Appendix E

Coordination

Section 1:

Endangered Species Act Coordination

PBS&J

An employee-owned company

July 17, 2002

Rusty Swafford
National Marine Fisheries Service
Habitat Conservation Division
4700 Avenue U
Galveston, Texas 77551-5997

RE: Laguna Madre GIWW Maintenance Dredging Project
PBS&J Job Number 440319

Dear Mr. Swafford:

PBS&J has contracted with the Galveston District of the U.S. Army Corps of Engineers (Galveston District) to help the District prepare a Supplemental Environmental Impact Statement (SEIS) for the Laguna Madre GIWW Maintenance Dredging Project (project) located in Nueces, Kleberg, Kenedy, Willacy, and Cameron Counties, Texas. The Galveston District is engaged in maintenance dredging of the GIWW through the Laguna Madre and tributary channels. A preferred alternative has been developed.

The purpose of this SEIS is to update existing information, provide additional information and environmental analysis of the impacts concerning continued maintenance dredging. The level of detail for our assessment will be as necessary to describe existing conditions and to provide analysis of future conditions due to project impacts.

The project area includes the Laguna Madre section of the existing waterway, a 119 mile shallow-draft channel which extends from the J.F. Kennedy Causeway, that joins Flour Bluff to Padre Island, to the old Queen Isabella Causeway, that once joined Port Isabel to South Padre Island

PBS&J is submitting this information letter to request an updated list of threatened and endangered species, which should be addressed for the project. We are also requesting the level of detail necessary for Essential Fish Habitat occurring in the project area and any conservation recommendations you may have. Please call me at (512) 329-8342 ext. 9627 if you have any questions or need additional information.

Sincerely,

Lisa Vitale

Lisa Vitale
Marine/Aquatic Biologist
LDV/lv

206 Wild Basin Road, Suite 300 • Austin, Texas 78746 • Telephone: 512.327.6840 • Fax: 512.327.2453 • www.pbsj.com

PBS&J

An employee-owned company

July 17, 2002

Allen Strand
U.S. Fish and Wildlife Service
6300 Ocean Drive
CESS Bldg., Room 113
Corpus Christi, Texas 78412

RE: Laguna Madre GIWW Maintenance Dredging Project
PBS&J Job Number 440319

Dear Mr. Strand:

PBS&J has contracted with the Galveston District of the U.S. Army Corps of Engineers (Galveston District) to help the District prepare a Supplemental Environmental Impact Statement (SEIS) for the Laguna Madre GIWW Maintenance Dredging Project (project) located in Nueces, Kleberg, Kenedy, Willacy, and Cameron Counties, Texas. The Galveston District is engaged in maintenance dredging of the GIWW through the Laguna Madre and tributary channels. A preferred alternative has been developed.

The purpose of this SEIS is to update existing information, provide additional information and environmental analysis of the impacts concerning continued maintenance dredging. The level of detail for our assessment will be as necessary to describe existing conditions and to provide analysis of future conditions due to project impacts.

The project area includes the Laguna Madre section of the existing waterway, a 119 mile shallow-draft channel which extends from the J.F. Kennedy Causeway, that joins Flour Bluff to Padre Island, to the old Queen Isabella Causeway, that once joined Port Isabel to South Padre Island

PBS&J is submitting this information letter to request an updated list of threatened and endangered species, which should be addressed for the project, and any particular areas of concern you may have. Please call me at (512) 329-8342 ext. 9627 if you have any questions or need additional information.

Sincerely,

Lisa Vitale

Lisa Vitale
Marine/Aquatic Biologist
LDV/lv

206 Wild Basin Road, Suite 300 • Austin, Texas 78746 • Telephone: 512.327.6840 • Fax: 512.327.2453 • www.pbsj.com

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

September 10, 2002

Ms. Lisa Vitale
Marine/Aquatic Biologist
PBS&J
206 Wild Basin Road, Suite 300
Austin, Texas 78746

Consultation No. 2-11-02-I-272

Dear Ms. Vitale:

This responds to your July 17, 2002 letter to the U.S. Fish and Wildlife Service (Service) requesting lists of species federally-listed as threatened or endangered for counties through which the Gulf Intracoastal Waterway Maintenance Dredging Project would traverse. This would include Nueces, Kleberg, Kenedy, Willacy, and Cameron Counties. The informationa will be used to help the Galveston District of the U.S. Army Corps of Engineers prepare a supplemental environmental impact statement for the Laguna Madre GIWW Maintenance Dredging Project.

Attached is a list of species that may occur in those counties, for your use and future reference. Please note that some of the proposed placement areas are now within designated critical habitat for the threatened piping plover. If we can be of further assistance, please contact Tom Shearer at 1-361-994-9005, ext. 242, or by e-mail Tom_Shearer@fws.gov.

Sincerely,

Allan M. Strand

Allan M. Strand
Field Supervisor

Federally Listed as Threatened and Endangered Species of Texas
January 8, 2002

This list represents species that may be found in counties throughout the state. It is recommended that the field station responsible for a project area be contacted if additional information is needed.

DISCLAIMER

This County by County list is based on information available to the U.S. Fish and Wildlife Service at the time of preparation. This list is subject to change, without notice, as new biological information is gathered and should not be used as the sole source for identifying species that may be impacted by a project.

Migratory Species Common to many or all Counties Species listed specifically in a county have confirmed sightings. If a species is not listed they may occur as migrants in those counties.

Least tern	(E ~)	*Sterna antillarum*
Whooping crane	(E w/CH)	*Grus americana*
Bald eagle	(T)	*Haliaeetus leucocephalus*
Piping plover	(T w/CH)	*Charadrius melodus*
Loggerhead shrike	(SOC)	*Lanius ludovicianus*
White-faced ibis	(SOC)	*Plegadis chihi*

(Cameron County)

Gulf Coast Jaguarundi	(E)	*Herpailurus yagouaroundi cacomitli*
Ocelot	(E)	*Leopardus pardalis*
West Indian manatee (=Florida)	(E)	*Trichechus manatus*
Brown pelican	(E)	*Pelecanus occidentalis*
Northern aplomado falcon	(E)	*Falco femoralis septentrionalis*
Hawksbill sea turtle	(E w/CH‡)	*Eretmochelys imbricata*
Kemp's Ridley sea turtle	(E)	*Lepidochelys kempii*
Leatherback sea turtle	(E w/CH‡)	*Dermochelys coriacea*
South Texas ambrosia	(E)	*Ambrosia cheiranthifolia*
Star cactus	(E)	*Astrophytum (=Echinocactus) asterias*
Texas ayenia	(E)	*Ayenia limitaris*
Bald eagle	(T)	*Haliaeetus leucocephalus*
Piping plover	(T w/CH)	*Charadrius melodus*
Green sea turtle	(T)	*Chelonia mydas*
Loggerhead sea turtle	(T)	*Caretta caretta*
American alligator	(TSA)	*Alligator mississipiensis*
Mountain plover	(P/T)	*Charadrius montanus*
Audubon's oriole	(SOC)	*Icterus graduacauda audubonii*
Black tern	(SOC)	*Chlidonias niger*
Brownsville common yellowthroat	(SOC)	*Geothlypis trichas insperata*
Cerulean warbler	(SOC)	*Dendroica cerulea*
Ferruginous hawk	(SOC)	*Buteo regalis*
Loggerhead shrike	(SOC)	*Lanius ludovicianus*
Northern gray hawk	(SOC)	*Buteo nitidus maximus*
Reddish egret	(SOC)	*Egretta rufescens*
Sennett's hooded oriole	(SOC)	*Icterus cucullatus sennetti*

Texas Botteri's sparrow	(SOC)	*Aimophila botterii texana*
Texas olive sparrow	(SOC)	*Arremonops rufivirgatus rufivirgatus*
Tropical parula	(SOC)	*Parula pitiayumi nigrilora*
White-faced ibis	(SOC)	*Plegadis chihi*
Coues' rice rat	(SOC)	*Oryzomys couesi aquaticus*
Texas horned lizard	(SOC)	*Phrynosoma cornutum*
Black-spotted newt	(SOC)	*Notophthalmus meridionalis*
Rio Grande lesser siren	(SOC)	*Siren intermedia texana*
Bailey's ballmoss	(SOC)	*Tillandsia baileyi*
Lilia de los llanos	(SOC)	*Echeandia chandleri*
Marshelder (slender) dodder	(SOC)	*Cuscuta attenuata*
Runyon huaco	(SOC)	*Manfreda longiflora*
Runyon's water-willow	(SOC)	*Justicia runyonii*
Short-fruited spikerush	(SOC)	*Eleocharis brachycarpa*

(Kenedy County)

Gulf Coast Jaguarundi	(E)	*Herpailurus yagouaroundi cacomitli*
Ocelot	(E)	*Leopardus pardalis*
West Indian manatee (=Florida)	(E)	*Trichechus manatus*
Brown pelican	(E)	*Pelecanus occidentalis*
Northern aplomado falcon	(E)	*Falco femoralis septentrionalis*
Hawksbill sea turtle	(E w/CH‡)	*Eretmochelys imbricata*
Kemp's Ridley sea turtle	(E)	*Lepidochelys kempii*
Leatherback sea turtle	(E w/CH‡)	*Dermochelys coriacea*
South Texas ambrosia	(E)	*Ambrosia cheiranthifolia*
Green sea turtle	(T)	*Chelonia mydas*
Loggerhead sea turtle	(T)	*Caretta caretta*
Piping plover	(T w/CH)	*Charadrius melodus*
Coues' rice rat	(SOC)	*Oryzomys couesi aquaticus*
Audubon's oriole	(SOC)	*Icterus graduacauda audubonii*
Cerulean warbler	(SOC)	*Dendroica cerulea*
Ferruginous hawk	(SOC)	*Buteo regalis*
Black tern	(SOC)	*Chlidonias niger*
Loggerhead shrike	(SOC)	*Lanius ludovicianus*
Reddish egret	(SOC)	*Egretta rufescens*
Sennett's hooded oriole	(SOC)	*Icterus cucullatus sennetti*
Texas Botteri's sparrow	(SOC)	*Aimophila botterii texana*
Texas olive sparrow	(SOC)	*Arremonops rufivirgatus rufivirgatus*
Tropical parula	(SOC)	*Parula pitiayumi nigrilora*
White-faced ibis	(SOC)	*Plegadis chihi*
Black-spotted newt	(SOC)	*Notophthalmus meridionalis*
Rio Grande lesser siren	(SOC)	*Siren intermedia texana*
Texas horned lizard	(SOC)	*Phrynosoma cornutum*
Bailey's ballmoss	(SOC)	*Tillandsia baileyi*
Roughseed sea-purslane	(SOC)	*Sesuvium trianthemoides*
Los Olmos tiger beetle	(SOC)	*Cicindela nevadica olmosa*

(Kleberg County)

Gulf Coast Jaguarundi	(E)	*Herpailurus yagouaroundi cacomitli*
Ocelot	(E)	*Leopardus pardalis*

West Indian manatee (=Florida)	(E)	*Trichechus manatus*
Brown pelican	(E)	*Pelecanus occidentalis*
Northern aplomado falcon	(E)	*Falco femoralis septentrionalis*
Hawksbill sea turtle	(E w/CH‡)	*Eretmochelys imbricata*
Kemp's Ridley sea turtle	(E)	*Lepidochelys kempii*
Leatherback sea turtle	(E w/CH‡)	*Dermochelys coriacea*
Black lace cactus	(E)	*Echinocereus reichenbachii* var. *albertii*
Slender rush-pea	(E)	*Hoffmannseggia tenella*
South Texas ambrosia	(E)	*Ambrosia cheiranthifolia*
Green sea turtle	(T)	*Chelonia mydas*
Loggerhead sea turtle	(T)	*Caretta caretta*
American alligator	(TSA)	*Alligator mississipiensis*
Bald eagle	(T)	*Haliaeetus leucocephalus*
Piping plover	(T w/CH)	*Charadrius melodus*
Mountain plover	(P/T)	*Charadrius montanus*
Audubon's oriole	(SOC)	*Icterus graduacauda audubonii*
Cerulean warbler	(SOC)	*Dendroica cerulea*
Ferruginous hawk	(SOC)	*Buteo regalis*
Loggerhead shrike	(SOC)	*Lanius ludovicianus*
Reddish egret	(SOC)	*Egretta rufescens*
Sennett's hooded oriole	(SOC)	*Icterus cucullatus sennetti*
Texas Botteri's sparrow	(SOC)	*Aimophila botterii texana*
Texas olive sparrow	(SOC)	*Arremonops rufivirgatus rufivirgatus*
White-faced ibis	(SOC)	*Plegadis chihi*
Black-spotted newt	(SOC)	*Notophthalmus meridionalis*
Rio Grande lesser siren	(SOC)	*Siren intermedia texana*
Texas horned lizard	(SOC)	*Phrynosoma cornutum*
Bailey's ballmoss	(SOC)	*Tillandsia baileyi*
Lilia de los llanos	(SOC)	*Echeandia chandleri*
Welder machaeranthera	(SOC)	*Psilactis heterocarpa*
Maculated manfreda skipper	(SOC)	*Stalligsia maculosus*

(Nueces County)

Gulf Coast Jaguarundi	(E)	*Herpailurus yagouaroundi cacomitli*
Ocelot	(E)	*Leopardus pardalis*
Brown pelican	(E)	*Pelecanus occidentalis*
West Indian manatee (=Florida)	(E)	*Trichechus manatus*
Hawksbill sea turtle	(E w/CH‡)	*Eretmochelys imbricata*
Kemp's Ridley sea turtle	(E)	*Lepidochelys kempii*
Leatherback sea turtle	(E w/CH‡)	*Dermochelys coriacea*
Slender rush-pea	(E)	*Hoffmannseggia tenella*
South Texas ambrosia	(E)	*Ambrosia cheiranthifolia*
Piping plover	(T w/CH)	*Charadrius melodus*
Green sea turtle	(T)	*Chelonia mydas*
Loggerhead sea turtle	(T)	*Caretta caretta*
Mountain plover	(P/T)	*Charadrius montanus*
Audubon's oriole	(SOC)	*Icterus graduacauda audubonii*
Black rail	(SOC)	*Laterallus jamaicensis*
Black tern	(SOC)	*Chlidonias niger*
Cerulean warbler	(SOC)	*Dendroica cerulea*

Ferruginous hawk	(SOC)	*Buteo regalis*
Loggerhead shrike	(SOC)	*Lanius ludovicianus*
Northern gray hawk	(SOC)	*Buteo nitidus maximus*
Reddish egret	(SOC)	*Egretta rufescens*
Sennett's hooded oriole	(SOC)	*Icterus cucullatus sennetti*
Texas Botteri's sparrow	(SOC)	*Aimophila botterii texana*
Texas olive sparrow	(SOC)	*Arremonops rufivirgatus rufivirgatus*
White-faced ibis	(SOC)	*Plegadis chihi*
Black-spotted newt	(SOC)	*Notophthalmus meridionalis*
Rio Grande lesser siren	(SOC)	*Siren intermedia texana*
Gulf salt marsh snake	(SOC)	*Nerodia clarkii*
Texas diamondback terrapin	(SOC)	*Malaclemys terrapin littoralis*
Texas horned lizard	(SOC)	*Phrynosoma cornutum*
Maritime Texas pocket gopher	(SOC)	*Geomys personatus maritimus*
Lilia de los llanos	(SOC)	*Echeandia chandleri*
Roughseed sea-purslane	(SOC)	*Sesuvium trianthemoides*
Texas windmill-grass	(SOC)	*Chloris texensis*
Thieret's skullcap	(SOC)	*Scutellaria thieretii*
Welder machaeranthera	(SOC)	*Psilactis heterocarpa*
Maculated manfreda skipper	(SOC)	*Stallingsia maculosus*

(Willacy County)

Gulf Coast Jaguarundi	(E)	*Herpailurus yagouaroundi cacomitli*
Ocelot	(E)	*Leopardus pardalis*
West Indian manatee (=Florida)	(E)	*Trichechus manatus*
Brown pelican	(E)	*Pelecanus occidentalis*
Northern aplomado falcon	(E)	*Falco femoralis septentrionalis*
Hawksbill sea turtle	(E w/CH‡)	*Eretmochelys imbricata*
Kemp's Ridley sea turtle	(E)	*Lepidochelys kempii*
Leatherback sea turtle	(E w/CH‡)	*Dermochelys coriacea*
Texas Ayenia	(E)	*Ayenia limitaris*
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Ferruginous hawk	(SOC)	*Buteo regalis*
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Reddish egret	(SOC)	*Egretta rufescens*
Sennett's hooded oriole	(SOC)	*Icterus cucullatus sennetti*
Texas Botteri's sparrow	(SOC)	*Aimophila botterii texana*
Texas olive sparrow	(SOC)	*Arremonops rufivirgatus rufivirgatus*
White-faced ibis	(SOC)	*Plegadis chihi*
Texas horned lizard	(SOC)	*Phrynosoma cornutum*
Black-spotted newt	(SOC)	*Notophthalmus meridionalis*
Rio Grande lesser siren	(SOC)	*Siren intermedia texana*
Coues' rice rat	(SOC)	*Oryzomys couesi aquaticus*
Bailey's ballmoss	(SOC)	*Tillandsia baileyi*

INDEX

Statewide or areawide migrants are not included by county, except where they breed or occur in concentrations. The whooping crane is an exception; an attempt is made to include all confirmed sightings on this list.

E	=	Species in danger of extinction throughout all or a significant portion of its range.
T	=	Species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
C	=	Species for which the Service has on file enough substantial information to warrant listing as threatened or endangered.
CH	=	Critical Habitat (in Texas unless annotated ‡)
P/	=	Proposed ...
P/E	=	Species proposed to be listed as endangered.
P/T	=	Species proposed to be listed as threatened.
TSA	=	Threatened due to similarity of appearance.
SOC	=	Species for which there is some information showing evidence of vulnerability, but not enough data to support listing at this time.
□	=	with special rule
‡	=	CH designated (or proposed) outside Texas
~	=	protection restricted to populations found in the "interior" of the United States. In Texas, the least tern receives full protection, except within 50 miles (80 km) of the Gulf Coast.

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

May 30, 2003

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) Habitat Conservation Division has reviewed the Draft Environmental Impact Statement (DEIS) "Gulf Intracoastal Waterway Laguna Madre, Texas Maintenance Dredging"dated April 2003, for compliance with the National Environmental Policy Act and the Essential Fish Habitat (EFH) requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). NOAA Fisheries staff has worked closely with the Corps of Engineers (COE) and the Texas Department of Transportation for over eight years to assist in development and review of environmental studies in support of the DEIS and to develop the Draft Dredged Material Management Plan (DMMP) for the next 50 years of maintenance dredging in the Laguna Madre.

After reviewing the subject document, we believe that DEIS adequately describes the environmental impacts associated with the current COE maintenance dredging activities, the draft DMMP, and other alternatives which were considered. The EFH assessment predicts the implementation of the proposed DMMP would reduce direct impacts to seagrasses due to deposition of dredged material by an estimated 1,307 acres when compared to current COE practices. Management actions included in the draft DMMP, such as (1) total confinement, (2) use of semi-confined areas and training levees, and (3) time of year restrictions, also are expected to lessen the impacts on EFH from suspended solids associated with dredged material placement. Given all of the economic, engineering, environmental, legal and societal constraints associated with maintenance dredging approximately 117 miles of waterway in the Laguna Madre, we concur that the draft DMMP will provide a net overall benefit to EFH, when compared to current dredging and disposal practices. Therefore, NOAA Fisheries has no EFH conservation recommendations to provide and no further consultation under the MSFCMA is required.

Finally, the project area is within the known distribution limits of Federally listed threatened species that are under purview of NOAA Fisheries. In accordance with the Endangered Species Act of 1973, as amended, it is the responsibility of the COE to review its activities and programs and identify

actions that may affect endangered or threatened species or their habitat. Determinations involving species under NOAA Fisheries' jurisdiction should be reported to our Protected Resources Division (PRD) at the letterhead address. If it is determined that the activities may adversely affect any species listed as endangered or threatened and under PRD purview, then formal consultation must be initiated.

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

Sincerely,

Frederick C. Sutter III
Deputy Regional Administrator

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, FL 33702
(727) 570-5312; Fax 570-5517
http://caldera.sero.nmfs.gov

JUN 6 2003

F/SER3:DK

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

Dear Dr. Saunders:

This correspondence is in reply to the April 1, 2003, letter and accompanying information from the Galveston District Corps of Engineers (COE). The COE has requested section 7 consultation from the National Marine Fisheries Service (NOAA Fisheries), pursuant to the Endangered Species Act of 1973 (ESA). The proposed action is the maintenance dredging plan for the Gulf Intracoastal Waterway (GIWW), Laguna Madre, off Nueces, Kleberg, Kenedy, Willacy, and Cameron Counties, Texas. The NOAA Fisheries' consultation number for this project is I/SER/2003/00443; please refer to this number in future correspondence on this project.

The COE has drafted a new management plan for the dredging of the GIWW. The new plan addresses the placement of dredged materials in the 63 designated placement areas (PAs), with changes in placement being implemented in the Dredged Material Management Plan (DMMP). The COE initiated the formation of an Interagency Coordination Team (ICT) to help develop the scope of environmental studies needed for the maintenance dredging plan, to assist in determining the preferred alternative for the draft environmental impact statement (DEIS), and to provide a forum for continued coordination and monitoring throughout the life of the project. The ICT is comprised of representatives from the Texas Department of Transportation, Texas General Land Office, Texas Commission on Environmental Quality, Texas Parks and Wildlife Department, Texas Water Development Board, NOAA Fisheries, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the COE. Based upon analysis of a wide array of options where each PA was analyzed individually, the ICT developed the DMMP that they determined was the best alternative, and would reduce impacts to the Laguna Madre's resources compared to the current placement practice while still meeting the COE's need for placement of dredged material.

The Laguna Madre section of the GIWW extends 117 miles from the JFK Causeway to the old Queen Isabella Causeway. The main channel required maintenance dredging every 23 to 60

months in selected reaches to remove approximately 200,000 cubic yards (cy) to 3 million cy of sediment. This dredging is performed using cutterhead-suction dredges and the materials are placed by hydraulic pipeline onto both upland and open-bay PAs. The DMMP has been designed to reduce the impact on the bay bottom (over 9,000 acres of direct impact from the 61 of 63 PAs currently in use). Changes to placement vary among the different PAs based upon logistical and other concerns, but include confining the PAs to prevent scouring, turbidity, and other impacts; limiting open-bay unconfined placement; using more deepwater open-bay areas; using more upland sites; placing dredge material in manners that reduce impacts to submerged aquatic vegetation and benthic communities; and configuring PAs in ways that limit predators from using them as stepping stones to bird rookeries on other PAs or islands.

ESA-listed species under the purview of NOAA Fisheries which potentially occur in the project area include the green (*Chelonia mydas*), loggerhead (*Caretta caretta*), Kemp's ridley (*Lepidochelys kempii*), leatherback (*Dermochelys coriacea*), and hawksbill (*Eretmochelys imbricata*) sea turtles. Additionally, the DEIS refers to the smalltooth sawfish (*Pristis pectinata*) as a candidate species. Please note that this species was officially listed as endangered on April 1, 2003 (68 FR 15674). However, the DEIS was correct in stating that the action area is outside of the current range of smalltooth sawfish and therefore no effect is expected. No critical habitat has been designated or proposed for listed species within the project area.

All of the dredging to occur will be done using cutter-suction dredges which move slowly and, unlike hopper dredges, have never been documented, observed, or reported to capture or kill sea turtles. Sea turtles are highly mobile, can avoid the slower moving cutter-suction dredges, and will likely be frightened away from the project area by dredging activity and noise. The measures included in the DMMP are designed to reduce environmental impacts, especially to submerged habitats. Turbidity and habitat smothering from the material placement will still occur, but to lesser degree and in less sensitive areas than under the previous maintenance dredging plan. Turbidity effects and some of the habitat smothering effects are temporary in nature. No direct effects to sea turtles are expected, and indirect effects are expected to be very minimal or discountable. NOAA Fisheries, therefore, believes that the proposed action is not likely to adversely affect any listed species or designated critical habitat under our purview.

This letter concludes the COE's consultation responsibilities under section 7 of the ESA for the proposed actions for federally-listed species, and their critical habitat, under NOAA Fisheries' purview. A new consultation should be initiated if there is a take, new information reveals impacts of the proposed actions that may affect listed species or their critical habitat, a new species is listed, the identified action is subsequently modified, or critical habitat is designated that may be affected by the proposed activity.

In the April 1, 2003, letter the action agency indicated that it is also in the process of consulting with NOAA Fisheries' Habitat Conservation Division (HCD) pursuant to the Magnuson-Stevens Fishery Conservation and Management Act's requirements for essential fish habitat (EFH) consultation (16 U.S.C. 1855 (b)(2) and 50 CFR 600.905-.930, subpart K). The action agency should also ensure that the applicant understands the ESA and EFH processes; that ESA and EFH consultations are separate, distinct, and guided by different statutes, goals, and time lines for responding to the action agency; and that the action agency will (and the applicant may)

receive separate consultation correspondence on NOAA Fisheries letterhead from HCD regarding their concerns and/or finalizing EFH consultation. Consultation is not complete until EFH and ESA concerns have been addressed.

If you have any questions about EFH consultation for this project, please contact Rusty Swafford, HCD, at (409) 766-3699. If you have any questions about this ESA consultation, please contact Dennis Klemm, fishery biologist, at the number above or by e-mail at Dennis.Klemm@noaa.gov.

Sincerely,

Roy E. Crabtree, Ph.D.
Regional Administrator

cc: F/PR3
F/SER42- R. Swafford

File: 1514-22 f.1. TX
O:\section 7\informal\Gulf Intracoastal Waterway Laguna Madre.wpd

U.S. Fish and Wildlife Service
Threatened and Endangered Species Concurrence
(Included in Pages 10 and 11 of the Comment Letter)

"The Service has reviewed the Biological Assessment (BA) for impacts to endangered and threatened species relative to the maintenance dredging of the intracoastal waterway Laguna Madre. Based on the project description and location, the Service concurs with your determination that no impacts to Federally listed species will occur to the South Texas ambrosia, slender rush-pea, Texas ayenia, star cactus, black lace cactus, northern aplomado falcon, whooping crane, Eskimo curlew, bald eagle, ocelot, and jaguarondi as a result of the proposed action.

The Service's jurisdiction applies to nesting sea turtles. All five species of sea turtles are known to occur along the Texas coastline as described in the BA. The Service concurs with the USACE that it is possible, but unlikely, that leatherback, hawksbill, and loggerhead turtles will occur in the Laguna Madre and if they did, that the use of cutter dredges would help avoid or minimize impacts. Green turtles and Kemp's ridley turtles have been documented as occurring in the Laguna Madre, however, nests have never been located. Therefore, the Service concurs that the proposed project is not likely to adversely impact nesting sea turtles. The USACE should seek concurrence and further conservation measures from the National Marine Services (NMFS) as to impacts to sea turtles occurring in coastal waters.

Piping plovers, their habitat and designated critical habitat will be impacted during dredging and dredge material placement, however, because such disturbances will be minor, temporary in nature, and measures have been included to avoid and minimize impacts the Service concurs the proposed action may affect but, not likely to adversely affect the piping plover and will not adversely modify designated critical habitat. Piping plover habitat is very dynamic and future changes may require further conservation measures during a particular dredging event. One such conservation measure that may be recommended is a seasonal time restriction. Dredging activities should be well coordinated with the Service in advance to avoid any delays in work schedules.

The Service concurs with the USACE that the project may affect, but not likely to adversely affect the West Indian manatee, because of its rare occurrences. But, because sightings have increased in the last few years, the Service recommends additional conservation measures. The recommended measures would be to notify the Service if a manatee is sighted and assist in the monitoring efforts. The Service would also appreciate any assistance from the USACE in capturing the manatee if experts deem it necessary and appropriate for its survival.

It is important to remember, that the life of the project is 50 years. Changes in the system, species, and areas of endangered and threatened species habitat and critical habitat will certainly occur over time. It is imperative that the ICT remain active in ensuring impacts will not occur from this project actins in the future. Prior to commencing work on areas proposed for dredging and placement the ICT should seek review and concurrence of effects from the Service. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination can be reconsidered."

Allan M. Strand
U.S. Fish and Wildlife Service
Fish and Wildlife Service Comment Letter – June 19, 2003

Section 2:

Public Involvement

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

April 25, 2003

REPLY TO
ATTENTION OF

Environmental Section

TO INTERESTED PARTIES:

A notice of availability for public review and comment on the Draft Environmental Impact Statement (EIS) for maintaining the Gulf Intracoastal Waterway in the Laguna Madre, Texas, was published in the April 4, 2003, Federal Register. The public review period extends for 45 days and will conclude on May 19, 2003.

Recently, the U.S. Army Corps of Engineers received a request to extend the deadline for sending in comments on the Draft EIS. We have decided to honor this request and extend the deadline an additional 30 days. The U.S. Environmental Protection Agency (EPA) has been notified about the time extension and it will be published in the Federal Register on May 2, 2003. For your comments to be considered in preparing the final document, they must be postmarked no later than June 19, 2003.

For additional information, please contact Dr. Terrell Roberts at 409/766-3035 or (e-mail: terrell.w.roberts@usace.army.mil).

Sincerely,

Lloyd H. Saunders, Ph.D.
Chief, Planning, Environmental
Regulatory Division

US Army Corps of Engineers
Galveston District

NOTICE OF A PUBLIC HEARING FOR THE GULF INTRACOASTAL WATERWAY, LAGUNA MADRE, TEXAS DRAFT ENVIRONEMENTAL IMPACT STATEMENT

The U.S. Army Corps of Engineers will hold Public Hearings on the Draft Environmental Impact Statement (DEIS) for maintenance dredging of the Gulf Intracoastal Waterway through the Laguna Madre on 7 May 2003 in Corpus Christi and 8 May 2003 in Brownsville. The purpose of the meetings is to inform the community about the project and Draft EIS and to solicit public comments on the DEIS and information for the preparation of the Final EIS. The DEIS can be found on the Corps web site at: www.swg.usace.army.mil. A limited number of CDs of the DEIS will also be available at the meetings. There will be formal presentations at 7 pm at both meetings, followed by an opportunity for comments from the public.

May 7, 2003, TAMU-Corpus Christi Campus; Natural Resources Center Building, Room 1003; 7:00 PM to 10:00 PM

May 8, 2003; Brownsville Public Library, Meeting Room, 7:00 PM to 10:00 PM

Those not able to attend can submit written comments to:

U.S. ARMY ENGINEER DISTRICT, GALVESTON
ATTENTION: Dr. Terrell Roberts
CESWG-PE-PR
P.O. BOX 1229
GALVESTON, TEXAS 77553-1229
E-Mail: terrell.w.roberts@usace.army.mil
Phone: (409) 766-3035
Fax: (409) 766-3064

US Army Corps
of Engineers
Galveston District

Laguna Madre
Draft Environmental Impact Statement

History

♦ Suit was filed against the Corps of Engineers by the National Audubon Society and other environmental groups in 1994 to prevent Galveston District from placing dredged maintenance material in the open waters of the Laguna Madre. As a result of the suit, the Corps agreed to develop a long-term dredged material management plan (DMMP) and to prepare an Environmental Impact Statement (EIS) for the Gulf Intracoastal Waterway crossing the Laguna Madre.

♦ Galveston District formed an Interagency Coordination Team (ICT) composed of state and federal resource agencies (nine voting and two advisory) to address environmental issues and a long-term maintenance plan for the Laguna Madre Section of the Gulf Intracoastal Waterway in February 1995.

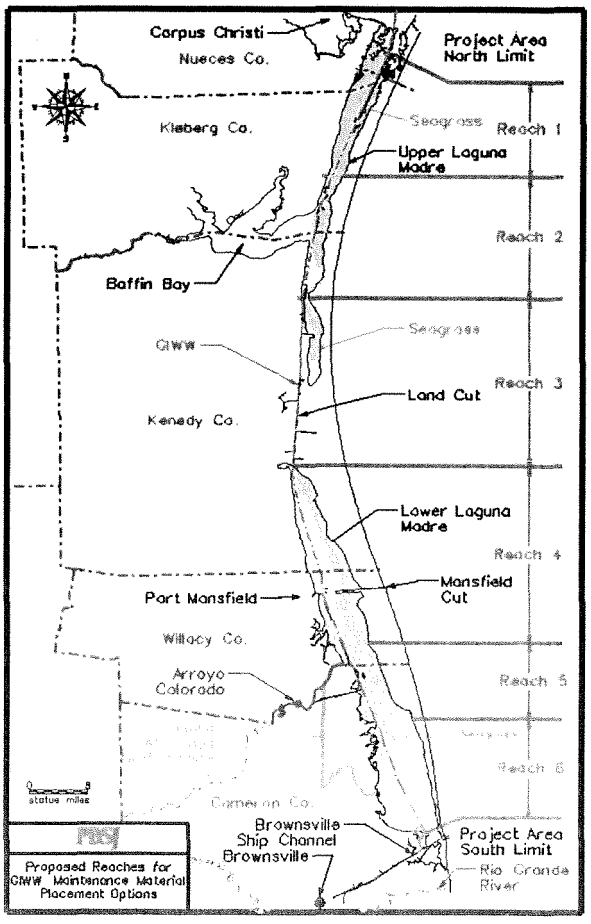
♦ The ICT helped develope 35 studies and five different models in order to perform the necessary scientific analyses to address the environmental concerns. The group helped identify several disposal options for review in the EIS. The draft DMMP was completed in October 2002 for public review and comment. The notice of availability for public review of the draft EIS has now been published in the Federal Register.

ICT - INTERAGENCY COORDINATION TEAM

An Interagency Coordination Team, or ICT, was established to provide counsel and help the USACE develop scientific investigations to address the environmental issues raised concerning GIWW maintenance in the Laguna Madre. The ICT is comprised of representatives from the following:

Texas Department of Transportation (TxDOT)
Texas General Land Office (GLO)
Texas Commission on Environmental Quality (TCEQ)
Texas Parks and Wildlife Department (TPWD)
Texas Water Development Board (TWDB)
National Marine Fisheries Service (NMFS)
U.S. Environmental Protection Agency (EPA)
U.S. Fish and Wildlife Service (FWS)
U.S. Army Corps of Engineers (USACE), Galveston District
Padre Island National Seashore (PINS) (Advisory only)
Coastal Bend Bays and Estuaries Program (CBBEP) (Advisory only)

The studies recommended by the ICT, and funded by the USACE, are included on the website http://www.swg.usace.army.mil/items/Laguna/ under the "Special Studies" button, as pdf files.



Important Facts

♦ The Corps of Engineers and ICT have worked together for eight years to develope a dredged material maintenance plan based upon the best scientific knowledge available. Studies addressing the area's natural resources; models of hydrodynamics, sediment transport, and seagrasses; economics; and project impacts on the Laguna Madre have cost between $5 and $6 million and have provided the scientific knowledge that is the basis of the EIS and DMMP.

♦ The ICT reached several important conclusions -- the Laguna Madre is too complex to allow a single dredging and placement method for long segments of the waterway and each placement area must be considered separately for the management plan that is best suited for the hydrological, engineering and ecological parameters characterizing the site. It was also learned that to minimize impacts on the seagrasses, the best time to place material into an open water area is from November through February when the grass is dormant.

♦ Because the Lalguna Madre is a dynamic and complex system, the DMMP is intended to be a flexible document that can be updated as warranted by future conditions. To ensure that the plan functions according to the intent of the ICT, the group will remain as an organized group and continue to meet, as needed, to review and update the dredging and disposal plans before each dredging cycle.

♦ Tonight's meeting is to gather public comments on the draft Environmental Impact Statement. Additional written comments will be accepted until June 19, 2003.

FAQ - FREQUENTLY ASKED QUESTIONS

- WHY CAN'T YOU JUST BARGE THE MAINTENANCE MATERIAL TO THE GULF?
- ARE YOU GOING TO PUT THE MAINTENANCE MATERIAL ON THE MAINLAND?
- DOESN'T THE MAINTENANCE MATERIAL KILL THE SEAGRASSES?
- WHY DON'T YOU BUILD LEVEED PLACEMENT AREAS AND CONFINE THE MAINTENANCE MATERIAL?
- WHY DON'T YOU PUMP THE MAINTENANCE MATERIAL ON THE BEACH?
- WHY NOT JUST ABANDON THE GIWW BETWEEN CORPUS CHRISTI AND BROWNSVILLE?
- DOESN'T THE MAINTENANCE MATERIAL AFFECT FISHERIES?
- WHAT ARE THE ENVIRONMENTAL BENEFITS OF HAVING THE GIWW IN THE LAGUNA MADRE?

Want answers to these questions and others you may have? Go to the Galveston District webpage at **http://www.swg.usace.army.mil/** and review information on the Laguna Madre
Environmental Studies and Dredged Material Management Plan (DMMP & DEIS).

Should you have any comments regarding the Laguna Madre DEIS, please submit in writing to:

U.S. Army Engineer District, Galveston
ATTN: Dr. Terrell Roberts
CESWG-PE-PR
P.O. Box 1229
Galveston, Texas 77553-1229

E-Mail: terrell.w.roberts@usace.army.mil
Phone: (409) 766-3035
Fax: (409) 766-3064

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

April 1, 2003

REPLY TO
ATTENTION OF

Environmental Section

TO INTERESTED PARTIES:

A copy of the Draft Environmental Impact Statement (EIS) for maintaining the Gulf Intracoastal Waterway in the Laguna Madre, Texas is available for your review and comment. This document has been prepared in accordance with Section 102 (2) (c) of the National Environmental Policy Act (NEPA).

Please send any comments or requests for paper or electronic (CD) copies of this document to the above address. You may also visit the Galveston District's web page at www.swg.usace.army.mil to view the document. Your comments will be thoroughly considered in revising the EIS and included in the final document as submitted.

This document has been filed with the US Environmental Protection Agency (EPA) pursuant to the President's Council on Environmental Quality guidelines implementing NEPA (40 CFR Parts 1500 – 1508). This document is being sent concurrently to Federal, State, and local agencies, civic and environmental groups, and others known to be interested in this study. The EPA filing date and the closing date for the 45-day review period will be noted in the Federal Register of April 4, 2003. For your comments to be considered in preparing the final document, they must be postmarked no later than the closing date of the 45-day review period (May 19, 2003).

For additional information on this document, please contact Dr. Terrell Roberts (EIS) at 409/766-3035 (e-mail: terrell.w.roberts@usace.army.mil).

Sincerely,

Lloyd Saunders

Lloyd H. Saunders, Ph.D.
Chief, Planning, Environmental
Regulatory Division

NOTICE OF A PUBLIC MEETING
ON THE LAGUNA MADRE DREDGING PLAN

The U.S. Army Corps of Engineers will hold public meetings on the Draft Dredged Material Management Plan (DMMP) for maintenance dredging of the Gulf Intracoastal Waterway through the Laguna Madre on 28 October 2002 in Corpus Christi and 29 October 2002 in Harlingen. The purpose of the meetings is to provide information on the DMMP and solicit public comment and suggestions on the draft plan. A draft of the DMMP can be found on the Corps web site at: www.swg.usace.army.mil. Copies also will be available at the meetings. There will be informal information sessions from 4-7 PM and formal presentations at 7 PM at both meetings.

Date: October 29, 2002

Location: Harlingen Cultural Arts Center next to the Public Library

Time: 4:00 PM to 8:00 PM

NOTICE OF A PUBLIC MEETING
ON THE LAGUNA MADRE DREDGING PLAN

The U.S. Army Corps of Engineers will hold public meetings on the Draft Dredged Material Management Plan (DMMP) for maintenance dredging of the Gulf Intracoastal Waterway through the Laguna Madre on 28 October 2002 in Corpus Christi and 29 October 2002 in Harlingen. The purpose of the meetings is to provide information on the DMMP and solicit public comment and suggestions on the draft plan. A draft of the DMMP can be found on the Corps web site at: www.swg.usace.army.mil. Copies also will be available at the meetings. There will be informal information sessions from 4-7 PM and formal presentations at 7 PM at both meetings.

Date: October 28, 2002

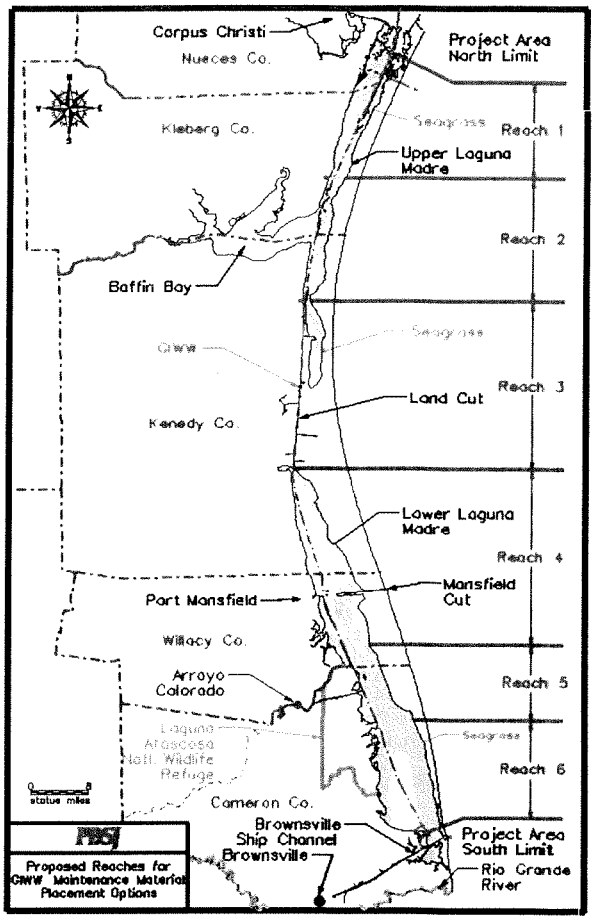
Location: TAMU-Corpus Christi Campus; Natural Resources Center Building.

Time: 4:00 PM to 8:00 PM

US Army Corps
of Engineers
Galveston District

Laguna Madre
Dredged Material Maintenance Plan

LAGUNA MADRE FACT SHEET



Project Name: Gulf Intracoastal Waterway (GIWW), Texas Section, from Corpus Christi to Brownsville. This is a 12-foot by 125-foot navigation channel authorized July 23, 1942 by PL 675, 77th Congressional District represented by Mr. Solomon P. Ortiz.

Location: The project is located between Corpus Christi Bay and Port Isabel, Texas.

Description: This section of the GIWW serves the Ports of Corpus Christi, Port Mansfield, Harlingen, Port Isabel, and Brownsville. The section is 117 miles long and project maintenance is authorized to the project depth.

Funding Status: Project is funded by Operations and Maintenance.

Local Sponsor: Texas Department of Transportation.

Background: Suit was filed on the Corps of Engineers by the National Audubon Society and other environmental groups in 1994 to prevent the Galveston District from placing dredged maintenance material in the open waters of the Laguna Madre. As a result of the suit, the Galveston District agreed to develop a long-term dredged material management plan (DMMP) and to prepare a Supplemental Environmental Impact Statement (SEIS). The Galveston District began studies to develop the DMMP with the help of an Interagency Coordination Team (ICT) consisting of eight State and Federal resource agencies. The original completion date for preparing the draft SEIS and DMMP was set for December 1998. The completion date has been slipped in order to complete several critical studies which provided important data that helped the ICT select the best disposal option.

Issues and Other Information: The Laguna Madre is separated into upper and lower lagoons by extensive mud flats. The flats restricted water exchange between the upper and lower lagoons until the completion of the GIWW in 1945. Construction of the waterway improved circulation in the Laguna Madre and created many islands that are utilized many species of waterbirds. Many improvements to the Laguna's environment were documented as a result of construction of the waterway. More recently, concern has been expressed about the impacts of unconfined open bay placement in the Laguna Madre. Over the past 30 years, seagrasses have increased coverage by 130 km^2 in the upper Laguna Madre while decreasing by 140 km^2 in the lower Laguna Madre. Similar dredging methodologies are utilized in the upper and lower Laguna Madre. The Galveston District initiated the ICT with the local sponsor and State and Federal resource agencies in February 1995 to address the environmental issues and long-term maintenance plan for the Laguna Madre Section of the GIWW. The ICT has developed and approved 35 scopes-of-work to perform the necessary scientific studies to address the environmental concerns. The ICT helped identify several disposal options for review in the SEIS. A draft DMMP was completed in October 2002 for public review and comment. The draft SEIS is scheduled for release for public review and comment in the spring of 2003.

The ICT has worked diligently since to prepare a management plan for disposing dredged material from the GIWW that would minimize, if not eliminate, impacts to the lagoon's natural resources. The draft DMMP is the culmination of this effort by the ICT and presents a conceptual management plan to reduce impacts to seagrass and fishery organisms and provide an enhancement for birds utilizing the disposal islands along the GIWW. The draft DMMP also takes into consideration, to the maximum extent practicable, the special concerns and management needs of the National Park Service for ten of the placement areas (PA) that lie within the boundaries of the Padre Island National Seashore (PINS). Additionally, the ICT considered the issues raised by the public, environmental organizations, and land owners along the GIWW at several public meetings and ICT meetings and incorporated these concerns in the draft DMMP to the maximum extent practicable.

It is important to note also that the ICT considered several different dredging and placement alternatives for six different reaches of the Laguna Madre before determining it would be necessary to prepare a management plan for each PA separately. There were several constraints to consider, including impacts to natural resources, engineering capabilities. and economic feasibility, before the ICT reached consensus on each management plan.

After lengthy discussions, the ICT rejected most offshore alternatives, all beach and washover nourishment, and all upland disposal plans for new sites on the mainland or Padre Island for a variety of reasons. These include unacceptable impacts to lagoon resources, lack of beach quality material for beneficial uses, regulations prohibiting pipelines crossing the PINS, lack of willing land owners for upland use, and lack of engineering feasibility. This left the ICT with only the remaining feasible alternatives of unconfined, semi-confined, or fully confined placement in the existing PAs, with two exceptions. The District is determining the engineering and cost feasibility of using a pipeline or bucket dredge and scows to take material from a frequently dredged section of the GIWW at its intersection with the Mansfield Channel and another area near the Brownsville Ship Channel to an offshore site for disposal. The feasibility of this alternative will be described in the final DMMP and Supplemental Environmental Impact Statcment (SEIS).

The ICT determined the best management plan to minimize disposal impacts on seagrass beds near an unconfined or semi-confined PA is to limit disposal of dredged materials to the period between November 1 and February 28 when seagrass is dormant. This dredging window would allow water turbidity to subside before the seagrass starts its rapid growth phase in the Spring. Additionally, best management practices would be used to retain as much of the sediments on the emergent areas of the PAs as possible. Examples of these practices include retaining levees to direct the sediments away from circulation channels and seagrass beds, baffles to slow the effluent flow to allow for greater settling of the sediments, and diffusers on the end of the dredge pipe to dissipate the energy of the water flow and decrease scouring at the end of the pipe.

The ICT also proposed extending the boundaries of some of the existing PAs north or south to include all of the emergent areas that presently extend outside the PAs so that sediment retention could be maximized. At other PAs where there is deep water nearby and insufficient emergent area to allow adequate sediment retention, the PA boundary would be extended east or west to allow pipeline placement in nonvegetated deep water.

In addition to the two fully confined PAs in use, the ICT proposed enclosing all or portions of another 12 PAs to eliminate impacts to nearby sensitive resources, such as seagrass. The District is currently studying these sites to determine the size needed to accommodate 50 years of dredged material, the height of the levees needed to confine the material, and whether the foundations will support the levees. The District is also determining if levees have to be extended into the water to provide sufficient storage capacity. Should the levees be extended into the water, the impacts to fisheries habitat resulting from removing lagoon bottom from the ecosystem will be described and quantified in the SEIS.

If offshore disposal for the two special cases near the Mansfield Channel and Brownsville Channel is not acceptable, alternate disposal sites have been proposed in the DMMP in nearby deep, nonvegetated water that will reduce shoaling and eliminate seagrass burial. Additionally, another PA at the intersection of the Mansfield Channel and GIWW will be expanded to encompass an island that is heavily used by birds to protect the island from erosion and expand it for increased bird use.

Because the Laguna Madre is a dynamic and complex system, the DMMP is intended to be a flexible document that can be updated as warranted by future conditions. To help ensure that the management plans function according to the intent of the ICT, the ICT will remain as an organized group and continue to meet, as needed, to update the DMMP and review the District's dredging and disposal plans before each dredging cycle.

Additional information on the studies conducted by the District to provide data for the ICT to use in preparing the management plans and other information to explain the project is provided in the District's website. The draft DMMP is also to be found on the website, http:

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

REPLY TO
ATTENTION OF

CESWG-PL-R

September 5, 1996

NOTICE OF PUBLIC SCOPING MEETING FOR GULF INTRACOASTAL WATERWAY (GIWW) - CORPUS CHRISTI BAY TO PORT ISABEL, TEXAS

INTRODUCTION

Notice is hereby given of a public scoping meeting to be conducted by the Galveston District, Corps of Engineers on:

THURSDAY, SEPTEMBER 26, 1996
6:00 - 9:00 PM

HARLINGEN PUBLIC LIBRARY*
AUDITORIUM
410 76 DRIVE
HARLINGEN, TEXAS

Registration for those wishing to speak will begin at **5:00 PM**. The meeting will begin promptly at 6:00 PM.

BACKGROUND

The section of the GIWW in this study is a 12-foot deep by 125-foot wide channel which extends about 117 miles from Corpus Christi Bay to Port Isabel through the Laguna Madre (see Figure). This reach of the GIWW serves the Ports of Brownsville, Port Isabel, Harlingen, and Port Mansfield, transporting over 2 million tons of commodities annually. Maintenance dredging is conducted on an as needed basis to removed shoaled sediments within the waterway. Maintenance material is placed in a combination of 71 upland, confined, and open-bay placement areas totaling over 9,000 acres. Every 3 years approximately 40% of the waterway requires maintenance for an average annual shoaling rate of 2 million cubic yards. Average maintenance costs for this section of the waterway are $1.2 million.

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* This event is not sponsored by the Harlingen Public Library.

The Laguna Madre is one of only three hypersaline lagoons in the world. This shallow, productive estuary produces over 50% of the State's coastal finfish harvest and serves as nursery grounds for the important Gulf shrimp fishery. Seagrasses are a significant resource in the lagoon and cover over 65 percent of the bay bottom. The seagrasses in the Laguna Madre (along with the Laguna Madre de Tamaulipas) provide the only wintering food for about 78 percent of the world's population of redhead ducks.

To address the complex issues and problems associated with the presence of the GIWW in the Laguna Madre and to assure coordination, commitment, and involvement of a broad base of State and Federal resource agencies, an Interagency Coordination Team (ICT) was formed and first met in February 1995. The ICT is composed of the following agencies:

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service
- Environmental Protection Agency
- Texas General Land Office
- Texas Water Development Board
- Texas Parks and Wildlife Department
- Texas Department of Transportation
- Texas Natural Resource Conservation Commission
- Corpus Christi Bay National Estuary Program (Advisory)

The goals of the ICT are to (1) identify environmental concerns associated with the GIWW in the Laguna Madre, (2) develop scopes of work needed to address environmental concerns, (3) ensure effective team work among State and Federal agencies, and (4) contribute to and expedite completion of the dredged material management plan and Supplemental Environmental Impact Statement (SEIS) for the GIWW.

The ICT has identified a list of concerns for the first goal associated with dredging and placement of material in the Laguna Madre. Some of these concerns include:

- Impacts on the benthic community
- Effects of turbidity
- Impacts on seagrass populations
- Effects on circulation and hydrodynamics
- Effects on fishery productivity
- Contaminant concerns
- Viability of alternate placement areas
- Potential for beneficial uses of dredged material

Several studies have already been initiated to satisfy the second goal, and the ICT continues meeting on a regular basis to achieve the third and fourth goals.

PURPOSE OF THE PUBLIC SCOPING MEETING

The public scoping meeting is to help the Corps of Engineers identify environmental concerns (Goal No. 1), identify study efforts needed in the Laguna Madre (Goal No. 2), and meet the National Environmental Policy Act requirements for preparing an SEIS (Goal No. 4). Therefore, this meeting is to provide an opportunity for all interested persons to comment and provide information for use in identifying problems associated with the project, conducting additional studies, and preparing an SEIS. Every effort will be made to address concerns/issues identified. There will be additional opportunities for the public to express their views in other group meetings/workshops in the future.

CONDUCT OF THE PUBLIC SCOPING MEETING

The District Engineer, Galveston District, Corps of Engineers, will serve as the presiding officer at the public scoping meeting. The District Engineer will take all actions necessary to conduct a fair, impartial, and orderly hearing. To this end, the District Engineer will:

(a) Regulate the course of the hearing and conduct of the parties, their counsel, and the public in attendance.

(b) Establish reasonable time limits for oral statements of parties, their counsel, or representatives.

(c) Receive into evidence all written statements, charts, tabulations, and similar data.

(d) Ask questions of speakers for purposes of clarification.

All persons will be given an opportunity to present oral or written statements, including documentary materials, at the public meeting. Any person will be entitled to be represented by or speak through legal counsel or other representative and to present recommendations as to an appropriate study or other consideration. Prior to the opening of the meeting, each person will be requested to complete an attendance card. The attendance card will contain information blocks on which persons attending the public meeting can give their name, address, and whether they wish to present an oral statement during the public meeting.

All statements and information provided must concern the subject matter of the hearing. All statements will be addressed to the District Engineer. Cross-examination of any person addressing the public meeting by any person in attendance will not be allowed.

The District Engineer will speak first. Any public official will then be offered an opportunity to speak. Other speakers will be called upon in order of registration. Speakers should come prepared to complete their oral statement in not more than five minutes (subject to change based on attendance). Statements by any person that cannot be completed within the time allotment should be summarized orally, and the full text submitted in writing.

Written statements or informational materials for inclusion in the record, including documentary materials, may be presented during the public meeting or may be mailed to:

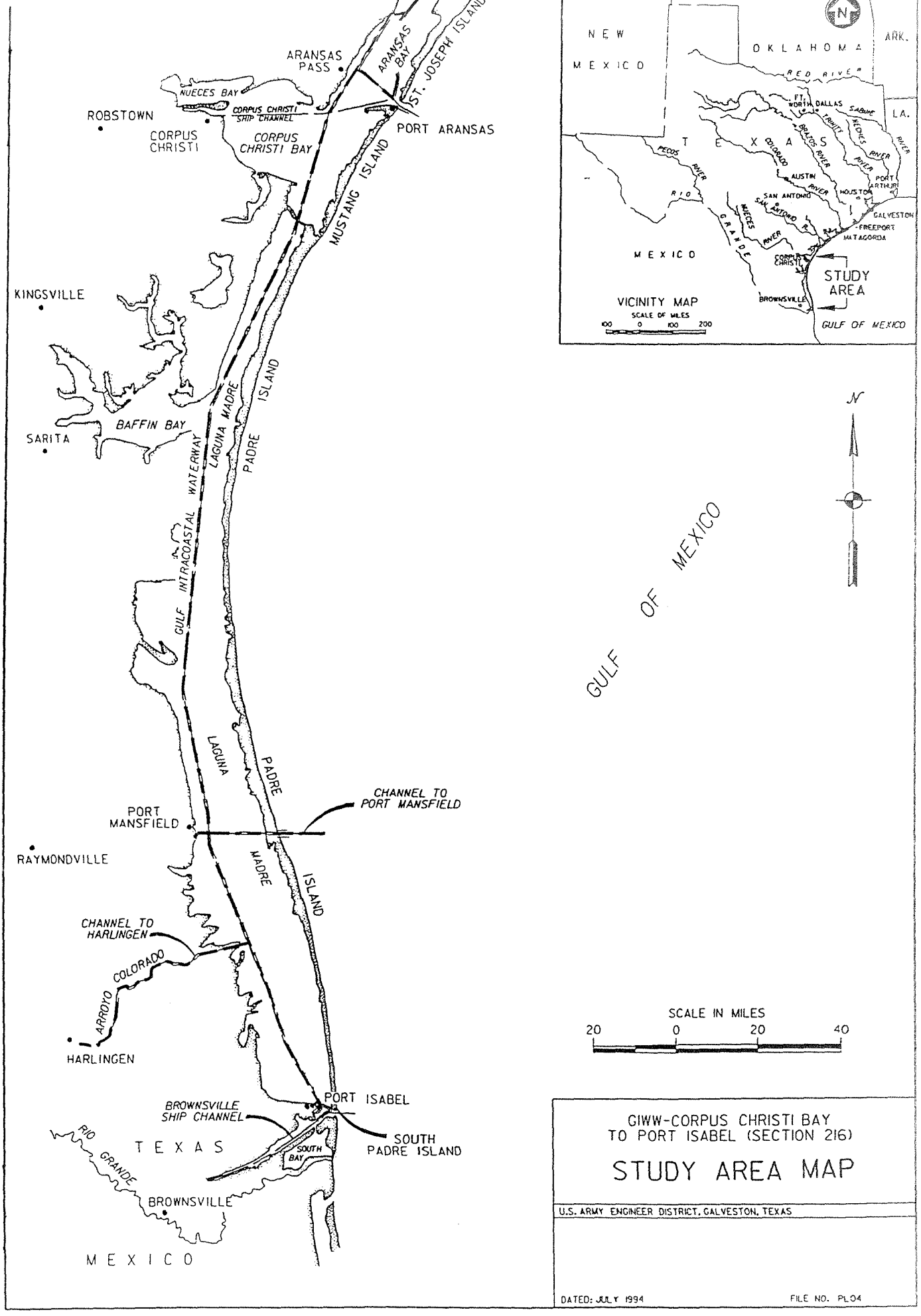
U.S. ARMY ENGINEER DISTRICT, GALVESTON
ATTENTION: CESWG-PL-R
P.O. BOX 1229
GALVESTON, TEXAS 77553-1229

All statements, both oral and written, will become part of the official record of the public scoping meeting and will be made available for public examination. Mailed statements to be included in the record must be mailed on or before **October 26, 1996** and should reference and indicate that submittal is for inclusion in the record of the public scoping meeting held in Harlingen, Texas on September 26, 1996.

Please bring this notice to the attention of others known to be interested in the subject of the meeting.

If you need additional information or have questions concerning this notice, please contact Mr. Rick Medina at (409) 766-3044 or you may write to the address above.

Eric R. Potts
Colonel, Corps of Engineers
District Engineer



GIWW-CORPUS CHRISTI BAY
TO PORT ISABEL (SECTION 216)

STUDY AREA MAP

U.S. ARMY ENGINEER DISTRICT, GALVESTON, TEXAS

DATED: JULY 1994

FILE NO. PL04

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

REPLY TO
ATTENTION OF:

Coastal Planning Branch

November 15, 1993

NOTICE OF PUBLIC WORKSHOPS FOR GULF INTRACOASTAL WATERWAY - CORPUS CHRISTI BAY TO PORT ISABEL, TEXAS (SECTION 216)

ARRANGEMENTS FOR WORKSHOPS

A series of public workshops will be held to solicit input and concerns on the Gulf Intracoastal Waterway - Corpus Christi Bay to Port Isabel, Texas (Section 216) study. Three workshops will be held on this study. These workshops will be:

December 7, 1993 7:00 p.m.	Auditorium H.M. King High School 2210 Brahma Blvd. Kingsville, Texas
December 8, 1993 7:00 p.m.	Auditorium Harlingen High School - South Campus 1701 Dixieland Road Harlingen, Texas
December 9, 1993 7:00 p.m.	Auditorium Port Isabel High School Highway 100 Port Isabel, Texas

PURPOSE

These workshops are being conducted to obtain input from the public to identify needs and concerns related to the Gulf Intracoastal Waterway

between Corpus Christi Bay and Port Isabel. Specifically, public input is requested concerning:

1) Operational problems associated with the GIWW;
2) Problems associated with current dredged material disposal practices;
3) Opportunities for the beneficial uses of dredged material;
4) Opportunities for environmental restoration; and
5) Development of a long-term disposal plan.

BACKGROUND

The Corpus Christi Bay to Port Isabel segment of the main channel of the GIWW is the first of five segments of the waterway in Texas which will be addressed. The overall study is being conducted under the authority of Section 216 of the 1970 Flood Control Act which gives the Corps of Engineers the authority to review completed Corps projects which may have changed because of physical or economic reasons.

Studies for this segment, as well as for the remaining four, will be conducted in two phases, a reconnaissance phase and a feasibility phase. The reconnaissance phase consists of determining whether there is a Federal interest in further planning. If so, the study process will continue into the more detailed feasibility phase. If all economic, technical, and environmental considerations are satisfied, a report with recommendations for implementation will be made to the Congress.

The reconnaissance phase on this first waterway segment will be completed in July 1994 with the feasibility phase requiring an additional three to four years, depending on the complexities of the issues which surface from the reconnaissance phase.

MEETING PARTICIPATION

A critical component of the study process is public input. This is an ongoing feature as the study begins with broad ideas and concepts and continues by refining, evaluating, and screening as the study progresses toward final recommendations. Therefore, it is important that your concerns be identified early in the process so that they can be given proper consideration.

Information can be presented at one of the workshops shown above, or if you are unable to attend, please mail the information to us at the address shown in the letterhead. A summary of the meetings and information received through December 10, will be sent to those on the mailing list before the end of December. If you have other input beyond these dates, please feel free to forward it to us at any time. If you have questions concerning the study or the meetings, please feel free to call Ms. Sheridan Willey at (409) 766-3050 or Ms. Karyn Trevino at (409) 766-3074.

Please bring this notice to the attention of others known to be interested in the subject of the meeting.

John P. Basilotto
Colonel, Corps of Engineers
District Engineer

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

REPLY TO
ATTENTION OF:

CESWG-CO-M

JUL 2 4 1990

PUBLIC NOTICE NO. IWW-M-9-S-1
(Supplements Public Notice No. IWW-M-9)

MAINTENANCE DREDGING
GULF INTRACOASTAL WATERWAY (MAIN CHANNEL) -
CORPUS CHRISTI BAY TO MUD FLATS

PURPOSES

This public notice is issued in accordance with the provisions of Federal regulations, Title 33 CFR 337.1 and Title 40 CFR 230, concerning the policy, practice and procedures to be followed by the Corps of Engineers in connection with the dredging or excavation of material from navigable waters or disposal of dredged material in navigable waters.

This notice is being distributed to interested State, Federal and local agencies, private organizations, news media, and individuals to assist in developing facts and recommendations concerning the proposed use of four additional disposal areas for maintenance dredging of selected reaches of the project.

This public notice supplements PUBLIC NOTICE NO. IWW-M-9, dated November 13, 1974, which described maintenance dredging of the Gulf Intracoastal Waterway (Main Channel) between Corpus Christi Bay and the Mud Flats. The purpose of this notice is to inform the public that four additional disposal areas are being incorporated into the disposal plan as presented originally by IWW-M-9.

PROJECT LOCATION

The proposed disposal areas as covered by this notice are located just north and south of Baffin Bay bordering the Gulf Intracoastal Waterway (GIWW), in Kleberg and Kenedy Counties, Texas.

PROJECT DESCRIPTION

This portion of the federally maintained 125-foot wide GIWW reaches from the vicinity of Corpus Christi Bay to the Laguna Madre Mud Flats. The authorized project depth is 12 feet below mean low tide (Corps of Engineers datum).

PUBLIC NOTICE NO. IWW-M-9-S-1

DISPOSAL AREAS

The disposal areas in this reach are used extensively for disposal operations by contract pipeline dredges. The disposal areas covered by this supplemental notice are shown on the attached drawing. Disposal areas presented in the original notice are also shown. These areas have been previously coordinated in the original notice and are not addressed in this supplement.

Disposal Areas 191A, 194A, and 196A - These three disposal areas (DA) are located on the north side of Baffin Bay along the shoreline of the Laguna Madre. They are located approximately at GIWW station numbers 123+000-128+000, 141+000-144+000, and 151+000-154+500 respectively, in the vicinity of Point of Rocks. Use of these three areas will reduce the need for open water disposal in the Baffin Bay section of the Laguna Madre. These areas are presently used for grazing, and are characterized by dense coastal prairie vegetation, and some areas of wetlands and transitional wetlands. It is proposed to initially utilize these areas as unconfined areas. The material that will be pumped to the back of the disposal areas will be allowed to flow unconfined across the areas. The natural slope of the land will drain the water towards the Laguna Madre while the dense coastal prairie vegetation will retain the solids. If needed, "wing" levees approximately 2 or 3 feet high would be constructed on the north and south limit of each disposal area to prevent the lateral spread of dredged material. Consequently, the impacts of dredging are not expected to exceed the limits shown. The wing levees could be knocked down to permit drainage during dredging jobs. After several dredging cycles, all or portions of the areas would be leveed as conditions warrant.

Disposal Area 198A - This area is located at Point Penascal approximately between GIWW stations 174+500-185+000. The north end of the disposal area will terminate approximately 600 feet from the Baffin Bay shoreline in order to exclude the wetlands on the tip of Point Penascal. This area is also presently being used for grazing and characterized by dense coastal prairie vegetation and three areas less than 2 acres each of transitional wetlands. Since this area is to be leveed, no impacts are expected outside of this disposal area.

PUBLIC NOTICE NO. IWW-M-9-S-1

COMPOSITION AND QUANTITY OF MATERIALS.

Material to be removed from the GIWW and placed in the proposed disposal areas consist of fine grained sand, clay, and silt. Shoaling in the waterway is a result of alluvial deposits occurring during high water periods and tidal actions in bays and bayous. The shoaling rate for the GIWW between stations 123+000-185+000 is 350,000 cubic yards annually.

PROPERTIES ADJACENT TO DISPOSAL AREAS

Disposal Areas 191A, 194A, 196A - These areas are all located on the west side of the GIWW on the King Ranch property in Kleberg County. All three areas are bound by grazing lands, undeveloped areas, and transitional wetlands on the north, west and south sides and the Laguna Madre on the east.

Disposal Area 198A - This area is also located on the north side of the GIWW on Kenedy Ranch property in Kenedy County. This area is bound by wetlands and Baffin Bay on the north side, grazing lands, undeveloped areas and transitional wetlands and wetlands on the west and south sides, and Laguna Madre on the east side.

DREDGING BY OTHERS

There is no dredging or disposal of materials by others covered by this notice. Non-Federal dredging activities are regulated by the Department of the Army permit program.

DESIGNATION OF DISPOSAL SITES

The proposed disposal sites have not been previously designated by the Administrator, Environmental Protection Agency (EPA).

COMPLIANCE WITH LAWS AND REGULATIONS

Coordination with the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and the Texas Parks and Wildlife Department has been accomplished. Informal consultation procedures will also be conducted with the USFWS and NMFS under the Endangered Species Act, as amended, prior to the use of the proposed areas. A water quality certification will also be requested from the Texas Water Commission.

PUBLIC NOTICE NO. IWW-M-9-S-1

The proposed areas will be coordinated with the Texas State Historic Preservation Officer. Coordination with the Advisory Council on Historic Places will be accomplished if existing or potentially eligible National Register sites are involved. All coordination will be in accordance with 36 CFR 800. Prior to use, information pertinent to the area will be reviewed to determine the potential for occurrence of any significant historic resources.

The following is a list of Federal, State, and local agencies with whom these activities are being coordinated:

Advisory Council on Historic Preservation
Environmental Protection Agency, Region VI
U.S. Department of Commerce
U.S. Department of Interior
U.S. Department of Energy
Eighth Coast Guard District
Budget and Planning Office, Office of the Governor of Texas
Texas Parks and Wildlife Department
Texas Water Commission
General Land Office
State Department of Highways and Public Transportation
Commissioners Court of Nueces County
Commissioners Court of Kleberg County
Commissioners Court of Kenedy County
City of Corpus Christi
City of Kingsville

ENVIRONMENTAL STATEMENT

A final Environmental Statement for Maintenance Dredging, Gulf Intracoastal Waterway, Texas Section, Main Channel and Tributaries was filed with the Council on Environmental Quality on January 26, 1976. The work described in this notice is incidental to and required by the plan contained in the Final Environmental Impact Statement. Subsequent to this notice, an Environmental assessment will be prepared and the appropriate NEPA compliance document will be filed with the Environmental Protection Agency.

CESWG-CO-M JUL 2 4 1990

PUBLIC NOTICE NO. IWW-M-9-S-1

Designation of the proposed disposal plan for dredged material associated with this Federal project shall be made through the application of guidelines promulgated by the Administrator EPA in conjunction with the Secretary of the Army. If these guidelines alone prohibit the designation of this proposed disposal plan, any potential impairment to the maintenance of navigation, including any economic impact on navigation and anchorage which would result from the failure to use this disposal plan, will also be considered.

REQUEST FOR PUBLIC HEARING

Any person who has an interest which may be affected by the use of the proposed disposal area may request a public hearing. The request must be submitted in writing within 30 days of the date of this notice and must clearly set forth the interest which may be affected and the manner in which the interest may be affected by this activity.

Persons desiring to express their views or provide information to be considered in evaluating the impact of this work and the future maintenance and operations are requested to mail their comments within 30 days of the date of this notice to:

District Engineer
U.S. Army Engineer District, Galveston
Attn: CESWG-CO-M
P.O. Box 1229
Galveston, Texas 77553-1229

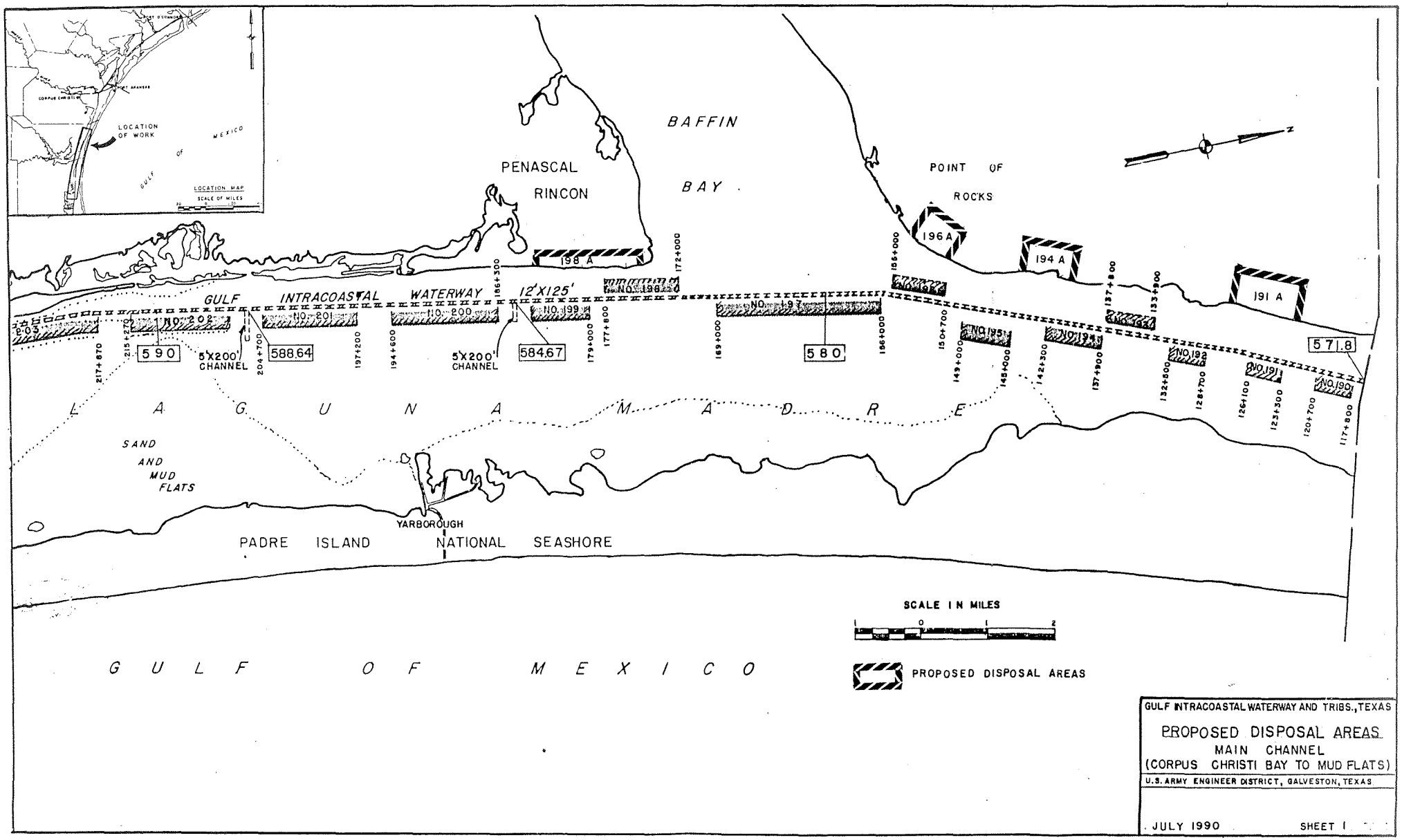
with specific reference to Public Notice No. IWW-M-9-S-1, dated JUL 2 4 1990.

Comments must be submitted to the above address on or before AUG 2 3 1990.

Any questions concerning the proposed action may be directed to Mr. Casey Cutler, 409-766-3963.

Brink P. Miller
Colonel, Corps of Engineers
District Engineer

Enclosure



GULF INTRACOASTAL WATERWAY AND TRIBS., TEXAS

PROPOSED DISPOSAL AREAS
MAIN CHANNEL
(CORPUS CHRISTI BAY TO MUD FLATS)

U.S. ARMY ENGINEER DISTRICT, GALVESTON, TEXAS

JULY 1990 SHEET 1

Section 3:

Public Comments

DE
PE-LS

LLMF

Lower Laguna Madre Foundation
P. O. Box 153
Port Mansfield, Texas 78598
PHONE: 956-944-2387 FAX: 956-944-2278
e-mail llmf@granderiver.net

June12, 2003

Colonel Leonard D. Waterworth
District Commander
U.S. Army Corps of Engineers
2000 Fort Point Road
Galveston, Texas 77550

Re: Lower Laguna Madre Foundation (LLMF) comments pertaining to the Laguna Madre Draft Environmental Impact Statement

Dear Colonel Waterworth:

The Lower Laguna Madre Foundation wishes to thank all members of the ICT who spent many years searching for a solution to the questions contained in the DEIS. The LLMF acknowledges some progress has been made and believes that with additional effort a DEIS/DMMP can be completed that will make all citizens of the United States proud. Sadly, we feel the DEIS currently falls short of its NEPA mandate regarding protection of the Laguna Madre. Perhaps the clearest evidence of the bias of the DEIS favoring industry over the environment was illustrated at the May 8, 2003 DEIS public hearing held in Brownsville, Texas. Representatives from the ports, the barge companies and the dredging interests all stood up and gave the DEIS rave reviews. All other interested parties were disappointed, to say the least. 1

In the spirit of *essayons* the LLMF hereby submit its comments regarding the Laguna Madre DEIS.

Section 3.12.2.3: According to the figures provided in the DEIS, 64% of the commodities transported along the Laguna Madre reach of the GIWW are refined petroleum products. Despite this acknowledgement the DEIS does not contain a detailed cost comparison of pipeline versus barge transport. Why? The DEIS fails to acknowledge the existence of the pipeline that runs from Corpus Christi to the Rio Grande Valley. Instead the DEIS makes only a brief mention of a *proposed* pipeline and then suggests that using this *proposed* pipeline could increase transportation costs by five million dollars per year! This conclusion is invalid on its face because a pipeline *does* exist! In reality the existing pipeline has recently been upgraded and is capable of handling most, if not all, of the refined petroleum product currently transported via shallow draft barges (August 15, 2000 Coastal Corporation Press Release, attached). A fair cost comparison must take the existence of this pipeline into account. 2

It is the opinion of the Lower Laguna Madre Foundation that this pipeline *vs* barge cost comparison was not done because it would reflect badly on the viability of the GIWW south of Corpus Christi. In fact, the current benefit/cost ratio is so marginal that if even a small amount of product currently being shipped via barge were transferred to the pipeline, the benefit/cost ratio would likely drop below the necessary 1:1 that is required to show a continued federal interest in the Laguna Madre reach of the GIWW. 3

In addition to making great sense environmentally as well as economically, it should also be noted that pipelines provide a safer alternative to barges or trucks. The deaths of eight people as a result of the collapse of the Queen Isabella Causeway in September of 2001 and the deaths of fourteen people last May on the I-40 bridge over the Arkansas River, both of which were caused by barge collisions, serves to highlight this issue. According to the National Transportation Safety Board (NTSB), in the past ten years alone there have been approximately two thousand seven hundred collisions of our nation's bridges. When one takes into account the projected population growth of the Rio Grande Valley, it is clear that tragic event such as the collapse of the Queen Isabella Causeway will become more likely not less. The possible construction of a second causeway makes this yet more likely. 4

Section 4.17 states: "Only placement on terrestrial upland areas or leveed (in the bay) areas would prevent direct impacts to the seagrass beds, though the conveyance to the upland sites would impact seagrass habitat, along with other estuarine and upland habitat." The LLMF agrees that upland disposal is a very bad option and should be discarded. The fact the DEIS recognizes the importance of removing the material from the system is also a point of agreement.

We do not agree, however, that upland or leveed sites in the Laguna are the only option. We believe offshore placement resolves the issue. Offshore placement does not destroy seagrass, upland, or other estuarine habitat, and also eliminates the costly routine of reworking the same material. Offshore placement would also protect the Laguna from storm related releases of spoil from "contained" sites. The ICT argument against the LLMF's preferred method (cutterhead/scow) appears to be based on cost concerns. ICT chairpersons stated many times that *cost and political expediency* were not considerations in the creation of the DMMP. If this is true then why is offshore placement considered "fatally flawed" for the lack of scows? Scows are easily built and if amortized over the life of the DMMP would be quite cheap and readily available (Gahagan & Bryant Associates, April 12, 2001, attached). 5

A recent technical paper in the Journal of Waterway, Port, Coastal and Ocean Engineering is entitled, "*Factors Controlling Navigation-Channel Shoaling in Laguna Madre, Texas*" (Morton, R. A. et. al., 2001). This paper concludes in part:

" Shoaling in the Ocean Intracoastal Waterway of Laguna Madre, Texas caused primarily by recycling of dredged sediments. Sediment recycling, which is controlled by water depth and location with respect to the predominate wind-driven currents, is minimal where dredged material is placed on tidal flats that are either flooded infrequently or where the water is extremely shallow. In contrast, nearly all of the dredged material placed in open water > 1.5m deep is reworked and either transported back into the channel or dispersed into the surrounding lagoon..." 6

The DEIS indicates that only a 14% savings would accrue if all material were to be placed offshore. This assumption seems illogical in view of Morton's findings that nearly ALL material placed in open water sites ends up back in the GIWW or is dispersed into the Laguna. The LLMF believes this 14% figure was arrived at politically not scientifically. 7

Transporting material from reaches 1 and 2 and existing upland areas (such as the mouth of the Arroyo Colorado) offshore would obviously give a wrong impression as to the economic viability of the offshore option. The LLMF has never suggested moving material from these areas offshore. Reworking would be eliminated if offshore placement were used. This would save millions of tax-dollars over the life of the 50-year DMMP. Reducing dredging frequency by eliminating reworking is the key to saving tax dollars and seagrass. The DEIS acknowledges this by referring to savings associated with reduced frequency in the context of upland and leveed in-the-bay placement. 8

Why not with offshore placement? The LLMF believes this is where political expediency comes in! A portion of the cost of offshore might have to be born by the primary beneficiaries of the GIWW (the barge companies). It is the LLMF's belief that the powerful barge lobby continues to hold sway over the Corps on the issue of offshore placement. 9

Mobilization/demobilization costs are typically the costliest part of most dredging projects. This aspect of future dredging costs was apparently not taken into consideration when "fatally flawing" the offshore placement option. 10

Excerpt from Carl Betteron, Chief of O&M, and USACE letter of June 16, 1994, attached:

"The point about placement of dredged material on King Ranch property versus open bay placement is a false dichotomy. Think about it. Even if the King Ranch had willingly turned over the property, nothing would have been resolved.

The portion of GIWW dredged material which would have been placed on the ranch property is a minuscule part of the total material; the vast majority would still be targeted for open water placement. So the key issue would have remained unresolved."

On October 24, 1996 Governor George W. Bush sent a letter to Colonel Eric R. Potts, Galveston District Engineer. Governor Bush's letter stated in par, attachedt:

"Offshore disposal should be considered in the SEIS, as well as other disposal options. All parties should have complete information as to cost implications of offshore disposal methods and potentially related effects on overall dredging frequencies. An objective analysis will enable all concerned to determine what is best for Texas and begin exploring the most appropriate funding sources."

In a related newspaper article (Valley Morning Star September 26, 1996 attached), Governor Bush supported offshore placement of Laguna Madre GIWW dredge spoil: " *It would be nice if the federal government would spend more money to do that"*, he said. " *I believe that's a solution that everybody could live with."*

Summary of Offshore Position:

For over a decade the Lower Laguna Madre Foundation has endorsed the offshore placement option, because we believe it is the only option that protects the living resources of the Laguna and acknowledges the importance of the GIWW. Therefore, it is the only politically viable option. It allows the Corps to fulfill its congressional mandate, as well as, be in full compliance with the provisions of the National Environmental Policy Act. We believe the debate over the damage caused by open bay dumping will never be resolved until offshore placement is given a full and serious look. This was not the case in the ICT/DMMP or the DEIS. 11

Other comments regarding the DEIS are as follows:

On the one hand the DEIS claims credit for the reduction of salinity thru the construction of the GIWW (salinity reduction is not necessarily a good thing) and at the same time claims the DMMP will have no impact. Perpetuation of the GIWW will obviously continue to influence the salinity regime of the Laguna Madre. Whether this "freshening" is beneficial is open to debate and deserving of further study. 12

Referring to ES-1: the public was granted very limited access during the ICT process. Meeting notices were issued sporadically. Venues and meeting times placed an unreasonable burden on public participants. 13

Referring to ES-2 "primary concerns": the LLMF suggest seagrass protection be listed as a primary concern. 14

Referring to ES-3: the LLMF believes the most "obvious" impact of the current no-action alternative is the systematic loss of seagrass meadows in the Lower Laguna Madre. We also believe that the no-action alternative should be the cessation of dredging not the business as usual method of open-bay dumping. 15

Referring to ES-3: the LLMF believes the statement "The modeling studies showed that small impacts to be expected from turbidity from open-bay unconfined dredging and placement" This statement has no basis in reality and reflects flaws in the modeling study. Many studies (Quammen, Onuf 1993, USACE Section 216, January 1997) have shown great impact to seagrass due to open bay dumping and dredging activities in general. 16

Referring to ES-3 (Salinity): the LLMF argues that peer reviewed studies (Quammen, Onuf 1993 USACE Section 216, January 1997) have shown dredging projects have decreased the hyper-salinity of Laguna Madre, causing a drastic reduction in the acreage of Shoalgrass and a dramatic increase in Manatee Grass and other arguable less desirable seagrasses. Loss of Shoalgrass threatens the existence of Redhead ducks (Woodin), a federally protected species that could soon become endangered if the loss of Shoalgrass continues. Either alternative will continue to affect the salinity making this statement false and misleading. 17

"The salinity story can be argued from both sides (either higher or lower) so it is a complicated story. But the hypersalinity amelioration occurs in the upper Laguna only, where salinities once were near 100 they are now in the 40s and 50s. I think most estuarine biologists would agree that a fluctuating salinity that ranges from 10 to 30 ppt is optimal. Prolonged hypersalinity (>50) and prolonged freshets do cause damage to estuarine organisms. The problem is how long is long? I would guess more than a week. But in the end, estuarine organisms are euryhaline and can stand wide fluctuations in salinity over short time periods without any harm." (Montagna, email to LLMF on June 6, 2003)

Referring to ES-5 The statement, "No live oyster reefs occur within the Laguna Madre ecosystem, with the exception of the South Bay population", is false. A significant live oyster reef does exist a short distance east of PA 220 on both the north and south sides of the Mansfield Channel. This reef is expanding, primarily to the west, thus bringing it closer to PA 220 each year. Another live oyster reef is located a short distance southeast of Three Islands. 18

Referring to ES-6 The DEIS makes the statement that turbidity's impact is short term and local. Peer reviewed studies (Quammen, Onuf 1993) have shown the impacts to be long term, cumulative and far-reaching. The LLMF believes the constant denial of accepted facts, such as this, weakens the credibility of the entire DEIS. 19

Referring to ES-7 (Wildlife Resources) Upland spoil containment sites attract wildlife such as whitetail deer and Nilgai due to their retention of rainwater. Once attracted these animals are often sucked down by the quicksand like ground conditions that exist within the sites. The animals then die a slow and painful death. 20

The vast majority of spoil islands in the Lower Laguna Madre are not viable rookery islands, because they are often land-bridged to the mainland, and are thus regularly patrolled by predators such as raccoons and coyotes. 21

The USACE Section 216 Reconnaissance Report January of 1997 states: "*Additional detrimental effects attributed to the GIWW include blocking circulation within and between some coves and the lagoon by accumulating dredged material in an area until it becomes emergent or nearly emergent.*
Besides altering circulation patterns, the shallow disposal areas also allow terrestrial predators (coyotes and raccoons) easy access to several islands that were previously used as nesting sites by colonial waterbirds."

To constantly suggest spoil islands are valuable bird rookeries is a false and misleading statement. Currently the National Audubon Society leases a tiny number of spoil islands in the Lower Laguna Madre because their experts have determined the vast majority of spoil islands to be of little use as sanctuaries or rookeries. It is worth noting that National Audubon was the lead plaintiff who sued the Corps in 1994 for reasons related to spoil island proliferation. 22

ES-11 (Cultural Resources) There are many terrestrial archeological sites along the west shoreline of the Laguna Madre making ES-11 false and misleading. 23

Section 3.1.3 (Hydrology) The profound consequences on the hydrology of the Laguna Madre occur as a result of compartmentalization (Section 216 Reconnaissance Report January 1997) the creation of spoil islands both emergent and submerged causes a severe disruption of the natural hydrology of the Laguna Madre. Thousands of acres of bay have been cut-off from the main part of the Laguna as a result of spoil islands. 24

The most acutely impacted areas are those areas in reaches 5 and 6. An archipelago of spoil islands stretches from just south of Port Mansfield to just north of the Queen Isabella Causeway. Because many of these islands were created prior to the 1975 EIS, a full understanding of these island's impacts have not been adequately studied. To enlarge and perpetuate these islands by hardening them as is proposed in the DMMP is not advisable. 25

It is the fervent wish of the Board of Trustees of the Lower Laguna Madre Foundation that the Corps of Engineers addresses all listed concerns in a way that demonstrates a sincere desire to resolve this long standing and contentious matter regarding the degradation of the Laguna Madre due to the destructive practice of open bay dumping of dredge spoil. 26

Sincerely,

Walt Kittelberger, Chairman
Lower Laguna Madre Foundation

RESPONSE TO COMMENTS

Walt Kittelberger
Lower Laguna Madre Foundation
P.O. Box 153
Port Mansfield, Texas 78598

Comment No. Response

1. A public meeting is an opportunity for the public to present their opinions and concerns. Representatives from the user groups have this right and just because they express their views at a public meeting does not mean it is a sign of bias of the DMMP favoring industry. Representatives of other groups, such as the LLMF, attended these meetings and expressed their opinions, but you have not considered this as a bias of the DMMP favoring your group. Opposing opinions by different groups is a sign that the process outlined by NEPA is working. The DMMP and EIS have addressed the concerns expressed in the various public meetings.

2. The economic analysis and initial write-up were prepared before a detailed cost estimate was initiated. Due to a lack of information, average annual costs were estimated based upon the gross assumption that costs would be distributed evenly throughout the 50-year project life. This assumption is very conservative and results in an overstatement of average annual project costs. After the cost analysis was completed, the cost data were reanalyzed using the new dredging cycle data which resulted in a much lower average annual cost than the gross initial calculations. A revised write-up of the economic analysis was prepared for the DEIS, but the changes to the economic write-up were inadvertently left out of the DEIS. The corrected economic analysis has been included in the FEIS.

   The table below provides the corrected Average Annual Benefits and Maintenance Costs and Benefit-Cost Ratios (thousands of dollars) to facilitate a response to comments. The table shows the correct, or more detailed, cost estimates inadvertently omitted from the DEIS.

Table 4-9. Average Annual Benefits and Maintenance Costs, and Benefit-Cost Ratios (thousands of dollars)

Scenario	Average Annual Benefits	Average Annual Costs	Net Benefits	B/C Ratio
Benefits start first year of project life	$22,378	$7,610	$7,610	2.9
Benefits start after 5 years of channel shoaling	$18,151	$7,610	$10,541	2.4

Walt Kittelberger
Lower Laguna Madre Foundation
P.O. Box 153
Port Mansfield, Texas 78598

The expansion of the existing petroleum pipeline was completed in 1998, following completion of the TAMU study. The impact of the pipeline expansion is reflected in current cargo flow statistics, i.e. transfers of goods from barge to pipeline are reflected in the current tonnages. Barge shipments of petroleum products decreased approximately 7% from 1998 to 2001, only a slight decrease. Barge transport of gasoline decreased approximately 36%, while distillate fuel oil increased 347%. Since expansion of the pipeline, there has been a slight change in the distribution of petroleum products shipped, however, overall demand for barge transportation of petroleum products has remained stable. By utilizing current tonnages, the analysis has captured the impact of the pipeline and 1998 expansion. The continued operation of the Laguna Madre portion of the GIWW remains the least costly transportation mode (with the expanded pipeline in place) with a B/C ratio of over 2.4.

With regard to the quoted $5.17M increase in transportation of refined petroleum products (1998 TAMU study), the statement means that if the Laguna Madre were closed and all refined petroleum products were shipped by other means, including the pipeline, costs would be expected to increase. This is due to increases in transportation costs for other goods within the petroleum product category that cannot be shipped via the same pipeline. In addition, significant increases in transportation costs of other commodities would be expected. These goods would be shipped by the least cost alternative mode, shown to be a combination of rail and inland waterway barge (to Corpus Christi), but at a greater cost than the barge all the way to Brownsville mode.

3. Please see response to LLMF Comment 2.

4. It is true that pipelines provide a safer alternative to waterborne transportation, rail, air, and highway transportation. However, the probability of an event, like the collapse of the Queen Isabella Causeway, is quite remote. Risks are associated with all modes of transportation. To illustrate, statistics on transportation fatalities by mode for 2001 are shown below. The waterborne transportation fatalities include recreational boating fatalities.

   It is important to note that pipelines simply cannot transport all commodities. Other modes are necessary. Waterborne commerce is a very safe mode of transport compared to highway transportation and is comparable to the safety of rail and air modes.

Walt Kittelberger
Lower Laguna Madre Foundation
P.O. Box 153
Port Mansfield, Texas 78598

Transportation Fatalities by Mode (Number)

Mode	Fatalities
Highway	41,821
Air	760
Waterborne	820
Rail (550) and Gas and Hazardous Pipeline (38)	588

SOURCE: Bureau of Transportation Statistics, *National Transportation Statistics 2001*, preliminary data, in press.

5. Placing the dredged material offshore was considered by the ICT, but had to be rejected for engineering reasons and Federal regulations, because it was realized that arguments similar to this, and they were broached in ICT meetings, did not agree with the facts. Gahagan & Bryant (2001), attached to the LLMF letter ignores one extremely important fact. According to the experts retained by the USACE, the only avenue for the use of the number of tugs and scows required would be for one company to invest the capital to build the necessary equipment, knowing that it would be the only bidder, since no other company would have sufficient equipment. No company would make that kind of investment if there were any possibility that equipment might sit idle for years at a time. The EIS includes information on the elevated costs incurred by the USACE when there is only one bidder versus multiple bidders for a dredging contract. If there were no possibility of competition, this elevated cost factor would likely increase. While the cost was not considered in the development of the DMMP, it cannot be ignored. The ICT looked at engineering feasibility based on competitively available equipment, not conjecture about what could happen under a highly speculative scenario.

6. This information is provided in the EIS, is from a study conducted for the USACE on the recommendation of the ICT, and was used by the ICT in its deliberations. Therefore, the ICT recognized the importance of reducing the amount of dredged material runoff that could be reworked and adopted the best management practices available to reduce this runoff. These practices included, among others, using training levees on islands to help retain the material and fully confining other PAs, where practical, to remove the material from the system. Thus, the DMMP reduces the amount of dredged material available for recycling.

7. This value is from the hydrographic/sediment transport model developed for the Laguna Madre, as explained in the DEIS. Because of uncertainties that accrue in the model with multiple-year runs, the ICT realized that multiple year runs were neither feasible nor informative. Therefore, this value, derived from a scientifically based model, represents the reduction from totally confined placement from a dredging cycle, which included a

Walt Kittelberger
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one-time event for the whole Laguna Madre. It was only used to determine the reduced frequency of dredging placement alternatives that removed some or all of the maintenance material from the system in the matrix analysis that was conducted in the early portions of the deliberations. Since the DMMP provides for more confinement of material than the No-Action alternative, it represents a reduction of impacts to the ecosystem. If the reduction is greater than the model predicts over time, then it represents a greater reduction in impacts than described in the EIS.

8. The ICT looked at offshore disposal using a pipeline hydraulic dredge and hopper dredges for the entire reach of the GIWW in the Laguna Madre only in the early stages of the study. After it was obvious that hopper dredging was impractical for the entire reach, the ICT looked at hopper dredges, hydraulic dredge with scows, and clamshell dredge with scows for Reach 6 only which is between Brazos Santiago and Mansfield Passes (reduced travel time) and which contains one of the highest shoaling rates in the entire Laguna Madre. This would have been the best candidate for reducing recycling of dredged material, as well as reducing cost. This alternative also proved impractical due to equipment needs and cost which varied from 3.2 to 18.8 times the present cost (if the equipment was available). The ICT also looked at using a hydraulic dredge and piping it two miles offshore in all reaches, except Reach 3, but that cost varied from 6.4 to 17.7 times the present cost. This translates into a total cost over the 50 year period for offshore placement provided above of $129.6 million to $761.4 million (Reach 6 only) compared to $40.5 million for the present practice and $40.8 million for the DMMP. It would be difficult to justify the additional cost based on the potential, but unknown, reduction in recycling of material. Recycling of material in the Laguna Madre will never be eliminated because there will always be erosion of existing islands and the west shoreline (the Laguna Madre is migrating westward according to Dr. Morton) and the influx of fresh sediments from the passes and, especially, from the periodic influx of tremendous sediment loads from tropical storms.

9. The DMMP was prepared following the recommendations of the ICT after reaching consensus. The ICT considered the offshore alternative in various forms and reached the conclusion that it is not a viable solution at this time. Therefore, there is no political control of the outcome of the DMMP since the barge industry does not control any members of the ICT.

10. It is not clear to what this comment is referring. Mobilization/demobilization cost is also part of offshore placement.

11. Placement of all maintenance material offshore was given a careful and thorough analysis by the ICT before reaching the conclusion that it was not a viable option and was, therefore, eliminated form detailed consideration. Whether or not there is debate about it, although there was considerable discussion of the issues within the ICT, does not affect its viability. As a non-viable alternative it should not have been, and therefore was not, examined in great detail in this EIS. Should it become viable in the future, the

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environmental consequences of ocean placement will be evaluated via the NEPA process.

12. Salinities will not be further reduced in the Laguna Madre with the DMMP alternative. USACE is not aware of any great concern expressed in the literature about the Laguna Madre becoming "fresh". In fact, the GIWW is credited with allowing the expansion of seagrass into the upper lagoon, which is considered a "good thing" by scientists and fishermen alike. Also, the DMMP provides new placement methods that should impact fewer resources than the current practice.

13. While the ICT meetings, but not workshops, were open to the public, they were designed as working meetings for the members of the ICT. Therefore, they were logically set during the working hours of the ICT members and at convenient locations for the members to attend.

14. Submerged aquatic vegetation is included under the category of "Coastal community types", which is listed as one of the primary concerns that are addressed in the EIS.

15. The impacts of the present dredging operation on seagrasses in the Laguna Madre, as well as the impacts of the proposed DMMP, have been fully described in the EIS. The reasons for describing the No-Action alternative as the present condition under the current dredging plan rather than a pre-GIWW condition are fully described in Section 2.2.

16. Although the change in salinity, from opening the Land Cut with the GIWW, undoubtedly accounts for the dramatic increase in seagrass coverage in both the Upper and Lower Laguna Madre, the channel has been dredged for over 50 years, using almost exclusively open bay placement and there were 178,600 acres of seagrass in the Laguna Madre in 1998, according to the TPWD. This compares to an estimated 182,876 acres in 1965 and 180,405 acres in 1988, based on the data in Quammen and Onuf (1993). This implies that, while open bay placement may have a negative impact on seagrasses, it is not a dramatic one and, of course the brown tide event occurred between 1988 and 1998 and that had a dramatic impact on seagrass coverage in the Laguna Madre (Onuf, 1996). Additionally, the model, while it surely has limitations as do all models, was verified against empirical field data. As was noted in the DEIS, there are different interpretations to some of the data that were referenced.

17. The extensive SAV in the Upper Laguna Madre results from the greater circulation associated with the GIWW itself, not placement practices. The continued lower salinities, coupled with species-specific successional trends, may cause changes in SAV species composition but this would occur under either the No-Action or the DMMP Alternative. Data on the redhead duck population indicates no decrease along the Texas coast. For instance, for the years 1990 through 1999, the number of redheads

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counted on the TPWD mid-winter waterfowl surveys on the lower Texas coast ranged from a low of 141, 618 in 1990 to a high of 559,274 in 1995, with the latest count in 1999 equal to 249,342. Totals for the entire Texas coast (upper and lower were not broken out after 1999) ranged from 108,416 in 2000 to 563,761 in 1995, with the latest count in 2002 equal to 506,429. The numbers vary greatly from year-to-year. These data have been added to the final EIS. Additionally, according to Mitchell (1992), redheads feed on Halodule in 5 to 12 inches of water. For any loss of seagrass to impact redheads, it would have to be in very shallow water, not in the deeper water indicated by Dr. Onuf as areas of concern. Were the redhead to become threatened or endangered, the FWS would determine if the cause was in the breeding grounds or the wintering grounds. Furthermore, the quote from Montagna, would appear to argue for more decrease in salinity rather than an increase to the pre-GIWW period.

18. Thank you for the information. There is no reference to these reefs in the literature, so it is good information to have.

19. The DEIS cites numerous references, all peer reviewed, that indicate the impacts are as stated. The EIS also includes the statements of Dr. Onuf, but this does not convince us that his is the only one of all these studies that is correct.

20. This is the only reference we have ever heard of this condition. We would appreciate any studies in which this is documented.

21. The ICT was aware of this situation and the DMMP includes efforts to enlarge channels between islands and other measures to reduce predation.

22. The DMMP follows the recommendation of the Colonial Waterbird Management Plan, to the extent practicable, and the recommendation of the State and Federal agencies mandated with protecting environmental resources, via their representatives on the ICT. The fact that placement areas are used as rookeries is neither false nor misleading as a search of the literature and interviews with agency personnel will confirm.

23. While it is true that there are archeological sites on the shoreline of the Laguna Madre (57 are noted in Section 3.11.3.9 of the DEIS), no terrestrial site was sufficiently near the project to be affected by either the dredging or the placement. The text will be examined to ensure that this is clear in the EIS.

24. There is no doubt that digging the GIWW has altered the hydrology of the Laguna Madre. The ICT recognized this impact, especially in the shallow embayments west of the PAs in Reach 5 and recommended ameliorating the impact by confining dredged material and enlarging some of the circulation channels between the PAs.

25. Again we would reiterate existing islands are included in both the No-Action and DMMP alternatives, as part of the existing baseline. For this area, we would note that with the

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DMMP alternative, PA 221, which is in Reach 4 but just south of the Mansfield Channel, is to be moved to the deeper water east of the GIWW to eliminate continued use of the existing PA 221, and the gaps between PAs 222 and 223 and between PAs 223 and 224 will be widened to reduce predation. Also, see LLMF Comment 24 for additional information on reducing these impacts.

26. We believe the USACE, with the considerable help of the ICT, has addressed all listed concerns in the EIS and DMMP to resolve the critical issues raised by you and other commenters. The ICT participated fully in preparing the EIS and DMMP and reached consensus on all management plans proposed in the DMMP to reduce placement-related impacts to the ecosystem in the Laguna Madre.

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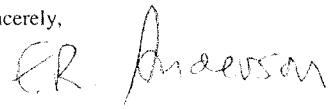
Re: Comments on Draft EIS for Gulf Intracoastal Waterway, Laguna Madre, Texas, Maintenance Dredging

Gentlemen:

Enclosed are comments submitted on behalf of the King Ranch, Inc. regarding the above referenced draft environmental impact statement, including the proposed Dredged Material Management Plan, Biological Assessment, Texas Coastal Zone Management Plan consistency determination, and Clean Water Act Section 404(b)(1) evaluation.

Sincerely,



Frederick R. Anderson
Jonathan R. Stone

Counsel for the King Ranch

cc: Jack Hunt, President, King Ranch, Inc.
Frank Perrone, Esq., General Counsel, King Ranch, Inc.
Sally Davenport, Texas Coastal Coordination Council

Enclosures

Comments on Draft Environmental Impact Statement for Gulf Intracoastal Waterway, Laguna Madre, Texas, Maintenance Dredging

These comments are submitted on behalf of the King Ranch, Inc. regarding the Draft Environmental Impact Statement for the Gulf Intracoastal Waterway, Laguna Madre, Texas, Maintenance Dredging (U.S. Army Corps of Engineers, April 2003) ("DEIS"), including the following program documents that are incorporated into the DEIS: proposed Dredged Material Management Plan ("DMMP") (DEIS Appendix A); Biological Assessment (Appendix D); Texas Coastal Zone Management Plan consistency statement (Appendix F); and Clean Water Act Section 404(b)(1) evaluation (Appendix G).

Neither the DEIS nor any of the above referenced program documents propose the adoption of any upland disposal alternative, nor do they make any of the requisite determinations that would be required in order to adopt any upland alternative. In the unlikely event that any proposal to adopt an upland alternative should be made, the King Ranch reserves its right to submit comments on the required draft EIS and program documents for such a proposal. 1

The King Ranch shares the goals of protecting the unique environment of the Laguna Madre, including all components of the in-bay and critically related onshore ecosystem. The King Ranch's support for these goals arises from its historical stewardship of the near-pristine lands along the Laguna Madre shoreline. There may not be another ranch in the United States, and very few in the world, that have the historical importance and natural beauty enjoyed by the King Ranch. King Ranch is designated by the United States government as a National Historic Landmark based on its history and location. The Laureles and Norias Divisions along the coast across from Padre Island National Seashore are defined by their unique ecosystem which is home to abundant wildlife and big game, many varieties of birds, and other fauna. They offer scenic views, premier salt water fishing, and habitat for numerous endangered and other rare species. In addition to animal husbandry and agriculture, King Ranch operates a number of conservation programs and ecotourism projects. Many staff members devote full time to protecting and maintaining the abundant natural amenities that help make this area unique. Ranch biologists continue to expand the King Ranch Nature Tour Program, which attracts wildlife and bird watchers from all over the world. The King Ranch provides critical wintering shelter for many migratory bird populations. The American Bird Conservancy has designated the King Ranch as a Globally Important Bird Area, and the Conservancy determined that the King Ranch is among the top sites in the world that are "exceptionally important – even essential – for bird conservation." The King Ranch offers to the public history, nature, and agriculture tours, and hunting for deer, quail, turkey, feral hog, javelina, and nilgai antelope. Approximately 700,000 acres of King Ranch provide exceptional wildlife habitat which includes live oak mottes, sand dunes, prairie and mixed brush communities, and twelve thousand acres of wetlands along the western shoreline of the Laguna Madre. 2

A. UPLAND ALTERNATIVES

The King Ranch concurs with the DEIS's conclusion that "upland" disposal of dredged materials on the western shoreline of the Laguna Madre is not environmentally acceptable, and

the King Ranch concurs with the decision in the DMMP to not use any upland disposal sites.[1] We note that the matrix analyses for all Reaches except the Land Cut (Reach 3) project that the upland alternatives would cause the highest adverse impacts to human uses, and the highest overall adverse impacts taking into account impacts on all receptors, compared to all other disposal alternatives (see DEIS pages 2-38, 2-42, 2-48, 2-51, 2-55). We also note that the term "upland" could be misleading to the casual reader, since the potential upland disposal sites are actually directly adjacent to the bay waters, and are in fact wetland rather than high ground. 3

For the record, we submit the following additional information regarding upland disposal alternatives, which would have to be incorporated in a new or supplemental EIS if any proposal to use upland sites is ever considered for adoption: 4

1. Physical Impacts of Upland Disposal Sites

The enclosed report by the engineering firm Gahagan & Bryant Associates, Inc. (*Analysis of ICT-Identified Confined Upland and Thin Layer Placement Sites, GIWW, Laguna Madre, TX*, Oct. 2001) projects the extensive physical footprint of the "confined" and "thin layer" upland disposal alternatives on the onshore and offshore areas of the Laguna Madre. Under either disposal alternative, approximately 89 million cubic yards of dredged waste would be disposed of onshore during the 50-year life of the proposed DMMP. Approximately 315 acres of nearshore bay bottom including seagrasses would be dredged to create pipeline corridors to shore, and 64 acres of onshore coastal area would be converted to pipeline corridors. Gahagan's detailed analyses demonstrate that the 50-year project would entail approximately 94,000 pipeline-mile-days (p-m-d, a measure of some pipeline impacts on undeveloped areas such as the Laguna Madre).

If the thin layer disposal alternative is selected, Gahagan calculates that a very large area -- approximately 73,000 acres -- of shoreline will be buried for the 50-year program. The shoreline burial corridor will be approximately 89 miles long by 1.3 miles wide, i.e., 79 percent of the entire length of the Laguna Madre coastline. The enormous extent of this burial corridor appears to be consistent with projections in the DEIS (see DEIS page 2-23).

Gahagan demonstrates that if the confined disposal alternative is selected, diked disposal sites ranging from 29-feet to 33-feet in height (i.e., *at least three stories high*, which comports with the DEIS estimate of approximately 30 feet) would wall off 20 miles of the Laguna Madre shoreline from the bay waters for the 50-year program, destroying the normal shoreline exchange of water, nutrients, and wildlife – a form of environmental disruption that would require special analysis in any EIS proposing to adopt a confined upland alternative. (Any proposal to adopt such an alternative surely would be rejected by the President's Council on Environmental Quality as "environmentally unacceptable."[2]) The disposal sites would bury approximately 4,287 acres of shore. Additionally, Gahagan calculates that a minimum of 41 acres would be converted to access roads for site construction and maintenance.

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[1] These Comments do not address disposal on emerged surfaces at the Land Cut.

[2] See 40 C.F.R. Part 1504.

2. Biological, Aesthetic, and Cultural Impacts of Upland Disposal Sites

The enclosed report by biologist Dr. John H. Rappole (*Analysis of the "Upland" Option for Disposal of Dredge Materials from* the *Laguna Madre: Upland Disposal Causes Severe Environmental Damage*, Oct. 2, 2001) projects biological impacts from potential upland disposal alternatives. Dr. Rappole concludes that upland disposal would cause particularly severe impacts on the unique and pristine Laguna Madre ecosystem, which is part of the most biologically diverse region in North America north of the tropics.[3]

Dr. Rappole's analysis shows that upland disposal would not protect seagrasses in the bay, and in fact would actually harm seagrasses. The harm would in part be caused by the return flow of suspended sediments to the bay waters from the disposal sites. As Gahagan notes, return flow is a necessary design component of the upland disposal process, whether it is actively permitted through sluice gates at confined disposal sites or passively permitted as uncontrolled runoff at thin layer sites. Dr. Rappole demonstrates that significant turbidity from return flow will harm the heretofore unaffected seagrass beds that lie between the shoreline and the west side of the barging channel, and that long-term reduction of these seagrasses would be on the order of 18 percent. This is in addition to the seagrasses that would be destroyed by dredging for the placement of disposal pipelines from the channel to shore.

Dr. Rappole shows that upland thin layer disposal would not serve a beneficial use for the onshore environment. Thin layer disposal would severely harm the onshore environment by burying emergent wetlands, cutting off normal bay-shore exchanges, and substituting sparse, low-quality scrub vegetation for the normal vegetation relied on by numerous wildlife species whose survival depends upon the shoreline habitat.

Dr. Rappole addresses impacts from upland disposal on threatened and endangered species and migratory songbirds. Upland disposal would result in the destruction of large areas of coastal habitats including those vital to 36 species protected under federal and state laws for threatened or endangered species. Upland disposal also would destroy and disrupt critical stopover habitats for tens of thousands of individuals of over 300 species of migratory birds.

Dr. Rappole accounts for wind-blown and storm-driven salt and clay particles that would spread far inland from the disposal sites. Significant damage to habitats is likely to occur as far as 60 miles inland with impacts on hundreds to thousands of acres of crops, pastures, and habitats critical to many species including wetlands, live oak mottes, forests, woodlands, and prairies. This would also significantly degrade the historic and cultural attributes of the National Historic Landmark portion of the King Ranch.

Dr. Rappole also notes the enormous visual impacts of the three-story wall of dikes for upland confined sites or the 79 mile long burial corridor for thin layer sites. Upland sites would create the appearance of an industrial zone along the Laguna Madre shoreline, which almost in

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[3] J.H. Rappole & G.W. Blacklock, Birds of the Texas Coastal Bend (1985, Texas A&M U. Press); J.W. Tunnell, Jr. & F.W. Judd, eds., The Laguna Madre of Texas and Tamaulipas at Chapter 4 (2002, Texas A&M U. Press).

its entirety has been subjected to no human impact other than cattle grazing from the time the Spanish explorers first touched the Texas coast to the present.

Any proposal to adopt upland alternatives would also have to account for damage to commercial and recreational fisheries. Dr. Rappole shows that burial of coastal lands and interference with shore/bay nutrient cycles would harm fish and shellfish nurseries including shrimp, trout, and drum fishes.

3. Costs of Upland Disposal Sites

Most of the hypothetical upland disposal sites addressed in the draft EIS are located on private ranch lands, and in particular a substantial number of the sites are on the King Ranch. If at any time an upland disposal alternative is to be selected, a new or supplemental EIS would have to include an analysis of the costs of acquiring such sites (compare DEIS at Table 2-5, page 2-10, and Table 2-35, page 2-96). The costs to the government for condemning upland disposal sites would be prohibitive.

Condemnation of King Ranch land for upland disposal sites would be many tens of millions of dollars. This is not a case where condemnation costs accurately can be reflected by multiplying local per acre prices for ranches in the general area by the number of acres covered by the footprint of the disposal sites. Such an analysis would ignore the unique characteristics of the King Ranch, the different potential market for King Ranch property versus other properties in the region, and the impacts that upland disposal sites would have on remaining King Ranch property and on businesses of the King Ranch. The King Ranch has for a long time denied attempts by affluent buyers to purchase parts of the Ranch. To preserve ownership as the King family legacy, the Ranch has instead entered into recreational leases on ranch parcels. The condemnation value of King Ranch coastline in the Laureles and Norias Divisions, considered as an independent economic unit, would be substantial if such a coastline tract were ever available in the marketplace. The damage that would be done to the King Ranch, and especially the coastline area associated with dredge spoil sites, would be enormous. Additionally, the damage to adjoining property not condemned would greatly exceed the value of the property condemned for the spoil sites themselves, including severe visual and aesthetic damage associated with construction of spoil mounds three stories high on the beautiful, flat shoreline, damage to the privacy and solitude of the coastline, disruption of drainage, migration of salt and other contaminants from spoil mounds, impacts to groundwater, and destruction of unique coastal habitats including oak mottes.

B. COASTAL ZONE MANAGEMENT CONSISTENCY DETERMINATION

The coastal program consistency determination in Appendix F of the DEIS does not analyze or make the requisite findings for upland disposal. If at any time an upland disposal alternative were to be proposed for adoption, a new consistency determination would have to be provided by the U.S. Army Corps of Engineers. The consistency determination would have to be based specifically on a complete analysis of projected impacts from the proposed upland disposal alternative and a comparison with projected impacts from other alternatives, in light of the requirements, goals, and policies of the Texas Coastal Management Program ("TCMP"). It would not be possible to make the required consistency determination for disposal on upland

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sites on the western shoreline of the Laguna Madre, because the impacts would not be consistent with general TCMP criteria or with the specific TCMP consistency criteria for maintenance dredging activities.

Consistency factors for dredged material dump sites are listed in the TCMP at 31 Texas Administrative Code § 501(14)(j). The first consistency factor requires that disposal sites "avoid and otherwise minimize adverse effects to coastal waters, . . . critical areas, coastal shore areas, and Gulf beaches to the greatest extent practicable."[4] "Critical areas" means wetlands.[5] The "uplands" proposed in the ICT's draft analysis actually consist of a mix of wetlands and other ecologically important coastal shore areas. These areas would be severely impacted by upland spoil dumping, as described in the technical reports discussed in Part A, above, and enclosed with these Comments. The reports demonstrate, not only that onshore areas would be severely impacted, but also that return flow of dredged materials back to the Laguna waters would severely impact nearshore areas of seagrass that have escaped injury under the historical open bay dumping practices.

Moreover, as required by the TCMP, upland disposal could not be adopted if any other alternatives were available that would have less impacts on critical areas. The enclosed report of Gahagan & Bryant Associates, Inc. shows that disposal in the Gulf of Mexico can be done in a variety of ways that would cost little more than present open bay disposal (and likely no more than, possibly less than, upland disposal). See enclosure, *Costs of Gulf Placement of Laguna Madre Dredge Spoils* (Gahagan & Bryant Associates, April 12, 2001), which is discussed below at Part E.

Another reason that a coastal consistency determination could not be made for any upland disposal alternative is that it would not be possible to make the required demonstration that adverse effects on plant and animal populations would be minimized by "avoiding sites having unique habitat or other value, including habitat of endangered species . . . ."[6] The enclosed reports by Dr. Rappole show that severe impacts to endangered and threatened species (such as the aplomado falcon, ocelot, pygmy owl, Texas tortoise, and others) and their habitats (for instance, destruction of the oak mottes along the coastline) are likely to result from upland disposal.

Many other coastal consistency factors would prevent selection of an upland disposal alternative. For example, sites must be selected to "prevent or minimize any potential damage to the aesthetically pleasing features,"[7] yet the confined upland disposal alternative would create dredged material levees three stories high that cut off the view of the Laguna, and the unconfined disposal alternative would create large areas of barren wastes along the shore. Sites must also be

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[4] 31 TAC § 501(14)(j)(1).

[5] 31 TAC § 501.3(a)(8).

[6] 31 TAC § 501(14)(j)(2)(F)(iii).

[7] 31 TAC § 501(14)(j)(2)(G)(i).

selected to minimize additional infrastructure,[8] yet upland disposal alternatives would likely require a network of service roads to be paved in range lands.[9]

C. CLEAN WATER ACT SECTION 404(b)(1) EVALUATION

The Clean Water Act section 404(b)(1) evaluation in Appendix G of the DEIS does not analyze or make the requisite findings for upland disposal. If at any time an upland disposal alternative were to be proposed for adoption, a new CWA section 404(b)(1) evaluation would have to be prepared by the U.S. Army Corps of Engineers. A section 404(b)(1) evaluation for upland disposal would have to be based specifically on the Guidelines for Specification of Disposal Sites for Dredged or Fill Material (see 40 Code of Federal Regulations Part 230) and the Corps' general policies for public interest reviews (see 33 C.F.R. § 320.4 and § 323.6). For the reasons discussed in Parts A and B, above, any evaluation for upland disposal would not be able to make the required findings. 6

As examples, any CWA section 404(b)(1) evaluation of upland disposal could not make the required findings that:

- upland disposal would not cause or contribute to significant degradation of the wetlands and adjacent bay water aquatic ecosystem (40 C.F.R. § 230.10(c));

- upland disposal would not cause or contribute to significantly adverse effects on recreational, aesthetic, and economic values enjoyed by the general public and property owners (40 C.F.R. § 230.10(c)(4) and § 230.53) including "mar[ring] the natural beauty" and "destroying vital elements that contribute to the compositional harmony or unity [and] visual distinctiveness or diversity of an area" (40 C.F.R. § 230.53);

- there is no alternative to upland disposal that would have less adverse impact on the wetlands and adjacent bay water aquatic ecosystem (40 C.F.R. § 230.10(a));

- upland disposal would not jeopardize endangered or threatened species or their critical habitats (40 C.F.R. § 230.10(b)(3)); and

- benefits of upland disposal outweigh cumulative effects on historic properties, land use, conservation, wildlife values, recreation, and considerations of property ownership (33 C.F.R. § 320.4(a)(1)).

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[8] 31 TAC § 501(14)(j)(2)(H)(ii).

[9] The DEIS assumes no road access would be needed to construct upland sites (DEIS page 2-88) and that channels would be dredged to bring heavy equipment to shore from the bay, but the DEIS does not address access requirements for maintaining the disposal sites for the 50-year life of the proposed dredging program and beyond.

D. BIOLOGICAL ASSESSMENT OF ENDANGERED AND THREATENED SPECIES

The Biological Assessment of potential impacts on federally endangered and threatened species in Appendix D of the DEIS does not address upland disposal alternatives, and does not address species protected pursuant to the laws of Texas. Dr. Rappole's reports project substantial adverse impacts to upland habitats as far inland as sixty miles, caused by wind-blown salt from disposal sites, support infrastructure such as maintenance roads, and direct impacts at the coast from disposal sites, access corridors, and return flow of deposited materials. At the Laguna Madre and adjacent shoreline, upland disposal would alter or completely destroy large areas serving as critical stopover habitats for tens of thousands of individuals of over three hundred species of migratory birds. The habitat for thirty-six legally endangered or threatened species would be altered or destroyed by upland disposal, including six mammal species, thirteen bird species, five amphibian species, seven reptile species, and five plant species, as follows: 7

Mammals: Ocelot, *Felis pardalis.* Federally listed as Endangered. Texas lists the species as Endangered. **Jaguarundi,** *Felis yaguarundi.* Federally listed as Endangered. Texas lists the species as Endangered. **West Indian Manatee,** *Trichechus manatus.* Federally listed as Endangered. Texas lists the species as Endangered. **Yuma Myotis,** *Myotis yumanensis.* Texas lists the species as Threatened. **Southern Yellow Bat,** *Lasiurus ega.* Texas lists the species as Threatened. **Coues Rice Rat,** *Oryzomys couesi.* Texas lists the species as Threatened.
Birds: Ferruginous Pygmy Owl, *Glaucidium brasilianum.* Texas lists the species as Threatened. **Northern Beardless-Tyrannulet,** *Camptostoma imberbe.* Texas lists the species as Threatened. **Tropical Parula,** *Parula pitiayumi.* Texas lists the species as Threatened. **White-faced Ibis,** *Plegadis chihi.* Texas lists the species as Threatened. **Reddish Egret,** *Egretta rufescens.* Texas lists the species as Threatened. **Wood Stork**, *Mycteria americana.* U.S. breeding populations (South Carolina, Georgia, Florida) are Endangered (Federal). Texas lists the species as Threatened. **Piping Plover,** *Charadrius melodus.* Winter populations are federally listed as Threatened. Texas lists the species as Threatened. **Interior Least Tern,** *Sterna antillarum athalassos.* Winter populations are federally listed as Endangered. Texas lists the subspecies as Endangered. **Peregrine Falcon,** *Falco peregrinus.* Winter populations are federally listed as Threatened. Texas lists the species as Threatened. **Botteri's Sparrow,** *Aimophila botterii.* Texas lists the species as Threatened. **Brown Pelican**, *Pelecanus occidentalis.* Federally listed as Endangered. Texas lists the species as Endangered. **White-tailed Hawk,** *Buteo albicaudatus.* Texas lists the species as Threatened. **Aplomado Falcon,** *Falco femoralis.* Federally listed as Endangered. Texas lists the species as Endangered.

Amphibians: Black-spotted Newt, *Notophthalmus meridionalis.* Texas lists the species as Threatened. **South Texas Siren**, Siren *intermedia.* Texas lists the species as Threatened. **White-lipped Frog**, *Leptodactylus labialis.* Texas lists the species as Threatened. **Mexican Treefrog**, Smilisca *baudini.* Texas lists the species as Threatened. **Sheep Frog**, *Hypopachus* variolosus. Texas lists the species as Threatened.

Reptiles: Texas Tortoise, *Gopherus berlandieri.* Texas lists the species as Threatened. **Indigo Snake**, *Drymarchon corais.* Texas lists the species as Threatened. **Texas Horned Lizard,** *Phrynosoma cornutum.* Texas lists the species as Threatened. **Speckled Racer**, *Drymobius margaritiferus.* Texas lists the species as Threatened. **Scarlet Snake**, *Cemophora*

coccinea. Texas lists the species as Threatened. **Black-striped Snake,** *Coniophanes imperialis.* Texas lists the species as Threatened. **Northern Cat-eyed Snake**, *Leptodeira septentrionalis.* Texas lists the species as Threatened.

Plants: Texas Sea Purslane, *Sesuvium trianthemoides.* Federally listed as Threatened. **Slender Rush Pea**, *Hoffmannseggia tenella.* Federally listed as Endangered. Texas lists the species as Endangered. **Texas Ayenia**, *Ayenia limitaris.* Federally listed as Endangered. Texas lists the species as Endangered. **Black-laced Cactus**, *Echinocereus reichenbachii.* Federally listed as Endangered. Texas lists the species as Endangered. **South Texas Ambrosia**, *Ambrosia cheiranthifolia.* Federally listed as Endangered. Texas lists the species as Endangered.

E. GULF OF MEXICO DISPOSAL ALTERNATIVES

The King Ranch supports disposal of dredged material in the Gulf of Mexico wherever feasible, as this disposal alternative would have the least adverse environmental impacts to the Laguna Madre ecosystem. Moreover, as the DEIS notes, disposing dredged materials to the Gulf of Mexico would permanently decrease the amount of residual sediments in the Laguna Madre and therefore would permanently decrease the frequency and amount of maintenance dredging required. The DEIS projects that Gulf disposal would result in a 14 percent overall reduction in required dredging (DEIS page 2-15). 8

While the DEIS estimates that Gulf disposal costs would range as high as $38.50 per cubic yard depending on the particular method used, the King Ranch has obtained preliminary engineering estimates for two methods that would cost only a little more than traditional open bay disposal, not taking into account the costs of in-bay environmental impacts that would be avoided by Gulf disposal. The enclosed report, *Costs of Gulf Placement of Laguna Madre Dredge Spoils* (Gahagan & Bryant Assoc., Inc., April 12, 2001), presents a preliminary evaluation of transportation and placement costs of either piping spoil or hauling it by scows to the Gulf. One method uses a combination of scows and pipelines to transport spoil to ocean placement sites, while another method uses scows alone to transport spoil to existing ocean placement sites. The first method would cost approximately $6 to $10 per cubic yard of spoil, depending on the particular portion of the Laguna Madre dredged. The second method would cost approximately $6 to $14 per cubic yard of spoil, depending on the particular portion of the Laguna Madre dredged. 9

F. ENCLOSED STUDIES

In support of, and in addition to, the above Comments, the King Ranch submits the following enclosed studies: 10

- **Analysis of the "Upland" Option for Disposal of Dredge Materials from the Laguna Madre: Upland Disposal Causes Severe Environmental Damage (Dr. John Rappole, October 2, 2001).**

  Dr. Rappole concludes that upland disposal would cause particularly severe impacts on the unique Laguna Madre ecosystem, which is part of the most biologically diverse region in North America north of the tropics. Return flow of suspended sediments to the

bay waters from upland disposal sites will harm the seagrass beds that lie between the shoreline and the west side of the barging channel. Additional seagrasses would be destroyed by dredging for the placement of disposal pipelines from the channel to shore. Thin-layer disposal would severely harm the environment by burying emergent wetlands, cutting off normal bay-shore exchanges, and substituting sparse, low-quality scrub vegetation for the normal vegetation relied on by numerous wildlife species whose survival depends upon the shoreline habitat. Upland disposal would result in the destruction of large areas of coastal habitats including those vital to 36 species protected under federal and state laws for threatened and endangered species. Upland disposal also would destroy critical stopover habitats for tens of thousands of individuals of over 300 species of migratory birds. Enormous visual impacts would include a three-story wall of dikes for upland confined sites or a 79 mile corridor along the seashore buried by thin layer sites, creating the appearance of an "industrial zone" along the Laguna Madre shoreline. Wind-blown and storm-driven salt and clay particles would spread inland as far as 60 miles with impacts on hundreds to thousands of acres of crops, pastures, and critical habitats including wetlands, live oak mottes, forests, woodlands, and prairies. Damage to commercial and recreational fisheries will be caused by burial of coastal lands and interference with shore/bay nutrient cycles.

- **Dredge Disposal in the Laguna Madre: Adverse Environmental Impacts of "Upland" Disposal on Seagrass and the Related Bay Shore (Dr. John Rappole, January 29, 2001).**

  Dr. Rappole concludes that dumping spoil on the uplands will not avoid harmful effects on seagrass in the Laguna Madre, but will instead shift the harmful effects from historically impacted seagrass areas east of the barging channel to relatively virgin areas of seagrass between the mainland and the west side of the barging channel. The report also refers to an experimental uplands disposal site on the Baer Ranch. This experiment resulted in destroying wetlands, walling off natural shore flows, and producing vast areas of low-quality forage.

- **Dredge Disposal in the Laguna Madre: Bayshore Spoil Disposal is as Damaging as Disposal in the Open Bay (Dr. John Rappole, August 20, 1996).**

  Dr. Rappole concludes that upland disposal has a number of environmental costs similar to, and sometimes indistinguishable from, disposal in the Laguna.

- **White Paper: Environmental Impacts of the Plan to Dump Dredged Spoil from the Gulf Intracoastal Waterway on Lands Bordering the Laguna Madre (King Ranch, September 20, 1993).**

  The White Paper is based on the opinions of eight leading scientists and engineers who completed studies of the environmental impacts of proposed upland dumping. The experts conclude that upland dumping over a 30 to 50 year period would cause serious and irreversible damage to the lands, shoreline, and Laguna Madre, as well as the birds, animals, and plants that inhabit the areas. The White Paper also concludes that there are a number of reasonable alternatives to upland dumping.

- **Gulf Intracoastal Waterway in Texas – Laguna Madre – Analysis of ICT-Descriptions of Confined Upland and Thin Layer Placement Sites (Gahagan & Bryant Associates, October 2001).**

  The engineering firm of Gahagan & Bryant conclude that with either confined or thin-layer upland disposal methods, approximately 89 million cubic yards of dredged waste would be disposed of onshore during the 50-year program. Approximately 315 acres of nearshore bay bottom including seagrasses would be dredged to create pipeline corridors to shore, and 64 acres of onshore coastal area would be converted to pipeline corridors. Thin-layer disposal would bury approximately 73,000 acres of shoreline covering a corridor 89 miles long by 1.3 miles wide. Confined disposal would wall off 20 miles of the Laguna Madre shoreline from the bay with three-story-high diked disposal sites. It would also bury approximately 4,287 acres of shore. Engineering costs for confined disposal would average approximately $10.4 million per year for dredging and confined disposal, not counting extremely high costs of acquiring the land for the disposal sites, pipeline corridors, and access roads, of post-50-year program maintenance of the diked disposal sites, and of environmental impacts. Engineering costs for thin-layer disposal would average approximately $3.8 million per year for dredging and thin layer disposal, not counting the extreme costs of acquiring the land for the disposal sites and pipeline corridors and of enormous environmental impacts.

- **Costs of Gulf Placement of Laguna Madre Dredge Spoils (Gahagan & Bryant Associates, April 12, 2001).**

  Gahagan & Bryant conclude that two methods are available for disposing of Laguna Madre dredging spoils into the Gulf of Mexico. One method uses a combination of scows and pipelines to transport spoil to ocean placement sites, while another method uses scows alone to transport spoil to existing ocean placement sites. The first method would cost approximately $6 to $10 per cubic yard of spoil, depending on the particular portion of the Laguna Madre dredged. The second method would cost approximately $6 to $14 per cubic yard of spoil, depending on the particular portion of the Laguna Madre dredged.

- **Letter regarding Disposal of Dredged Material from the Intracoastal Canal in the Laguna Madre, to the Texas Department of Transportation from Stephen I. Adler, Esq. (July 2001).**

  Mr. Adler discusses the enormous expenditure, many tens of millions of dollars, that the State would be required to make if land for upland disposal were to be condemned. The costs would be due to the unique historical importance, ecology, natural beauty, and name recognition of the Laguna Madre coastal area and ranches. The costs would be compounded by the devastating environmental impacts caused by upland disposal. Among the specific damages to ranch owners and land values would be devastating impacts on animal husbandry, agriculture, wildlife, birds, trophy big game, premier salt water fishing, and endangered species and their habits.

  Enclosures

RESPONSE TO COMMENTS

Frederick R. Anderson
Jonathan R. Stone
Counsel for the King Ranch
Caldwalader, Wickersham & Taft LLP
1201 F Street N.W. Suite 1100
Washington, D.C. 20004

Comment No.	Response

1. Comment noted.

2. Comment noted.

3. Comment noted.

4. Thank you for the additional information.

5. Comment noted.

6. Comment noted.

7. Comment noted.

8. Comment noted.

9. We disagree that the two offshore methods estimated by your contractor, Gahagan & Bryant (G&B) would cost only a "little more" than traditional open bay disposal. As you noted, G&B only made preliminary cost estimates and had to make a number of broad assumptions to arrive at these estimates. The USACE contracted Moffatt & Nichol (M&N) to make detailed cost estimates and used data available at the USACE, industry sources, and proprietary information to reduce the assumptions and increase the accuracy of the estimates. M&N evaluated pipeline disposal in the Gulf and the option using scows with clamshell and pipeline dredges to transport the material to the Gulf, as well as using hopper dredges. Their more refined and detailed estimates for the same two alternatives examined by G&B range from $12.58 to $36.08/cy for Reaches 1, 4, 5, and 6 for pipeline disposal in the Gulf, where a pipeline crossing at Padre Island is permitted, and from $6.21 to $11.04/cy (depending on the number of scows used) for pipeline dredge and scows for Reach 6 only. Reach 6 was evaluated alone since it is located between two nearby passes (reducing travel time for scows) and contains the highest shoaling areas in the Laguna Madre, making it an ideal site to reduce recycling of sediments. The use of a clamshell dredge with scows in Reach 6 had an estimated cost of $5.62 to $6.87/cy, depending on the number of scows used. Therefore, the costs are considerably higher in a detailed cost analysis for the option using a pipeline dredge for most of the lagoon, compared to G&B's estimates. The detailed costs by M&N for the other options would likely be much higher if estimated for the entire lagoon, as well, given the increased hauling distance for the other reaches not located near passes, compared to G&B's estimates. Also, to put the issue in perspective, the average cost of present practice is $1.96/cy, while the average cost of the DMMP plan is $2.48/cy. That

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$0.52/cy represents an increased cost of $670,000 per year or $33.4MM over the 50 year project life, so we feel an increase even to an average between $6-$10/cy or $6-$12/cy (considerably less than the costs M&N calculated based on a very thorough analysis of the data) cannot be characterized as "would cost only a little more than traditional methods".

10. Thank you for the reports.

Saltwater-fisheries Enhancement Association

711 N. Carancahua, Suite 915
Corpus Christi, TX 78475
361-886-1100
361-883-8343 fax

June 13, 2003

U. S. Army Corps of Engineers
Att: Dr. Terry Roberts
P. O. Box 1229
Galveston, Texas 77553-1229

Re: Proposed Dredging Intracoastal Waterway, Laguna Madre, Texas

Dear Dr. Roberts:

The Saltwater-fisheries Enhancement Association (SEA) is a non-profit organization with a membership of slightly over 5,000 individuals, the majority of whom live in Corpus Christi area and fish the Upper Laguna Madre. The purpose of SEA is to promote the preservation, conservation and enhancement of the saltwater inshore and offshore coastal resources for the use and enjoyment of present and future generations.

The Board of Directors of SEA discussed the proposed dredging plan at our Board meeting June 3, 2003. This was subsequent to your "public" meeting held in early May. Our Board voted unanimously to opposed the dredging plan as it currently exist. Specifically, we have serious concerns relative to any open bay disposal plans and would suggest that at a minimum containment features be provided thus minimizing turbidity and preventing a broader disposition of dredge material through rain water runoff and erosion due to tidal and wave action. 1

Additionally, proposals to place material in deeper holes or depressions within the Laguna Madre is totally unacceptable. These depressions provide areas for fish and other aquatic life to escape to in colder weather conditions thus increasing their survivability during these cold weather events.. These "holes" also provide some of the only structure on the Laguna Madre and filling them with material will adversely affect recreational fishing which has a significant economic value to Corpus Christi and the Coastal Bend. 2

Those of us who have lived in this area for many years have witnessed first hand the erosion that has occurred on the existing dredge disposal islands and the resulting 3

silting in close proximity to these islands. We have watched as maintenance dredging operations have been conducted with the dredging contractor exhibiting no regard for the Laguna Madre. Pipe placement has resulted in acres of sea grass beds being covered resulting in the permanent loss of essential habitat. As recent as last Summer material was pumped beyond existing spoil islands just south of Baffin Bay, creating another spoil in what was previously a productive grass bed and resulting in increases in turbidity in the area that continue today, Containment features in the area of the Land Cut have not been utilized on occasion and rather material deposited in the shallows of the Nine Mile Hole. It is time for the Corps to apply the same rules and regulations to their dredging projects that they demand from the private sector.

We recognize the significance of the Intracoastal Waterway as a link between the Ports of Corpus Christi and Brownsville as well as the economics associated with the inland barging of products. We additionally however, recognize the significant role the Upper and Lower Laguna Madres play in providing unique and fragile estuaries that benefit the coastal resources of the area, as well as the economics associated with both recreational and commercial activities utilizing these waters. SEA is not ready to see the Laguna Madres sacrificed through the use of 1949 disposal practices because it is the most economically feasible technique. Obviously open bay disposal is the least expensive means of dredge disposition, however we feel we should be beyond these out dated techniques. We must consider the long term health of our bay systems and open bay disposal does not contribute to this health, but rather creates long term, irreversible damage. 4

The defense of these plans as creating beneficial use areas is weak at best. To sacrifice essential bay bottom habitat and defend it as creating habitat for colonial birds simply does not make sense. Birds have miles of undeveloped, protected shorelines along the Kenedy and King Ranches as well as Padre Island. The birds survived since the beginning of time without the spoil islands that were created through the original dredging of the Intracoastal Waterway in the late 1940's. Admittedly, birds do use the existing spoils for nesting and no doubt they would utilize additional islands if made available. However, the bird populations would have survived without the existing man made spoils and will no doubt continue to survive without additional bay bottom being sacrificed. I believe studies conducted in anticipation of proposed oil and gas operations on the Upper Laguna Madre concluded that additional islands created through dredge disposition would not serve a beneficial purpose and in fact would likely be detrimental due to probable increases in predication. 5

The membership of SEA feels very strongly that open bay disposal should not be utilized on the Upper and Lower Laguna Madres nor should the few deep holes that exist on the Laguna Madres be filled. We would additionally urge the Corps to schedule additional public hearings in the Corpus Christi area with reasonable public notice so public comment could be heard. I am certain that the notice was published in the Federal Register, however I know of no one who subscribes to this publication. I am equally certain that our outdoors writer for the Corpus Christi Caller Times would be 6 7

anxious to provide notice to the public regarding this type of hearing and I believe the public would respond.

Sincerely,

Jim O. Atkins
President

RESPONSE TO COMMENTS

Jim O. Atkins
Saltwater-fisheries Enhancement Association
711 N. Carancahua, Suite 915
Corpus Christi, Texas 78475

Comment No.	Response

1. The ICT evaluated upland placement, offshore placement, and confined open-bay placement alternatives for the entire Laguna Madre. These alternatives would have eliminated unconfined placement in the open bay. However, except for some PAs, which are to be fully confined, the ICT had to reject these alternatives. As described more fully in Section 2.0, the upland placement option was eliminated because of the permanent removal of seagrass habitat by dredging access channels to the mainland or Padre Island and the potential impacts to wetland habitat fringing the shoreline or located in depressions farther inland. Offshore placement was eliminated because of the limitations in available equipment capable of working in 12-foot channel depths and navigating in rough offshore water, pumping distance, and the year-round dredging required for the equipment just to keep up with the shoaling rates (Section 2.0). Although these alternatives were eliminated before a cost analysis was prepared, it was determined later that the cost would be prohibitive to use the upland and offshore alternatives for all of the dredged material. However, limited offshore disposal options for two locations near Mansfield Pass and Brazos Santiago Pass were retained for review by the ICT, should it be determined economically or engineeringly feasibly and environmentally desirable in the future.

   The ICT considered confining the dredged material on existing PAs when preparing the DMMP and did recommend complete confinement of the material in some PAs, including some open-bay PAs. However, this option was limited by the size of the PA needed to contain the next 50 years of dredged material (the study period) and the levee height that could be supported by existing soils at the PAs. Some of the PAs would have to be expanded, which would permanently remove any seagrass surrounding the PA in order to have sufficient ponding area to allow enough settling time to meet the State TSS condition for the effluent, recommended by the TCEQ in ICT meetings. Therefore, not all of the PAs could meet this requirement. Another consideration was the high cost to construct, armor, and maintain the levees around all 63 PAs in the Laguna Madre.

   There will be a number of training levees that could be classified as "minimum containment features", as noted in Section 2.11 of the DEIS. These will slow or redirect runoff away from sensitive areas, which will reduce turbidity and burial. Please note that the DMMP significantly reduces the amount of open bay placement of maintenance material, relative to present practices that have been occurring for the last 50+ years. During this period, the Laguna Madre has continued to flourish and the Upper Laguna Madre has become a much better place for recreational fishing through seagrass expansion into areas where it once was rare.

Jim O. Atkins
Saltwater-fisheries Enhancement Association
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2. Emmord's Hole would only be used as an option of last resort (DEIS Section 2.11.7) and will only be used as a placement location for excess material from PAs 183-186 and 188, if necessary to prevent seagrass impacts at those PAs. The concept of "thermal refuges" in a well-mixed (strong north winds), shallow body (holes less than 7 feet deep for the most part) like the Laguna Madre was refuted by the NMFS in an ICT workshop. Empirical data indicate that even the GIWW is well mixed during strong northers and cannot provide a thermal refuge for fish.

3. It is because of these concerns that the EIS and DMMP were prepared, as is noted in Sections 1.1, 1.5, and 3.0 of the DEIS. As described in the EIS, the DMMP will significantly reduce turbidity, as well as direct (burial) impacts to seagrasses.

4. The DMMP significantly reduces the amount of open-bay placement, turbidity, and impacts to seagrass relative to present practices. Open-bay placement is only used where the ICT determined that either open-bay placement would cause minimal impacts or the other available options would cause more impacts than open-bay placement. Much of this information is presented in Sections 2.9 and 2.10 of the DEIS.

5. The ICT did not have the luxury of a single-purpose point of view, but was required, under NEPA, to examine and give weight to all aspects of the human environment. Management plans were developed for each PA with consideration given first to preventing or reducing seagrass impacts and, second, to enhancing some of the existing islands for bird use. Only one new PA was proposed expressly for the purpose of recreating islands that were bird colonies in the past before erosion removed them. This will only be done at the recommendation of the ICT after considering the benefits and negative impacts associated with the proposed action.

6. The ICT, comprising personnel from the State and Federal agencies responsible for protecting the human environment, and with all of the information provided by the special studies, available on the Galveston District website and summarized in Appendix H to the EIS, wrestled with these considerations for over five years. The resulting DMMP was a compromise that, to the extent possible, balanced the various aspects of the human environment, while satisfying the overall purpose of the project, maintaining the GIWW.

7. Section 7.0 of the EIS lists the public involvement opportunities relative to the project. The public meeting notice was published in the Corpus Christi Caller Times (and on their web site) on 4/27/03 and on 5/1/03 for the meeting on 5/7/03. There are no more public hearings planned during the public review period for the Draft EIS.

United States Department of the Interior
NATIONAL PARK SERVICE
INTERMOUNTAIN REGION
12795 West Alameda Parkway
PO Box 25287
Denver, Colorado 80225-0287

IN REPLY TO:
L76

June 17, 2003

Dr. Terry Roberts
U.S. Army Corps of Engineers
Galveston District
Southwestern Division
2000 Fort Point Road
Galveston, TX 77550

Subject: National Park Service Comments on the April 2003 Draft Environmental Impact Statement for Maintenance Dredging of the Gulf Intracoastal Waterway, Laguna Madre, Texas

Dear Dr. Roberts:

Once again, the National Park Service (NPS) appreciates the opportunity to review the most recent draft of this Environmental Impact Statement for Maintenance Dredging of the Gulf Intracoastal Waterway, Laguna Madre, Texas (DEIS). We now offer the following general and specific comments.

General Comments:

The NPS continues to be concerned about the failure or refusal of the U.S. Army Corps of Engineers (COE) to recognize the NPS's jurisdiction over the submerged and fast lands within Padre Island National Seashore (PAIS). In the DEIS the COE appears to argue that the navigation servitude and a 1947 perpetual easement for dredging and spoil disposal exempt the COE from complying with the NPS's statutory, regulatory, and policy requirements (DEIS, p. 4-73). The NPS respectfully disagrees. 1

The navigation servitude is a rule of law holding that the United States does not need to pay compensation for damage to, or a taking of, private property when the federal government takes certain actions to protect the navigability of waters. As such, the servitude is not applicable in this situation, which involves the failure or refusal of one federal agency to comply with the legal mandates imposed by Congress on another federal agency.

We also would like to clarify what we perceive to be certain misconceptions about the dredging and spoil disposal easement. In 1947 the United States, not the COE, acquired from the Arroyo

Colorado Navigation District of Cameron and Willacy Counties, Texas, a perpetual easement for dredging and spoil disposal in two described tracts of land in the Laguna Madre. The United States later acquired from the State of Texas fee title to the surface estate of certain submerged lands in the Laguna Madre for PAIS. Some of those submerged lands already were subject to the United States' dredging and spoil disposal easement. However, when the United States acquired fee title to those lands, title merged in the United States and, as a matter of law, the easement ceased to exist. Put bluntly, the COE never owned the dredging and spoil disposal easement; the United States owned it, just as the United States now owns the merged estate. Therefore, the question is not who owns the easement; the question is how two federal agencies with administrative jurisdiction over different interests in the same lands should interact and cooperate in the management of those lands.[1]

We believe that the actions of Congress provide some guidance on this question. In 1962, fifteen years after the United States acquired the dredging and spoil disposal easement, Congress directed the Secretary of the Interior to establish certain lands and waters, including portions of the Laguna Madre, as PAIS, without providing for an exemption from NPS regulation for COE activities within the new national seashore. Congress easily could have exempted COE activities from NPS regulation, much as Congress did for Naval aerial gunnery or bombing ranges in the vicinity of Padre Island. See 16 U.S.C. § 459d-6. The fact that Congress said nothing about COE activities in PAIS's authorizing legislation indicates, we believe, that Congress intended for COE activities within PAIS to be subject to the NPS's reasonable regulation.

By asserting the NPS's authority to regulate COE activities within PAIS, we do not seek to prohibit or interfere with the COE's Congressionally authorized navigation functions. Instead, we believe that the NPS permitting process will enhance communication and collaboration between the two agencies and ultimately will result in dredging and disposal practices that better protect the resources and values that Congress has directed the NPS to conserve at PAIS.

For your information, we would like to cite and summarize some of the important NPS laws and policies that govern activities within PAIS. (The NPS previously provided much of this same information to the COE in a February 20, 2003, letter from the PAIS Superintendent to Mr. Mark Lumen, Assistant District Counsel for the COE's Galveston District.)

The Act of August 25, 1916, ch. 408, 39 Stat. 535, codified as amended at 16 U.S.C. §§ 1 and 2-4 (2000), commonly known as the NPS Organic Act, directs the NPS to "promote and regulate the use of the Federal areas known as national parks, monuments, and reservations . . . by such means and measures as conform to the fundamental purpose of the said parks, monuments, and

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[1]Even if the 1947 easement continues to exist in favor of the COE—a questionable proposition for the reasons discussed above—like other preexisting easements and rights-of-way located within units of the national park system it is subject to NPS laws, regulations, and policies, including the issuance of an NPS special use permit. E.g., United States v. Vogler, 859 F.2d 638, 642 (9th Cir. 1988), cert. denied, 488 U.S. 1006 (1989) (stating that "the Secretary's [Secretary of the Interior's] power to regulate within a national park to 'conserve the scenery and the nature and historic objects and wildlife therein. . . .' applies with equal force to regulating an established right of way within the park").

reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." Id. at § 1. Subsection 101(b) of the Act of March 27, 1978, Pub. L. No. 95-250, 92 Stat. 166, codified at 16 U.S.C. § 1a-1 (2000), commonly known as the Redwood Amendment, emphasizes that the NPS's protection, management, and administration of units of the national park system "shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established." Title II of the National Parks Omnibus Management Act of 1998, Pub. L. No. 105-391, 112 Stat. 3497, 3499, codified at 16 U.S.C. §§ 5931-37 (2000), directs the NPS to utilize "the highest quality science and information" to enhance management of park areas. Id. at § 5932.

Congress directed the Secretary of the Interior to establish PAIS in the Act of September 28, 1962, Pub. L. No. 87-712, 76 Stat. 650, codified as amended at 16 U.S.C. §§ 459d through 459d-7 (2000). PAIS was established "[i]n order to save and preserve, for purposes of public recreation, benefit, and inspiration, a portion of the diminishing seashore of the United States that remains undeveloped." Id. at § 459d. The authorizing legislation directs the Secretary of the Interior to administer PAIS as a unit of the national park system, "subject to the provisions of the [NPS Organic Act], as amended and supplemented, and in accordance with other laws of general application relating to areas administered and supervised by the Secretary through the National Park Service." Id. at § 459d-4. It also authorizes the Secretary to utilize "authority otherwise available . . . for the conservation and management of natural resources" to further the management of the national seashore. Id.

Acting under the authority of 16 U.S.C. § 3, the NPS has promulgated regulations, found at 36 C.F.R. chapter I (2002), "for the proper use, management, government, and protection of persons, property, and natural and cultural resources within areas under the jurisdiction of the National Park Service." Id. at subsection 1.1(a). Those regulations generally prohibit the destruction, injury, or disturbance of natural, cultural, and archeological resources in units of the national park system. Id. at § 2.2. They also authorize the superintendent of a park area to issue special use permits to authorize an otherwise restricted activity (consistent with applicable legislation and regulations) and to include in special use permits "the terms and conditions that the superintendent deems necessary to protect park resources or public safety." Id. at § 1.6.

The NPS Management Policies 2001 (MPs) generally require the NPS to allow natural geologic processes, including processes such as erosion, deposition, and shoreline migration, to continue without interference. MPs §§ 4.8.1. and 4.8.1.1. In cases where human activities have altered natural shoreline processes, the MPs direct the NPS to consult with state and other federal agencies in order to identify ways to mitigate the effects of such alteration and to investigate alternatives for restoring natural conditions. The MPs permit the NPS to use spoil material for resource management purposes, as long as this use is consistent with park planning documents and does not impair park resources and values. Other written guidance in the form of NPS Director's Orders and Handbooks set forth the NPS's standards for compliance with the National Environmental Policy Act of 1969, reviewing and making decisions pertaining to special use permit applications, and managing wetlands and floodplains.

PAIS's General Management Plan (April 1983) (GMP) outlines the management of colonial waterbird rookeries that exist on dredge-material islands and the Laguna Madre. Rookery islands are included in the park's Protected Natural Area Subzone, which allows these habitats to be managed on a seasonal basis if restrictions on use are required. Management in this subzone is intended to perpetuate ecologically significant and fragile environments. The Laguna Madre and its associated seagrasses are included in the park's Natural Environment Subzone, which are managed for resource-oriented recreation. The primary strategy for this subzone is noninterference with natural processes, but limited manipulation may be authorized to mitigate man-caused changes. Consistent with the GMP, the park's Oil and Gas Management Plan (February 2000) calls for the NPS to manage the park's Laguna Madre habitat as a sensitive resource area.

Specific Comments:

In addition to the general comments above, we offer the following specific comments on the DEIS:

- There is no mention of the NPS or the Coastal Bend Bays and Estuaries Program in the Executive Summary page ES-1. Both agencies served in an advisory capacity to the Interagency Coordination Team (ICT) during the development of this document. 2
- The NPS remains concerned about the quality of the sediment being proposed for placement within the park. In response to our January 17, 2003, comment about this issue, the COE responded that it took a "quick glance" at the latest samples. This response does not alleviate our concern. While the COE asserts that the level of contamination is acceptable to the ICT, the NPS has tried to make it clear that the contamination is not acceptable to the NPS. We therefore request a thorough and rigorous testing program to ensure that contaminated sediments are not disposed in the park. The standards utilized by the COE for analyzing sediment quality must at least be equal to the standards utilized by the NPS. Any standard less than the NPS standard would constitute impairment. 3
- The COE's response to the NPS January 17, 2003, comment letter referred several times to ongoing review by the Interagency Coordination Team (ICT) of the dredged material management plan in order to make site-specific adjustments. Because the ICT's and COE's decisions on these matters will directly impact NPS lands and waters, the NPS again renews its request for inclusion on the ICT. 4
- Impact analysis for colonial waterbirds should include information on habitat change such as to what extent would vegetation for nesting colonial waterbirds be covered with dredge material and if suitable vegetation was not available, how much time would be necessary before species such as reddish egrets, could nest on the newly created habitat. Page 4-35 states "Abundant suitable habitats occur . . . to allow for such temporary displacement and most disturbances would be of a duration short enough to allow for a prompt return to pre-project patterns." This suggests that suitable habitat would be available by the nesting season following the dredging event. 5
- Green sea turtles are known to occur within the Laguna Madre. Therefore, Table 3-4 should be revised to state that they are likely to occur. In addition, the Black-capped 6

Vireo is known to occur within the project area. This species has been omitted from Table 3-4.

- The levees used on Placement Area 185 should be removed after dredging to help ensure that the islands within this placement area are utilized by colonial waterbirds. The DEIS currently states that these levees will be removed if they do not erode. There is no reference to how long this may take and therefore the NPS requests that the text be changed to state "the training levee will be graded down at the end of the dredging operation if it has not already eroded down during placement." This statement may be included as a general statement at the beginning of the section discussing placement areas within PAIS. 7
- Numerous references to specific details outlined in the PAIS Dredge Material Island Management Plan, which has been incorporated into Appendix A of the DEIS, have been omitted for all placement areas within PAIS. These details are necessary to help ensure that impairment to park resources does not occur. Comments regarding PAIS placement areas were provided in a January 17, 2003, letter to the COE and outlined specific details necessary for the placement of dredge material within the park. Responses to those comments stated that the details would be discussed between the ICT, PAIS, and the COE before each dredging event. As the agency that primarily manages the lands within PAIS, the NPS believes that these details are necessary for the prevention of impairment to park resources and should be provided to the public for consideration. 8

Because of our legal responsibility to manage PAIS's resources, please be advised that we are considering elevating this matter to the Washington level. We believe that some of the scientific information provided in the DEIS (such as the seagrass research provided by Dr. Sheridan) either indicates a strong possibility of impairment or demonstrates a need for additional sampling. Therefore, the NPS believes that the COE must perform additional environmental analysis before any dredge material may be deposited within PAIS. 9

We hope that these comments help to resolve the outstanding issues between our two agencies. We look forward to working closely with you as you prepare the final environmental impact statement for this project.

Sincerely,

Karen Wade
Regional Director, Intermountain Region

cc:
Mr. Robert Eaton, Department of the Interior, Office of the Field Solicitor
Mr. Dave Shaver, National Park Service, Geologic Resources Division
Ms. Julia Brunner, National Park Service, Geologic Resources Division
Mr. Jock Whitworth, National Park Service, Padre Island National Seashore

RESPONSE TO COMMENTS

Karen Wade
United Stated Department of the Interior
National Park Service
Intermountain Region
12795 West Alameda Parkway
P.O. Box 25284
Denver, Colorado 80225-0287

Comment No.	Response

1. The Galveston District, USACE, and the Padre Island National Seashore (PINS) have exchanged letters several times setting forth their respective positions on whether the USACE is required to obtain a special use permit from PINS before using the dredged material disposal areas. Rather than repeating the arguments, the following response is provided to your claim that PINS controls the easements acquired by the USACE because title to both the easements and the underlying fee have merged.

   Simply stated, the USACE position follows:

   a) The USACE holds easements, which it acquired pursuant to specific Congressional authorization to operate and maintain the GIWW. These were acquired in 1942, long before Congress created PINS. They are within the boundaries later authorized for PINS to acquire. The statute creating PINS authorized, but did not require, transfers of these easements to PINS. It also authorized, but did not require, the transfer of the fee interest underlying the USACE easements, held by Cameron and Willacy Counties, to PINS.

   b) It is true that the United States, not the USACE, owns the easements. It also may be true that if the United States owns both the fee and the easement, the easement ceases to exist as a technical matter due to merger of title.

   c) We have reviewed our real estate records and contacted both Cameron and Willacy Counties. There is no record that supports the statement in your letter that the underlying fee interests were transferred to PINS. If you have such records, please provide copies to us for our evaluation.

   d) As the underlying fee interest was not transferred to PINS, there could be no merger of the USACE's easement with the underlying fee. Even if different interests in the same piece of real estate had been acquired separately by the USACE and NPS and title "merged" in the United States, that would not change the fact that these different estates had been acquired by different agencies using appropriations provided for different purposes. The fact that title technically is held by the United States has no controlling significance in resolving the rights of different agencies to use property which they have acquired with funds provided by Congress for specific purposes. Just because the United States owns PINS, the Army does not have a right to build something on the real property interests acquired by NPS. The situation is precisely the same with easements acquired by the USACE. NPS does not have authority to require a special use permit before the USACE places dredged material on them.

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e) The Organic Act, Redwoods Act and other management authorities given to NPS to manage land it acquires for National Parks do not give it authority to manage easements acquired by the USACE to operate the GIWW and not transferred to PINS, even if they are adjacent to property acquired by PINS. An agency, which acquires property, using appropriations provided by Congress to do so, controls that property in accordance with its authorizing legislation. NPS controls the property it acquired in accordance with its management authorities. The USACE controls the property it acquired in accordance with its management authorities. Both should consider the legitimate interests of the other in accomplishing their respective responsibilities.

f) The USACE, like NPS, is required to fully comply with NEPA. We have been engaged in this process that has involved both interested parties through the ICT and the public. This process will be completed before any dredged material is placed in the USACE's easements. NPS is entitled to provide input during this process and has done so. However, the responsibility for preparing the NEPA documentation belongs to the USACE, just as the responsibility for preparing any such document for activities within the lands acquired by PINS belongs to NPS.

Your letter states that NPS is not a voting member of the ICT. NPS has been an advisory member of the ICT for at least four years. The original voting member of the ICT for DOI was the Fish and Wildlife Service; however, that agency offered to transfer that responsibility to NPS some time ago if an issue directly affecting NPS arose in an ICT meeting. We agree that PINS has interests in the area, which should be considered carefully, and I believe the ICT has done so.

We welcome your commitment that the NPS does not seek to interfere with our Congressionally authorized navigation functions, but seeks only better communication and collaboration between the agencies, which will result in practices that better protect the resources of PINS. Similarly, the USACE does not seek to interfere with your Congressionally authorized functions or your responsibilities to manage PINS. Further, the USACE shares your interest in protecting the resources of PINS.

Throughout the process of developing the draft EIS and DMMP, we have attempted to protect those resources. The ICT has carefully considered input from the public and from all concerned local, State, and Federal agencies. Specifically, the ICT has addressed each of the concerns expressed by PINS. The PINS management plan for the PAs is included as Appendix C to the final EIS. A number of the steps taken to protect PINS resources are listed in the EIS.

The USACE will coordinate use of our easements with PINS and adopt all reasonable practices to protect its resources in accordance with the ICT recommendations and the

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final EIS. However, coordination must be completed in a timely manner, as there already have been extensive delays in performing maintenance dredging on this reach of the GIWW. Having barges carrying petrochemicals run aground in this area due to a lack of maintenance dredging is not in the best interest of anyone.

We respect the management preference of the NPS to allow natural processes to take their course in PINS. However, if applied strictly to the Laguna Madre, this policy would preclude maintenance dredging on the GIWW and would be inconsistent with your commitment not to interfere with our Congressional authorized navigation project. We also note that many of the concerns expressed in your letter address the impact of dredging operations on seagrasses. Please note that before the GIWW was created, the Laguna Madre was a hypersaline environment in which seagrass distribution was extremely limited, especially in the upper lagoon. Opening additional areas to exchanges of water permitted seagrasses to flourish in the area. The long-term impact of allowing natural processes to strictly control would be reduction or elimination of much of the existing seagrasses from the area if the GIWW were to completely close across the Mud Flats (Land Bridge) separating the upper and lower Laguna Madre by natural processes.

2. We will add references to the NPS and Costal Bend Bays and Estuaries Program to the Executive Summary.

3. You state that the use of any standard for sediment quality must be at least equal to those utilized by NPS. We have attempted to determine what those standards are, but that information has not been provided. Until the standards are provided, it is not possible to evaluate whether they can be met.

4. The USACE does not understand the request for NPS inclusion on the ICT. PINS has been an advisory member of the ICT for at least 4 years. Although the Fish and Wildlife Service is the DOI representative on the ICT when a vote is needed if consensus cannot be reached on an issue, that agency has offered to transfer that responsibility to NPS when an issue directly affecting PINS arises.

5. Information on habitat change (such as the extent of vegetation affected by placement and the duration of time before the area would be suitable nesting habitat) varies widely according to each individual placement area, the time of year the activity takes place, and many other variables. This cannot be quantified in the EIS.

6. Table 3-4 has been revised relative to the green sea turtle. However, an extensive search of the existing literature located only two documented coastal/south Texas records for black-capped vireo. Both represent aberrant records of individual birds during migration, over 100 years apart. Both records are also outside of the study area:

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a) Date: 03/29/1894
Location: Cameron County (Brownsville) – outside study area
Notes: migration/accidental
Source: Bird Life of Texas (Oberholser, 1979)

b) Date: 04/24/1995
Location: Nueces County (Packery Channel) – outside study area
Notes: migration/accidental
Source: Texas Online Clearinghouse of Bird Records
http://www.texasbirding.net/txclrhouse/index.html (Sarkozi, 2003)

As noted, these records represent isolated, aberrant occurrences, and under normal circumstances, the probability of black-capped vireo occurring in the study area would be almost nonexistent. Because black-capped vireos winter along the Pacific coast of Mexico (the states of Sinaloa, Nayarit, Jalisco, Colima, etc.) they do not follow the circum-Gulf or trans-Gulf migration route used by most neotropical migrant species. Their migration route is northeasterly across north-central Mexico, and entering Texas through the states of Coahuila and Chihuahua. This migration route typically focuses them directly into southwestern Texas and away from the lower Texas coast. These two records may be the result of unusual weather patterns that pushed these individuals further east than normal.

We do not feel that two isolated, aberrant records qualify the black-capped vireo for addition to Table 3-4. The species is not included on county lists issued by FWS or TPWD for any of the study area counties.

7. To the extent that they have not naturally eroded, the levees on the island used on Placement Area 185 to prevent material from shoaling the small boat channel on the south side will be removed at the end of the dredging operation.

8. The entire PINS Management Plan is presented in Appendix C to the EIS. The DMMP, as approved by the ICT, clearly states that the PINS Management Plan will be accommodated to the extent practicable. Therefore, we see no need for change in the EIS.

9. The USACE hopes that we can reach an understanding under which both PINS and the USACE can accomplish their missions in this area without undue impacts on each other. The Galveston District staff stands ready to work with your staff to accomplish that. However, the USACE is not prepared to apply for a special use permit from PINS to use USACE easements in the Laguna Madre.

United States Department of the Interior

U.S. Geological Survey

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USGS
science for a changing world

17 June 2003

U.S. Army Engineer District, Galveston
ATTENTION: Dr. Terrell Roberts
CESWG-PE-PR
P.O. Box 1229
Galveston, Texas 77553-1229

Dear Dr. Roberts:

Please consider the following comments on the Draft EIS on Gulf Intracoastal Waterway Laguna Madre Maintenance Dredging. The problems confronted are many and difficult, and measures to respond to one concern sometimes lead to outcomes that are in conflict with other concerns. In many cases, the proposed dredge material management plan (DMMP) appears to balance these competing considerations quite effectively, and that is no mean accomplishment. However, in some other cases, I am concerned that proposals have the potential for adverse consequences that are being dismissed on the basis of some dangerous assumptions arising out of Corps modeling of the system. Most of my concerns stem from the results of an intensive underwater light monitoring program that I conducted in Laguna Madre near Port Mansfield for 3 months before through 15 months after a maintenance dredging project in 1988 (Onuf 1994, attached). In the deep part of the study area where most of the dredge disposal occurred, light attenuation was higher throughout the 15 months of observation after dredging than before dredging. In seagrass meadow and the transition zone at the outer edge of the meadow, effects were evident up to 10 months after dredging. I concluded that episodic resuspension of dredge deposits by wind-generated waves in deep parts of the lagoon and subsequent dispersal of suspended particles by movement of the turbid water mass were responsible for the propagation of dredge-related turbidity over space and time in this system. As I explained in a previous letter to you, dated 29 March 2002, two areas are particularly prone to the effects of these processes, (now quoting from that letter) 1

> "Both are broad expanses of deep water (by Laguna Madre standards), one east of Laguna Vista and extending 5 miles or so north, and the other east of Port Mansfield and also extending north for 6 or 7 miles. The factors which conspire to magnify dredging impacts here compared to elsewhere in the lagoon are that large areas are near the depth limit of seagrasses. Windy conditions prevail much of the time. Because of the orientation of the basin, the prevailing winds blow far enough over relatively deep water to generate considerable wave action and some entrainment of water in currents. The waves undoubtedly would stir sediments from the native bottom; however, acting on the finest sediments in the system, removed from channel bottoms and liquified in the dredging process, and then deposited in ridges for long distances parallel to the channels, the same waves will resuspend much more material for much longer than from the native bottom. Once in the water column, the suspended sediments will be moved by tidal and wind-driven currents, propagating dredging-related turbidity in space and time. Under these conditions, the "footprint" of dredging impacts is magnified by at least an order of magnitude beyond the areas initially receiving the deposits. Because maintenance dredging is required every 2 or 3 years in these parts of Laguna

Madre, the reduction in water clarity is chronic, probably accounting for the lack of recovery of seagrasses in deep areas since the 1970's."

As noted above, I provided data and analysis in a paper published in Estuarine, Coastal and Shelf Science (Onuf 1994) that are the basis of my interpretation of changes in Laguna Madre, showing reduced light for months over large areas after a dredging project and relating deep areas where seagrasses were lost to reaches of high dredging activity. A fundamental assumption of the DMMP is in conflict with the conclusion of that study, that dredge disposal in deep water will have no impact on seagrasses. My published data suggest that this is a dangerous and unwarranted assumption. The assumption appears to be based on a reanalysis in the Draft EIS of Corps dredging records using amounts, rather than just the records on lengths of channel dredged that were available to me, that is construed as weakening my association of dredging history with seagrass loss. There is a major discrepancy between the two records for the 20,000 foot reaches centered at 190,000 and 210,000 feet north of Port Isabel, in the deep, bare area near Port Mansfield (Figure 1). According to my compilation, there was as much or more dredging activity there as in the southern bare area (the 20,000 foot reaches centered at 30,000 and 50,000 feet north of Port Isabel) (Figure 1, bottom), whereas the analysis shown in the Draft EIS shows a quarter to half as much dredging in the reaches centered at 190,000 and 210,000 feet north of Port Isabel as in the reaches centered at 30,000 and 50,000 feet north of Port Isabel. I suspect the discrepancy arises because my figures include dredging from the Port Mansfield Channel in Laguna Madre and the Draft EIS figures are only for the GIWW proper. As far as possible effects on light attenuation are concerned, I think it is necessary to include the contribution from the crossing channel as well. The two striking peaks in dredging aligning precisely with the two areas of major seagrass loss in deep water were a crucial element in suggesting a causal connection to me. 2

Another point raised in the Draft EIS (p 4-6) was that "the 1965 data, which Onuf (1994) compared with the 1978 data were not extensive or well documented". I don't know which data are being referred to, but, if it is suggesting that better information on seagrass distribution might have revealed that seagrasses never had been there, this is not the case. The Texas Parks and Wildlife Department sampling on which the 1960's distribution map was based, was at 1 mile intervals north and south and one-third mile intervals east and west. Bottom cover was determined from sediment plugs brought up with posthole diggers. That is high enough resolution to have detected the bare areas found in the 1970's, and none were found. 3

Another comment in the Draft EIS (p 4-6) is that "LANDSAT photographs show that the bare, high turbidity area had appeared by 1972". This would refute the association between dredging and loss of seagrass that I have claimed if most of the dredging occurred after 1972. According to Figures 4.1 and 4.3 of the Draft EIS, 900,000 cubic yards had been dredged in 1969 and 1970 from this segment, which is more than for any other segment in 5 years, except the next segment south (1,300,000 cubic yards, of which 600,000 cubic yards were dredged in 1969 and 1970). Thus, the fact that the bare area had developed by 1972 does not contradict the imputed association of concentrated dredging activity with seagrass loss in deep areas. 4

Hydrodynamic and sediment transport modeling done for the Draft EIS concluded that there would be negligible change in the outer boundary of seagrasses from their current location by continuing current dredging practices. The current outer boundary is an accommodation to the light regime that is maintained as a result of current dredging practices, so it is not surprising that the model did not predict a change. However, the conclusion drawn from this seems to be that, therefore, dredge disposal deep anywhere will cause no harm to seagrasses. I am very uneasy about this operating premise. For instance, the deep part of Placement Area (PA) 233 is relatively far away from any existing seagrass, relative to where prevailing currents would move turbid water generated over the disposal area , but proposed PA 233A is close to seagrasses on the west side in a high energy environment that historically has not received periodic inoculations of fine sediments (Figure 2). I am sure that there will be much more severe turbidity effects on the adjacent seagrasses by disposal in 233A than in 233. The midline of PA 233A ranges from 3500 to 5000 feet from the nearest seagrass to the west and from 5500 to 7500 feet to the east. Unless there is at least as much recovery on the east side of the lagoon as loss on the west, this could be a mistake. 5

I have the same kind of concern about proposed PA 221A near Port Mansfield, moved from a relatively protected area (because of the barrier to waves produced by past disposal) to the much more exposed east side of the channel, in close proximity to existing seagrass meadow (Figure 3). The midline of PA 221A is in seagrass meadow at the south end and <2500 feet from nearest seagrass where it is furthest removed from seagrass meadow. 6

In upper Laguna Madre, the proposal to use deep areas near Emord's Hole is especially sensitive to this problem of proximity to seagrass in a hydrodynamically active environment, where turbidity will propagate from resuspended dredge deposits. The bare area is very long and narrow (Figure 4). There is no spot in it that is as much as 2500 feet from seagrass, and, for most of its length, nearest seagrass is <800 feet away. 7

I realize the assumption of no damage for deep placement is based on runs of linked hydrodynamic and sediment transport models, but the three situations described here have to be pushing the envelope of the models. If these options are pursued, I urge circumspection, close monitoring for possible loss of seagrass nearby over the next few years, and a commitment to switch to other options if losses are evident. 8

My studies and 15 years of professional experience working with seagrass in Laguna Madre lead me to believe that the offshore option proposed in the Draft EIS should be pursued. I also recommend expansion of the offshore option to replace disposal in four other placement areas: PA's 218 and 219, just north of Port Mansfield, and PA's 233 and 234, just north of Port Isabel. The first two extend from 1.5 to 5 miles north of the junction with the channel to Port Mansfield. From there it is 10 miles out to the open Gulf of Mexico. Dredge material could be pumped from these sites to receiving scows at the junction, and the scows presumably could use the junction configuration as a turnaround. PA's 233 and 234 extend from 4 to 9 miles north of the junction of the GIWW and the channel to the Port Isabel small boat basin, and it is another 8 miles from the channel junction to open water of the Gulf of Mexico by channel. Again, the channel junction could be used as a back-in turnaround, and dredge material could be pumped to that point. The north end is too far away for this option to be feasible but is adjacent to already emergent old disposal area. This island could be leveed and used to receive what now goes into PA 233. 9

In addition to the problem of distance, the Draft EIS also notes limitations on the size of equipment that the channel can accommodate and limited availability of suitable equipment as reasons that make out-of-lagoon disposal unfeasible. As I stated in my letter of 29 March 2003, 10

> "In regard to the limited availability of appropriate equipment, the long operating schedule dictated by the small capacity of equipment that can be used in Laguna Madre should be viewed as an opportunity not a constraint. If constant use can be guaranteed, equipment can be built to specification for this application and then dedicated to it ever after. This probably would be a win-win-win situation for the contractor, the managers of the waterway, and environmental interests.
>
> If the north ends of these segments are still too far removed from gulf access, then why not develop permanent, armored containment areas that can accommodate all the discharge from a dredging cycle? Presumably, the sediments would be completely dewatered before next use. Even if there were no possible land application for the material, its volume would be so reduced compared to what it was at the time of dredging that it would be feasible to take it offshore by barge."

Given the 50 year duration of this project, considerable capital outlay in support of the project could be supported. Perhaps the most attractive feature of these alternatives to in-bay disposal is that the possible improvements in water clarity might allow for recovery of seagrasses lost as a consequence of past management of the GIWW. This would be the best mitigation for unavoidable losses resulting from future operation of the GIWW.

I hope that these comments help improve future operation of the Gulf Intracoastal Waterway. Please feel free to contact me if I can assist in any other way.

Sincerely,

Christopher P. Onuf, Ecologist

1 attachment

List of Figures.

Figure 1. The timing and intensity of dredging activity in the lower Laguna Madre of Texas. The histograms show the volume of material dredged per 20,000 foot reach of the Gulf Intracoastal Waterway in thousands of cubic yards in the five years leading up to seagrass surveys of 1965, 1974 and 1988 (top, compiled from figure 4-1 of Draft EIS), and the cumulative length of channel dredged yards in the five years leading up to seagrass surveys of 1965, 1974 and 1988 (bottom, from Onuf [1994], figure 2). The reaches centered at 190,000 and 210,000 feet are highlighted.

Figure 2. Aerial photograph of southern section of lower Laguna Madre showing dredge Placement Areas and plastic overlay showing seagrass distributio. Copied to same scale from figures in Draft EIS.

nFigure 3. Aerial photograph of middle section of lower Laguna Madre showing dredge Placement Areas and plastic overlay showing seagrass distribution. Copied to same scale from figures in Draft EIS.

Figure 4. Aerial photograph of middle section of upper Laguna Madre showing dredge Placement Areas and plastic overlay showing seagrass distribution. Copied to same scale from figures in Draft EIS.

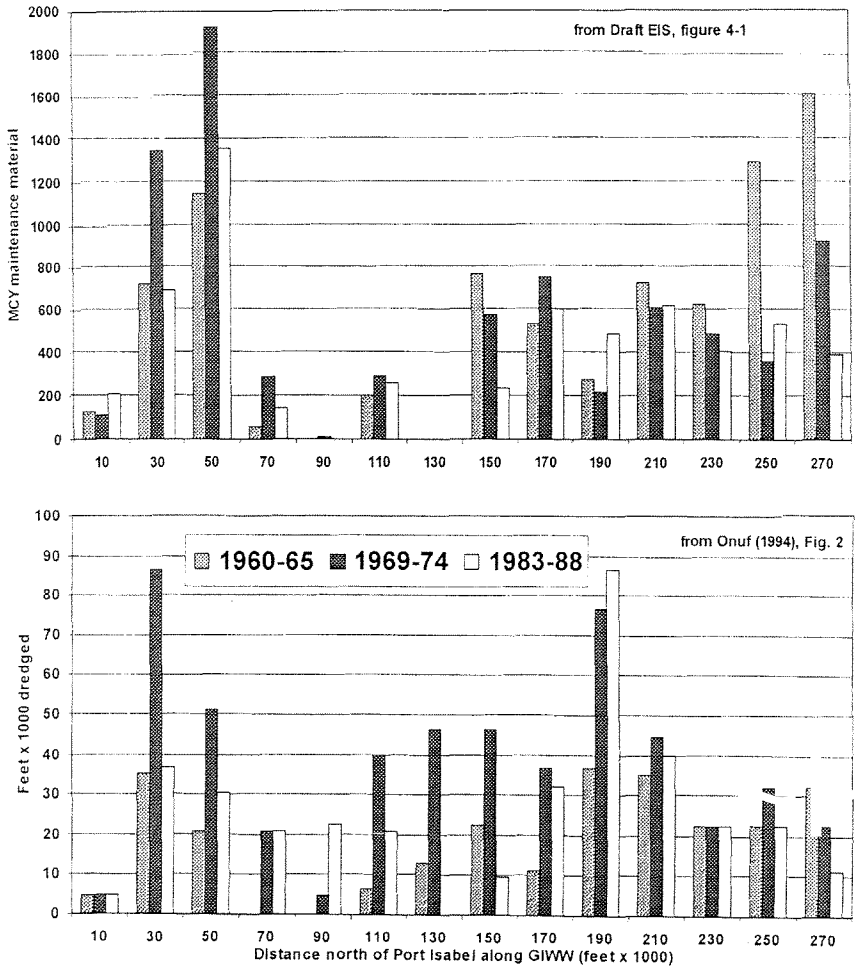

from Draft EIS, figure 4-1
MCY maintenance material
2000
1800
1600
1400
1200
1000
800
600
400
200
0
10 30 50 70 90 110 130 150 170 190 210 230 250 270
from Onuf (1994), Fig. 2
1960-65
1969-74
1983-88
Feet x 1000 dredged
100
90
80
70
60
50
40
30
20
10
0
10 30 50 70 90 110 130 150 170 190 210 230 250 270
Distance north of Port Isabel along GIWW (feet x 1000)

Figure 1

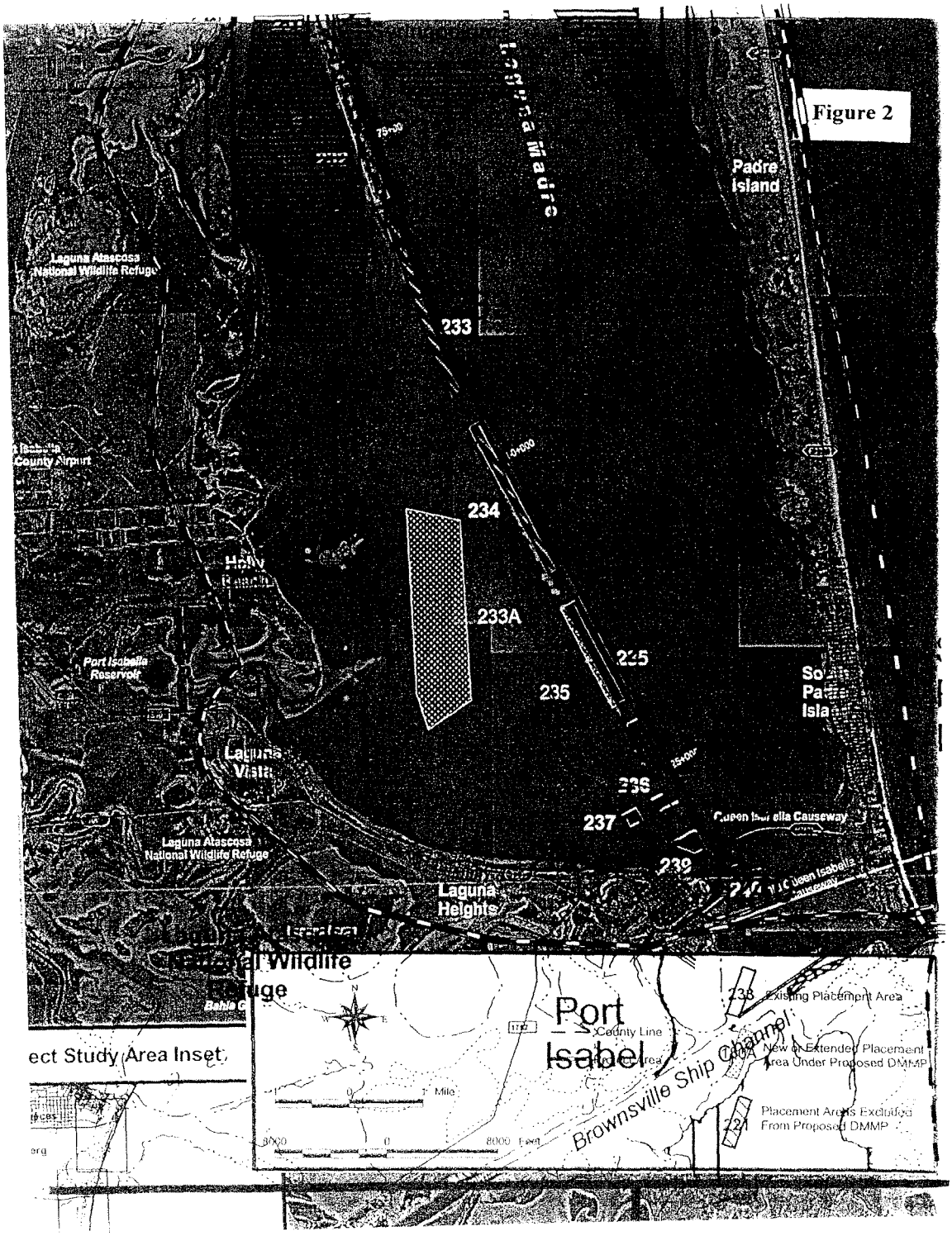
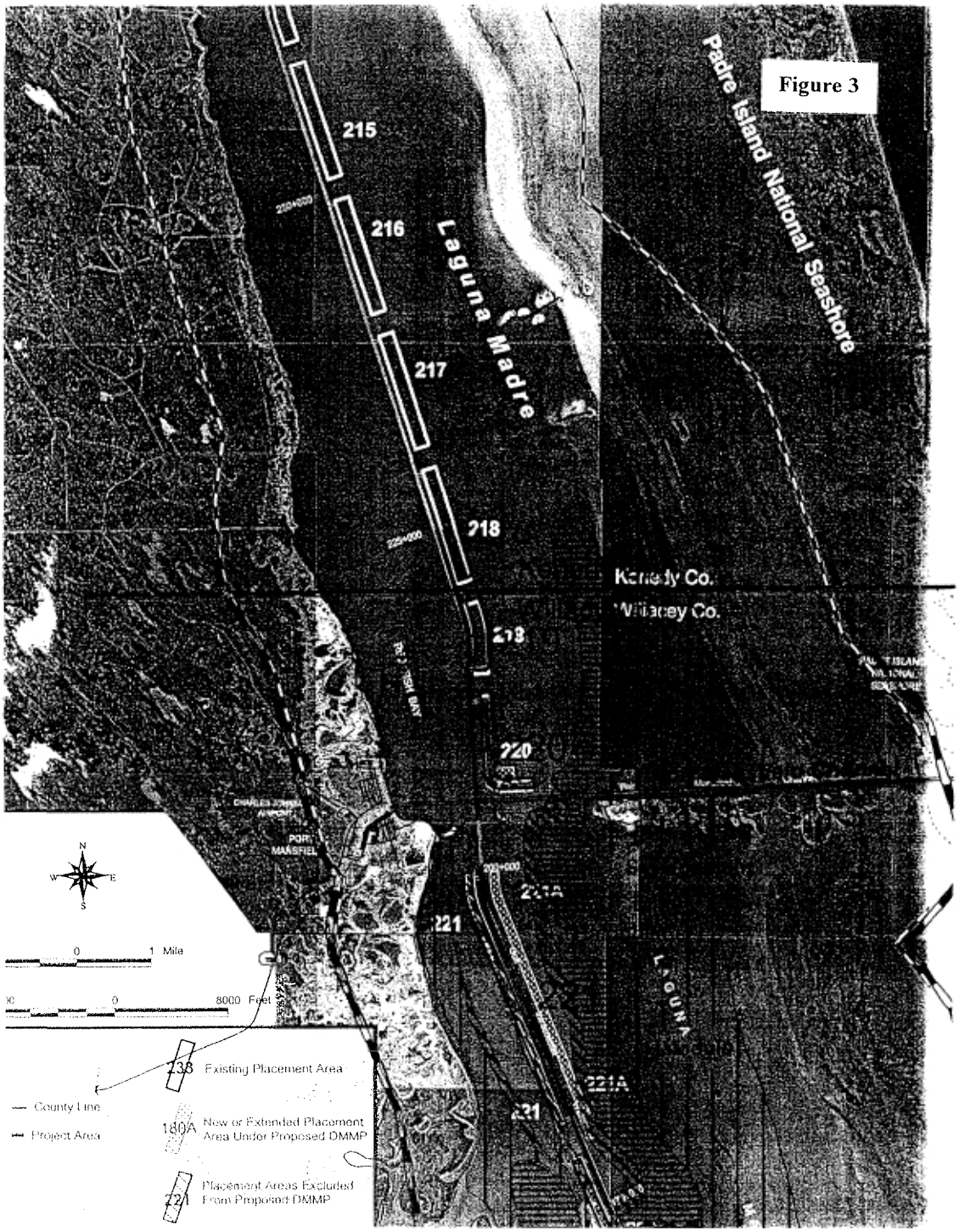
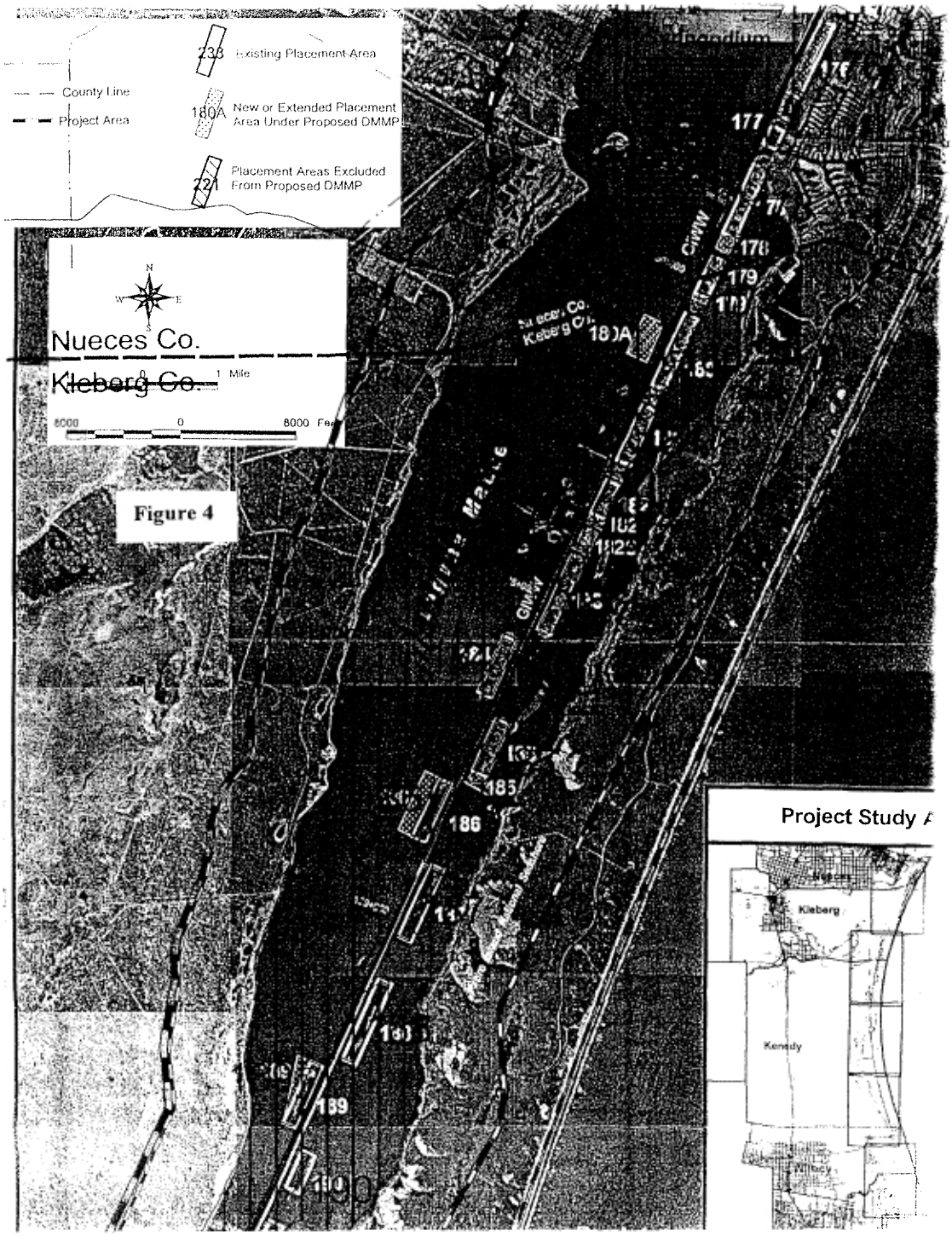


Figure 2
Laguna Madre
Padre Island
Laguna Atascosa National Wildlife Refuge
233
234
233A
235
Port Isabella Reservoir
Laguna Vista
237
Laguna Atascosa National Wildlife Refuge
Laguna Heights
Port Isabel
Brownsville Ship Channel
Existing Placement Area
County Line
Placement Area Excluded From Proposed DMMP
ect Study Area Inset

Figure 3


Padre Island National Seashore
Laguna Madre
215
216
217
218
219
220
221
221A
Kenedy Co.
Willacey Co.
PORT MANSFIEL
CHARLES JOHNSON AIRPORT
PAT ISH BAY
LAGUNA
N
W
E
S
0
1 Mile
0
8000 Feet
238 Existing Placement Area
County Line
Project Area
180A New or Extended Placement Area Under Proposed DMMP
Placement Areas Excluded From Proposed DMMP


Existing Placement Area
County Line
Project Area
New or Extended Placement Area Under Proposed DMMP
Placement Areas Excluded From Proposed DMMP
Nueces Co.
Kleberg Co.
1 Mile
8000 0 8000 Feet
Figure 4
Project Study A
Kleberg
Kenedy
177
178
179
180A
185
186
189
GIWW

RESPONSE TO COMMENTS

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Texas Gulf Coast Field Station
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Corpus Christi, Texas 78412

Comment No.	Response

1. Thank you for acknowledging the difficulties faced by the USACE and ICT in resolving the myriad issues associated with the project. The USACE and ICT recognized that there may be unanticipated effects resulting from some of the management plans. This is why the DMMP is a flexible document that will be reviewed and revised periodically as unintended impacts are identified.

   As for the issue of turbidity in the two deep areas you identified, the USACE and ICT recognized there were turbidity impacts beyond the disposal footprint inside the established PAs and funded studies to determine the limits and duration of the impacts. The hydrodynamic model included wind waves and currents, based on the extensive data collected by the Conrad Blucher Institute and others. The assessment of impacts was based on the model's calculation of the 20% isopleth, which, based on the data of Dr. Ken Dunton and others, should be a conservative value for the percent of incipient light needed by seagrasses. While increased turbidity was evident in the model, it was not sufficiently high for a long enough period of time to cause long-term impacts to the seagrasses. Additional impacts analysis included mudflow from the placement of dredged material, based on empirical data from the Laguna Madre and other bay systems of Texas. No mudflows in deep water were projected to impact seagrasses. Based on these analyses, the management plans recommended by the ICT and included in the DMMP were intended to reduce sediment flow and turbidity impacts from maintenance dredging of the GIWW in the entire Laguna Madre.

2. There are 8 PAs used for the Mansfield Channel. PAs 1 and 2 are in the Gulf, PAs 3 and 8 are totally confined. PAs 4-6 are located on the north side of the Mansfield Channel, are upland unconfined sites, and receive mostly sandy material with very little runoff. PA 7 is the east-west portion of an L-shaped PA at the northeast junction of the GIWW and Mansfield Channel and PA 220 is the north-south portion that is used for the GIWW. It appears that this PA is the only one that could be logically included in the calculations included in Onuf 1994. Therefore, we only included the GIWW data to provide a clearer picture of the potential contribution of dredged material from the project to turbidity in the area along the GIWW. However, we have regenerated those figures using the material that can be expected to go into PA 220 from the Mansfield Channel and wyes. These figures are attached to the end of this response and entitled Figures 5.4-1 through 5.4-3. While the modified figures do show a larger quantity of material going into PA 220, the relative amounts for the various periods shown in these figures and the figures in the EIS does not change.

3. Since we cannot locate the basic data from McMahan (1969) that was used to compare to the other data sets, this statement has been removed from the Final EIS.

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Comment No.	Response

4. We are not sure exactly which segments are included here, but an examination of Figures 4.1 through 4.3 shows that dredging quantities for the period 1960-1965 are greater than the dredging quantities for the period 1969-1974 in every instance for PA 221 (roughly 177,000 feet north of Port Isabel) north to PA 211 (roughly 280,000 feet north of Port Isabel). One would expect this to be the critical area for the bare area north of Port Mansfield. This also holds true for the time periods 1961-1965 versus 1970-1974 and 1962-1965 versus 1971-1974, which does appear to contradict the concept that increased dredging prior to 1975 was responsible for seagrass loss between 1965 and 1978.

5. We agree that the baseline against which changes attributable to the management plans in the DMMP must be measured is the current practice in the No-Action Alternative. However, if current practices in the few areas in which no modifications are required by the DMMP; e.g., PAs 213 through 219, were to cause increased impacts to the seagrasses, the model should have predicted that because, although the hydrodynamic model was calibrated to existing conditions in the Laguna Madre, the impacts (burial or 3-month elevation of turbidity, as depicted by the 20% isopleth) are independent of the Laguna Madre. The model did not predict such impacts in any of the areas modeled for deep-water placement. Regardless, the deep area in PA 233A will be monitored and if there are additional negative impacts to nearby seagrass beds attributable to the DMMP that are greater than the benefits, the ICT will review the management plan and make recommendations to the USACE for modifying the DMMP.

6. Moving at least the northern 1/3 (if not all) of PA 221 to the east was a consensus decision by the ICT based on a number of factors that included concerns by local fishermen that the area between PA 221 and the shore was shoaling as a result of past placement at PA 221, the seagrasses near PA 221 would be impacted by continued placement on PA 221, and the evidence that movement of PA 221 to PA 221A would not impact the seagrass nearest PA 221A. However, because there could be unintended consequences from moving the dredged material to the east side of the GIWW, the USACE and ICT will develop a monitoring plan for the site. The ICT will review the results and make recommendations to the USACE, if necessary, to modify the DMMP to correct problems that may be found.

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Comment No.	Response

7. This area was extensively modeled, including the seagrasses that are there and no long-term impacts were determined. It should be noted, however, that the DMMP states that use of Emmord's Hole is a last-resort option and its use will be based on the recommendations of the ICT before each dredging cycle. It should also be noted that the ICT had to balance many different aspects of the human environment in its recommendation, not just seagrass. Again, if this option should ever be used, the placement operation will be monitored to determine impacts over time. The results will be used in making future recommendations for placement in the area.

8. Monitoring language has been added to the Final EIS. The USACE is committed to maintaining close coordination with the ICT throughout the 50-year period of the DMMP and will work closely with the ICT to identify workable placement options.

9. The offshore option for the PAs you describe, except for PAs 218 and 219, were analyzed by the ICT for feasibility and economics. Their decision that this limited use of the offshore option was not yet feasible given equipment availability and high cost was recorded in the DMMP, but it was also recorded that this option would be revisited to ensure that there were no changes in technology or economics. Should the option become feasible, the ICT could make the recommendation to take the dredged material from this limited area offshore. However, this would require another EIS or EA plus coordination with the EPA to clear the use of this material for disposal in the established offshore PAs before the option could be adopted.

10. Placing the dredged material offshore was considered by the ICT, but had to be rejected for engineering reasons and Federal regulations because it was realized that arguments similar to this, which were discussed in ICT meetings, did not agree with the facts. Seeing this as an opportunity ignores one extremely important fact. According to the experts retained by the USACE, the only avenue for the use of the number of tugs and scows required would be for one company to invest the capital to build the necessary equipment, knowing that it would be the only bidder since no other company would have sufficient equipment, and, thus, guaranteed a long-term contract for the Laguna Madre. By law, the USACE must go out for competitive bids on a project to keep costs manageable and, therefore, cannot guarantee a long-term contract to one company. Without this guarantee, no company would make that kind of investment if there were any possibility of competitive bidding. With competitive bids, this means that at least one company's equipment is now excess and might sit idle for years at a time. As confirmation of the success of competitive bidding in reducing project costs, the EIS includes information on the elevated costs incurred by the Galveston District and other districts when there is only one bidder versus multiple bidders for a dredging contract. If there were no possibility of competition, this elevated cost factor would likely increase.

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Comment No.	Response

The ICT also looked at open-bay confined placement, which is being suggested in the second paragraph of this comment, but the expected impacts for continuing present practice in some deep-water areas did not justify changing present practice to open-bay confined placement, which would be very difficult from an engineering perspective, in those few areas and will permanently remove bay bottom from the ecosystem. While the cost for confining the material in all PAs was not considered in the development of the DMMP, it cannot be ignored. In summary, the ICT looked at engineering feasibility based on competitively available equipment, not conjecture about what could happen under a highly speculative scenario.

Figure 5.4-1
GIWW Maintenance Quantities - LLM (5-Year Period)

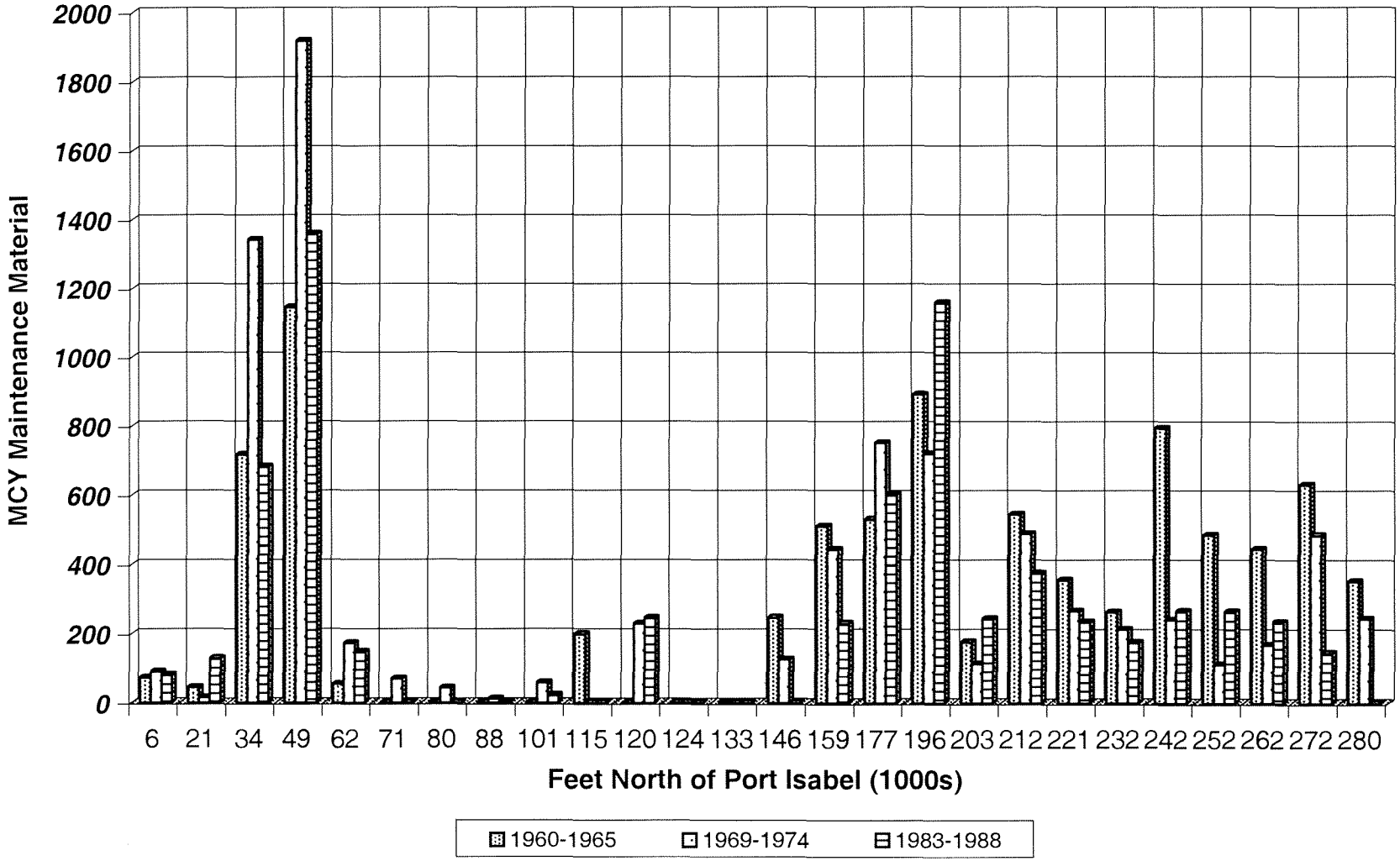


Figure 5.4-2
GIWW Maintenance Quantities - LLM (4-Year Period)

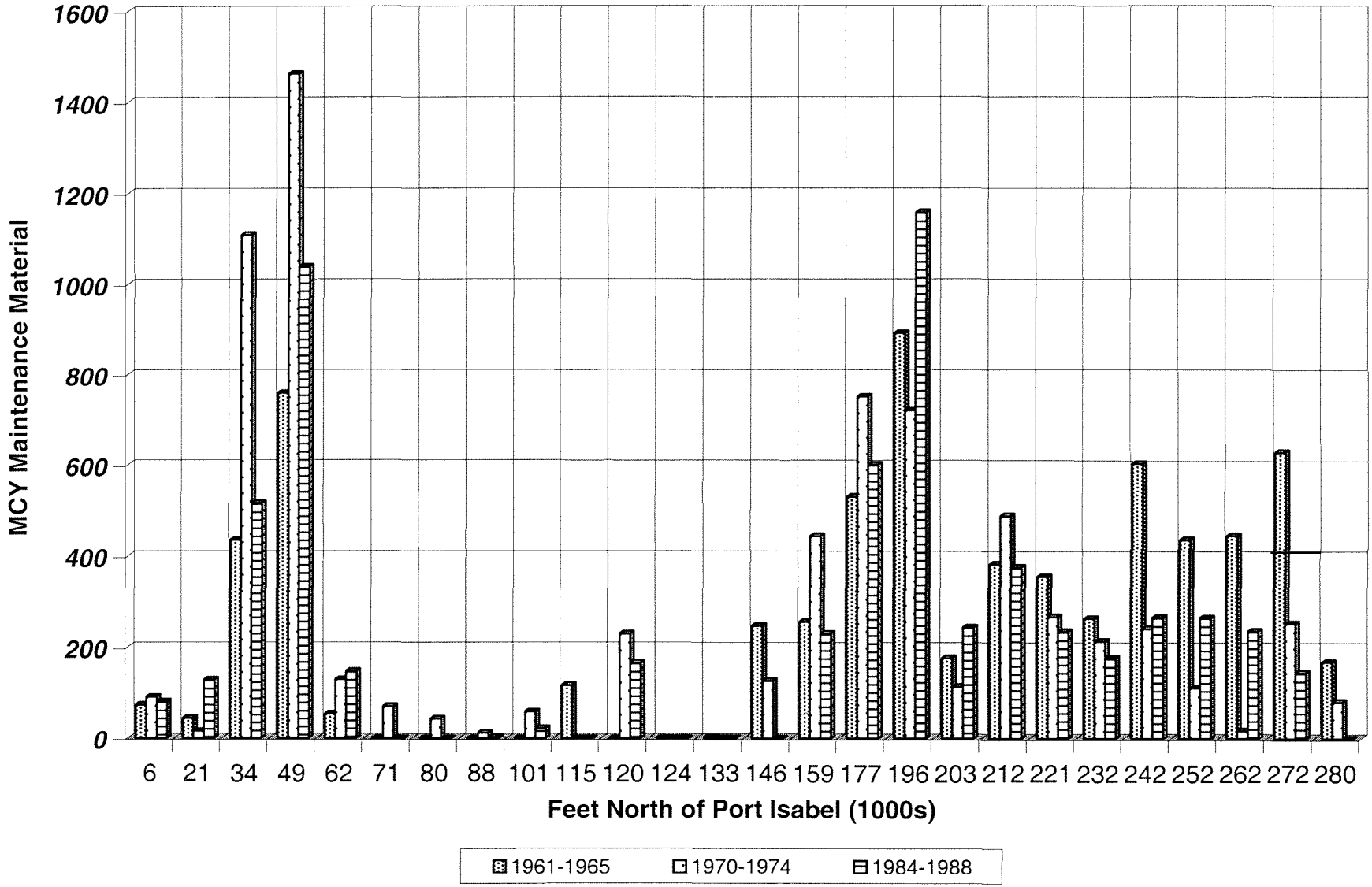
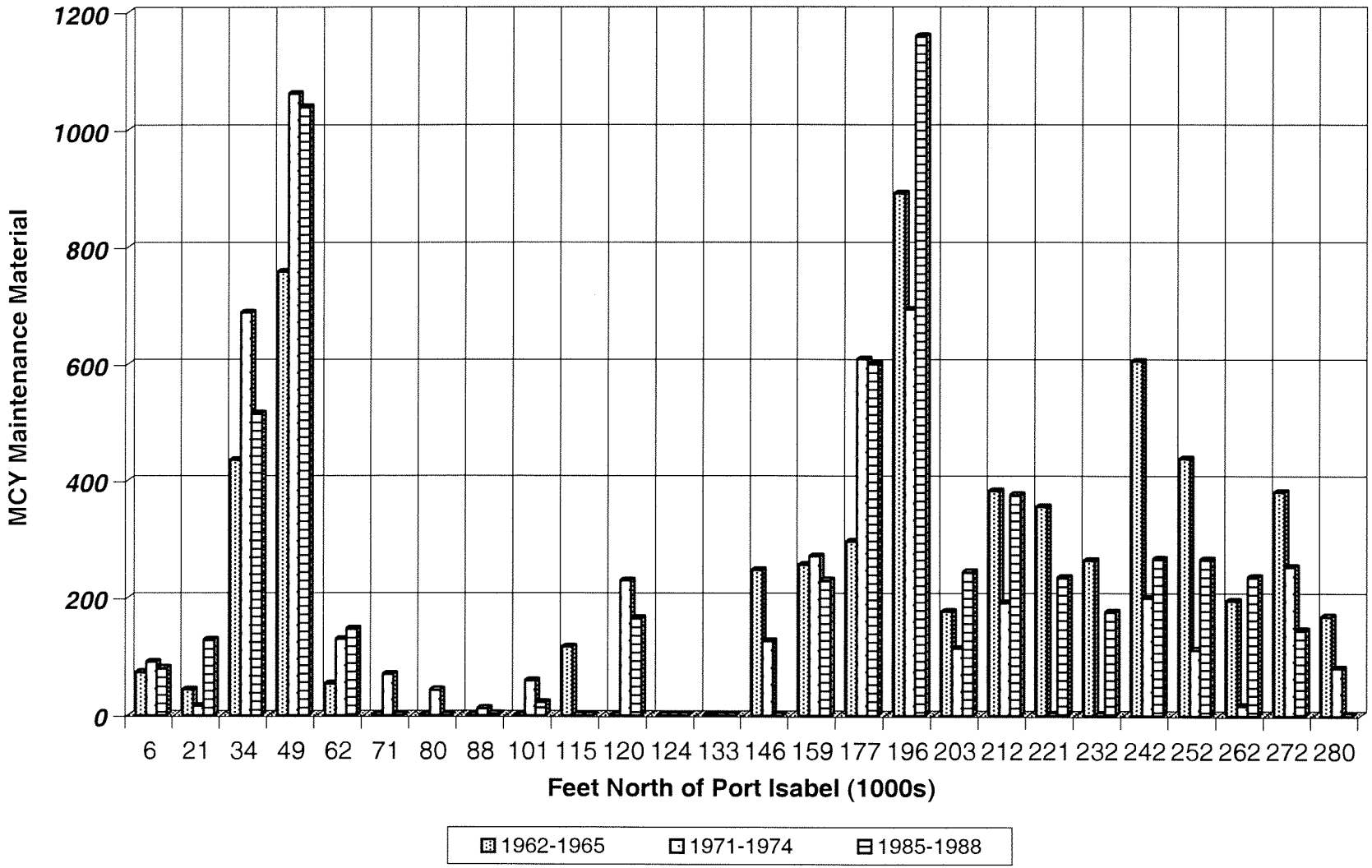


Figure 5.4-3
GIWW Maintenance Quantities - LLM (3-Year Period)



June16, 2003

Colonel Leonard D. Waterworth, District Commander
U.S. Army Corps of Engineers
2000 Fort Point Road
Galveston, Texas 77550

Re: Frontera Audubon Society comments to the Laguna Madre Draft Environmental Impact Statement

Dear Colonel Waterworth:

We have received and reviewed the Gulf Intracoastal Waterway Laguna Madre, Texas Maintenance Dredging DEIS of April 2003. The drafting of the DEIS was in response to a law suit filed by the National Audubon Society, Frontera Audubon Society, Sierra Club, Lower Laguna Madre Foundation and others. Although we do not agree with the findings of the ICT, we appreciate their effort.

Today, we are facing the same problems with open bay disposal as back in 1994 and before. Although much work has been done with a lot of money expended, many feel that we are no closer to a permanent, environmentally sound solution. We are not satisfied with the finding that taking the spoil offshore to disposal grounds is not a viable alternative to open bay disposal. It is deemed in the study by some to be both too expensive and impractical. Yet, the study does show that in the Lower Lagoon it appears to be a doable solution. We agree that land disposal is not an alternative. 1

Now, comes the Corps suggesting and promoting the building of spoil islands for the enhancement of bird life. While acknowledging that some spoil islands have been useful in other parts of the Inter coastal Waterway, Frontier Audubon does not believe that this method of disposal should be used in the Laguna Madre. 2

More spoil islands cover badly needed bay bottom and grasses. Some host bird species that may be harmful to coastal birds. Many spoil islands form land bridges that allow predators, both animal and human to cross and disturb nesting patterns and despoil nests and nesting sites. 3

We are told by the study that containment of spoil on the islands is more expensive than Gulf of Mexico placement. If the spoil is not contained it allows a return flow of harmful sediments into the seagrass beds. In a storm event massive releases of sediment occur from spoil islands. For these and other good reasons, Frontera Audubon requests that Gulf disposal of dredging activities in the Laguna Madre be the system of choice. EPA sites are available. The Corps has only to show its resolve to dispose of the spoil in the most environmentally sensitive manner possible. 4

Thank you for the opportunity to comment. These comments passed and approved by the Board of Frontier Audubon Society in a Board Meeting, Monday May 27, 2003.

Yours very truly,
Mary Lou Campbell

Mary Lou Campbell, Conservation Issues Chair for Frontera Audubon Society of Weslaco, Texas
Rural Route 2, Box 88
Mercedes, TExas 78570
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RESPONSE TO COMMENTS

Mary Lou Campbell
Frontera Audubon Society of Weslaco, Texas
Rural Route 2, Box 88
Mercedes, Texas 78570

Comment No.	Response

1. A cost analysis of the various dredging and placement alternatives (see Section 2.12.9 and Table 2-35) shows that all of the ocean placement alternatives for the entire length of the GIWW in the Laguna Madre are much more expensive than the current or proposed methods in the DMMP. However, the cost analysis did find the costs for offshore placement using a clamshell dredge and scows would be much lower than other offshore alternatives if used in a limited area in special cases, such as PAs located near passes. Because this alternative is still not economical, the USACE, with the concurrence of the ICT, selected a more economical dredging and placement method that would potentially reduce impacts to nearby seagrass beds. However, limited ocean disposal at selected PAs could be considered for future dredging cycles by the ICT, provided it could be done economically, equipment was available, and EPA provided the necessary clearance for ocean placement under Section 102 of the Marine Protection, Research and Sanctuary Act.

2. The USACE neither suggested nor promoted the more expensive alternative of bird island enhancement. The ICT recommended that the DMMP follow, to the extent possible, the Colonial Waterbird Management Plan (Appendix B), prepared by long-time residents and bird experts in the area. Additionally, by following those recommendations, more material will remain in upland areas of the PAs, reducing impacts to nearby seagrass.

3. Enhancement of existing bird islands will most commonly result from reconstruction of islands lost to erosion, not creation of new islands. Some channels between the islands will be increased in size to reduce predator invasion and the bird island enhancement should help reduce coverage of bay bottom and seagrasses by retaining more sediments on the islands.

4. We cannot find where the DEIS stated that confinement on the island left from GIWW construction is more expensive than ocean placement and Table 2-35 does not include such an alternative (Alternative #3A is confined placement on the mainland, except for Reach 3 and Alternative #4B is open-bay confined placement in all PAs, regardless of whether there are islands present, except for Reach 3). Construction of levees for full containment is expensive but generally less so than ocean placement (see Table 2-35). However, where it can be used in the DMMP, such as in most of Reach 5, it serves the same function as ocean placement in that maintenance material is permanently removed from the Laguna Madre system. Use of best management practices to retain more material on existing islands is only slightly more expensive than present practice, but allows a reduction in impacts to seagrass and bay bottom and enhancement of the islands for bird use.

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

JUN 16 2003

Dr. Terry Roberts
Environmental Section (PE-E)
Galveston District
U.S. Army Corps of Engineers
2000 Fort Point Road
Galveston, TX 77550

Dear Dr. Roberts:

In accordance with our responsibilities under Section 309 of the Clean Air Act, the National Environmental Policy Act (NEPA), and the Council on Environmental Quality Regulations (CEQ) for Implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the Draft Environmental Impact Statement (DEIS) for Maintenance Dredging Gulf Intracoastal Waterway Laguna Madre, Texas Nueces, Kleberg, Kenedy, Willacy, and Cameron Counties, Texas.

The DEIS evaluates and identifies the potential environmental impacts associated with the Proposed Action and Alternatives, including the No-Action Alternative. With prescribed mitigation, the DEIS demonstrates the proposed action would have no significant adverse impact on the human environment and would have negligible impacts in all other areas. EPA's participation as a member of the Interagency Coordination Team or ICT provided our agency the coordination opportunities and capacity to comment early in the developmental stages of the DEIS and thus contribute to the development of an environmentally acceptable long-term maintenance dredging disposal plan and full disclosure EIS. 1

EPA classified your DEIS and proposed action as "LO," i.e., EPA has "Lack of Objections" to the proposed alternative. Our classification will be published in the Federal Register according to our responsibility under Section 309 of the Clean Air Act, to inform the public of our views on proposed Federal actions.

EPA appreciates the opportunity to review the DEIS. We request that you send our office one (1) copy of the Final EIS at the same time that it is sent to the Office of Federal Activities (2251A), EPA, 1200 Pennsylvania Avenue, N.W., Washington, D.C. 20044.

Sincerely yours,

Michael P. Jansky, P.E.

Michael P. Jansky, P.E.
Regional 309 Coordinator (6ENXP)

RESPONSE TO COMMENTS

Michael P. Jansky, P.E.
United States Environmental Protection Agency
Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Comment No.	Response
1.	Thank you for your comments.

TEXAS PARKS & WILDLIFE

June 18, 2003

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

Dear Colonel Waterworth:

Texas Parks and Wildlife Department (TPWD) staff has reviewed the Draft Environmental Impact Statement (DEIS) for maintaining the Gulf Intracoastal Waterway in the Laguna Madre, Texas dated April 2003, and the Draft Dredged Material Management Plan (DMMP) for the next 50 years of maintenance dredging. Department staff has participated for over eight years in assisting the Corps of Engineers in developing the draft plan and reviewing studies funded by Army Corps of Engineers (ACE) which aided in the DEIS and DMMP.

This Department, along with other resource agencies, has invested a great deal of staff time in this effort to provide information, input and recommendations to protect and conserve one of our state and national treasures, the Laguna Madre, and its unique ecosystems. Department staff, along with other resource agencies and interest groups, was instrumental in drawing attention for the need to conduct additional studies to the 1975 Environmental Impact Statement to better identify the ecological impacts of the dredge maintenance program on this portion of the Gulf Intracoastal Waterway (GIWW). 1

Department and other resource agency staffs participated in reviewing every alternative dredged material placement or maintenance method conceived, and aside from those contained in the DEIS, all were demonstrated to be infeasible. While this Department would prefer that none of the dredged material be placed in the Laguna Madre except for beneficial purposes, it is not possible to maintain the channel without placing the material in the Laguna Madre. Texas Parks and Wildlife Department believes that the draft is an improvement on the aforementioned EIS and goes a long way in identifying and providing information on measurable impacts of the dredge maintenance program which is

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helpful in assessing the degree of impacts to state bays and estuaries. It should not be ignored that the construction of the GIWW in the Laguna Madre resulted in significant enhancement of some ecosystem functions, including a reduction in hyperthermals and hypersalinities and resultant fish kills in the Upper Laguna during the summer, and expansion of seagrass meadows there.

Department staff believes that actions proposed in the DMMP, including plans in select areas for total confinement, use of semi-confined areas, training levees to direct flows away from sensitive areas, and confining maintenance dredging to the fall and winter months (during periods when seagrasses are dormant), provide a net benefit over the previous (existing) dredging plan. For example, the DEIS estimates that approximately 4887 acres of open water (unvegetated) will be affected by the proposed DMMP, or about 115 acres more than the current or no-action alternative plan. The 115 acres will be used for fully confining placement areas (PA) and should lead to fewer dredging cycles. The plan also estimates a reduced impact of approximately 1307 acres to submerged aquatic vegetation in the DMMP. These and other components in the plan are an improvement from the no-action plan. However, it is still clear in the DEIS that impacts to the environment are a consequence of dredge maintenance program.

Most serious of the significant impacts to the biological resources of the Laguna Madre are the periodic blanketing of seagrasses and benthic organism in and near the designated disposal areas, and chronic turbidity in areas where currents cause the re-suspension of sediment, reducing light penetration and photosynthesis. Through the studies funded and work conducted for the SEIS and DMMP, we believe that those impacts are better understood and identified, and actions proposed will assist in minimizing negative impacts within the project area. This work may also be useful in other reaches along the Texas or Gulf Coast.

During public hearings held on May 7, 2003, concerns were expressed by several members of the public regarding Emmord's Hole, located in the Upper Laguna Madre, as a preferred disposal site. As one of the DMMP disposal options, Emmord's Hole is an area where extended depths of greater than 6.5 mean lower low water (MLLW) are found (page 2-74). While the DEIS states that Emmord's Hole will "...only act as a placement location of last resort... ," staff wishes to reiterate that no plans for placement will be made without first consideration and approval by the Interagency Coordinating Team which will include Texas Parks and Wildlife Department staff (see page 2-75, last sentence of Section 2.11.7).

The Department wishes to thank the Army Corps of Engineers for the opportunity to assist in this long and arduous effort. Please direct any questions or information to Rollin MacRae in Austin at (523) 389-4639 or Ismael "Smiley" Nava in Corpus Christi at (361) 825-3242.

Sincerely,

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

LM:RM:IN:JRM:sh

cc: Ms. Pat Clements, USFWS
Mr. Tom Calnan, GLO
Mr. Rusty Swafford, NMFS
Mr. Ray Matthews, TWDB
Mr. Bruce Moulton, TCEQ
Mr. Mark Fisher, TCEQ

RESPONSE TO COMMENTS

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

Comment No.	Response
1.	Thank you for your comments.

e
ENVIRONMENTAL DEFENSE
finding the ways that work

June 19, 2003

Colonel Leonard D. Waterworth
District Commander
U.S. Army Corps of Engineers
2000 Fort Point Road
Galveston, TX 77550

Re: Draft Environmental Impact Statement for Maintenance Dredging of the Laguna Madre section of the Gulf Intracoastal Waterway (hereafter referred to as the Laguna Madre DEIS, or the DEIS).

Dear Col. Waterworth,

Environmental Defense appreciates the extension granted for comments pertaining to the Laguna Madre DEIS. We also acknowledge the extensive commitment of time and resources the Corps of Engineers and the Interagency Coordinating Team (ICT) have put forth in pursuit of a dredge maintenance management plan (DMMP) acceptable to Gulf Intracoastal Waterway (GIWW) and Laguna Madre stakeholders.

We have a number of comments relative to the DMMP and the DEIS. Essentially, we find that the ICT and the Corps have put forth a plan that may not represent a significant environmental improvement over existing practices. The alternative dredge disposal schemes presented in the DMMP are but a rearrangement of the same methods and techniques used in the past. We are also concerned that accepting the DMMP as the plan in place for the next 50 years leaves little room for exploring new techniques and options that might certainly become available within that time frame. We welcome the discussion of ocean disposal as a viable option for parts of the Laguna Madre but we strongly urge that language be inserted in the DEIS committing the Corps to more aggressively examine the potential for ocean disposal in these reaches and other reaches of the GIWW. We also call for a no-action alternative different from the one presented in the DEIS: cessation of dredging in the GIWW. 1 2 3

Current dredging practices have severe environmental consequences.

Environmentally, the no action alternative as presented in the DEIS is unacceptable due to adverse impacts on seagrass beds and Laguna Madre-dependent species. The importance of seagrass beds to the life of the Laguna Madre cannot be overstated. In *The*

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Laguna Madre of Texas and Tamaulipas, (Tunnell et al, 2002) Withers states "seagrasses in the Laguna Madre constitute a unique resource that cannot be duplicated elsewhere on the Texas Coast"(p. 86). Seagrass beds are highly productive, possibly supporting entire fisheries, and certainly nourishing commercial and recreational fisheries that are important economically to the state (Withers, Tunnell et al. 2002, p. 85). Laguna Madre seagrasses provide rich forage, nursery habitat and refuge for a variety of finfish and invertebrates, waterfowl, colonial waterbirds and shorebirds. About 77% of the North American breeding population of Redhead duck winters on the Laguna Madre (Tunnell et al. 2002, p. 172) and feeds exclusively on one species of seagrass - shoalgrass (*Halodule wrightii*) (Tunnell et al 2002 p. 170).

Studies conducted by Dr. Chris Onuf of the USGS and historical analyses included in the Laguna Madre compendium by Tunnell and others acknowledge that opening passes to the Gulf of Mexico played an important role in stabilizing salinity balances and promoting the growth of seagrasses (Tunnell et al 2002, p. 89), but they also document changes in the composition of seagrass species and in the density of seagrass beds over time, due to continued dredging and open bay spoil disposal. For example shoalgrass, once likely the dominant species in the Lower Laguna Madre, is slowly being replaced by turtle-grass (Tunnell et al p. 89), threatening the future viability of Redhead duck wintering grounds.

Experts agree that dredging of sediment from the bottom of the GIWW, disposal of the sediment in the bay, and wave action causing re-suspension and dispersal of the sediment can severely restrict the amount of light reaching seagrass beds and significantly hinder their growth. Studies show that seagrasses can only withstand burial for a short period of time (one to two weeks). Under conditions where light penetration is low for a prolonged period, "potentially dangerous decreases in plant biomass" can occur (Dunton et al. Executive Summary, page 4). We, along with other conservation and recreational fishing constituents, are concerned that continued disposal of dredged material into the Laguna Madre bay system will have long term, detrimental impacts on the seagrass beds, on productivity in the Laguna Madre, and on livelihoods and wildlife dependent upon the Laguna Madre. For this reason, the no-action alternative of continued open-bay, unconfined disposal of dredged material into the Laguna Madre is unacceptable. 4

<u>The proposed DMMP does not adequately address the environmental issues.</u>

The DEIS offers only two alternatives: the no action alternative and the preferred alternative – the DMMP. We do not believe the alternatives offered meet NEPA requirements.[1] 5

The ICT process resulted in studies that examined, in some detail, the extent of light attenuation and its effect on seagrass growth in the Laguna Madre. Based on these

[1] NEPA requires that an EIS "rigorously explore and objectively evaluate all reasonable alternatives." 40 CFR 1502.14 (a).

studies, the ICT concluded that impacts could be lessened in a number of ways: by restricting dredging to the times of year when seagrass growth is dormant, by partially containing the dredged material, and by using more of the material to expand bird nesting islands, among other methods.

While these methods seem to constitute an improvement over existing practices, our review did not lead us to the conclusion that there would be significant environmental improvement with the preferred alternative *in practice*. In other words, the language in the DEIS and DMMP does not bind the Corps to using these techniques, instead employing terms like "to the extent practicable." If fully implemented, the combination of these practices might be more environmentally sound than existing practices. However, the DEIS does not provide any assurance that the Corps will choose to follow the recommendations of the ICT. Thus, the DEIS lacks the rigorous evaluation required under NEPA for even this alternative. Moreover, no commitments are made to how these techniques might be used as mitigation measures for the proposed continued dredging. See, e.g., 40 CFR 1502.14 (f). 6

Other best management practices that the Corps details in the DMMP: thin layer dispersal of the dredge material (less than 3 inches) and restricting open bay, unconfined dredging to the November-February period, do not provide assurances that seagrass beds will not continue to be impacted. Referring specifically to page A-2 of the DEIS, a potential, and likely, scenario is that unconfined open bay dredge disposal (of less than 3 inches) takes place in December, the material is dispersed through wave action over a period of three months, and the sediment continues to affect the growth cycle of the seagrass, potentially for the next 3-5 years, even with the thin-layer dispersal method. If another dredge event takes place within that time frame, the recovery will likely be slowed even further. New seed dispersal into the affected area may have begun to recolonize the seagrass beds, but those new plants would again be adversely affected with the repeated dredge cycle. 7

Recreational fishermen testifying at the Corpus Christi public hearing on May 7, 2003 stated that they could see the effects of dredge disposal for "months" after a dredging event. Since observation of the effects of dredge disposal seem to in some cases contradict the findings of the model, the model must be questioned and tested during actual dredge events, a conclusion supported in one of the studies completed for the ICT (Dunton et al Exec Summ page 5) See also 40 CFR 1500.1 (b) (accurate scientific analysis essential to implementing NEPA). 8

Dr. Ken Dunton's report also states that the potential impacts from ammonium flux during resuspension of dredged material can provoke phytoplankton blooms, which would contribute to decreased light penetration. Light penetration is necessary for photosynthetic activity to occur, and critical to maintaining the health of seagrasses by regulating levels of sulfides. The report abstract states that seagrass beds covered with even "modest amounts of dredged material can experience rapid increases in sulfide 9

concentrations that can be sustained at toxic concentrations for several months" (p. 4). These findings seem to merit more attention in light of the DMMP reliance on timing to avoid impacts to seagrasses, and show that the impacts from each dredge event can be complex and long-lasting.

In addition, other seagrass experts have expressed concern with several of the DMMP conclusions regarding disposal in deeper water areas and in new areas of the Laguna Madre. A leading seagrass researcher, Dr. Chris Onuf (USGS), stated at the Corpus Christi public hearing that the DMMP "pushed the envelope" of the model in concluding environmental benefits from the preferred alternative, and that disposing of dredged material in deeper parts of the Laguna, as the DMMP indicates will be pursued for several PAs, actually runs the risk of impacting *more* seagrass beds, due to heavier wave action in these areas. Dr. Onuf stated he was in favor of offshore disposal as the most environmentally beneficial option. 10

Fourth, we are not convinced that the DMMP offers a significant change in disposal practices from current methods, or on balance will decrease impacts to seagrass beds despite more efforts to contain the dredge disposal. For example, the DMMP recommends that dredge disposal practices for 40 of the 63 existing placement areas (PAs) either expand the existing footprint of dredge placement or continue placement as before. 11

There are 13 recommendations for expanding PAs for bird use, some of which may actually include new impacts to habitat, including a freshwater pond and seagrass beds. While there are spoil islands in the Laguna Madre that provide bird nesting habitat, we question the broad conclusion made in the DMMP that providing more dredge material will automatically increase an island's value as bird nesting habitat and therefore prove an environmental benefit. In many cases increasing the size of these islands and expanding the surrounding footprint has led to increased predator impacts on birds using the islands. The U.S. Fish & Wildlife Service comments on page 26 of the Coordination Act Report issued in conjunction with the DEIS (March 2003): "for rookery islands, the ICT needs additional information regarding the resource needs, including foraging requirements, of the nesting species to answer questions about the impacts of increased turbidity and local impacts to seagrass beds." In addition, it appears likely that construction or expansion of levees, containment systems and wake barriers will have at least some impact on existing habitat, but there is little evaluation of what those impacts might be. NEPA, of course, requires such an evaluation. See, e.g., 40 CFR 1502.16 (a), (b), & (d). 12

<u>From an environmental perspective, ocean disposal remains the best option.</u>

Ocean disposal eliminates impacts to seagrass beds, takes material out of the system so it cannot be re-suspended and dispersed after a dredge event is over, might significantly decrease the number of dredge events required as a result, and assures that Laguna Madre 13

water clarity – one of its defining features and important ecological characteristics - is not compromised. Other benefits of ocean disposal include: no need to build additional levees and containment areas, few impacts to cabins, existing rookeries, and fisheries.

For most reaches, the DEIS judges ocean disposal to be infeasible from an engineering point of view. For other reaches it appears to also be a cost issue. These are very technical issues that require careful analysis. As an example, the table below summarizes the Corps' estimates of costs for current disposal vs. ocean disposal for Reach 5.

	current	**open ocean**
	reach 5	reach 5
dredge vol per cycle (cubic yards)	532,176	532,176
number of dredg episodes	6.03	6.03
dredge time (months)	1.08	1.91
Costs:		
mob/demob	$398,732	$880,585
dredging	$1,138,857	$5,124,855
site preperation	**$0**	**$8,975,470**
sub-total	$1,537,589	$14,980,910
contingency	$307,518	$2,996,182
contingency as % of sub-total	20.00%	20.00%
total costs	$1,845,107	$17,977,092
unit cost (per cubic yard)	$3.47	$33.78
total cost with markups	$2,075,745	$20,224,229
ratio total cost with markup to total costs	1.125	1.125

We have been unable to find sufficient information in the DEIS to explain the cost differences. The table shows that for each cycle of open ocean disposal, it is assumed there will be "site preparation costs." For reach 5, such costs are almost $9 million. What "preparation" is required for open ocean disposal, and why would "preparation" be required for each such dredge event? In addition, the table also shows higher mob/demob costs because the equipment must come from the South Atlantic. If there are multiple dredging episodes at closely timed intervals, why would the mob/demob differential be so high for every event? 14

Recreational fishermen reliant on the Laguna Madre from Corpus Christi to Brownsville express grave concerns over continued disposal of dredged material in the bay system. In fact, there was not a single recreational fisherman who spoke in favor of bay disposal at the Corpus Christi public meeting. These fishermen earn a living from the Laguna Madre and are trained observers of the system. We believe their observations are very important and should be weighed very seriously in considering the options available to the Corps in maintaining the GIWW. As one fisherman put it: "we understand you are protecting a stream of commerce, but so are we...". None of the cost analyses performed for the ICT or the DMMP so far have attempted to incorporate recreational or 15

commercial fisheries impacts as a result of dredge maintenance. This is a gross oversight that needs correcting. See, e.g., 40 CFR 1502.23 (cost benefit analyses must consider relationship to unquantified environmental impacts, values and amenities).

A dredging plan is not like other Corps of Engineers projects that, once built, cannot be modified without serious economic consequences. Certainly there is no need to make a 50-year commitment to dredging methods that, on balance, are more harmful to the environment and that create more economic hardships for some Laguna Madre stakeholders than other methods that may become feasible in the future.

The DEIS's case against closure as a viable option is unconvincing.

The DEIS acknowledges, "one of the perceptions that became apparent in public scoping meetings was that the value of commercial traffic on the GIWW would not offset the cost of maintaining the GIWW in the Laguna Madre" (p 4-50). The DEIS addresses this issue by calculating a benefit cost ratio (BCR) equal to the ratio of transportation cost savings (barge v alternative mode) to operation and maintenance (O&M) costs. Since this yields a BCR greater than 1.00, this issue would appear to be resolved. We find the arguments presented in this section of the DEIS to be seriously unpersuasive.

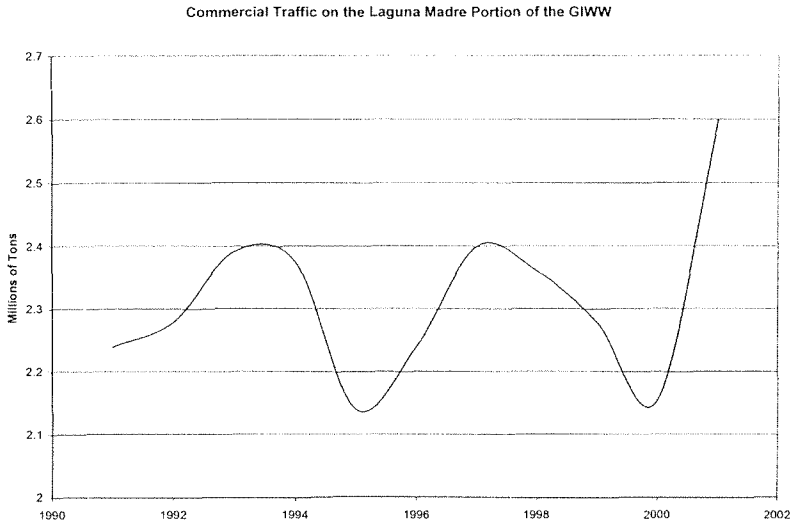
The Corps has estimated the average O&M on the Laguna Madre portion to be $17.204 million (p 4-56). Tonnage data for 2000 (to correspond with the DEIS analysis based on 2000 data) equaled $2.152 million (p 4-53). Since O&M costs are a federal responsibility, this represents a subsidy per ton of $7.99. 16

It is stated that the DEIS analysis is an update of an earlier study by Stephen Fuller and Luis Fellin. However, the DEIS numbers are not consistent with those provided in the earlier study. In the DEIS, barge costs per ton are estimated to be $9.11 (pp 4-53 and 4-54). This is almost twice the amount ($4.69 per ton) estimated by Fuller and Fellin. The same comparison for alternative modes yields a ratio of 1.87 ($17.52 per ton in the DEIS compared to $9.38). 17

We doubt seriously that costs per ton have risen so dramatically over the last six years. If the values from the earlier study were used, the BCR would be well below 1.00, making closure the best alternative from a National Economic Perspective. 18

We also note that the Corps' BCR in the DEIS assumes a yearly traffic growth rate of 1.3 percent. This would be a significant reversal of trends over the last 10 years. Since 1992, tonnage has fluctuated between 2.140 million (1995) and 2.601 million (2001). While the 2001 total represents a significant increase over 2000, the data suggest that fluctuations will continue to occur. Traffic totals are shown in the graph below. A lower

rate of growth would also reduce the BCR.



Source: Waterborne Commerce Statistics, Calendar Year 2001, Part 2.

Finally, we note that the DEIS does not include an analysis of alternative means of transport for goods currently transported by barge that may become cheaper and more feasible in the future. A petroleum pipeline is already transporting product to the Lower Rio Grande Valley. Since petroleum products still comprise the bulk of downbound shipments, it is entirely feasible that within the next 50 years existing or new pipelines might be able to handle most if not all of the petroleum imports to the Valley. This would certainly require a re-evaluation of the utility of this segment of the GIWW, given the comparatively small amount of upbound traffic currently using the waterway. 19

Conclusion.

The DEIS must examine cessation of dredging as an alternative, commit to following the recommendations of the ICT, more aggressively pursue offshore disposal as an option, include an analysis of the potential impacts to local industries such as commercial and recreational fishing, and examine how other means of transport might affect the conclusions in the EIS. We are strongly opposed to any plan that contemplates continued bay disposal of dredge material for the next 50 years. 20

Thank you for considering these comments. If you have questions or would like to discuss these comments, please do not hesitate to contact me.

Sincerely,

Karen M. Chapman
Water & Wildlife Analyst

References cited:

The Laguna Madre of Texas and Tamaulipas, Edited by John W. Tunnell, Jr. and Frank W. Judd, Texas A&M University Press, 2002.

Effects of Dredge Deposits on Seagrasses: An Integrative Model for Laguna Madre, Concluding Report, Volume I, Executive Summary, Dunton, K.H., Burd, L., Cifuentes, P.M., Morse, J.W., 2003.

Fish and Wildlife Coordination Act Report for Environmental Impact Statement on the Laguna Madre, Texas Gulf Intracoastal Waterway, Dredge Material Management Plan, Tom Shearer, U.S. Fish & wildlife Service, Corpus Christi Services Field Office, March 2003.

Effect of Closing the GIWW Below Corpus Christi Bay on Expenditures for Transportation Service, Stephen Fuller and Luis Fellin, Dept. of Agricultural Economics, Texas A&M University, May 1998.

RESPONSE TO COMMENTS

Karen M. Chapman
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Comment No.	Response

1. The USACE and the agencies on the ICT that helped prepare the EIS and DMMP agree that the new management plans do represent a significant environmental improvement over the existing practices. Every effort was made to design a site specific plan for each PA that would reduce or eliminate impacts to the surrounding area, including use of best management practices to retain more sediments on the islands and complete confinement of sediments in several PAs, especially in Reach 5. Based on the new DMMP, it was determined that impacts to submerged aquatic vegetation would be reduced by 1,307 acres in the Laguna Madre and many of the islands would be enhanced for colonial waterbird use.

2. As explained in the EIS and DMMP, the ICT will review each management plan prior to a dredging cycle to ensure the best management practices for each PA are incorporated. The DMMP is a flexible document that can be reviewed and modified, if warranted, based on new technologies or changing conditions in the Laguna Madre.

3. Ocean Disposal, as a potential option for some areas close to passes, is described in the DMMP and EIS. This option can be considered for any future dredging operations by the ICT for recommendation to the USACE. If this option becomes viable, a new NEPA document will be prepared to gain EPA clearance for ocean placement.

4. The No-Action alternative for this project was described in Section 2.2 and the reasons for not using cessation of dredging as the No-Action alternative are fully explained. All issues you describe are acknowledged in the EIS and were considered during preparation of the management plans. The studies and model results obtained by Dr. Ken Dunton were key to preparing the management plans and, as a result, normal dredging operations will be limited to the seagrass dormant period between November 1 and February 28 to reduce water turbidity impacts on seagrass. Additional best management practices will be used, as described in the EIS and DMMP, to further reduce direct and indirect impacts to seagrass. The ICT accepted this plan as the best alternative to the present dredging and placement practice and agreed that it represents a significant decrease in impacts to the Laguna Madre's ecosystem.

5. We do not agree. The ICT examined a wide array of alternatives, as is noted in Section 2 of the DEIS. Each altenative was examined through a rigorous selection process as described in Section 2. Through the extensive analysis performed by the ICT, the DMMP was developed as the best option of the many examined and consists of several different placement methods needed for the unique requirements found at each PA. Therefore, all others were eliminated, as is also documented in Section 2 of the DEIS. Examination of alternatives, and eliminating them from further consideration, is an accepted policy under NEPA (40 CFR 1502.14 "...and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been

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eliminated." To include a series of alternatives that were considered and deleted after careful analysis, just for the purpose of having a number of alternatives in the DEIS, would be a violation of both the requirements and the spirit of NEPA.

6. Section 1.6 of the DEIS states that the ICT "will provide a forum for continued coordination on the preferred alternative (DMMP) through the life of the project and provide advice on modifying management plans for the placement areas." Section 2.11 states, "The management plans in the DMMP will be reviewed prior to each dredging event to ensure the best management practice for each PA in every reach is incorporated to the extent practicable.´ This "practicable" does not apply to the review, but to the practices. It is very likely that one very good option for the Laguna Madre, were it practicable, would be to pump the maintenance material offshore, but it is not practicable. Thus the inclusion of the phrase, "to the extent practicable."

7. These impacts are fully described in the EIS and were considered during development of the DMMP (see Section 4.4.1.1). Measurements during the sediment transport modeling study found that sediment flows from the end of the pipeline placed in open water PAs flowed over the bottom about 400-500 meters without any attempt to reduce the mud flow by frequently moving the pipeline. The best management practices in the DMMP call for frequent movement of the pipeline in open water PAs to reduce the extent of the mud flow. These practices, coupled with seasonal dredging, have provided an estimate of 1,307 fewer acres of seagrass impacts compared to present practices in the No-Action alternative for a reduction of 28% in impacts. Furthermore, the recovery time estimates of 3-5 years was based on a verification study at PA 235 which has turtlegrass in the surrounding area, not shoalgrass. Therefore, the claim that seagrass will not have time to reestablish itself completely, either vegetatively or from seed, is not valid for areas dominated by shoalgrass which is still the dominant seagrass in most of the Laguna Madre.

8. Anecdotal information is not used in the DEIS because it does not provide numerical data for comparison with project study results. NEPA requires "Accurate scientific analysis" (40 CRF 1500.1). The model was tested as is noted in Section 4.4.1.2, which discusses the Verification Study (Burd and Eldridge, 2003) for the model.

9. The conclusions of Morse et al (2002) are discussed in detail in Section 4.2.4 of the DEIS, where it is noted "However, it should be noted that, while the brown tide appears to be a recurring phenomenon (Whitledge, 1993), it has not been recorded in the Laguna Madre since the GIWW was dredged in 1949, except for this latest occurrence. Therefore, since the brown tide organism is always present in the Laguna Madre system (Buskey et al., 1996), and maintenance of the GIWW has not caused brown tide events, there must be mechanisms occurring in the Laguna Madre that prevent the hypothesis put forth in Morse et al. (2002) from becoming reality." We have searched the available literature in the preparation of the final EIS and have found no other studies which describe a scenario such as that hypothesized in Morse et al. (2002).

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10. The deeper areas proposed for placement of dredged material are devoid of seagrass. Sediment transport models indicate that while most of the dredged material may eventually be transported out of the area, the amount will be less than what is transported out of the PAs where the material is presently placed. The ICT recognized this as a net benefit for the Laguna Madre in the DMMP compared to present practice. As for the Ocean Disposal alternative, going to only offshore placement would cost an average of $35.8 million annually, or $30.9 million more per year than under the DMMP (729%) and $31.6 million more than present practices (844%). This enormous increase is not justified by the potential impacts, based on the impacts recorded in the last 50+ years of dredging and placement in the Laguna Madre.

11. The reasons for expanding the footprint of the PAs is to decrease the impacts of the dredged material placement, based on the extensive alternatives analysis conducted by the ICT, which included some seagrass experts. The expansions were to provide more island area to retain sediments or to gain access to deep, unvegetated water.

12. The recommendations relative to bird islands were based on expert ICT input and the draft Colonial Waterbird Management Plan (AppendixB), devised by long-time residents and bird experts in the area. Additionally, by following those recommendations, more material will remain in upland areas of the PAs, reducing impacts to nearby seagrass. In some cases, the channels separating islands will be widened and deepened to reduce predator access. The freshwater ponds on some of the PAs were created as a by-product of placement in the past. Where it is possible, the ponds will be protected, but if not possible, they will be recreated. The DEIS states that there will be impacts from levee expansion and those impacts, and all others, are included in the DEIS under the categories listed in Section 4.0, and are included in the summary table 4.1 for each PA.

13. There would be, however, impacts to the human environment from ocean placement, whether by pipeline to the Gulf, by hopper dredges, or by dredges and scows, which would require one or more EISs. Placement by pipeline, for example, would entail many of the same impacts as upland placement, from the pipeline corridors and their maintenance, and upland placement was eliminated from further analysis based on those impacts. These impacts were examined by the ICT early in the alternatives analysis (see Sections 2.6 and 2.9). These impacts, plus the fatal flaw of engineering infeasibility, eliminated ocean placement from further consideration. Also see response to ED Comment 10.

14. 40 CFR 1502.2(a) states "Environmental impact statements shall be analytic rather than encyclopedic." Therefore, M&N (2002), cited in the DEIS, was not included in the text of the DEIS but is summarized in Section 2.12 of the DEIS. A listing of the meaning of site preparation, by reach, is provided in Section 2.12. However, the complete cost analysis and assumptions are provided on the USACE web page which is where you must have obtained the information in your table. Also provided in this table is the dredging method for the offshore alternative you selected and this is with a hydraulic dredge and pipeline to a site located about 2 miles offshore. The assumptions provided with the table on the

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USACE web page also explain that the "site preparation costs" are for dredging an 8-foot deep channel from the GIWW to Padre Island at several locations to allow access for pipelines and equipment to handle it. These channels are assumed to fill in between dredging cycles and must be redredged for each cycle. The assumptions also explain that a clamshell dredge and scows will be used to dredge the access channels and place the material offshore. Because this is an offshore option, a hydraulic dredge cannot be used to dredge the channel since the pipeline is not yet in place and the material would have to be placed in the Laguna Madre. Therefore, the mob/demob costs are higher to include the cost of bringing the clamshell dredge from the east coast. The list of assumptions on the web page do not include bringing equipment in from the South Atlantic, which is illegal under the Jones Act. All equipment is assumed to come from the Gulf coast or the east coast. As for keeping the equipment on site to reduce mob/demob costs, the cost of dredging equipment is high and unless a dredging contractor can keep the equipment working at a given site, it will go elsewhere to work. Thus there is mob/demob cost with every job because dredging the GIWW is not continuous.

15. These gentlemen may be seasoned observers of portions of the system, but the ICT, which did consider this issue, included fisheries experts from the NMFS, FWS, and TPWD, as well as the managers of some of the studies performed during the five-year period leading up to the publication of the DEIS. However, the human environment, as defined in 40 CFR 1508.14, is much more inclusive than the area of interest of local recreational fishermen. This more complex problem is the one that the ICT wrestled with to arrive at the DMMP. Additionally, as noted above, anecdotal information cannot be substituted for scientific studies in an EIS.

    We do not know how you reached the conclusion that the DMMP "on balance [is] more harmful to the environment...than other methods." The DMMP was developed based on the expertise of the ICT, the study authors, and a thorough analysis of all additional available information, independent of the cost analysis, as noted in the DEIS. The ICT concluded that the management plans in the DMMP presented a significant reduction in future environmental impacts for maintenance dredging of the GIWW. Additionally, the DEIS notes explicitly that the DMMP is not a final product but is one that may be modified over time based on the changing situation in the Laguna Madre and the results of information that may become available in the future. The DMMP notes several times that it will be reviewed before each dredging cycle by the ICT to determine if modifications are needed. Furthermore, cost analysis of recreational fishing and other tourist-related enterprises were included in Tanyeri-Abur (1998) and the DEIS, all of which are available on the Galveston District website.

16. The economic analysis and initial write-up were prepared before a detailed cost estimate was initiated. Due to a lack of information, average annual costs were estimated based upon the gross assumption that costs would be distributed evenly throughout the 50-year project life. This assumption is very conservative and results in an overstatement of average annual project costs.

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After the cost analysis was completed, the cost data were reanalyzed using the new dredging cycle data which resulted in a much lower average annual cost than the gross initial calculations. A revised write-up of the economic analysis was prepared for the DEIS, but the changes to the economic write-up were inadvertently left out of the DEIS. The corrected economic analysis has been included in the FEIS.

The table below provides the corrected Average Annual Benefits and Maintenance Costs and Benefit-Cost Ratios (thousands of dollars) to facilitate a response to comments. The table shows the correct, or more detailed, cost estimates inadvertently omitted from the DEIS.

Table 4-9. Average Annual Benefits and Maintenance Costs, and Benefit-Cost Ratios (thousands of dollars)

Scenario	Average Annual Benefits	Average Annual Costs	Net Benefits	B/C Ratio
Benefits start first year of project life	$22,378	$7,610	$14,768	2.9
Benefits start after 5 years of channel shoaling	$18,151	$7,610	$10,541	2.4

There are many variables that go into the calculation of transportation costs. As stated previously, the Reebie Barge Cost Analysis Model and Rail Cost Analysis Model were used to develop the costs for both the 1998 TAMU study and the current study. In the case of barge costs, the variables include wages, fuel, towboat, barge, switching/fleeting, cleaning/relocation, overhead, origin/destination mileage, average tons per barge, loading/unloading costs, tow type (general vs. dedicated) and backhaul rates.

In response to the comments regarding average costs per ton, an analysis was prepared as described in comments 17 and 18. The 1998 TAMU average costs per ton were applied to the current study tonnages. Applying the 1997 average cost per ton to the 2003 study tonnages does not change the rank of the alternatives, nor does it change the feasibility of the preferred alternative. The results are shown in the following table. (Please note that comment #18 uses an average of $4.69 per ton for the 1998 study. This amount corresponds to the downbound tonnages only, excluding the upbound portion. The correct comparison is the overall average of $5.21 per ton ($11.4M/2,187,728 tons)). The corresponding rate in the 2003 study is $9.11 per ton ($19.6M/2,152,229 tons).

The differences between the two costs can be attributed to several factors. First, the costs are dependent on market influences for the prices of fuel, wages, etc. There have been both increases and decreases in the relevant market prices over the time period. In addition, a couple of assumptions made to develop the per-ton costs using the BCAM

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model differed between the two studies. The 1998 TAMU study assumed no terminal loading/unloading costs, while the current study included terminal loading/unloading costs. In addition, the 1998 TAMU study assumed 100% empty backhaul, while the current study compared both 100% and 50% empty backhaul rates, but assumed 50%, as outlined in the report.

The difference in the application of the terminal loading/unloading cost is by far the most significant difference between the two rates, accounting for approximately 70% of the increase. Terminal loading/unloading costs are a significant portion of operating costs in the transportation industry, and were, therefore, included in the 2003 study. Loading/unloading costs were applied consistently to all alternatives, resulting in the increase in cost per ton for every alternative (barge, rail and combination of modes). The remaining difference (30%) between the average cost per ton for the studies lies in general market fluctuations and in changes in the origin/destinations and tonnages over the years. The overall result is a change in magnitude of benefits approximately 1.7 times between the studies.

Comparison of Annual Transportation Costs for 1997 TAMU Study, 2002 Study and Application of 1997 TAMU Rates to 2002 Tonnages (millions of dollars)

Mode	1998 TAMU Costs	2002 Costs	1998 TAMU Costs Applied to 2002 Tonnages
Inland Waterway Barge	$11.4	$19.6	$11.2
Least Cost Alternative (Combination Rail/Inland Waterway Barge)	$22.8	$37.7	$22.4
Rail	$37.7	$51.4	$37.7

The resultant net benefits using this sensitivity analysis are $11.2M ($22.4 - $11.2). Even without any escalation of benefits from 1997 to current levels, the resultant B/C ratio is 1.5 ($11.2M/$7.6M). This comparison allows a liberal comparison of transportation costs by assuming no changes in transportation costs since 1997, but still supports project feasibility.

17. Please see Response 16.

18. The traffic annual growth rate of 1.3% is based on an analysis prepared by the Institute for Water Resources for the 1997 Inland Waterway Review. Three projections are

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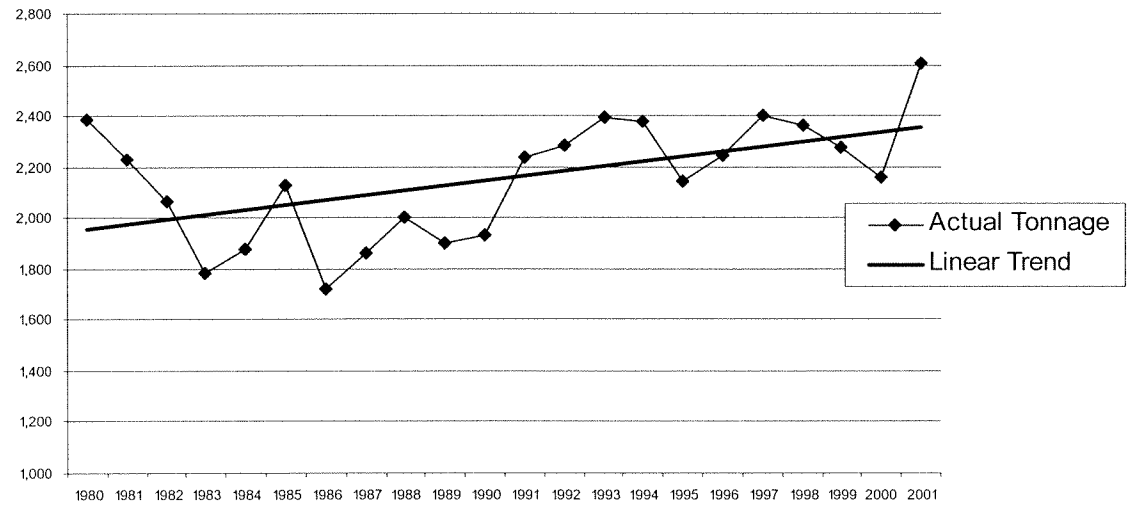
provided based on various levels of confidence, specifically, low (0.6%), medium (1.3%) and high (1.9%). The most likely growth rate, or medium level, was chosen for use in the current study.

To support the use of this rate, a trend analysis of actual tonnages from 1980 to 2001 for the Laguna Madre segment of the GIWW was conducted. The results are shown in the graph that follows. The graph illustrates the general volatility of tonnages on a yearly basis. However, there is an overall growth in tonnages over the past twenty years. As shown in the graph, the general upward trend in tonnages continues during the 1990 to 2001 time period as well.

As a sensitivity analysis, the annual growth rate was assumed to be 0.0%. A flat growth rate results in a reduction of net excess benefits to approximately $8.3M. The change in the growth rate does not change the ranking of alternatives and the recommended project continues to be feasible with a B/C ratio of 2.0.

GIWW: Corpus Christi to Mexico Tonnages (thousand short tons)
(1980 - 2001)



19. As you state, it is entirely possible that a cheaper mode of transportation may be developed in the future. Expansion of the existing petroleum pipeline was completed in 1998. The impact of the pipeline expansion is reflected in current cargo flow statistics, i.e. transfers of goods from barge to pipeline are reflected in the current tonnages. Barge shipments of petroleum products decreased approximately 7% from 1998 to 2001, only a slight decrease. Barge transport of gasoline decreased approximately 36%, while distillate fuel oil increased 347%. Since expansion of the pipeline, there has been a slight change in the distribution of petroleum products shipped, however, overall

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demand for barge transportation of petroleum products has remained stable. By utilizing current tonnages, the analysis has captured the impact of the pipeline and 1998 expansion. The feasibility of constructing a new pipeline is significantly reduced by real estate issues in the area, specifically, the ability to get new easements and rights-of-way. Although there always exists the potential for cheaper means of transportation, there are currently no known, committed efforts towards development of new alternatives. The continued operation of the Laguna Madre portion of the GIWW remains the least costly transportation mode (with the expanded pipeline in place) with a B/C ratio of over 2.4.

20. The reasons for not examining cessation of dredging as an alternative are described in the DEIS, as noted in Comment 4 above. The DEIS commits to continuing coordination with the ICT on modification to the DMMP in the future, if necessary; has pursued offshore placement to the extent possible with available information; has included analysis of tourist-related enterprises in Sections3.12 and 4.12; and "other means of transport" were examined by Fuller and Fellin (1998) and recently updated by the USACE in Section 4.13.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 19, 2003

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

Dear Colonel Waterworth:

This letter is to provide the Texas Commission on Environmental Quality (TCEQ) comments on the Draft Environmental Impact Statement (DEIS) regarding the "Gulf Intracoastal Waterway Laguna Madre, Texas Maintenance Dredging" dated April 2003. The TCEQ staff have actively participated in the U.S. Army Corps of Engineer (Corps) sponsored Interagency Coordination Team (ICT) for over eight years in developing the environmental studies for the DEIS, and to develop the Draft Dredged Material Management Plan (DMMP) for the continued maintenance dredging in the Laguna Madre.

The TCEQ wishes to take this opportunity to express its support of the ICT process in bringing together involved federal and state agencies in the planning process for complex federal projects. Specific to the Laguna ICT, the Corps' support of the ICT process and the associated studies has provided an impressive amount of data as the basis for the DEIS.

The DMMP has incorporated use of confined disposal, training levees, and seasonal restrictions on dredged material disposal as management actions which should reduce the direct impact to seagrasses by over 1300 acres compared to the current Corps current disposal practices in the Laguna Madre. The DEIS provides an important update on the existing information and the environmental consequences of the placement of dredge material from the continued maintenance dredging of the 117 miles of Gulf Intracoastal Waterway (GIWW) through the Laguna Madre.

It is important to develop and implement a monitoring plan with the goals of assessing the effectiveness of the disposal practice modifications in the DMMP, accurately determining the localized effects of the DMMP disposal practices, providing the necessary information to further minimize the impacts of dredged material placement, and to maximize the beneficial use of the dredged material. Results from such a plan will provide the ICT a valuable tool for the continued

1

coordination of dredged material placement in the Laguna Madre. Important elements of the monitoring plan should include total suspended solids, ammonia concentrations resulting in the water column as a result of placement activities, and the effectiveness of innovative disposal practices.

The TCEQ will work closely with the Corps and the ICT to develop language for the final EIS which states the Corps' commitment to develop and implement a monitoring plan for the project. This commitment is needed for the TCEQ to complete the 401 Water Quality Certification for the project. 2

Enclosed with this letter is the TCEQ's list of additional comments to further improve the clarity of the DEIS.

The TCEQ looks forward to developing a stategy for incorporating the monitoirng plan into the Final Environmental Impact Statement. Please provide any response to Mr. Mark Fisher of the Water Quality Division MC-150, P.O. Box 13087, Austin, Texas 78711-3087. Mr Fisher may also be contacted by phone at (512) 239-4586, or by e-mail at *mfisher@tceq.state.tx.us*.

Sincerely,

L'Oreal Stepney

L'Oreal Stepney, Director
Water Quality Division
Texas Commission on Environmental Quality

LS/MF/emh

Enclosure

ccs: ICT Members

Texas Commission on Environmental Quality Comments
Draft Environmental Impact Statement
"Gulf Intracoastal Waterway Laguna Madre, Texas Maintenance Dredging"
April 2003

Page ES-4	States that overall 1307 fewer acres will be impacted from proposed DMMP. This needs to be reconciled with section 4.16 which states a reduction of 1362 acres of seagrass impact.	3
Page 1-7	Table 1-1 does not identify confined disposal areas.	4
Page 2-69	PA 203 and PA 204. States current position will have to be documented in the DEIS. This documentation is needed in text of the document and in Appendix A.	5
Page 4-1	It should be noted that the Laguna Madre, Segment 2491, was identified on the 2000 303(d) List as partially supporting the aquatic life use due to depressed dissolved oxygen in several areas. This segment is listed in category 5c on the 2002 303(d) List. See: http://www.tnrcc.state.tx.us/water/quality/02_twqmar/02_305b/2491_fact.pdf for additional information	6
Page 4-5	Sediment budget cites Morton (1998) that 97.1 percent of all maintenance dredging is from reworked maintenance material, yet there is no discussion to reconcile Teeter (2002) which predicts only 14 percent reduction in dredge volume from removing material from the system on page 2-15.	7

RESPONSE TO COMMENTS

L'Oreal Stepney
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 79711-3087

Comment No.	Response
1.	Language relative to a monitoring program, which has been reviewed by the ICT, including the TCEQ, is included in the final EIS in Section 4.15.
2.	Please see response to TCEQ Comment 1.
3.	The text in Section 4 has been revised.
4.	Table 1-1 will be corrected to reflect the fact that some of the existing PAs are partially or fully confined.
5.	Text has been revised.
6.	Text has been revised.
7.	Language has been added to explain this apparent contradiction.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
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June 19, 2003

Lloyd H. Saunders, Ph.D.
Chief, Planning, Environmental
and Regulatory Division
Department of the Army, Galveston District
Corps of Engineers
P.O. Box 1229
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attn: Dr. Terrell Roberts

Dear Dr. Saunders:

This responds to the U.S. Army Corps of Engineers (USACE) request by letter, dated April 1, 2003, for a review of the Draft Environmental Impact Statement (DEIS) and Biological Assessment (BA), dated March 2003, for maintaining the Gulf Intracoastal Waterway (GIWW) in the Laguna Madre, Texas, comments on the DEIS and a letter of concurrence or a Biological Opinion (BO). The USACE requested comments in the April 1st letter by May 19, 2003; however, subsequent to that letter, the comment period was extended to June 19, 2003.

The U.S. Fish and Wildlife Service's (Service) representative on the Interagency Coordination Team (ICT) from its beginning in 1995 and throughout much of the work of the ICT relative to the preparation of the DEIS was Mr. Johnny French. Following Mr. French's retirement in December 2000, Mr. Tom Shearer was the Service's representative on the ICT. As of January 2003, Ms. Pat Clements has been appointed as the Service's ICT representative. The Service's comments on the DEIS have been coordinated with Mr. Shearer and other Service personnel including Ms. Mary Orms who is this office's team leader for consultation under Section 7 of the Endangered Species Act.

GENERAL COMMENTS

Although noted a number of times in the DEIS, it bears reiterating that the ICT must remain an active group, and an integral part of the USACE's maintenance dredging activities in the Laguna Madre. Integral to the ICT's continued advisory work is that the Dredged Material Maintenance Plan (DMMP) should, although it was developed using the best scientific data available at the time, only be considered a guide in the decision making process, and not a document to be considered "etched in stone". The DEIS notes (on page 2-62 ¶ 3 and elsewhere) that with each planned dredging, the DMMP will be consulted, but that current information will be incorporated into each dredging decision. True of probably all water-related projects, but especially apparent in coastal environments, is the dynamic nature of the Laguna Madre system. Each dredging proposal will need

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to be assessed based on the information gathered in the DEIS and DMMP, and compared to the current state of the various reaches and associated Placement Areas (PA). Current technological advances will also need to be considered by the USACE and ICT. The ICT should be alert for the possibility that the baseline information represented in the DMMP has dramatically altered from the previous dredging cycle. The Service recommends that the ICT actively commit to the goal of eliminating "Emergency Dredging", except in cases of catastrophic events, such as hurricanes. Emergency dredging precludes much of the careful assessment that is needed for truly applying current best management practices to the Laguna Madre maintenance dredging program. Rarely should the USACE and the ICT be surprised by the amount of material needed to be removed from a particular dredging area. This will require an effort by the USACE and the ICT members to stay abreast of current information about the Laguna Madre, as well as a commitment to develop and utilize communication lines with other agencies not on the ICT as well as with GIWW stakeholders. Some of the comments below on the DEIS are, in the assessment of the Service, the result of these communication lines being underdeveloped or poorly utilized.

Investigations of water and sediment quality in the Laguna Madre, both historical and those requested by the ICT, indicated that there are areas that have elevated metal concentrations and/or pesticides. The LWA (1998)[1] study of the ICWW, for example, suggested that further study is needed to determine whether high levels of copper represents a water quality problem since every sample exceeded EPA's marine criteria. Prior to each dredging cycle the USACE should provide the ICT with the contaminant analyses to determine suitability of placement for dredged material. Solid phase bioassays and bioaccumulation studies should be included along with bulk chemistry. 2

When dredging is done on an emergency basis, sediment analysis, if done, is not shared with the ICT. The Service recommends periodic monitoring of the state of the channel, especially in areas that are prone to sedimentation. Emergency situations which bypass consultation with the ICT could be avoided by identifying segments that will require dredging in the near future.

The DEIS notes that the Service's Fish and Wildlife Coordination Act Report, Laguna Madre, Texas (LMCAR)(March 2003), will be included as an appendix in the FEIS. The LMCAR includes, for each placement area, the DMMP descriptions and recommendations, the site-specific descriptions and management recommendations from the Draft Colonial Waterbird Management Plan developed by the Coastal Bend Bays and Estuaries Program (unpublished, 2002), and for the appropriate placement areas, the Padre Island National Seashore draft Spoil Island Management Plan. As a related tool in the LMCAR, the Service created overlays of each placement area with the colonial waterbird rookeries. 3

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[1]LWA. 1998. Characterization of dredged material, Laguna Madre, Texas. Prepared by U.S. Environmental Protection Agency, Dallas, TX, Lee Wilson and Associates Santa Fe, NM and Coastal Environments, Baton Rouge, LA. Contract 68-06-0067

SPECIFIC COMMENTS

EXECUTIVE SUMMARY:

The active and continuing efforts that are expected of the ICT in the on-going maintenance dredging program for the Laguna Madre are referenced numerous times throughout the DEIS. The Service recommends that the Executive Summary include a statement that clearly summarizes the role of the ICT relative to the whole Laguna Madre maintenance dredging program over the life (50-years) of the project. 4

ES.1 DESCRIPTION, p. ES-2 paragraph 2: The DEIS notes "The ULM reach includes three water exchange passes, generally 5 feet deep by 200 feet wide, that were constructed to improve water circulation and fish migration in an area known locally as "The Hole." There are 8 small channels (DEIS Fig. 1-2b and 1-2c) to the east of the GIWW between PA 203 and PA 208 (placement areas to the north and south of The Hole area). Except for the channel associated with PA 205, referenced elsewhere in the DEIS, it is not clear which of these channels are being referenced as comprising the other two passes. The Service recommends that this be clarified in the FEIS. [note: these three passes are referenced again on p. 1-7, also without specific site information] 5

ES.4 SPECIAL AQUATIC HABITAT, Submerged Aquatic Vegetation: The DEIS notes "Overall 1,307 fewer acres of seagrass will be impacted with the DMMP alternative." The Service recommends that the USACE clarify whether this acreage applies to one north-to-south maintenance dredging pass (divided over however many years that would take) or applies to the 50-year life of the project. If the former, then this acreage (also for the other habitat types that will be affected by dredging) needs to be reconciled, here and elsewhere in the DEIS, to include the additional impacts that may be associated with areas that require more frequent dredging. 6

ES-7 THREATENED AND ENDANGERED SPECIES, p. ES-9, ¶ 3 *State-Threatened Colonial Waterbirds*: The Service recommends that the second sentence be revised as follows: "Neither the No-Action nor the DMMP alternative should directly impact these State-listed waterbirds **outside of the nesting season** because they are mobile enough to avoid direct impacts from dredged material placement." 7

1.0 NEED FOR AND OBJECTIVES OF ACTION

1.3 EXISTING PROJECT, p. 1-7, ¶ 2: Referenced PA 238 does not appear on Figure 1-2f. 8

Figure 1-2 a through f: Numbering of these pages in the DEIS is 1-6 to 1-11. The correct pagination, at their current location in the document, is 1-9 to 1-19. The Service recommends this be corrected in the FEIS. 9

1.4.3 Finfish and Shellfish Resources, p.1-22: The DEIS notes: "Potential impacts to commercial and recreational fisheries have also been a noted concern from stakeholders." However, neither in 10

this section, nor elsewhere in the DEIS, is the importance of deeper water habitat areas, as refuges for fish during certain conditions, discussed or assessed. Given the clearly voiced concerns on this point that have been made with the release of the DEIS, the Service recommends that the FEIS include a direct assessment of this issue.

1.4.5 Threatened and Endangered Species, p.1-23: The Service recommends that the last sentence in this paragraph be deleted and replaced with the following: Critical Habitat for piping plover wintering grounds was designated in 2001 in Texas by the Fish and Wildlife Service (66FR 36074-36078). All or portions of Units TX-2 to TX-5 (figure 3-3) are within the study area for the DEIS. 11

1.5 PUBLIC AND AGENCY CONCERNS, p.1-24, ¶ 3: The DEIS notes as a concern: "...increased predation of colonial waterbird rookeries on existing placement areas, and other impacts from open-bay placement of dredged material." On page 1-28 this issue is again noted, and the removal of disposal islands too close to the mainland is discussed as an additional restoration measure recommended by the resource agencies. However, this issue is not mentioned, nor is it addressed in sections of the DEIS describing wildlife and impacts of the maintenance dredging activities, specifically the creation of long emergent islands which can permanently support predators such as coyotes and racoons. Although specific actions that could remedy this concern can be addressed as a component of the implementation of the DMMP, and associated on-going reviews by the ICT, the Service recommends that the DEIS be amended in appropriate sections to identify predator use and dispersal along the PA's within the study area, and discussed as an impact of the dredging maintenance program. 12

2.0 ALTERNATIVES

2.3 DEVELOPMENT OF REACHES, p.2-3, ¶ 3, second sentence: The DEIS is unclear in identifying which portions of the Lower Laguna Madre (LLM) are being referenced by this statement "... the area that the GIWW traverses is in waters too deep to support seagrasses." The Service recommends that the FEIS be revised to clarify whether the reference is to either the northernmost or southernmost portion of the LLM, the topic of this paragraph, or to the GIWW as a whole. 13

P. 2-4, ¶ 1 and 2: The first sentences of each of these paragraphs seem to be contradictory. The Service questions why the segments were set to prevent the distance from the dredge to various placement areas from exceeding 7 miles when the next paragraph note is made that a 2-mile distance is pushing the limits. The Service recommends that the FEIS clarify this point. Also, the Service recommends that if segments are to be referenced in the document, that a figure be included in the FEIS which identifies these features. 14

2.6 SCREENING CRITERIA, p 2-7, ¶ 1, second bullet: The Service recommends that the FEIS refer the reader to section 4.15 for additional information regarding the Organic Act of 1916 and other policies and regulations of the National Park Service that are guiding the decisions of Padre Island National Seashore relative to the maintenance dredging and use of the placement areas within park boundaries. 15

Table 2.4, p.2-8: The Service recommends that the FEIS clarify for the reader that one N, or a "no" eliminates a placement option from further consideration, and that only options with 3 Y's, or "yeses", have been carried forward in the document. 16

2.9.5.2 Open-Bay Confined, p.2-26 Reach 1, sentence 4: The Service recommends that the FEIS clarify for the reader that "...impacts...associated with the construction of the additional levees ..." includes not only the footprint of the levee itself but any channels that might need to be dredged to access equipment into the site, and secondary impacts outside the levee from the erosion of the levee material. As this applies to the other 5 reaches, this clarification may most appropriately be made in the introductory paragraph for section 2.9.5.2. 17

2.9.5.3 Open-Bay Semiconfined, p. 2-34 Reach 3, sentence 6: The DEIS notes "Channels would have to be dredged into The Hole to provide access for equipment for levee construction." The Service recommends that the FEIS clarify why the three circulation channels noted on pages ES-2 and 1-7 would not be usable. Also, the Service assumes that given the shallow waters surrounding a number of placement areas, construction channels would also have to be dredged in other reaches if this dredge material placement option is pursued. As construction channels could significantly impact seagrasses and other important resources, the Service recommends that this be clarified in the FEIS, or explained in the introductory paragraph of section 2.9.5.3 why The Hole is the only site that would require a construction channel. 18

2.11 DREDGED MATERIAL MANAGMENT PLAN, p.2-59, ¶ 2, last sentence: The Service recommends this sentence be revised as follows. The ICT reached consensus on the DMMP. The placement areas for the DMMP are depicted in Figure 1-2a through f. 19

P. 2-62 ¶ 2: With regards to the issue of cabins that are located inside placement areas in the upper Laguna Madre, the DEIS notes "At their discretion, GLO State Land Board will require cabins to be relocated or removed, as necessary, prior to placement of dredged material." In its role as an ICT member, the Service has maintained the position that the continued presence of cabins in the placement areas should be considered secondary to issues of impacts to seagrass beds and other fisheries resources, and to wildlife including colonial waterbirds. This issue is discussed briefly in Section 4.12.2.2, page 4-47 "One negative impact that the DMMP will have is that there will be an impact on some of the Coastal Cabins, since the ICT recommends that it is in the best interest of the Laguna Madre ecosystem to use the islands, upon which the cabins are located, for active placement." The Service recommends that the TGLO clearly articulate its reasoning for impacting cabins on some placement areas and not on others. This is particularly true, for example, with regards to PA 186, where the potential for impacts to an important recreational fishing area is proposed as an option while impacts to cabins in the PA are avoided. 20

P. 2-62 ¶ 4: The DEIS notes that one consideration for minimizing impacts to seagrass beds is to restrict open-bay, unconfined placement of dredged material to the period from November to February. The Service notes that where such dredging is proposed in the vicinity of colonial 21

waterbird colonies, this restriction would be favorable to nesting waterbirds although the ICT will need to consider the species assemblage of a particular colony with regards to species that begin nesting activities in January or earlier.

Table 2-33 HISTORICAL MAINTENANCE MATERIAL INFORMATION, page 2-60: The last column "Approximate Useful Life* (Years)" The Service recommends that for all placement areas which are not fully confined an entry of N/A be noted. 22

2.11.1 Reach 1, p. 2-63, ¶ 4, sentence 6: The Service recommends that the reader be referred directly to Section 4.4.1.4 and 4.4.4. 23

P. 2-64, PA 180A: The Executive Summary (page ES-4) States, "...1,307 fewer acres of seagrass will be impacted with the DMMP alternative." The acres of seagrass estimated to be impacted by the DMMP would amount to 229.3 acres, including 98.6 acres on page 4-21 for the newly designated PA-180A. The Service reiterates that the recommendation made to the ICT regarding the proposed new placement area was as described in the Colonial Waterbird Management Plan (CWMP) (CBBEP 2002 unpublished). The recommendation is, "...the elevation of the island could be raised with the deposition of good spoil." Coordination with Dr. Alan Chaney, a co-author of the CWMP, confirmed that the intent is to create a slightly larger island (approximately 3-4 acres) and not a large island that would support a population of predators. The Service recommends that all sections of the FEIS (page 2-64, page 4-21, the table on page 4-20, the DMMP appendix, and any other references) be modified to reflect this recommendation. The Service does not concur with the establishment of a new 98.6 acre placement area that would bury existing seagrass meadows. 24

P. 2-65, p. 2-65 to 2-66, PA 184 to PA 188: Summaries for each of these placement areas with the exception of PA 186, clearly indicate that the use of a portion of Emmord's Hole for dredged material is only an option under consideration by the ICT. 25

For PA 186, the DEIS notes: "Extend the PA boundary to the west to include deep water in Emmord's Hole and pump the maintenance material to the deeper water west of the PA to avoid seagrass." The Service recommends the last sentence of the summary for PA 186 be deleted, and the text revised in the FEIS to clearly state that for PA 186 this expansion is also only an option to be considered by the ICT as follows: Pump dredged material onto the existing island. If necessary and with the recommendation of the ICT extend the boundary of PA 186 to include nearby deeper water.

P. 2-69, PA 206: The Service recommends that the reference to "DEIS" be changed to FEIS unless the position has been documented in this DEIS, in which case a reference to the location of that documentation should be included. 26

P. 2-70, PA 208: The Service recommends that "to the GIWW" be inserted after "run-off" in the second sentence. 27

Section 2.11.7, p. 2-74 and 2-75 Emmord's Hole ¶ 1: The Service recommends that the FEIS include an explanation of the determination of the general location of Emmord's Hole from the regions bathymetry. In other words, was the bathymetry determined by survey, existing maps or some other method? It is the assessment of the Service that the statement "...seagrass is not likely to be found in the Laguna Madre below a depth of 4.5 feet." is too broad, and a seagrass survey should be conducted prior to any dredging event both for this area and for any other area where impacts to seagrasses must be considered. This would determine the extent of the seagrass meadow, and the areas that should be avoided. 28

In general, a more precise determination of the boundaries of Emmord's Hole should be determined. The Service notes that the boundaries given as, "... 27° 26' to 27° 35' N and 97° 12' to 97° 21'W..." encompasses approximately 100 square miles, and should be corrected. The Service recommends that a figure be added to the FEIS that, as accurately as possible, graphically identifies the Emmord's Hole feature.

With respect to the rest of this paragraph that deals with the modeling efforts described in Teeter et al (2002), the Service recommends that if Emmord's Hole is being considered by the ICT for a particular dredging action, that the predicted results of the model be cross-checked with the actual results to ensure that degradation of adjacent seagrass meadows does not occur.

P. 2-75, ¶ 2: The Service concurs with the position in the third sentence that, "...Emmord's Hole is ... to only act as a placement location of last resort..." These statements reflect the intent of the ICT members. During the evolution of the Dredged Materials Maintenance Plan (DMMP), the Service agreed to the suggestions that over time the ICT consider Emmord's Hole, that the USACE would conduct surveys and modeling studies on the fate of nearby seagrass meadows, that the USACE might use Emmord's Hole as a one-time event pilot study, and most recently as a "safety valve" if spoil materials could not be placed elsewhere. As pointed out in the comments above on the summary for PA 186, and also in the DMMP, for Placement Area (PA) 186 included in Appendix A, the Service notes that Emmord's Hole is identified as the only disposal point. The Service recommends that the DMMP for PA 186 be redrafted to reflect that dredge materials would be placed first on the existing emergent land within PA186, and then piped over the seagrass meadows to the west, only as a last resort. 29

3.0 <u>AFFECTED ENVIRONMENT</u>

3.4.2 <u>Coastal Wetlands</u>, p. 3-17: The sections identifies a number of plant species found in the Laguna Madre. Lacking, perhaps because it has not yet been well-studied or characterized, is an assessment of exotic, invasive plant species in the Laguna Madre system. Invasive species, such as Brasilian pepper (*Schinus terebinthifolius*) have already taken hold in portions of the upper Laguna Madre at least. Some aggressive exotic plant species, such as Guineagrass (*Panicum maximum Poaceae*) invade quickly in disturbed soils. The ICT will need to add to the long list of resources under its collective stewardship, vegetated areas that could be subject to adverse impacts by undesirable plant species especially if dredging activities could promote conditions for their establishment. 30

3.5.1 Recreational and Commercial Species, p. 3-21, ¶ 2: The DEIS notes that from 1995- 1999 59% of finfish in Texas bays were landed in the Laguna Madre. Given this impressive figure, and the potential for substantial impacts to the Laguna Madre, both positive and negative, from the dredging maintenance activities, it is the assessment of the Service that the ICT as a group should strive for a thorough understanding of the habitat requirements of these species, to be incorporated in the decision-making process outlined in the DMMP. As noted above in comments on Section 1.4.3, lacking in the assessment for Emmord's Hole in particular, and for the Laguna Madre in general is a consideration of the importance of deeper water areas for fish and other aquatic species. There may be other habitat requirements and activities related to finfish species, such as hatchling releases by Texas Parks and Wildlife Department, that will need to also be included in the DMMP decision-making process. 31

3.6 WILDLIFE RESOURCES, p. 3-37, ¶ 4: The DEIS notes "Texas is one of the most significant waterfowl wintering regions in North America with 3 to 5 million waterfowl annually (recent years) wintering in Texas (TCMP). Waterfowl species wintering in the Laguna Madre system include the redhead (*Aythya americana*), northern pintail (*Anas acuta*), lesser scaup (*Aythya affinis*), northern shoveler (*Anas clypeata*), and mottled duck (*Anas fulvigula*)." As noted above in the Service's General Comments on the DEIS, this paucity of information on waterfowl resources that are a part of the Laguna Madre system is an example of the ICT's under-development and under utilization of key resources and expertise available in non-ICT agencies such as the U.S. Geological Survey. The Service recommends that every effort be made, prior to the publication of the FEIS, to better characterize waterfowl, as the Laguna Madre provides important, perhaps crucial, wintering habitat for these avian species. 32

Table 3-3 Piping Plover Critical Habitat Laguna Madre: The Critical Habitat units, as depicted in this figure are not correct. Enclosed is a CD with the correct image files. Also, the page number for this figure in the DEIS, 3-42, should be 3-49. 33

4.0 AFFECTED ENVIRONMENT

4.3.1 Toxicity Testing, p. 4-5: The Service recommends that this paragraph be amended to note that under the DMMP alternative, as has been done under current dredging protocol, the USACE will conduct appropriate testing of the sediments and water column for toxins prior to each dredging event. 34

4.4.1 Submerged Aquatic Vegetation: The FEIS should note that the numbers of acres of seagrasses given for reduction in impact (1,307 acres, page ES-4), and for acreage of seagrass that would be impacted (229.3 acres, page 4-21) are based on models that have not been tested over time. In addition, the impacts to seagrasses are not species specific, and do not address changes in the species composition of the existing seagrass meadows, that may in turn affect other fish and wildlife resources. Additionally, the FEIS should include a section on oversight and analysis of dredging events, and proposed adaptive management of placement areas that do not respond as forecasted in the modeling results. 35

4.4.2 Coastal Wetlands, p. 4=21, sentence 3: The Service recommends "unless replaced with a levee" be inserted after "these areas will revegetate". This acknowledges that the DMMP process includes proposals to construct training or enclosing levees on some placement areas and as a result, some areas of high marsh vegetation could be lost. 36

Table 4-3 CHANGES IN PLACEMENT AREA BOUNDARIES IN THE LAGUNA MADRE, p. 4-22, PA 186: Under the column "Changes Made" the Service recommends that "Option to" be inserted at the beginning of the text. 37

4.6 WILDLIFE RESOURCES, 4.6.2 Dredged Material Management Plan (DMMP) Alternative: This section notes impacts to terrestrial species from habitat modification, as changes in the surface cover from dredged material placement, but does not address the impacts that could occur, that have already been documented in some placement areas, as a result of the construction of large emergent areas. Emergent areas, where well isolated by the open waters of Laguna Madre, can serve as excellent colonial waterbird rookery sites. Where emergent areas are close together, or separated only by shallow water habitat, predators such as coyotes and racoons invade and thrive. The DMMP decision-making process will need to continue to assess the impacts of creating large stable emergent areas where the potential for establishment of predator populations would be aided by such creation. 38

4.14.2 Cumulative Impact Assessment Methodolgy, 4.14.4.1 Packery Channel, p. 4-59: Considering that Federal dollars have been appropriated, and legal agreements between the USACE and the City of Corpus Christi have been signed, the Service recommends that the term "potential" be deleted from the first sentence. 39

The Service recommends that the USACE include an assessment of the impact of Packery Channel, once constructed, on dredging of the GIWW and use of PA 175 and 176 in Reach 1. Currently, and under the DMMP Alternative, nearby PA 175 is not used for placement of dredged material, and PA 176 used very infrequently. 40

TABLE 4-10 CUMULATIVE IMPACTS, p. 4-60: For the column headed "Packery Channel" the Service recommends that the acreages given for submerged Aquatic Vegetation and Wetlands MITIGATION/BENEFITS be deleted and replaced with "not applicable". The mitigation for these resource types is going to be conducted at Shamrock Island, in Corpus Christi Bay, which is well out of the study area of the DEIS. 41

For the column headed "BNP Petroleum Corporation", the Service recommends that the migration acreages listed all be deleted and an NA notation be assigned. As noted in the description in Section 4.14.4.3 on page 4-62, the permit application for this referenced project has been withdrawn.

4.14.5 Past or Present Actions, p. 4-62: The Service strongly disagrees with the assessment that "...a vast number of oil and gas exploration projects have no NEPA documentation..." Oil and gas projects in the Laguna Madre, like BNP, are required to obtain a permit from the USACE. The USACE publishes a Statement of Findings (SOF) and Environmental Assessment (EA) for issued 42

permits. The SOF and EA is a NEPA document. The USACE could have accessed its own data base to provide information in the DEIS on the cumulative effects of its regulatory program both from oil and gas activities, and many other kinds of USACE permitted actions.

4.14.6.1 Ecological/Biological Resources, p. 4-63, sentence 4: The Service recommends that "could" be substituted for the second word "would". Also, insert after the last word in the sentence "substrate" the following "provided that a land bridge is not created that would allow for the migration or invasion of predatory species such as coyotes and racoons". 43

P. 4-63, last two sentences of the first paragraph: It is the assessment of the Service that it is inappropriate for the DEIS to calculate "overall positive cumulative impact in the general study area" based on MITIGATION/BENEFITS of Table 4-10. The mitigation associated with those referenced projects is planned because of a documented impact and loss to fish and wildlife resources associated with the project's implementation and does not represent an overall gain to the study area's resources. 44

P. 4-65 Terrestrial Wildlife: As noted above in comments on Section 3.6 Wildlife Resources, an assessment of impacts, both positive and negative, on waterfowl has not been included in the DEIS. With regards to terrestrial species, impacts to predatory species such as coyotes and racoons, is also not addressed in the DEIS. 45

P. 4-67 Submerged Aquatic Vegetation (SAV): the mitigation acreages for SAV noted for the Packery Channel should be deleted as the mitigation site, Shamrock Island, is well out of the Laguna Madre system. 46

APPENDIX D: Biological Assessment for Impacts to Threatened and Endangered Species Relative to the Maintenance Dredging of the Gulf Intracoastal Waterway, Laguna Madre, Nueces, Kleberg, Kenedy, Willacy, and Cameron Counties, Texas.

GENERAL COMMENTS

The Service has reviewed the Biological Assessment (BA) for impacts to endangered and threatened species relative to the maintenance dredging of the intracoastal waterway Laguna Madre. Based on the project description and location, the Service concurs with your determination that no impacts to Federally listed species will occur to the South Texas ambrosia, slender rush-pea, Texas ayenia, star cactus, black lace cactus, northern aplomado falcon, whooping crane, eskimo curlew, bald eagle, ocelot and jaguarundi as a result of the proposed action.

The Service's jurisdiction applies to nesting sea turtles. All five species of sea turtles are known to occur along the Texas coastline as described in the BA. The Service concurs with the USACE that it is possible, but unlikely, that leatherback, hawksbill, and loggerhead turtles will occur in the Laguna Madre and if they did, that the use of cutter dredges would help avoid or minimize impacts. Green turtles and Kemp's ridley turtles have been documented as occurring in the Laguna Madre, however, nests have never been located. Therefore, the Service concurs that the proposed project

is not likely to adversely impact nesting sea turtles. The USACE should seek concurrence and further conservation measures from the National Marine Services (NMFS) as to impacts to sea turtles occurring in coastal waters.

Piping plovers, their habitat and designated critical habitat will be impacted during dredging and dredge material placement, however, because such disturbances will be minor, temporary in nature, and measures have been included to avoid and minimize impacts the Service concurs the proposed action may affect but, not likely to adversely affect the piping plover and will not adversely modify designated critical habitat. Piping plover habitat is very dynamic and future changes may require further conservation measures during a particular dredging event. One such conservation measure that may be recommended is a seasonal time restriction. Dredging activities should be well coordinated with the Service in advance to avoid any delays in work schedules. 47

The Service concurs with the USACE that the project may affect, but not likely to adversely affect the West Indian manatee, because of its rare occurrences. But, because sightings have increased in the last few years, the Service recommends additional conservation measures. The recommended measures would be to notify the Service if a manatee is sighted and assist in the monitoring efforts. The Service would also appreciate any assistance from the USACE in capturing the manatee if experts deem it necessary and appropriate for its survival. 48

It is important to remember, that the life of the project is 50 years. Changes in the system, species, and areas of endangered and threatened species habitat and critical habitat will certainly occur over time. It is imperative that the ICT remain active in ensuring impacts will not occur from this project actions in the future. Prior to commencing work on areas proposed for dredging and placement the ICT should seek review and concurrence of effect from the Service. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination can be reconsidered. 49

SPECIFIC COMMENTS

Table 1, p. 1-2, : The American alligator which is listed as threatened due to similarity in appearance (TSA) was omitted from the table. It is known to occur in Cameron, Willacy and Kleberg County. The Service does not expect any impacts to the alligator from the proposed project. Enclosed, on a compact disk for future reference, is an updated county by county species list, for the Corpus Christi Ecological Services Field Office's area of responsibility,. 50

2.0, p. 2-1, third paragraph: "...impacts to Critical habitat from dredging and dredge material placement are considered to be minor..." The Service recommends adding "and temporary in nature". 51

2.2.2 **Habitat, p. 2-3:** The Service recommends deleting "calcareous". 52

2.3.3,Range and 2.3.4 Distribution in Texas, p. 2-4: "...Texas ayenia once occurred in Hidalgo and Cameron counties.." The Service recommends adding Willacy County. At the 2002 Texas Plant 53

Conservation Conference plant review workshop new populations were reported on private land in Harlingen and Arroyo Colorado and a refuge tract in Cameron County and in eastern Tamaulipas, Mexico.

2.4.4 Distribution in Texas, p. 2-5: Because suitable soils are present in adjacent counties but surveys are lacking, the Service recommends stating presently, the only known population of star cactus occurs in Starr County. 54

2.7.7 Conservation Measures, p. 2-10: "...The DMMP will benefit sea turtles by reducing impacts to seagrasses..." is a very broad statement. Although seagrasses will be enhanced in some areas, there are other areas in which it will be destroyed. The Service recommends wording such as "in some areas". The Service recommends the same wording be used in Sections 2.8.7, 2.9.7, 2.10.7. 55

2.8.1 Reasons for Status, p. 2-12, fifth paragraph: The Service recommends adding the additional yearly survey results. In 2001 5,442 and in 2002 6,436 Kemp's ridley nest were recorded. 56

2.8.3 Range, p. 2-12, second paragraph: "...Almost the entire population of Kemp's ridleys nest on an 11-mile stretch of coastline near Rancho Nuevo..." Approximately 215 kilometers (134 miles) of Tamaulipas, Mexico coastline is patrolled and have documented nesting. The heaviest concentration of nests is still along a 13 kilometer (8 miles) stretch at Rio Rancho. 57

2.8.6 Effects of the Project, p. 2-13: NOAA Technical Report NMFS 110, May 1992, "The *Distribution of Kemp's Ridley Sea Turtles (Lepidochelys kempi) Along the Texas Coast: An Atlas"*, reports three Kemp's ridley turtles have been documented as occurring in the Laguna Madre. Although it is a small number, it is likely for them to occur in the area, therefore, the Service recommends removing the word "highly" from the first sentence. 58

2.10.6 Effects of the Project, Page 2-17: "...Although green sea turtles could potentially occur in the project area, for the reasons given above no effects are anticipated from maintenance dredging operations..." The USACE states that "...dredging activities can destroy resting and foraging habitats..." This statement is interpreted as an impact to the green sea turtle. The USACE has described the minimizing measures to be, 1) foraging habitat would be reduced by the DMMP, 2) they would migrate to other feeding areas and 3) cutterhead dredges would be used. We recommend that the USACE reflect the acreage of foraging habitat that would be reduced by the DMMP, the net loss of acreage expected over the 50 year life of the project throughout the Laguna Madre, and that the majority of the areas will be managed to avoid seagrass impacts. This would provide better documentation of the conservation measures being used to avoid and minimize impacts and support your determination of effect. Because, there may be impacts, the Service also recommends using the terminology, "may affect, but not likely to adversely affect." 59

2.16.4 Distribution in Texas, p. 2-30, third paragraph: We recommend making a distinction of between the designation of critical habitat for wintering grounds (7/10/2001) and designation of critical habitat for breeding populations (Northern Great Plains population 9/11/2002, Great Lakes populations , 5/7/2001). 60

Figure 3 Piping Plover Critical Habitat, Laguna Madre, p. 2-31 : The figure reflects the draft critical habitat maps. The draft maps were revised and issued as the final critical habitat maps. The figure should be replaced with the correct version. Enclosed is a CD with the correct image files. 61

2.16.6 Effects of the Project, p. 2-33, fifth paragraph: "Because critical habitat...was only grossly defined...encompass vast expanses of open water..." Figure 3 is incorrect and the Units depicted are not the final critical habitat unit maps which are also accompanied by descriptions of each unit. The final maps (enclosed) do not reflect the large blocked areas of water. 62

2.16.8 Conclusion, p. 2-34: The Service recommends this be reworded to, "...the proposed project will affect the piping plover and its critical habitat, but it is not likely to adversely affect the piping plover or adversely modify critical habitat." 63

2.20.6 Effects of the Project, p. 2-42: The Service recommends, instead of "...no effect to the manatee...", the sentence read, "may affect, but not likely to adversely affect the manatee." 64

2.20.7 Conservation Measures, p.e 2-41: Although the Service concurs manatee occurrence in the area will be rare and not likely to be adversely impacted, there have been sightings. The Service recommends including a conservation measure that if a manatee is observed, the USACE will contact the Service and assist in efforts to monitor and/or capture, if deemed appropriate. 65

APPENDIX H, p. H-1: Please replace Mr. Tom Shearer with Ms. Pat Clements on the Federal Agency Voting Member Agencies list. 66

The Service appreciates the opportunity to provide comments on the DEIS. If you have any questions, please contact Pat Clements at 361-994-9005 ext 225, or by email at pat_clements@fws.gov.

Sincerely,

Allan M. Strand

ALLAN M. STRAND
Field Supervisor

Enclosure: CD

cc:
D. Watkins, U. S. Fish and Wildlife Service, Region 2, Albuquerque, NM
R. Lohoefener, U. S. Fish and Wildlife Service, Austin, TX
J.Wallace, Laguna Atascosa National Wildlife Refuge, Rio Hondo, TX
K. Merritt, South Texas Refuges Complex Headquarters, Alamo, TX
D. Echols, Padre Island National Seashore, Corpus Christi, TX
M. Woodin, U.S. Geological Survey, Corpus Christi, TX
L. Trevino, Coastal Bend Bays and Estuary Program, Corpus Christi, TX
S. Nava, Texas Parks and Wildlife Dept., Corpus Christi, TX
R. MacRae, Texas Parks and Wildlife Dept., Austin, TX
R. Swafford, National Marine Fisheries Service, Galveston, TX
G. Cranmore, National Marine Fisheries Service, St. Petersberg, FL
R. Cantu, Texas Dept. of Transportation, Austin, TX
T. Calnan, Texas General Land Office, Austin, TX
R. Matthews, Texas Water Development Board, Austin, TX (?)
B. Keeler, U. S. Environmental Protection Agency, Dallas, TX
M. Fisher, Texas Commission on Environmental Quality, Austin, TX

RESPONSE TO COMMENTS

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Comment No.	Response

1. As noted in your comment, the ICT will remain a viable group that will review dredging plans and the DMMP prior to each dredging cycle to ensure the objectives of the DMMP are attained. To help reach this goal, the USACE will work with the ICT to prepare a monitoring plan to identify successes or problems with the management plan for each PA as it is used. Once the DMMP is in place, the need for "emergency dredging" will be eliminated, except for truly emergency cases, such as tropical storms or other unforeseen events that could accelerate shoaling in a reach of the GIWW. Emergency dredging was used for non-storm events since 1995 only to comply with commitments made as a result of a court ruling and the fact that an acceptable DMMP had not been prepared and approved through the NEPA process. We do not agree that communication lines were undeveloped since the USACE worked closely with the ICT to accommodate any recommendations that provided information needed to prepare the DEIS and DMMP. This close coordination and communication resulted in a document that was acceptable to all members of the ICT. Any perception of a lack of communication could be the result of the lack of long-term association with the ICT since its inception in 1995 and the loss of continuity in knowledge of ICT discussions and agreements brought about by the retirement of Mr. French.

2. The LWA represents only one data set from the Laguna Madre. Historical data associated with dredging activities do not exhibit any definitive trends suggesting that chemical contaminants are a problem. Furthermore, the LWA report does not consider initial dilution or mixing zones, which are allowed by the Clean Water Act. Nevertheless, water and sediment quality will continue to be evaluated as part of the maintenance dredging program. These evaluations will be conducted according to guidance jointly developed by the USEPA and USACE. Furthermore, historical data that were routinely collected prior to the 1994 lawsuit were provided to the USEPA, TCEQ, and USFWS. None of these agencies have previously expressed any contaminant concerns. These data have not been collected since 1994 because only emergency dredging was done, which did not allow time for sample collection, analysis, and reporting. When the proposed DMMP is approved and placed in operation, normal maintenance dredging will begin and sampling can resume.

3. The FWS Coordination Act Report is located in Appendix I.

4. This statement is already included in the last sentence of the 4th paragraph of the Executive Summary.

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5. The three passes referred to in the DEIS consist of one of the Humble Oil Channels, between PAs 203 and 204 and centered at 233+200; a channel between PAs 204 and 206, centered at 242+500; and a channel between PAs 206 and 207, centered at 260+150. All of these were based on a FWS request in a letter dated August 20, 1971 relative to the draft EIS that became final in 1975. The locations of the channels have been added to the final EIS.

6. As noted in Section 4.4.1.3 of the EIS, this reduction is calculated for one dredging cycle, on a PA-by-PA basis. However, this cannot be multiplied by the number of dredging cycles per PA to arrive at some cumulative number since a reduction in impact acres for the first dredging cycle leads only to avoiding impacts to the same acres on the next cycle, not additional acres being avoided. The limitations on the calculations are noted in Section 4.4.1.3. Therefore, no changes will be made in the EIS.

7. The text has been revised.

8. PA 238 is not included in the figure, along with PA 237, because they are not part of the project. PA 205 should have been eliminated as well, but was not due to an oversight when preparing the figures.

9. As noted on the Errata Sheet on the back of the Title Page, page numbers for the color figures have been corrected in the final EIS.

10. The concept of "thermal refuges" in a well-mixed (strong north winds), shallow body (holes less than 7 feet deep for the most part) like the Laguna Madre was refuted by the NMFS in an ICT workshop attended by the FWS. An EIS is not the vehicle for proving popular, widely-held public concepts erroneous if not directly applicable to the project; however, it has been done in our response to comments where the issue has been raised in comment letters.

11. The text has been revised.

12. Language has been added relative to this problem and to the fact that the DMMP addresses this concern and attempts to reduce predator access.

13. A careful reading indicates that this sentence is referring to the northern portion of the LLM. However, as is stated in Section 2.1, Sections 2.2 through 2.9 are the information available to the ICT during the early matrix stage of the DMMP preparation and were left intact so that the reader could see that early information. Furthermore, these sections were reviewed by the ICT on several occasions and no additional clarification was called for or needed. Again, this information was used in the earliest analysis stage by the ICT

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before a decision was made to use a different method of analysis. The ICT then used detailed study data that was being completed at the time for its final recommendations on the DMMP. Therefore, there will be no changes to Sections 2.2 – 2.9.

14. Further reading of the first paragraph in the DEIS indicates that a 7-mile pumping distance could be achieved with an extremely large dredge (one made for using a 34-36 inch diameter pipeline). This was an early exercise to establish feasibility of dredging alternatives even though a 24-inch pipeline dredge is more realistic for this project. Therefore, there are no inconsistencies if the proper context is kept in mind when reading Section 2.0. Therefore, there will be no changes to this section.

15. See Response to FWS Comment 13 and 14.

16. See Response to FWS Comment 13 and 14.

17. See Response to FWS Comment 13 and 14.

18. See Response to FWS Comment 13 and 14.

19. The text has been revised.

20. This comment should be directed to the GLO. As FWS noted in Comment19, the ICT reached consensus on the draft DMMP. However, USACE has requested a clarification from GLO on its position on cabin removal from PAs.

21. Comment noted.

22. The table has been revised

23. The text has been revised.

24. Because it was only a recommendation by one member of the ICT to consider reestablishing a rookery island, all details for sizing and constructing the island have not been listed and discussed within the ICT. The ICT agreed that this concept would be developed further at future meetings. It was understood that the island(s) would be small, but because there are no data on how much dredged material will be required to construct the site or how much the material will spread over the bottom to achieve a specified island size, a conservative estimate of the impact was used and it was assumed that the entire PA would be covered. This resulted in the acres of impact you refer to in Table 4-2. These issues can be addressed in future meetings of the ICT and in future revisions of the DMMP. Therefore, based on the uncertainties noted above,

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USACE determines it is not necessary to modify the text of the EIS in the detail requested.

25. By agreement reached in previous ICT meetings, future revisions of the DMMP will be made after coordination with the ICT. Therefore, the changes you request cannot be made until the ICT has a chance to review and concur. This revision will be presented to the ICT at its next meeting.

26. This change and similar changes will be made throughout the DMMP to reflect the latest factual information.

27. The intent of this statement was to document a management practice to prevent, as much as possible, buildup of sediments on the mud flats to the east of the PA and prevent shoaling in several small tributary channels between the GIWW and the mud flats. This concern was expressed by one of the ICT members. Therefore, the text will not be revised.

28. The exact location of Emmord's Hole, other than the deepest area near PA 186, in not necessary since the entire hole would not be used for placement of dredged material if the ICT were to recommend this option. The hole is a feature well known to the people in the area and its delineation is no more necessary than is one for another well-known feature discussed in the EIS called "The Hole" or "Nine-Mile Hole". Therefore, the maps in Section 1.0 will not be redrawn to show the limits of this feature.

    The reference to seagrass not likely to occur below a depth of 4.5 feet was provided to the ICT by Dr. Ken Dunton. He has determined this depth through at least nine years of research, which revealed this depth as the limit to which sufficient sunlight can penetrate to support seagrass growth. However, a survey of the deep area next to PA 186 will be conducted to determine if seagrass is present should the ICT recommend using this site for placement of dredged material. The boundaries provided in Section 2.11.7 were derived from a fishing bathymetry map to provide a general idea of the size and location of Emmord's Hole and was not intended or needed to be precise. However, there is an error in the Lat/Long coordinates that has been corrected in the EIS. Again, if the ICT should recommend placement in Emmord's Hole, the USACE will follow a monitoring plan soon to be developed with the help of the ICT to determine the impacts of the placement operation.

29. By agreement reached in previous ICT meetings, future revisions of the DMMP will be made after coordination with the ICT. Therefore, the changes you request cannot be made until the ICT has a chance to review and concur. This revision will be presented to the ICT at its next meeting.

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30. The species list included common species to characterize the area. It was not intended and should not be considered as a comprehensive list of all species that could possibly be found there. There is no record of an invasion of upland areas in a PA following placement actions that was presented to the ICT. However, this topic could be discussed during a future ICT meeting to determine what precautions may be necessary to prevent this event, if necessary.

31. Comment noted.

32. An enhanced discussion of waterfowl resources has been added.

33. The images included in the DEIS were the best available at the time. We appreciate the revised information provided and will incorporate it into these figures. As noted in Response to FWS comment 8, page numbers will be corrected.

34. A sentence has been added to the end of this paragraph in the EIS that states: "Under the DMMP alternative the USACE will conduct appropriate testing of sediments and water column for chemical contaminants."

35. The projected area of impact is only partially from the models. Also included is the area of burial based on empirically determined footprints. The models upon which the estimates are partially based are discussed in detail in the EIS and provided in their entirety on the District website. Therefore, there is no need to add more caveats, since it would not give the reader any clearer picture of potential impacts. A new Section 4.15 has been added stating that a monitoring plan will be developed to ensure the objectives of the management plans are achieved.

36. The text has been revised.

37. The text will not be revised. The boundary must be extended through the NEPA process using the EIS as the vehicle for change in order to have the option to use Emmord's Hole available. Whether material is pumped in the newly enclosed area will be examined by the ICT before each placement operation.

38. Comment noted.

39. The text has been revised.

40. According to the Packery Channel EIS, maintenance material from Packery Channel will not be placed in either PAs175 or 176. Additionally, maintenance dredging of the GIWW is not expected to increase with the opening of Packery Channel; therefore, there is no reason to further assess these impacts.

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41. The table has been revised to show NA for BNP mitigation acreages. However, the mitigation acreages for Packery Channel were left in the table since they are a fact. A footnote has been added to indicate they will be located at Shamrock Island in Corpus Christi Bay, which is outside the project area.

42. The Cumulative Impacts Section has been revised.

43. The text has been revised.

44. We agree that mitigation is to compensate for project impacts, but beneficial uses of dredged material, by definition, represents a net gain to the ecosystem. Therefore, the text in Section 4.14.6.1 Ecological/Biological Resources will be revised to reflect that only the beneficial uses represents a positive cumulative impact.

45. An enhanced discussion of impacts has been added.

46. The text has been revised to show the mitigation is in Corpus Christi Bay.

47. Comment noted.

48. Although highly unlikely, if a manatee is sighted during dredging activities the FWS will be notified immediately as well as the Texas Marine Mammal Stranding Network.

49. As noted in the EIS, the ICT will provide a forum for continued coordination on the DMMP throughout the life of the project. Prior to any dredging and placement activities the ICT will review any additional information and seek consensus on the DMMP.

50. The American alligator was added to the table.

51. The text has been revised.

52. The text has been revised

53. The text has been revised.

54. The text has been revised.

55. The text has been revised to include the word “overall”.

56. The text has been revised.

57. The text has been revised.

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58. The text has been revised.

59. The text has been revised.

60. The text has been revised.

61. The figures have been revised.

62. The text has been revised to correspond to the revised figures.

63. The text has been revised.

64. The text has been revised.

65. The sentence has been changed to read "If a West Indian manatee is observed, the USACE will contact the FWS and the Texas Marine Mammal Stranding Network. The USACE may assist in efforts to monitor and/or capture, if deemed appropriate by USACE, given manpower and budget constraints and contract limitations."

66. The text has been revised.

Arhelger, Martin E

From: terrell.w.roberts@swg02.usace.army.mil
Sent: Friday, June 20, 2003 7:50 AM

CCA Texas

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June 19, 2003

VIA FACSIMILE (409) 766-3064
& EMAIL terrell.w.roberts@swg 02.usace.army.mil
Dr. Terry Roberts
U.S. Army Corps of Engineers
Galveston District
2000 Fort Point Road
Galveston, Texas 77550

Re: Public Comment, Gulf Intracoastal Waterway, Laguna Madre, Texas, Draft Environmental Impact Statement, May 7, 2003

Dr. Roberts:

The Coastal Conservation Association ("CCA") is a non-profit corporation dedicated to the preservation and conservation of our marine resources for the benefit of private citizens. With state chapters in Texas, Louisiana, Mississippi, Alabama, Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Connecticut, New York, Massachusetts, New Hampshire, and Maine, CCA represents the interests of its membership of more than 85,000 recreational anglers and marine conservationists throughout the nation.

CCA Texas, CCA's largest state chapter, has reviewed the Draft Environmental Impact Statement (DEIS) for maintaining the Gulf Intracoastal Waterway in the Laguna Madre, Texas, and the Draft Dredged Material Management Plan (DMMP) for the next 50 years of maintenance dredging. Historically, CCA Texas has supported the use of dredge material in a beneficial manner. Creation of a bird-nesting island is one

example of beneficial use for dredge material. However, the proposed areas of open bay disposal of dredge materials outlined in the DMMP are of concern to CCA Texas. Recently, in responding to the open bay disposal issue of Exxon Mobil's proposed dredge project in Baffin Bay, I stated that "It seems only logical that there is a more environmentally sound way to dispose of the dredge material that will not pose such a potentially destructive impact on this fragile and important bay system." The Corps of Engineers ("COE") and other members of the Interagency Coordination Team "ICT" agreed with this position and the Exxon Mobil application was withdrawn. Another example of similar reasoning was the COE decision to require BNP Petroleum to barge their dredge material from the Pure Oil Channel area in the Upper Laguna Madre to an upland disposal site. Scientific evidence has shown that open bay disposal of dredge material has an adverse impact on essential fish habitat, crustacean and invertebrate habitat and seagrass beds. Serious questions are raised regarding the DMMP proposed open bay disposal sites and the disregard of viable alternative sites and disposal methods by the ICT. The authorities quoted below are in support of CCA Texas' position. Their curriculum vitaes are attached and incorporated by reference. 1

Dr. Kenneth H. Dunton, Marine Science Institute, University of Texas- Austin, expresses concerns regarding open bay disposal by stating that "I was heavily involved with the effort to address the impacts of dredging on Laguna Madre seagrass beds using a linked sediment transport and seagrass production models. Although the models are generally reliable, they should not be broadly applied to any specific region of the Laguna.

Published research and data collected in this study has demonstrated that the Laguna is remarkably diverse. One model does not fit all scenarios, especially given the limitations of our knowledge of this complex ecosystem and with the models themselves. The consequences of open-bay disposal must be researched carefully for each targeted eco-region. Differences in seagrass species composition and biomass, sediment grain size and organic content, local physiography, depth, pore water nutrient content and sediment porosity, the abundance of drift macroalgae, etc. all play critical roles with respect to habitat response to dredging and disposal. 2

In summary, avoidance of significant impacts to specific areas in the

Laguna will depend on a solid understanding of the detailed ecological and physical characteristics of the

specific habitats that are subject to the substantial disturbances of sediment loading."

Further, Dr. Greg Stunz, Professor of Marine Biology, Texas A&M University-Corpus Christi states that with regard to open bay disposal in the Laguna Madre that seagrass (submerged aquatic vegetation; SAV) supports diverse communities of fishes and invertebrates and is critical (needed for juvenile survival and growth) nursery habitat for a many of these species. Dredge material disposal may have acute and chronic effects on the SAV itself as well as on the fishery and associated marine life. This may ultimately impact the overall productivity of the system resulting in a degradation of the ecological value of this important habitat type and the unique Laguna ecosystem. Dredge material disposal directly impacts turbidity, destruction of habitat, replacement of habitat type (e.g., SAV with mud), smothering the benthos (marine life living in or in association with the bottom; a very critical link to the ecological health of the estuary), and alteration of community assemblages. Recent studies comparing "natural" areas to sites of open bay disposal have shown lower densities of finfishes, mollusks, decopod invertebrates (e.g. shrimp and crabs) and distinct community structure in disposal areas compared to nearby SAV. Some studies show that disposal and mitigated areas may begin recovery in 2-3yrs, but full recovery of the benthos and nekton cannot be expect for 5 - 10 years, if at all. Often the typical 2-5 yr dredging/disposing cycles do not accommodate the necessary recovery period. Some studies have reported no re-colonization even after transplanting efforts. Where re-colonization has occurred reduced shoot density of SAV was observed after 10 years in the Laguna Madre and after 31 years in the Indian River Lagoon, Florida. Typically, dredge disposal has short-term effects. However, in Laguna Madre, dredge disposal has been shown to have much longer impact by elevating turbidity for up to 15 months after deposition and up to 10 months in areas greater than 1.2 km from original deposition sites. Even if SAV returns it does not ensure re-establishment of habitat value for fishes and decapods. 3

All of the proposed areas of open bay disposal are of concern to CCA Texas; however, Emmords Hole stands out as a particularly good example of the reasons to reevaluate decisions regarding open bay disposal. Dr. Roy Lehman, Director, Laguna Madre Field Station, Texas A&M University-Corpus Christi states that "Emmord's Hole is an area of critical seagrass habitat necessary for maintenance of the health of the Upper Laguna Madre. There are no extensive areas (>5 m diameter) with depths greater than 4 feet found there and 4

even those areas are small potholes that are margined by seagrasses. Thus, the term "Hole" is likely a misnomer and probably should be changed to "Emmord's Seagrass Meadow."

Placing dredged material in this environmentally sensitive area could result in the loss of critical habitat at the expense of the entire ecosystem. This activity could result in 1)the outright death of seagrass and associated organisms as they are covered, and 2) clouding of the water in the area, with a subsequent loss in light. This loss of light may reduce the health of the seagrass meadows and most likely start the action that will kill all the seagrass in the area along with, algae, invertebrates (periphyton & epiphytes) that are found on the seagrass and ultimately the fisheries as a whole.

The COE should look at the manner and care that was taken in dredging Pure Oil Channel located in Emmord's Seagrass Meadow (hole). During the last 12 months, the channel edges were properly marked to ensure there was the least amount of damage to the seagrass beds; silt barriers were placed in position during the digging. Signs were erected to inform boaters of the critical seagrass habitat located along the edge of the channel and that fines for damage to the seagrasses have been put in place by state and federal agencies. The spoil was dug with a hydraulic bucket and placed on waiting barges. These barges were then transported to a dock in Flour Bluff, offloaded and later moved to an upland site for proper disposal. This method is the preferred method of dredging in and near sensitive seagrass habitats. 5

As a Marine Botanist (TAMU,College Station, Ph.D., Class of 1993) and Director of the Laguna Madre Field Station, I use Emmords Seagrass Meadow (hole) as an area each year for teaching and training thousands of students, teachers, and the interested public. It is one of the best places in the upper Laguna Madre to snorkel seagrass beds and observe the flora and fauna. In addition, scientific research techniques are taught using Emmord's as a model seagrass bed. All five types of seagrasses are found in Emmords especially Shoal Grass and Manatee Grass. It is particularly interesting to note that this is one of the few areas in which Manatee Grass has been observed to flower. *Ruppia maritime* (Widegon Grass) has also been found there in the flowering state. There is great diversity within the seagrasses and it should be considered a habitat critical to the health of the surrounding waters. The seagrasses and periphyton produce oxygen as a by-product of photosynthesis and help to oxygenate the water for fish and other animals. The seagrasses are a source of food 6

for invertebrates including sea turtles that are observed in the area each year, vertebrates (especially game fish, speckled sea trout and red drum) and birds. In addition, seagrasses hold the bottom sediments in place, which reduces erosion, stabilizes the substrate and maintains proper water clarity.

As a sportsman, I often fish Emmord's by drifting across the seagrass bed and targeting redfish and trout. It is great fun to actually fish in waters that are clear enough to see the fish emerge out of the protective cover of the seagrass bed, hit and take your lure. The amount of tourist and fisherman dollars that come into the local, state and federal economy is substantial. During most weekends, there are hundreds of fishermen fishing Emmord's. Any damage to Emmord's would, therefore, also impact the regional economy. 7

The COE states that Emmord's is only a disposal site of last resort. However, due to its biological importance to the area, it should not even be regarded as a possible site. Instead, it should be considered only as an area to be protected from damage and decimation."

Further, Dr. David McKee, Professor of Biology, Texas A&M-Corpus Christi, states that Emmords Hole is a "thermal refuge" for fish during periods of polar cold fronts. As a thermal refuge Emmords Hole helps prevent unnecessary fish kills resulting from thermal shock. The proposal to "fill in" Emmords Hole with dredge material would eliminate this important benefit. 8

As evidenced in the Texas Parks and Wildlife Department report, "The 2001 Economic Benefits of Hunting, Fishing and Wildlife Watching in Texas", sport fishing results in millions of dollars being distributed throughout the Texas economy. Over 600 million dollars was spent by saltwater anglers during 2001, resulting in over 100 million dollars in state and federal tax benefits. One of the most popular saltwater fishing areas in Texas is the Laguna Madre. The open bay disposal of dredge material in the Laguna Madre could have an adverse impact on recreational fishing through destruction of essential fish habitat. Inasmuch as the decision to utilize open bay disposal methods was based in large part on economic considerations, these decisions should be reevaluated in light of the economic activity impact of saltwater anglers. 9

Because of the serious questions raised above, CCA Texas strongly recommends a re-examination of DEIS and DMMP and the further exploration of an alternative plan for the designated open bay disposal sites for the dredged material. CCA Texas opposes the unnecessary disposal of dredge material onto essential fish 10

habitat and the resulting adverse impact to the environment, recreational anglers, the economy and the general aesthetics of the coastal environment.

In summary, CCA Texas objects to all of the proposed open bay disposal sites contained in the DMMP. The conclusions reached in the DEIS that "alternative dredged material placement or maintenance methods other than open bay disposal for these sites were demonstrated to be infeasible" should be reevaluated. Further, inclusion of nongovernmental stakeholder groups, such as CCA, should be a priority in the decision making process for this valuable marine resource. 11

Respectfully,

Pat Murray
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CCA Texas

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RESPONSE TO COMMENTS

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Houston, Texas 77024

Comment No.	Response

1. The ICT evaluated upland placement, offshore placement, and confined open-bay placement alternatives for the entire Laguna Madre. These alternatives would have eliminated unconfined placement in the open bay. However, except for some PAs, which are to be fully confined, the ICT had to reject these alternatives. As described more fully in Section 2.0, the upland placement option was eliminated because of the permanent removal of seagrass habitat by dredging access channels to the mainland or Padre Island and the potential impacts to wetland habitat fringing the shoreline or located in depressions farther inland. Offshore placement was eliminated because of the limitations in available equipment capable of working in 12-foot channel depths and navigating in rough offshore water, pumping distance, and the year-round dredging required for the equipment just to keep up with the shoaling rates (Section 2.0). Although these alternatives were eliminated before a cost analysis was prepared, it was determined later that the cost would be prohibitive to use the upland and offshore alternatives for all the dredged material. However, a limited offshore disposal option for two locations near Mansfield Pass and Brazos Santiago Pass was retained for review by the ICT should it be determined economically or engineeringly feasibly and environmentally desirable in the future. We would also note that the DMMP significantly reduces the amount of open bay placement of maintenance material, relative to present practices that have been occurring for the last 50+ years. During this period, the Laguna Madre has continued to flourish and the Upper Laguna Madre has become a much better place for recreational fishing.

2. The seagrass models developed by Drs. Dunton, Burd, Eldridge, and others are not back-of-the-envelope calculations that encompass a couple of equations to describe environmental conditions in the Laguna Madre. There are models for different species, the models incorporate complex and numerous above- and below-ground processes, and they have been verified based on empirical data. Dr. Dunton stated unequivocally that the seagrass models were the most comprehensive ever developed because they were based on years of data collected by Dr. Dunton and his coworkers and included interactions that have never been included in seagrass models before. The hydrodynamic and sediment transport models developed for the Laguna Madre incorporated different data sets for various portions of the Laguna Madre and was specific for the various depths, currents, bottom types, seagrass types, grain size, emergent features, wind regimes, and shoreline configurations of the entire Laguna Madre into models. This model was also field verified with empirical data. Studies conducted for the USACE, at the recommendation of the ICT, included fisheries and benthos analyses (Sheridan), benthos versus seagrass composition and dredging history (EHA), and numerous other studies that are presented in their entirety on the Galveston District website. The ICT worked with all these data and information for five years to develop the DMMP and balance all of the competing needs of this complex ecosystem.

Pat Murray
CCA Texas
6919 Portwest, Suite 100
Houston, Texas 77024

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3. Section 4.0 of the Draft EIS goes into great detail describing the effects of dredging on SAV, benthos, fishery, and marine life in the Laguna Madre and all of these impacts are covered. It appears that the "recent studies" noted here are among those done for the USACE on the recommendation of the ICT, summarized in Appendix H to the DEIS, and presented on the Galveston District website. Therefore, the ICT had this information available to them and gave it careful consideration while helping to develop the DMMP.

4. The USACE has surveyed the area in question to verify that there is a large, deeper, unvegetated area there. It is located southwest of and adjacent to PA 186. Also, the seagrass distribution shown in Figure 3-1a of the DEIS is from the latest data collected by Dr. Chris Onuf, as noted in the DEIS, and clearly shows the unvegetated area. However, the ICT, composed of personnel from the National Marine Fisheries Service, U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department, National Park Service, U.S. Environmental Protection Agency, Texas General Land Office, Texas Department of Transportation, Texas Water Development Board, and Texas Commission on Environmental Quality, determined that using Emmord's Hole for dredged material placement was a viable, but last-resort, option (DEIS Section 2.11.7). This followed numerous ICT meetings to discuss these issues and review of several studies performed during the course of this EIS. Emmord's Hole will only be used as a placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole southwest of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action. A sediment transport model was used to determine the fate of all the dredged material that would normally be placed at PAs 186, 187, 188, and 189 as a worst-case scenario. The model indicated that turbidity plumes created by initial placement and subsequent wave and current action above the normal, non-disposal background levels and high enough to lower seagrass photosynthesis (the 20% isopleth) to impact levels would extend about 7.5 miles north of the disposal site inside Emmord's Hole for the first month of analysis. However, turbidity would subside to near background levels for the remainder of the one-year analysis (see Appendix H for a summary of the model study or visit the USACE web site for a complete report of the study). The disposal quantity used in the model was much higher than the amounts that would normally be placed in PA 186, therefore, it can be assumed that the impacts to Emmord's Hole and the surrounding seagrass beds would be much less than indicated in the model.

Pat Murray
CCA Texas
6919 Portwest, Suite 100
Houston, Texas 77024

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5. As an examination of Figure 3-1a of the DEIS will show, the Pure Oil Channel intersects the GIWW between PAs 182 and 183 and does cut through an extensive *Halodule wrightii* bed, roughly 8,000 feet before it gets to the unvegetated area that is the extension of Emmord's Hole, near Bearcroft's Hole. Thus, this is an entirely different situation than that presented in the DMMP for the GIWW.

6. Based on field survey data, the area included in the coordinates given in the EIS are deeper than the surrounding area and do not contain seagrass. Therefore, CCA must be addressing a different location than was modeled by ERDC for the ICT. However, Emmord's Hole, as described in the DEIS, would only be used as an option of last resort (DEIS Section 2.11.7) and will only be used as a placement location for excess material from PAs 183-186 and 188, if necessary, to prevent seagrass impacts at those PAs. Care will be taken to ensure that dredged material is not placed on or near areas of seagrass.

7. Please see response to CCA Comment 6. Also, recreational impacts were included in an analysis of the regional economy by Tanyeri-Abur (1998) and summarized in Appendix H.

8. The concept of "thermal refuges" in a well-mixed (strong north winds), shallow body (holes less than 7 feet deep for the most part) like the Laguna Madre was refuted by the NMFS in an ICT workshop. Empirical data indicate that even the GIWW is well mixed during strong northers and cannot provide a thermal refuge for fish.

9. Tourist-related industries were included in the impacts analyses in the DEIS (see Section 4.12).

10. The DEIS and DMMP were not prepared in a vacuum. The ICT helped prepare the documents and utilized all data collected during the past 5 or more years of study to make recommendations only after carefully considering the impacts. The NMFS is charged with the responsibility of reviewing all EISs for consistency with EFH under the Magnuson-Stevens Fishery Conservation and Management Act (PL 94-265), as amended (see DEIS Section 6.0) and found the DMMP to be consistent. Additionally, the TPWD was a member of the ICT that developed the DMMP.

11. The ICT, comprising personnel from State and Federal agencies that have the responsibility, under the laws of the U.S. to protect the resources that constitute the human environment, spent eight years to develop the DMMP. They did it with full cognizance of the information that is noted in CCA's letter, plus extensive additional information. Nothing is provided here that would require the process of the alternatives analysis be reevaluated. As the name implies, the Interagency Coordination Team is composed only of State and Federal resource agencies with jurisdictional responsibility and interest in a proposed Federal project. The opportunity for the public and public organizations like the CCA to participate in this and other Federal projects is provided in the NEPA process through public scoping meetings and review of draft and final EISs.

United States Department of the Interior

U.S. Geological Survey
Texas Gulf Coast Field Station
Campus Box 339, TAMU-CC
6300 Ocean Drive
Corpus Christi, TX 78412

USGS
science for a changing world

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, TX 77553-1220

Attn: Dr. Terrell Roberts

Dear Dr. Saunders: 19 June 2003

I am writing to comment on the Draft Environmental Impact Statement for Maintenance Dredging of the Gulf Intracoastal Waterway in the Laguna Madre, Texas. My comments focus on important omissions, misstatements, or oversight, which represent several major shortcomings of the document. In total, the cumulative weight of these deficiencies indicates that the document needs substantial rethinking and revision. I itemize and discuss each of them below.

Section 1.4.4 (Wildlife Resources) on page 1-22 asserts that the "wildlife resource component of the existing project is fairly small, since the majority of placement activities to date have involved open-water placement." The same paragraph goes on to assert that the primary concern for project impacts on wildlife resources is with birds nesting on rookery islands. I must take exception to this claim; the primary concern is with water birds that forage in seagrass beds. This includes hundreds of thousands of redheads and pintails that feed on shoalgrass rhizomes, as well as other birds, such as mergansers, goldeneyes, and grebes, that feed on organisms inhabiting the seagrass beds. Direct impacts on these wildlife species from open-bay disposal can occur through the burial of seagrass beds, and indirect impacts can result from shading by suspended sediments. These impacts on waterfowl and other species are potentially serious and should be explicitly acknowledged and evaluated in the EIS. In the draft EIS, this issue is ignored. 1

Section 2.2 (No-Action Alternative) on pages 2-1 and 2-2 asserts that "the No-Action alternative represents the base condition with the GIWW in place and maintained by present dredging and placement methods." While the base condition of the GIWW is being maintained, published research in peer-reviewed scientific journals indicates that hydrologic alterations to the Laguna Madre ecosystem initiate long-term changes that 2

continue to reverberate within the system for decades. Consequently, while the maintenance of the GIWW with the present no-action alternative would be assured, it certainly does not represent maintenance of the ecosystem, but rather a prescription for continued long-term alteration. Maintenance dredging activities under the no-action alternative result in long-term ecosystem changes in the Laguna Madre through frequent resuspension of dredged materials during storms and sustained high winds. That is a troubling scenario, given that the Laguna Madre is the only large, hypersaline lagoon ecosystem within the entire nation and annually sustains hundreds of thousands of waterfowl during the winter. Indeed, the Laguna Madre is the critical linchpin of the entire North American winter range for redheads. The US has international treaty obligations to protect and conserve this and other waterfow species under the Migratory Bird Treaty of 1913.

The uses of ranks in the matrix analyses generate confusion about the alternatives for disposal. Ranks conceal what the real estimates of effects are and make it more difficult to effectively evaluate alternatives by merging multiple impacts within a single number representing a broad category. The use of this methodology makes it more difficult to critically evaluate the alternatives and more difficult to defend such a subjectively derived number. My recommendations are to eliminate any scheme of ranking and to present real estimates of impacts for all parties to consider. 3

I find Section 4.6 (Wildlife Resources) to be grievously flawed in its assessment of alternatives. The repeated references to no net impacts, no long-term effects, and no significant effects pointedly refer only to terrestrial wildlife species and habitats. The EIS does not address environmental consequences of maintenance dredging on waterfowl and other aquatic birds. Evaluation of environmental consequences of open-bay disposal of dredged materials in a lagoon system as large and productive as the Laguna Madre cannot be limited to terrestrial wildlife species; it must include waterfowl and other water birds, which are such an important part of the avifauna of the Laguna Madre. Attempting to evaluate environmental consequences of actions in any aquatic system in an EIS without considering aquatic wildlife species is a grievous oversight and is, in my opinion, a fatal flaw in this draft EIS. 4

Sincerely,

Marc Woodin

Marc Woodin, PhD
U.S. Geological Survey
Texas Gulf Coast Field Research Station
6300 Ocean Dr., TAMU-CC Box 339
Corpus Christi, Texas 78412
(361) 985-6266
marc_woodin@usgs.gov

RESPONSE TO COMMENTS

Marc Woodin
U.S. Geological Survey
Texas Gulf Coast Field Research Station
6300 Ocean Drive, TAMU-CC Box 339
Corpus Christi, Texas 78412

Comment No.	Response

1. Before the GIWW was dredged, *Halodule wrightii* and other seagrass species were rarely found in the upper Laguna Madre. After the GIWW was completed, however, *Halodule wrightii* expanded into the upper lagoon and about doubled the food source for redhead ducks and other birds. Data on the redhead duck population indicates no decrease along the Texas coast. For instance, for the years 1990 through 1999, the number of redheads counted on the TPWD mid-winter waterfowl surveys on the lower Texas coast ranged from a low of 141, 618 in 1990 to a high of 559,274 in 1995, with the latest count in 1999 equal to 249,342. Totals for the entire Texas coast (upper and lower were not broken out after 1999) ranged from 108,416 in 2000 to 563,761 in 1995, with the latest count in 2002 equal to 506,429. Although the numbers vary greatly from year-to-year, the trend does not show the redhead population is declining. Therefore, it is only reasonable to assume that seagrass is not a limiting factor for the duck. Additionally, according to Mitchell (1992), redheads feed on Halodule in 5 to 12 inches of water. For any loss of seagrass to impact redheads, it would have to be in very shallow water, not in the deeper water indicated by Dr. Onuf as areas of concern. Furthermore, under the new management plans in the DMMP, fewer impacts to seagrasses are anticipated, which should translate into a potential increase in the available food for waterfowl that are dependent on seagrass. However, the discussion on waterfowl in the Affected Environment and the Impacts Section of the DEIS has been enhanced in the final EIS.

2. The reasons for using a No-Action Alternative of continued maintenance of the GIWW using current dredging and placement methods are described in Section 2.2. The purpose of the DMMP and EIS, besides fulfilling the requirements of a settlement agreement reached at the conclusion of a 1996 appeal to a 1994 lawsuit, is to prepare a management plan that will reduce, if not eliminate, maintenance impacts to the Laguna Madre's ecosystem. With the help of an ICT and considering the whole of the human environment, a management plan (DMMP) was prepared that was engineeringly and economically feasible and is estimated to reduce direct (burial) and indirect (turbidity) impacts to the extent that about 1,307 fewer acres of seagrass will be impacted compared to present conditions. Therefore, any deleterious impacts to wintering waterfowl would also be reduced.

3. As is noted in Section 2.10.7, the matrix approach was abandoned by the ICT, although the data that were generated in the process were retained, and a PA-by-PA approach was adopted. It is this latter approach that led to the draft DMMP presented as an appendix to the DEIS.

4. As noted in the response to Comment 1, discussion of potential impacts to waterfowl has been enhanced in the final EIS.

Texas Department of Transportation

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

June 23, 2003

Ms. Carolyn Murphy
U.S. Army Engineer District, Galveston
ATTN: CESWG-PE-PR
P.O. Box 1229
Galveston, Texas 77553-1229

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

Dear Ms. Murphy:

The Texas Department of Transportation (TxDOT) has reviewed the Draft Environmental Impact Statement (DEIS), related to the alternative Dredged Material Management Placement Plan (DMMP) for the maintenance dredging of the Gulf Intracoastal Waterway, Laguna Madre, Texas.

TxDOT supports the continuation of shallow draft navigation through the Laguna Madre and believes that the DEIS adequately addresses the areas of concern associated with the maintenance of the channel. Marine transportation is an effective and important mode of transportation that provides significant benefits to the economy of the state. The DEIS provides an environmentally acceptable solution for the continued utilization of this transportation mode within South Texas.

TxDOT appreciates the efforts of the Corps of Engineers (Corps) and the Laguna Madre Interagency Coordination Team (ICT) to address the difficult and complex environmental issues of the Laguna Madre. While every detail has not been addressed, the continuation of the Laguna Madre ICT will ensure the continuous improvement of maintenance dredging through the availability of new information and implementation of future technology advances. 1

TxDOT approves the DEIS and DMMP developed by the Corps and the ICT. If we can be of further assistance, please contact Raul Cantu, at (512) 416-2344.

Sincerely,

James L. Randall

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

cc: Colonel Leonard Waterworth, District Engineer, U.S. Army Engineer District, Galveston
Amadeo Saenz, Jr., P.E., Assistant Executive Director, Engineering Operations, TxDOT
Mario G. Medina, P.E., Transportation Planning and Programming Division, TxDOT
Raul Cantu, Jr., P.E., Transportation Planning and Programming Division, TxDOT

RESPONSE TO COMMENTS

James L. Randall, P.E.
Texas Department of Transportation
P.O. Box 149217
Austin, Texas 78714-9217

Comment No.	Response
1.	Thank you for your comments.

From: Kathy Griffith [mailto:kathgriff@juno.com]
Sent: Thursday, May 08, 2003 9:54 AM
To: Roberts, Terrell W
Subject: Open dispersal of dredge material

I am against any open dispersal of dredge material, in this instance particularly, in the Upper Laguna Madre along the Intracoastal Waterway at Emmonds Hole. 1

I am in favor of dredge material being placed in specifically designated locations, forming spoil islands which can be beneficial to wildlife, and in some cases can support fishing. Open dispersal on the other hand can ruin some fishing locations such as Emmonds Hole. 2

Kathryn M Griffith
456 Eldon Drive #I-3
Corpus Christi, TX 78412

RESPONSE TO COMMENTS

Kathryn M Griffith
456 Eldon Drive #I-3
Corpus Christi, Texas 78412

Comment No.	Response
1.	Thank you for your comments.
2.	Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

From: Ramey Beene [mailto:beene@fberealestate.com]
Sent: Thursday, May 08, 2003 10:38 AM
To: Roberts, Terrell W
Subject: open bay disposal

Mr. Roberts: I'm opposed to all open bay disposal plans in the Corpus Christi Laguna areas of the ICW. 1

RESPONSE TO COMMENTS

Ramey Beene
beene@fberealestate.com

Comment No.	Response
1.	Thank you for your comments.

From: jtharris [mailto:jtharris@ev1.net]
Sent: Thursday, May 08, 2003 2:30 PM
To: Roberts, Terrell W
Subject: Open Bay Dredge Disposal

Please do NOT continue with planning for disposal of dredge material in the Laguna Madre. We do not want the mud pumped out onto the sand & grass flats. Please find another way to dispose of the dredge material that will not affect the environment. 1

Thank you,

Jeff Harris

RESPONSE TO COMMENTS

Jeff Harris
jtharris@ev1.net

Comment No.	Response
1.	With the DMMP alternative, far less submerged aquatic vegetation and tidal flats will be impacted than the No-Action alternative. It was the goal of the ICT to address these environmental concerns. To achieve that goal, each individual PA was looked at, and based on ICT recommendations, the DMMP alternative was developed. We reiterate, the DMMP alternative has far less impact on the environment than the current practice (No-Action alternative).

From: Pietzsch, Robert W SWG Contractor
Sent: Friday, May 09, 2003 8:34 AM
To: Roberts, Terrell W SWG
Subject: Laguna Madre Dredging Proposal

Terry, I just had to cast my vote against this dredging proposal and for you to realize the fact that in know way is this an opinion of the USACE.I am the contract mail clerk here, but I use to live down in this area and was an avid fisherman in the Emmords Hole and Bird Island area. I caught a lot of large speckled trout there. I hope they can find another solution that would satisfy both parties, like they did on the Baffin Bay proposal that was finally dropped. I was in support of the Packery Channel proposal however, since it seemed like a good idea for both parties. Thanks for taking my comments. Robert Pietzsch, Mail Rm. 1

RESPONSE TO COMMENTS

Robert Pietzsch

Comment No.	Response
1.	Thank you for your comments.

From: JACK NEWMAN [mailto:indepth@intcomm.net]
Sent: Thursday, June 05, 2003 6:41 PM
To: Roberts, Terrell W
Subject: David Sikes column,June5,2003

I wanted to voice my opinion on the dumping of dredge material in Emmords Hole. DON"T!!!!! PLEASE!!! I vote for option # 3 in Mr. Sikes column; the Laguna Shores shoreline. The landowners are willing and I'm sure if they need extra monies, all members of CCA and other groups will help find a way. 1

Nancy Newman
9719 C.R. 2226
Taft, TX 78390

RESPONSE TO COMMENTS

Nancy Newman
9719 C.R. 2226
Taft, Texas 78390

Comment No.	Response
1.	Thank you for your comments.

From: Thomas B. Pool, PH.D., HCLD [mailto:rpool@fertilitysa.com]
Sent: Wednesday, June 18, 2003 2:32 PM
To: Roberts, Terrell W
Subject: Disposition of dredge material

This communication is to express my opposition to the proposed dumping of dredge material into Emmord's Hole of the upper Laguna Madre. Additionally, I am opposed to any open bay disposition proposal, given the delicate relationship between water clarity, mean wind velocities and seagrass growth in that area. I fully understand and appreciate the need to maintain the ICW by periodic dredging and I support this activity and the industries that benefit from a functional ICW. I would fully support a plan to use land-based disposition or to add to previously established spoil areas. I am only opposed to any activity that would reduce the water depth of Emmord's Hole, a major refuge for fish populations of strong economic value, or would contribute to turbidity that will adversely affect seagrass growth. Thank you for this opportunity to express my views.

1

2

3

Thomas B. Pool, Ph.D., HCLD
Embryologist and Scientific Director
Fertility Center of San Antonio
4499 Medical Drive, Suite 200
San Antonio, Texas 78229
210-614-3232
210-692-1210 (fax)
www.fertilitySA.com

RESPONSE TO COMMENTS

Thomas B. Pool
4499 Medical Drive, Suite 200
San Antonio, Texas 78229

Comment No.	Response

1. Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

2. The ICT evaluated upland placement, offshore placement, and confined open-bay placement alternatives for the entire Laguna Madre. These alternatives would have eliminated unconfined placement in the open bay. However, except for some PAs, which are to be fully confined, the ICT had to reject these alternatives. As described more fully in Section 2.0, the upland placement option was eliminated because of the permanent removal of seagrass habitat by dredging access channels to the mainland or Padre Island and the potential impacts to wetland habitat fringing the shoreline or located in depressions farther inland. Offshore placement was eliminated because of the limitations in available equipment capable of working in channel depths and navigating in rough offshore water, pumping distance, and the year-round dredging required for the equipment just to keep up with the shoaling rates (Section 2.0). Although these alternatives were eliminated before a cost analysis was prepared, it was determined later that the cost would be prohibitive to use the upland and offshore alternatives for all the dredged material. However, a limited offshore disposal option for two locations near Mansfield Pass and Brazos Santiago Pass was retained for review by the ICT should it be determined economically and engineeringly feasibly and environmentally desirable in the future.

3. Thank you for your comment.

From: W. S. Cain [mailto:wcain@houston.rr.com]
Sent: Thursday, May 22, 2003 11:05 AM
To: Roberts, Terrell W
Subject: Open Bay Dredge disposal

I recently saw an article that stated the Corps is considering open bay dredge disposal for a section of the Laguna Madre known as Emirs Hole. Many of us have fished that area for years and it is a prime area for good fish habitat.

I find it very disturbing that the Corps is even considering such a BAD IDEA. If there will be any public hearings, I would like to be informed so I can bring along many people who enjoy the area and will protest any such action as open bay dredge disposal in the Emmords Hole area. 1

There are many spoil banks up and down the Intercoastal Waterway that could and should be used for disposal areas that offer less damage to natural habitat than any open bay disposal site. In fact many of the small barrier islands that contain cabins that are legally permitted by the state are in danger of eroding and could use come of the spoils too preserve the islands. 2 3

Sincerely
W. S. Cain

RESPONSE TO COMMENTS

W. S. Cain
wcain@houston.rr.com

Comment No.	Response

1. Public hearings were held in Corpus Christi on May 7, 2003 at 7 PM in the Natural Resources Building at Texas A&M University-Corpus Christi and in Brownsville on May 8, 2003 at 7 PM at the Brownsville Public Library. Notices for the hearings were posted on the USACE web site and in all local newspapers. No more public hearings are planned during the public review period for the Draft EIS.

2. The ICT prepared the DMMP for each PA with the option of placing dredged material on islands as one of the methods for reducing impacts to nearby seagrass beds. Under this option, as much of the dredged material as possible would be retained on the islands using the best management practices available. These practices would include using a diffuser at the end of the dredge pipe to dissipate the force of the water flow to reduce scouring and help spread the material in a thin layer. Another method is to build low training levees to direct the flow of the material away from sensitive areas, such as seagrass beds or circulation channels. However, even with these practices, the PINS management plan identifies a need for only part of the material at most of the PAs inside the park's boundaries and the rest of the material would be placed at other sites outside PINS.

3. Some of the dredged material will be used to build up eroding PAs as part of the PINS management plan. However, the PAs were originally created for use as a disposal site, not for recreational use. The GLO permitted cabins to exist on the islands in the PAs at risk of possible damage by future disposal actions. The USACE has determined that several cabins on islands in the upper lagoon may have to be moved or modified to avoid damage in order to implement the DMMP and retain more of the sediments on the islands. The process for notifying the cabin owners of potential damage to their structure is being coordinated with GLO. GLO will notify the affected cabin owners prior to disposal on the PA to give them time to comply with the notice.

From: Goldston, William [mailto:w.goldston@goldstonengr.com]
Sent: Wednesday, May 21, 2003 3:17 PM
To: Roberts, Terrell W
Subject: Intracoastal Dredging Plan

Terry:

I'm usually coming to the Corps representing clients that are needing permits to build waterfront facilities that are under your domain. In this case, I'm writing as a long time, avid fisherman, who fishes the Laguna Madre very regularly.

I know the importance of maintaining the GIWW and also the problems of finding suitable disposal sites. That said:

- We must find ways for the Corps to eliminate open bay disposal; 1
- I can support confined-open bay disposal, and
- As a quasi-layman, Emmords Hole is so unique to the Laguna Madre system that I'd rather sacrifice some grass than lose that body of deeper water. 2

Thanks for your consideration and best wishes for finding the "right" solutions.

Very truly,

William Goldston, P.E.
President
Goldston Engineering, Inc.
Phone: 713-977-89-291-187
Cell: 713-828-5701
Fax: 713-977-7466
w.goldston@goldstonengr.com
www.goldstonengr.com

RESPONSE TO COMMENTS

William Goldston, P.E.
w.goldston@goldstonengr.com

Comment No.	Response

1. The ICT evaluated upland placement, offshore placement, and confined open-bay placement alternatives for the entire Laguna Madre. These alternatives would have eliminated unconfined placement in the open bay. However, except for some PAs, which are to be fully confined, the ICT had to reject these alternatives. As described more fully in Section 2.0, the upland placement option was eliminated because of the permanent removal of seagrass habitat by dredging access channels to the mainland or Padre Island and the potential impacts to wetland habitat fringing the shoreline or located in depressions farther inland. Offshore placement was eliminated because of the limitations in available equipment capable of working in channel depths and navigating in rough offshore water, pumping distance, and the year-round dredging required for the equipment just to keep up with the shoaling rates (Section 2.0). Although these alternatives were eliminated before a cost analysis was prepared, it was determined later that the cost would be prohibitive to use the upland and offshore alternatives for all the dredged material. However, a limited offshore disposal option for two locations near Mansfield Pass and Brazos Santiago Pass was retained for review by the ICT should it be determined economically and engineeringly feasibly and environmentally desirable in the future.

2. Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

From: Don & Lorrie Crawford [mailto:lorriec@davlin.net]
Sent: Friday, May 16, 2003 6:53 PM
To: Roberts, Terrell W
Subject: Laguna Madre

Mr Roberts:

As a long time fisherman in the Laguna Madre, I want to strongly object to the dumping of any dredged material anywhere in the Laguna. Especially in open waters such as Emords Hole, one of the best fishing spots in the Laguna. The deeper water there saves many trout during a cold winter. 1 2

I would like to recommend building berms on the existing spoils or in the very shollow water on the edge of the ICWW. 3

Don L. Crawford
RR1 Box 929
Three Rivers, Tx 78071

RESPONSE TO COMMENTS

Don L. Crawford
RR1 Box 929
Three Rivers, Texas 78071

Comment No.	Response

1. Unconfined open-bay disposal of dredged material has been occurring in the Laguna Madre since 1949 when the GIWW was built. The current draft EIS is looking at improving the current techniques of disposal.

2. Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

3. The ICT considered confining the dredged material on existing PAs when preparing the DMMP and did recommend complete confinement of the material in some PAs. However, this option was limited by the size of the PA needed to contain the next 50 years of dredged material (the study period) and the levee height that could be supported by existing soils at the site. Some of the sites would have to be expanded, which would permanently remove any seagrass surrounding the site in order to have sufficient area for ponding the water to allow sediment to settle and to contain the 50-year volume of material. Therefore, not all of the sites could meet this requirement. Another consideration was the high cost to construct, armor, and maintain the levees around all 63 sites in the Laguna Madre.

From: Tony Moherek [mailto:ajmoherek@satx.rr.com]
Sent: Saturday, May 17, 2003 10:16 PM
To: Roberts, Terrell W
Subject: Dredge disposal issue, Emmets Hole Laguna Madre/Public Comment

Dear Terry, I am a geologist living on N Padre Island & strongly favor the idea of the US Army Corps of Engineers place the ICW dredgings over existing spoils already in place & not in delicate estuaries such as Emmots Hole that is a special deeper area where a large host of fish species live. One suggestion would be to coordinate the placement of the spoils along the edges of the proposed Packery channel as I'm sure a good base for the rock wall jetties that are currently proposed will be needed. While at Texas A & M University , Dept of Oceanography, (1974-76) I earned my masters thesis on the impact of Houston Ship Channel dredgings placed a few miles offshore from Galveston. We placed numerous time lapse bottom current meters at depths of 20 to 60 ft & found that that there was minimal erosion of those dredings at that time. In fact the bulk of longshore transport pushed the sediments to the SW & away from the ship channel. This would be great if the Corps could dispose of these dredgings in a similar fashion off the coast of N. Padre. Good luck in getting all parties to agree on anything in this matter.

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Tony Moherek
Licensed Geoscientist # 427

RESPONSE TO COMMENTS

Tony Moherek
ajmoherek@satx.rr.com

Comment No.	Response

1. The ICT prepared the DMMP for each PA with the option of placing the dredged material on islands as one of the methods for reducing impacts to nearby seagrass beds. Under this option, as much of the dredged material as possible would be retained on the islands using the best management practices available. These practices would include using a diffuser at the end of the dredge pipe to dissipate the force of the water flow to reduce scouring and help spread the material in a thin layer. Another method is to build low training levees to direct the flow of the material away from sensitive areas, such as seagrass beds or circulation channels. However, even with these practices, the PINS management plan identifies a need for only part of the material at most of the PAs inside the park's boundaries and the rest of the material would be placed at other sites outside PINS.

   Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

2. Placing the dredged material along the edge of Packery Channel or as foundation material for the jetties was not considered by the ICT because of the distance involved in pumping or hauling the material to this site. Also, the option would not be feasible because the volume of material would be so great, it would fill in the channel and create a need for additional maintenance dredging to clear the channel. The increased disposal requirements for this project would incur more damage to the area's resources than it would benefit. Another negative factor is that the material is too fine grained and soft to be of any use as foundation material for the jetties at Packery Channel.

3. Placing the dredged material off the coast of Padre Island was considered by the ICT, but had to be rejected for engineering reasons and Federal regulations. Except for a few areas, the distance from the GIWW to a point about two miles off the Padre Island shoreline is too great for efficient pumping. The two-mile distance offshore was selected to take the fine-grained material out of the near-shore current and wave zone. The pumping distances involved in most areas would require 2-4 booster pumps to prevent the material from settling and clogging the pipes. The use of booster pumps results in a 10% or more loss of dredging efficiency per pump which limits their use to no more than one booster pump to maintain production. The areas that have the shortest pumping distance would require crossing PINS with the dredge pipe and the park service has already stated that this would represent an impairment of its natural resources and is not permissible.

From: Ramon C Hill [mailto:HILL3RC@CDCLN05.LVS.DUPONT.COM]
Sent: Friday, May 16, 2003 2:41 PM
To: Roberts, Terrell W
Subject: OPEN BAY DISPOSAL

Mr. Roberts,

Thank you for your response to my call and for our conversation. This note is to document my concern over recent communication related to the prospect of "open bay disposal" in the Laguna Madre. At sixty years of age and having lived my life on the Texas gulf coast, it is evident to me that we don't "dispose" of dredged material, we relocate it. When we relocate dredged material we do so at tremendous cost to the coastal environment by smothering wetlands or bay bottoms. The environmental degradation wrought in our lifetime will not be corrected by us and cannot be corrected by nature in nearly so short a time as it was done. Our only vindication will be that having recognized our destructive behavior we stopped it. Let's stop open bay disposal.

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Ramon C. Hill
2690 90th Street
Port Arthur, Texas 77640
409-727-2552

RESPONSE TO COMMENTS

Ramon C. Hill
2690 90th Street
Port Arthur, Texas 77640

Comment No.	Response
1.	The ICT considered all environmental concerns when developing the best placement options for the dredged material. The current Draft EIS, which replaces the existing 1975 EIS, is much more environment "friendly" than the current practice. Best management practices available will be utilized to ensure the least damage to the environment is done.

From: Chris.Moser@dynegy.com [mailto:Chris.Moser@dynegy.com]
Sent: Friday, May 16, 2003 10:50 AM
To: Roberts, Terrell W
Cc: webcomments@tpwd.state.tx.us; ralphnchristineadams@earthlink.net
Subject: No disposal of dredged spoils in open bays

Mr. Roberts, TPWD,

As a recreational fisherman, interested tax-payer and citizen, I object to the Corps' current proposal to dump spoils dredged from the Gulf Intracoastal Waterway into the Laguna Madre. My major concerns revolve around the elimination of rare semi-deep (5') habitat and reduction of water clarity which inevitably affects the entire ecosystem. I urge you to pursue other options that do not impact the $100 million sport fishery the Laguna currently supports. Please eliminate disposal in open bays as an option in the Corps' plan. 1 2

Sincerely,

Chris Moser
713.507.6860

RESPONSE TO COMMENTS

Chris Moser
Chris.Moser@dynegy.com

Comment No.	Response

1. Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action. A sediment transport model was used to determine the fate of all the dredged material that would normally be placed at PAs 186, 187, 188, and 189 as a worst-case scenario. The model indicated that turbidity plumes created by initial placement and subsequent wave and current action above the non-disposal levels and high enough to lower seagrass photosynthesis below survival levels would extend about 7.5 miles north of the disposal site inside Emmord's Hole for the first month of analysis. However, turbidity would subside to near background levels for the remainder of the one-year analysis (see Appendix H for a summary of the model study or visit the USACE web site for a complete report of the study). The disposal quantity used in the model was much higher than the amounts that would normally be placed in PA 186, therefore, it can be assumed that the impacts to Emmord's Hole and the surrounding seagrass beds would be much less than indicated in the model.

2. The ICT evaluated upland placement, offshore placement, and confined open-bay placement alternatives for the entire Laguna Madre. These alternatives would have eliminated unconfined placement in the open bay. However, except for some PAs, which are to be fully confined, the ICT had to reject these alternatives. As described more fully in Section 2.0, the upland placement option was eliminated because of the permanent removal of seagrass habitat by dredging access channels to the mainland or Padre Island and the potential impacts to wetland habitat fringing the shoreline or located in depressions farther inland. Offshore placement was eliminated because of the limitations in available equipment capable of working in channel depths and navigating in rough offshore water, pumping distance, and the year-round dredging required for the equipment just to keep up with the shoaling rates (Section 2.0). Although these alternatives were eliminated before a cost analysis was prepared, it was determined later that the cost would be prohibitive to use the upland and offshore alternatives for all the dredged material. However, a limited offshore disposal option for two locations near Mansfield Pass and Brazos Santiago Pass was retained for review by the ICT should it be determined economically and engineeringly feasibly and environmentally desirable in the future.

From: JOHN4141@aol.com [mailto:JOHN4141@aol.com]
Sent: Friday, May 16, 2003 12:33 AM
To: Roberts, Terrell W
Subject: Southern Intracoastal Canal dredge spoil

Sirs:

Please don't dump it in Emmords Hole. Put it on North Padre Island. Build up the public areas that flood at high tides. 1

Thank you.

A sportsman, J M Olson , 41 Camden Place , Corpus Christi, TX 78412

RESPONSE TO COMMENTS

J M Olson
41 Camden Place
Corpus Christi, Texas 78412

Comment No.	Response
1.	Thank you for your comments.

From: smitty-David Smith [mailto:smitty@the-i.net]
Sent: Thursday, May 15, 2003 11:34 PM
To: Roberts, Terrell W
Subject: dredging intracoastal waterway.....my comments

to mr terry roberts:

I grew up near Nueces Bay, and once worked on Baffin Bay. I am aware of many positive results of placed dredge material.

However, I would like to state my opinion, AGAINST OPEN WATER DREDGE MATERIAL 'PLACEMENT'.

I think in the year 2003, with increasing environmental understanding and value of sport fishing and other recreation,

Dredge Material should be placed on upland sites. 1

----------Regardless of whatever hoops the government has to figure out how to jump thru.----------

I say, put it on the National Seashore or on the King Ranch. If somebody has to be sued, let's get the lawyers. 2

Deep water is a precious commodity in our shallow Laguna Madre. Please reconsider your current plans.

respectfully,

David Smith Wildlife Biologist, Temple Ranch, Duval County (TAMU '79)

member: Union of Concerned Scientists, Nature Conservancy, Texas Chapter The Wildlife Society

<smitty@the-i.net>

RESPONSE TO COMMENTS

David Smith
smitty@the-i.net

Comment No.	Response

1. The ICT evaluated upland placement alternatives for the entire Laguna Madre. As described more in Section 2.0 of the Draft EIS, the upland placement option was eliminated because of the permanent removal of seagrass habitat by dredging access channels to the mainland or Padre Island and the potential impacts to wetland habitat fringing the shoreline or located in depressions farther inland.

2. The USACE cannot establish new disposal sites on Padre Island or its beaches inside the PINS without the agreement of the park service. The park service has notified the USACE and the ICT that it would not accept any disposal of dredged material on the island or its beaches, nor would it allow pipelines to be placed over or under the island to allow placement in offshore waters. In addition to this prohibition, most of the material (42% - 76%) is composed of silty organic material and clays and is not suitable for nourishing beaches or creating sand dunes.

   The ICT considered an upland disposal alternative (low areas of the King Ranch and Flour Bluff), but rejected it because of the permanent loss of seagrass caused by dredging access channels for the pipeline and equipment from the GIWW to the mainland and excess pumping distance in most of the Laguna Madre. The distance from the GIWW to the mainland at Emmord's Hole is probably the shortest in the Laguna Madre and may be economically feasible, but the ICT determined there would be less damage to seagrass beds and other natural resources by utilizing the deepest area of Emmord's Hole for disposal rather than cutting a channel through the seagrass beds. The ICT also determined that many of the low areas on the mainland are ecologically sensitive wetlands and should not be impacted by dredge pipe or covered with dredged material.

From: Schlabach0@aol.com [mailto:Schlabach0@aol.com]
Sent: Thursday, May 15, 2003 3:33 PM
To: Roberts, Terrell W
Subject: Emmords Hole

Mr. Roberts,

Please remove the Emmords Hole area from your list of places to dump dredge material from the ICW. This is an area that I have fished for many years and do not want to see it destroyed by dump material. Emmords is one of the most productive fishing areas in the Laguna Madre and anything that would effect this area negatively should be prohibited! 1

Thanks,
Capt. C.M. Schlabach
122 Whiteley
Corpus Christi, TX.
361-937-2115

RESPONSE TO COMMENTS

Capt. C.M. Schlabach
122 Whiteley
Corpus Christi, Texas

Comment No.	Response
1.	Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

From: Norman Trubee [mailto:ntrubee@helindonovan.com]
Sent: Thursday, May 15, 2003 11:04 AM
To: Roberts, Terrell W
Subject: No to open bay dregde dumping

Dear Mr. Roberts, as an avid fisherman and waterfowler, I am opposed to open bay dredge dumping in the Laguna Madre. Please find an alternative for this destructive proposal. 1

Norman Trubee, CPA
Helin, Donovan, Trubee & Wilkinson, LLP
12466 Los Indios Trail, Suite 213
Austin, TX 78729
Phone 512 257 8099
Cell 512 589 5063
Fax 512 258 5895
email ntrubee@helindonovan.com

RESPONSE TO COMMENTS

Norman Trubee
12466 Los Indios Trail, Suite 213
Austin, Texas 78729

Comment No.	Response
1.	Thank you for your comments.

From: Alicia Williams [mailto:aaliciawil@hotmail.com]
Sent: Thursday, May 15, 2003 10:47 AM
To: Roberts, Terrell W
Subject: Maintenance Dredging Plan

I am writing to voice my opposition of open-bay dredging that would deposit the dredging spoils in Emmords Hole. It is a rare habitat for fish because of its depth. In addition, I feel that it would affect the clarity of the beatiful water there. 1

Thank you for your consideration in this matter.
Alicia De Leon Williams

RESPONSE TO COMMENTS

Alicia De Leon Williams
aaliciawil@hotmail.com

Comment No.	Response
1.	Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action. A sediment transport model was used to determine the fate of all the dredged material that would normally be placed at PAs 186, 187, 188, and 189 as a worst-case scenario. The model indicated that turbidity plumes created by initial placement and subsequent wave and current action above the non-disposal levels and high enough to lower seagrass photosynthesis below survival levels would extend about 7.5 miles north of the disposal site inside Emmord's Hole for the first month of analysis. However, turbidity would subside to near background levels for the remainder of the one-year analysis (see Appendix H for a summary of the model study or visit the USACE web site for a complete report of the study). The disposal quantity used in the model was much higher than the amounts that would normally be placed in PA 186, therefore, it can be assumed that the impacts to Emmord's Hole and the surrounding seagrass beds would be much less than indicated in the model.

From: Paul Wimberly [mailto:Wimbinv@swbell.net]
Sent: Thursday, May 15, 2003 10:28 AM
To: Roberts, Terrell W
Subject: OPEN BAY DREDGE DISPOSAL

IT'S HARD TO BELIEVE THE CORP WOULD EVEN CONSIDER OPEN BAY DREDGE DISPOSAL. WE ONLY HAVE ONE LAGUNA MADRE--PLEASE DON'T DESTROY NATURAL HABITAT--PUT SPOIL ON EXISTING SPOIL ISLANDS WITH CONTAINMENT--SAVING A FEW DOLLARS ISN'T WORTH DAMAGE TO BEAUTIFUL UNSPOILED AREAS SUCH AS EMMORDS HOLE AND OTHERS-- 1 2

RESPECTFULLY SUBMITTED,

PAUL R. WIMBERLY,
25 YEAR BOARD MEMBER OF CCA

RESPONSE TO COMMENTS

Paul Wimberly
Wimbinv@swbell.net

Comment No.	Response

1. The ICT prepared the DMMP for each PA with the option of placing the dredged material on islands in the designated PAs as one of the methods for reducing impacts to nearby seagrass beds. Under this option, as much of the dredged material as possible would be retained on the islands using the best management practices available. These practices would include using a diffuser at the end of the dredge pipe to dissipate the force of the water flow to reduce scouring and help spread the material in a thin layer. Another method is to build low training levees to direct the flow of the material away from sensitive areas, such as seagrass beds or circulation channels. However, even with these practices, the PINS management plan identifies a need for only part of the material at most of the PAs inside the park's boundaries and the rest of the material would be placed at other sites outside PINS.

   The ICT considered confining the dredged material on existing PAs when preparing the DMMP and did recommend complete confinement of the material in some PAs. However, this option was limited by the size of the PA needed to contain the next 50 years of dredged material (the study period) and the levee height that could be supported by existing soils at the site. Some of the sites would have to be expanded, which would permanently remove any seagrass surrounding the site in order to have sufficient area for ponding the water to allow sediment to settle and to contain the 50-year volume of material. Therefore, not all of the sites could meet this requirement. Another consideration was the high cost to construct, armor, and maintain the levees around all 63 sites in the Laguna Madre.

2. Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

From: Marilyn Heffner [mailto:pmheff@yahoo.com]
Sent: Thursday, May 15, 2003 9:14 AM
To: Roberts, Terrell W
Subject: eppords hole as dump site

i and most of my neighbors strongly oppose the subject use. for our reasons, see david sikes column of 5/15/03 in the corpus christi caller times newspaper. if you must muddy the waters,it should be done on your own property, not ours. use the existing dump sites.

RESPONSE TO COMMENTS

Marilyn Heffner
pmheff@yahoo.com

Comment No.	Response
1.	The ICT prepared the DMMP for each PA with the option of placing the dredged material on islands in the designated PAs as one of the methods for reducing impacts to nearby seagrass beds. Under this option, as much of the dredged material as possible would be retained on the islands using the best management practices available. These practices would include using a diffuser at the end of the dredge pipe to dissipate the force of the water flow to reduce scouring and help spread the material in a thin layer. Another method is to build low training levees to direct the flow of the material away from sensitive areas, such as seagrass beds or circulation channels. However, even with these practices, the PINS management plan identifies a need for only part of the material at most of the PAs inside the park's boundaries and the rest of the material would be placed at other sites outside PINS.

From: Donald G. Bond [mailto:dbond@davlin.net]
Sent: Sunday, May 11, 2003 4:25 AM
To: Roberts, Terrell W
Subject: Placing dredge spoil into Emmord's Hole

This is to protest the use of Emmord's Hole as a disposal site for dredge spoil from maintenance dredging of the Intracoastal Canal. There is little enough "deep" area in the flats of the Laguna Madre, and Emmord's Hole should be kept as both a place for fishing and for fish survival. The ranch land in the area is low and could benefit by being raised for protection against high water. I understand that there is a greater cost to dispose of spoil on shore due to the cost of dykes, but to replace Emmord's Hole would also be costly. 1 2

Thanks for your consideration,
Donald G. Bond
514 Belleview
Corpus Christi, TX 78412

RESPONSE TO COMMENTS

Donald G. Bond
514 Belleview
Corpus Christi, Texas 78412

Comment No.	Response

1. Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

2. The ICT considered an upland disposal alternative (low areas of the King Ranch and Flour Bluff), but rejected it because of the permanent loss of seagrass caused by dredging access channels for the pipeline and equipment from the GIWW to the mainland and excess pumping distance in most of the Laguna Madre. The distance from the GIWW to the mainland at Emmord's Hole is probably the shortest in the Laguna Madre and may be economically feasible, but the ICT determined there would be less damage to seagrass beds and other natural resources by utilizing the deepest area of Emmord's Hole for disposal rather than cutting a channel through the seagrass beds. The ICT also determined that many of the low areas on the mainland are ecologically sensitive wetlands and should not be impacted by dredge pipe or covered with dredged material.

From: David Haddad [mailto:daddio@stx.rr.com]
Sent: Monday, May 12, 2003 11:41 AM
To: David Sikes; Terry Roberts
Subject: Open bay dredge disposal!!!!

Terry I understand there is a possibility that the dredge material from the Intercoastal Canal may be deposited in the Emmords Hole along the King Ranch (Laureles Division) shoreline. Please find another location for that material. The Emmords has been a very popular fishing area for as long as I can remember. I am sure that such a valuable area for the fishery is much more important to the environment than many other spots upon which the dredge material could be placed. The unpopulated islands that line the canal would probably not be a bad place to start. Please while you are considering alternatives be aware that many of the islands in the area have cabins on them and leave those islands untouched also. Many people and fish will be adversely impacted if the material is placed in the middle of this fine fishing area. I bet you are in a tough position to try to balance this situation. I would certainly appreciate being on your list to be kept informed of the progress of this Dredge Proposal. Thank you for your careful consideration.

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David Haddad
Promotional Productions
6009 Idylwood
Corpus Christi Texas 78412
361-991-1474

RESPONSE TO COMMENTS

David Haddad
6009 Idylwood
Corpus Christi, Texas 78412

Comment No.	Response

1. Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

2. The ICT prepared the DMMP for each PA with the option of placing the dredged material on islands in the designated PAs as one of the methods for reducing impacts to nearby seagrass beds. Under this option, as much of the dredged material as possible would be retained on the islands using the best management practices available. These practices would include using a diffuser at the end of the dredge pipe to dissipate the force of the water flow to reduce scouring and help spread the material in a thin layer. Another method is to build low training levees to direct the flow of the material away from sensitive areas, such as seagrass beds or circulation channels. However, even with these practices, the PINS management plan identifies a need for only part of the material at most of the PAs inside the park's boundaries and the rest of the material would be placed at other sites outside PINS.

3. The PAs were originally created for use as a disposal site, not for recreational use. The GLO permitted cabins to exist on the islands in the PAs at risk of possible damage by future disposal actions. The USACE has determined that several cabins on islands in the upper lagoon may have to be moved or modified to avoid damage in order to implement the DMMP and retain more of the sediments on the islands. The process for notifying the cabin owners of potential damage to their structure is being coordinated with GLO. GLO will notify the affected cabin owners prior to disposal on the PA to give them time to comply with the notice.

From: Thomas Harper [mailto:tharper@stx.rr.com]
Sent: Thursday, May 08, 2003 5:58 AM
To: Roberts, Terrell W
Subject: Dredge Spoil Disposal in Emmords Hole

Dear Mr. Roberts:
I am writing to express my opposition to the use of Emmords Hole for the disposal of dredge material. I live on North Padre Island and regularly fish in Emmords Hole. I am convinced that the disposal of dredge material in Emmords would damage these choice fishing grounds and limit their recreational use and productivity. 1

I urge the Corps to make beneficial use of the dredge material by disposing of the material on the North Padre Island beaches to control erosion and create new sand dunes. The material might also be used to protect the shoreline and fill low areas on the Kings Ranch or in Flour Bluff. 2 3

Sincerely,
Thomas Harper
13554 Port Royal Court
Corpus Christi, TX 78418

RESPONSE TO COMMENTS

Thomas Harper
13554 Port Royal Court
Corpus Christi, Texas 78418

Comment No.	Response

1. Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

2. The USACE cannot establish new disposal sites on Padre Island or its beaches inside the PINS without the agreement of the park service. The park service has notified the USACE and the ICT that it would not accept any disposal of dredged material on the island or its beaches, nor would it allow pipelines to be placed over or under the island to allow placement in offshore waters. In addition to this prohibition, most of the material (42% - 76%) is composed of silty organic material and clays and is not suitable for nourishing beaches or creating sand dunes.

3. The ICT considered an upland disposal alternative (low areas of the King Ranch and Flour Bluff), but rejected it because of the permanent loss of seagrass caused by dredging access channels for the pipeline and equipment from the GIWW to the mainland and excess pumping distance in most of the Laguna Madre. The distance from the GIWW to the mainland at Emmord's Hole is probably the shortest in the Laguna Madre and may be economically feasible, but the ICT determined there would be less damage to seagrass beds and other natural resources by utilizing the deepest area of Emmord's Hole for disposal rather than cutting a channel through the seagrass beds. The ICT also determined that many of the low areas on the mainland are ecologically sensitive wetlands and should not be impacted by dredge pipe or covered with dredged material.

From: Ralph G. Adams, Jr. [mailto:ralph_adams@earthlink.net]
Sent: Thursday, May 08, 2003 6:22 AM
To: Roberts, Terrell W
Subject: Against open bay dredge disposal in the Upper Laguna Madre

Dear Mr. Roberts:

I am against the current proposals to dispose of ICW dredging materials in the Upper Laguna Madre near the King Ranch (Laureles Division) shoreline. As a frequent angler in the Laguna, I know the quality of this resource and that it is simply too precious to risk. It is worth finding alternative locations to dump the dredgings. 1

The Upper and Lower Laguna Madre is an increasingly rare jewel of an ecosystem, both for its sheer size and for the array of life it supports within the bay as well as the open Gulf.

I hope you have had a chance to fish the magnificent flats of this region. So please help us to conserve this resource for future generations. 2

Sincerely,
Ralph G. Adams, Jr.
Houston, Texas
Tel. 713-664-0491

RESPONSE TO COMMENTS

Ralph G. Adams, Jr.
ralph_adams@earthlink.net

Comment No.	Response
1.	The ICT considered an upland disposal alternative (low areas of the King Ranch and Flour Bluff), but rejected it because of the permanent loss of seagrass caused by dredging access channels for the pipeline and equipment from the GIWW to the mainland and excess pumping distance in most of the Laguna Madre. The distance from the GIWW to the mainland at Emmord's Hole is probably the shortest in the Laguna Madre and may be economically feasible, but the ICT determined there would be less damage to seagrass beds and other natural resources by utilizing the deepest area of Emmord's Hole for disposal rather than cutting a channel through the seagrass beds. The ICT also determined that many of the low areas on the mainland are ecologically sensitive wetlands and should not be impacted by dredge pipe or covered with dredged material.
2.	Thank you for your comments.

May 14, 2003

Mr. Terry Roberts
U.S. Corps of Engineers
2000 Point Road
Galveston, TX 77550

Dear Mr. Roberts:

First of all I would like to thank you and the Corps of Engineers for the fine job you and your organization has done through the years. However, at this time I need to voice my concern/disagreement with your planned making of an island in Emmord's Hole located south of Corpus Christi, TX. 1

PLEASE DO NOT MAKE A NEW ISLAND
AND
DESTROY VALUABLE FISHING AREAS OF TEXAS
AT
EMMORD'S HOLE.

I am writing to not only voice an opinion but to offer a solution. How about just making an existing island taller, NOT LONGER OR WIDER, just TALLER. Or place the dredge material on the mainland or on the barrier island. These may not be viable alternatives, but they are certainly better than diminishing our limited fisheries and fishing opportunities in Texas. 2

On a side note: I have heard the stories about how the numbers of licensed hunters and fisherman/women have been decreasing in Texas. This is a direct impact on the Texas economy. Hundreds of millions of dollars are spent in Texas each year on fishing licenses, gear, bait, boats, service to boats, and etcetera. Do you really want to reduce the availability of quality fishing locations and decrease the economy of the State of Texas for its citizens, their businesses and the government? 3

I thank you for your consideration.

Sincerely,

Frank Wilson

RESPONSE TO COMMENTS

Frank Wilson

Comment No.	Response

1. The USACE does not intend to form a new island in Emmord's Hole. Emmord's Hole will only be used as a placement location for the material in excess of the PINS management plan onto PA 186. The material designated for PA 186 would be placed into the deepest areas of Emmord's Hole just outside of the PA to avoid overloading the PA. The deepest areas of Emmord's Hole (5-6 feet) are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

2. The ICT considered this alternative when preparing the DMMP and did recommend complete confinement of the material in some PAs. However, this option was limited by the size of the PA needed to contain the next 50 years of dredged material (the study period) and the levee height that could be supported by existing soils at the site. Some of the sites would have to be expanded, which would permanently remove any seagrass surrounding the site in order to have sufficient area for ponding the water to allow sediment to settle and to contain the 50-year volume of material. Therefore, not all of the sites could meet this requirement. Another consideration was the high cost to construct, armor, and maintain the levees around all 63 sites in the Laguna Madre.

3. The DMMP alternative will have less impact on the overall environment than the No-Action alternative and will therefore enhance the fisheries of the Laguna Madre.

US Army Corps of Engineers Galveston District	PUBLIC COMMENT Gulf Intracoastal Waterway, Laguna Madre, Texas Draft Environmental Impact Statement May 7, 2003	

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Dr. Terry Roberts
U.S. Army Corps of Engineers
Galveston District
2000 Fort Point Road
Galveston, Texas 77550
Facsimile: (409) 766-3064
Email: terrell.w.roberts@swg02.usace.army.mil

Name: Scott MURRAY

Address: 1818 Rodd Field Rd, UNIT T-4 (PHONE 361-993-3983)

City, State and Zip: Corpus Christi, Tx., 78412

Dear Mr. Roberts:

Comment:

I oppose the COE GIWW Maintenance Material Plan for the Upper Laguna Madre, specifically the utilization of "open bay disposal" practices. I oppose any shallow or deep disposal of dredge material in an open bay environment and in particular the "Reach that encompasses Emmords'. Hole." Open bay disposal is destructive to critical habitat and the only hypersaline ecosystem in the U.S. I am concerned about the long and short term environmental and economic impacts to a substantial commercial and Recreationally important estuary. There are better alternatives available than least cost open bay disposal. 1 2

RESPONSE TO COMMENTS

Scott Murray
1818 Rodd Field Road, Unit J-4
Corpus Chirsti, Texas 78412

Comment No.	Response

1. Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

2. The ICT evaluated upland placement, offshore placement, and confined open-bay placement alternatives for the entire Laguna Madre. These alternatives would have eliminated unconfined placement in the open bay. However, except for some PAs, which are to be fully confined, the ICT had to reject these alternatives. As described more fully in Section 2.0, the upland placement option was eliminated because of the permanent removal of seagrass habitat by dredging access channels to the mainland or Padre Island and the potential impacts to wetland habitat fringing the shoreline or located in depressions farther inland. Offshore placement was eliminated because of the limitations in available equipment capable of working in channel depths and navigating in rough offshore water, pumping distance, and the year-round dredging required for the equipment just to keep up with the shoaling rates (Section 2.0). Although these alternatives were eliminated before a cost analysis was prepared, it was determined later that the cost would be prohibitive to use the upland and offshore alternatives for all the dredged material. However, a limited offshore disposal option for two locations near Mansfield Pass and Brazos Santiago Pass was retained for review by the ICT should it be determined economically and engineeringly feasibly and environmentally desirable in the future.

US Army Corps of Engineers Galveston District	PUBLIC COMMENT **Gulf Intracoastal Waterway, Laguna Madre, Texas Draft Environmental Impact Statement May 7, 2003**	

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Galveston District
2000 Fort Point Road
Galveston, Texas 77550
Facsimile: (409) 766-3064
Email: terrell.w.roberts@swg02.usace.army.mil

Name: Scott M. Ponton

Address: 311 Dolphin Pl

City, State and Zip: Corpus Christi, Tx 78411

Comment: I Am 100% AgAinST this project. 1

RESPONSE TO COMMENTS

Scott M. Ponton
311 Dolphin Place
Corpus Christi, Texas 78411

Comment No.	Response
1.	Thank you for your comment.

US Army Corps of Engineers Galveston District	PUBLIC COMMENT Gulf Intracoastal Waterway, Laguna Madre, Texas Draft Environmental Impact Statement May 7, 2003	

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Galveston District
2000 Fort Point Road
Galveston, Texas 77550
Facsimile: (409) 766-3064
Email: terrell.w.roberts@swg02.usace.army.mil

Name: KATHLEEN FOOTE

Address: 910 DELAINE

City, State and Zip: CC TX 78411

Comment:

Find another place for dredge material.

1

RESPONSE TO COMMENTS

Kathleen Foote
910 Delaine
Corpus Christi, Texas 78411

Comment No.	Response
1.	Thank you for your comment.

US Army Corps of Engineers Galveston District	PUBLIC COMMENT Gulf Intracoastal Waterway, Laguna Madre, Texas Draft Environmental Impact Statement May 7, 2003	

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2000 Fort Point Road
Galveston, Texas 77550
Facsimile: (409) 766-3064
Email: terrell.w.roberts@swg02.usace.army.mil

Name: PAUL MAEK

Address: 340 Treeline Park #526

City, State and Zip: Corpus Christi, TX 78209

Comment:

No dredging! Leave Mother Nature alone.

1

RESPONSE TO COMMENTS

Paul Marfk
340 Treeline Park # 526
Corpus Christi, Texas 78209

Comment No.	Response
1.	Thank you for your comment.

From: Ralph G. Adams, Jr. [mailto:ralph_adams@earthlink.net]
Sent: Wednesday, June 18, 2003 2:13 PM
To: Roberts, Terrell W
Subject: Emmord's Hole

Dear Mr. Roberts:

I am writing to communicate my concern about the Emmord's Hole dredge disposal plan that may be enacted in the next several months. As an angler who makes several trips each year down to South Texas to fish the Laguna Madre, I know how exquisite the ecosystem is despite the tremendous volumes of shipping that cross through it. I hope that we may find a better way to dispose of the spoils, a way that minimizes impacts on the bay. Sportsmen routinely vote with their dollars and pony-up funds to support the resource they love. Perhaps another, more immediately expensive alternative is the best for the environment. Has anyone considered raising funds from license holders and businesses which benefit from such projects? That would be unpopular, but I would happiliy do my part and pay my share. The direct economic costs borne today would pay for themselves many times over in the future as the rare jewel of the Laguna continues to attract sport fishing interests. 1 2

The author, Tom McGuane, posits that we live "in an age when everything is going from bad to worse." I am reminded of that sentiment whenever I see the estuaries and bays and rivers being further degraded by mankind. I ask that you help us make the right decision and keep Emmord's Hole intact and the Laguna Madre protected. 3

Thank you and good luck.

Sincerely,
Ralph G. Adams, Jr.
Houston, Texas
Tel. 713-664-0491

RESPONSE TO COMMENTS

Ralph G. Adams, Jr.
ralph_adams@earthlink.net

Comment No.	Response

1. The option to place some of the dredged material normally designated for PAs 185, 187, and 188 in Emmord's Hole or PA 186 was not selected by the ICT easily. These PAs are located inside the boundaries of PINS and the park service has a management plan that focuses on eliminating impacts to the natural resources in the Park, versus the ICT's consideration for the natural resources of the entire Laguna Madre. Based on their plan, the park service requested the USACE and ICT to relocate dredged material not needed to improve existing man-made islands to areas outside the PINS. The ICT debated placing the excess material at existing PAs located on the west side of the GIWW and near Emmord's Hole rather than creating new and additional impacts by establishing new PAs in shallow, vegetated areas. However, any excess material placed in the existing PAs will create impacts to nearby seagrass beds greater than the historical impacts. The area around the existing PAs has adjusted to regular disposal of a certain quantity of material over the last 50 years, but additional quantities of material placed at the site will alter this equilibrium and could result in new reductions of seagrass coverage.

   Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

2. The USACE does not have the authority to raise funds from licensed holders and businesses to fund federal projects.

3. Thank you for your comment.

From: Pat Wolter [mailto:PWOLTER@mdacc.com]
Sent: Wednesday, June 11, 2003 10:35 AM
To: Roberts, Terrell W
Subject: Emmord's Hole

Dear Dr. Roberts,

I am a life long resident of Corpus Christi and a board member of our local CCA chapter. I respectfully want to express my dissent to the dumping of spoil into the ecologically sensitive Emmord's Hole, for to do so would be to spoil a long standing recreational area. 1

RESPONSE TO COMMENTS

Pat Wolter
PWOLTER@mdacc.com

Comment No.	Response
1.	Thank you for your comment.

From: Byron Russell [mailto:brussell@a-linksecurity.com]
Sent: Thursday, June 05, 2003 3:12 PM
To: Roberts, Terrell W
Subject: Dumping in Laguna Madre

Dear Mr. Roberts,
It has come to my attention that the Corps of Engineers has a plan on the table that would allow the dumping of materials that are to be dredged from the Intracoastal Waterway into the Emmords fishing hole.

Between 1957 and 1989, I lived along the Texas coast from Corpus Christi to the Rio Grande Valley. I have enjoyed the sport of fishing that presented its self in that area. Most of the time we either put in at Riviera Beach or we would go down Padre Island on the Gulf side and cross over and put in on the bay side in the Laguna Madre area.

During the period of time that I lived in that area, I spent some 10 years in the oil fields. I know that there are salt flats (old dried up lakes) in Kennedy County that would not experience real damaged if they were used for dumping of dredged materials. If the fishing holes are filled up, they more than likely will never come back. In the summer time, the fish need the holes in order to survive the heat. I will add, the fishermen who fish along the coast need the fish or else the sport will go away. 1 2

I believe in progress but to be foolish or near sighted while striving to improve the Intracoastal Waterway could effect the natural habitat of the fish and be something that we could regret for generations to come. Please take these thoughts under consideration and also please take the dredged material somewhere else. 3

RESPONSE TO COMMENTS

Byron Russell
brussell@a-linksecurity.com

Comment No.	Response

1. The ICT considered an upland disposal alternative, but rejected it because of the permanent loss of seagrass caused by dredging access channels for the pipeline and equipment from the GIWW to the mainland and excess pumping distance in most of the Laguna Madre. The distance from the GIWW to the mainland at Emmord's Hole is probably the shortest in the Laguna Madre and may be economically feasible, but the ICT determined there would be less damage to seagrass beds and other natural resources by utilizing the deepest area of Emmord's Hole for disposal rather than cutting a channel through the seagrass beds. The ICT also determined that many of the low areas on the mainland are ecologically sensitive wetlands and should not be impacted by dredge pipe or covered with dredged material.

2. Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

3. Thank you for your comment.

Bob Brumby
2027 Thicket Trail
San Antonio, Texas 78248
210-493-7364
brumbo@sbcglobal.net

May 27, 2003

To: U.S. Corps of Engineers
2000 Fort Point Road
Galveston, Texas 77550

Ref: ICW dredging Laguna Madre

Dear Sirs:

I have read a couple of newspaper articles that state the CoE is intending to dredge the ICW in the Upper Laguna Madre and utilize "open bay" disposal of the spoil in the Emmords Hole area.

I have heard many stories about failed attempts by the CoE to negotiate disposal with the King Ranch & PINS; but these are only rumors.

As an avid sport fisherman and cabin lease holder in the area, I am against "open bay" disposal of dredge in our bays, and very much against dumping in an area like Emmords Hole. This method of disposal is archaic, surely the CoE with all of it's staff and resources can come up with more environmentally friendly methods. 1

I would like to know when and where any public hearings are planned on this project. If it would be easier, you can respond by email to the address above. 2

Thank you

Bob Brumby

RESPONSE TO COMMENTS

Bob Brumby
2027 Thicket Trail
San Antonio, Texas 78248

Comment No.	Response

1. The ICT evaluated upland placement, offshore placement, and confined open-bay placement alternatives for the entire Laguna Madre. These alternatives would have eliminated unconfined placement in the open bay. However, except for some PAs, which are to be fully confined, the ICT had to reject these alternatives. As described more fully in Section 2.0 of the DEIS, the upland placement option was eliminated because of the permanent removal of seagrass habitat by dredging access channels to the mainland or Padre Island and the potential impacts to wetland habitat fringing the shoreline or located in depressions farther inland. Offshore placement was eliminated because of the limitations in available equipment capable of working in channel depths and navigating in rough offshore water, pumping distance, and the year-round dredging required for the equipment just to keep up with the shoaling rates (Section 2.0). Although these alternatives were eliminated before a cost analysis was prepared, it was determined later that the cost would be prohibitive to use the upland and offshore alternatives for all the dredged material. However, a limited offshore disposal option for two locations near Mansfield Pass and Brazos Santiago Pass was retained for review by the ICT should it be determined economically and engineeringly feasibly and environmentally desirable in the future.

   Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

2. Public hearings were held in Corpus Christi, Texas on May 7th and in Brownsville on May 8th. There are no more public hearings planned during the public review period for the Draft EIS.

US Army Corps of Engineers Galveston District	PUBLIC COMMENT Gulf Intracoastal Waterway, Laguna Madre, Texas Draft Environmental Impact Statement May 7, 2003	

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Galveston District
2000 Fort Point Road
Galveston, Texas 77550
Facsimile: (409) 766-3064
Email: terrell.w.roberts@swg02.usace.army.mil

There is no need for open bay dumping of spoil. I am totally against it. 1

Dredge spoil belongs on the dune fields and beaches when possible. Otherwise it should be deposited on the backside of existing spoil banks or spoil islands. The erosion problems on spoil islands can be lessened if the spoil is pumped to the far side of the islands or if new islands are placed further from the Intracoastal canal.. Spoil islands also create protected rookeries for migratory birds. 2

Robert E. Murry, Jr.
15410 Fortuna Bay
Corpus Christi, TX
(Padre Island)

RESPONSE TO COMMENTS

Robert E. Murry, Jr.
15410 Fortuna Bay
Corpus Christi, Texas

Comment No.	Response

1. The ICT evaluated upland placement, offshore placement, and confined open-bay placement alternatives for the entire Laguna Madre. These alternatives would have eliminated unconfined placement in the open bay. However, except for some PAs, which are to be fully confined, the ICT had to reject these alternatives. As described more fully in Section 2.0 of the DEIS, the upland placement option was eliminated because of the permanent removal of seagrass habitat by dredging access channels to the mainland or Padre Island and the potential impacts to wetland habitat fringing the shoreline or located in depressions farther inland. Offshore placement was eliminated because of the limitations in available equipment capable of working in channel depths and navigating in rough offshore water, pumping distance, and the year-round dredging required for the equipment just to keep up with the shoaling rates (Section 2.0). Although these alternatives were eliminated before a cost analysis was prepared, it was determined later that the cost would be prohibitive to use the upland and offshore alternatives for all the dredged material. However, a limited offshore disposal option for two locations near Mansfield Pass and Brazos Santiago Pass was retained for review by the ICT should it be determined economically and engineeringly feasibly and environmentally desirable in the future.

2. The USACE cannot establish new disposal sites on Padre Island or its beaches/dunes inside the PINS without the agreement of the park service. The park service has notified the USACE and the ICT that it would not accept any disposal of dredged material on the island or its beaches, nor would it allow pipelines to be placed over or under the island to allow placement in offshore waters. In addition to this prohibition, most of the material (42% - 76%) is composed of silty organic material and clays and is not suitable for nourishing beaches or creating sand dunes.

   As for placing dredged material on existing spoil islands, the ICT prepared the DMMP for each PA with this option as one of the methods for reducing impacts to nearby seagrass beds. Under this option, as much of the dredged material as possible would be retained on the islands using the best management practices available. These practices would include using a diffuser at the end of the dredge pipe to dissipate the force of the water flow to reduce scouring and help spread the material in a thin layer. Another method is to build low training levees to direct the flow of the material away from sensitive areas, such as seagrass beds or circulation channels. However, even with these practices, the PINS management plan identifies a need for only part of the material at most of the PAs inside the park's boundaries and the rest of the material would be placed at other sites outside PINS.

US Army Corps of Engineers Galveston District	PUBLIC COMMENT Gulf Intracoastal Waterway, Laguna Madre, Texas Draft Environmental Impact Statement May 7, 2003	

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Galveston District
2000 Fort Point Road
Galveston, Texas 77550
Facsimile: (409) 766-3064
Email: terrell.w.roberts@swg02.usace.army.mil

Name: Will Ohmstede Jr.

Address: 5805 Makepeace Lane

City, State and Zip: Corpus Christi, Texas 78714

Comment: I'm totally opposed to any open bay disposal of dredging materials. 1

RESPONSE TO COMMENTS

Will Ohmstede Jr.
5805 Makepeace Lane
Corpus Christi, Texas 78714

Comment No.	Response
1.	Thank you for your comment.

From: BRANDON ROACH [mailto:brandonroach@msn.com]
Sent: Sunday, June 08, 2003 10:45 AM
To: Roberts, Terrell W
Subject: DREDGE

I CANT BELEIVE THER THINKING ABOUT DUMPING SLUSH IN EMMORDS HOLE AREA. IM SO VERY AGAINST IT!!!!!!! WHY CANT THEY DUMP ON THE ISLANDS ALREADY THERE ALONG THE INTERCOASTAL? OR BETTER YET HALL IT OFF SOMEWHERE ELSE. 1

THANKS
BRANDON ROACH

RESPONSE TO COMMENTS

Brandon Roach
brandonroach@msn.com

Comment No.	Response

1. Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

   As for placing dredged material on existing spoil islands, the ICT prepared the DMMP for each PA with this option as one of the methods for reducing impacts to nearby seagrass beds. Under this option, as much of the dredged material as possible would be retained on the islands using the best management practices available. These practices would include using a diffuser at the end of the dredge pipe to dissipate the force of the water flow to reduce scouring and help spread the material in a thin layer. Another method is to build low training levees to direct the flow of the material away from sensitive areas, such as seagrass beds or circulation channels. However, even with these practices, the PINS management plan identifies a need for only part of the material at most of the PAs inside the park's boundaries and the rest of the material would be placed at other sites outside PINS.

US Army Corps of Engineers Galveston District	PUBLIC COMMENT **Gulf Intracoastal Waterway, Laguna Madre, Texas** **Draft Environmental Impact Statement** **May 7, 2003**	

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Galveston District
2000 Fort Point Road
Galveston, Texas 77550
Facsimile: (409) 766-3064
Email: terrell.w.roberts@swg02.usace.army.mil

Name: Greg Stunz

Address: 403 Marina Drive

City, State and Zip: Port Aransas, TX 78373

Comment:

I am opposed to any open-bay disposal of dredge material in the Laguna Madre. I am particularly concerned with the disposal as it relates to covering seagrass and the recovery implications. 1

RESPONSE TO COMMENTS

Greg Stunz
403 Marina Drive
Port Aransas, Texas 78373

Comment No.	Response

1. The ICT evaluated upland placement, offshore placement, and confined open-bay placement alternatives for the entire Laguna Madre. These alternatives would have eliminated unconfined placement in the open bay. However, except for some PAs, which are to be fully confined, the ICT had to reject these alternatives. As described more fully in Section 2.0, the upland placement option was eliminated because of the permanent removal of seagrass habitat by dredging access channels to the mainland or Padre Island and the potential impacts to wetland habitat fringing the shoreline or located in depressions farther inland. Offshore placement was eliminated because of the limitations in available equipment capable of working in channel depths and navigating in rough offshore water, pumping distance, and the year-round dredging required for the equipment just to keep up with the shoaling rates (Section 2.0). Although these alternatives were eliminated before a cost analysis was prepared, it was determined later that the cost would be prohibitive to use the upland and offshore alternatives for all the dredged material. However, a limited offshore disposal option for two locations near Mansfield Pass and Brazos Santiago Pass was retained for review by the ICT should it be determined economically and engineeringly feasibly and environmentally desirable in the future.

From: Rowan Shipman [mailto:rshipman@bracepatt.com]
Sent: Friday, June 06, 2003 3:56 PM
To: Roberts, Terrell W
Subject: Emmords Hole

I am a resident of Padre Isles. I wanted to express my disapproval of any plan to dump dredging material into Emmords Hole. Such a plan would surely ruin a prime red fish and trout spawning area. This is one of the premiere fishing areas in the state. To disrupt the natural beauty and natural habitats of this area would be a crime. 1

RESPONSE TO COMMENTS

Rowan Shipman
rshipman@bracepatt.com

Comment No.	Response
1.	Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

From: woodyw4@juno.com [mailto:woodyw4@juno.com]
Sent: Monday, June 09, 2003 10:38 AM
To: Roberts, Terrell W
Subject: ACOE plans

I have read the account in our local newspaper (Corpus Christi Caller Times) regarding ACOE's "last resort" plan to use Emmord's Hole as a dump site for spoils from the ICW dredging. It appears to me the short list offers to unprobable dump sites, thus making Emmord's Hole the most probable. 1

I think enough damage was done to the Laguna Madre during the recent oil/gas exploration, from which recovery seems to be happening. I believe that if the spoils are dumped in virtually the only deep fishing water north of Baffin Bay, it will take a lot longer for the fishery to recover, if it ever does. 2

I don't agree with whomever told Sykes the grasses do not grow in Emmord's Hole. I know they do, if the brown tide and other water clouding occurences are not there. Presently, the grasses grow in water over 3 feet deep - I was able to see the bottom the last couple of times I was out there and observe new grass growth. 3

I think the ACOE can come up with a better solution than potentially ruining this fishery. Just create a new island somewhere in the shallows. I am sure the birds and/or the cabin builders will love that. 4

Thanks for your time,

Woody Wingfield
USMC, retired

RESPONSE TO COMMENTS

Woody Wingfield
woodyw4@juno.com

Comment No.	Response

1. Emmord's Hole will only be used as a last-resort placement location for excess material from PAs183-186 and 188, if necessary, to prevent additional seagrass impacts at those PAs. The excess material would be placed into the deepest areas of Emmord's Hole just outside of PA 186 to avoid overloading the PA. The deeper areas of Emmord's Hole are devoid of seagrass. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT, only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

2. Thank you for your comment.

3. Based on the observations of Dr. Ken Dunton, sesagrass is not likely to be found in water depths below 4.5 feet in the Laguna Madre, and therefore is not likely to be found in the deeper waters of Emmord's Hole.

4. With one exception, no new spoil islands will be formed using dredged material; however, the ICT prepared the DMMP for each PA with the option to place material on existing islands as one of the methods for reducing impacts to nearby seagrass beds. Under this option, as much of the dredged material as possible would be retained on the islands using the best management practices available. These practices would include using a diffuser at the end of the dredge pipe to dissipate the force of the water flow to reduce scouring and help spread the material in a thin layer. Another method is to build low training levees to direct the flow of the material away from sensitive areas, such as seagrass beds or circulation channels. However, even with these practices, the PINS management plan identifies a need for only part of the material at most of the PAs inside the park's boundaries and the rest of the material would be placed at other sites outside PINS. The one exception to no creation of new islands is the option to renourish two islands that existed on the west side of the GIWW across from PA 180. However, this new PA would only have dredged material deposited in it at the recommendation of the ICT and only after careful consideration of the benefits and negative impacts of doing so.

From: Dr. David McKee [mailto:dmckee@falcon.tamucc.edu]
Sent: Wednesday, June 11, 2003 5:54 AM
To: Roberts, Terrell W
Subject: Open Bay disposal

I fully understand and appreciate the need to dredge and maintain the ICWW. However, I am firmly opposed to open bay disposal of spoil especially in areas such as Emmord's Hole. Destroying valuable nursery habitat by disposing of spoil in ANY open bay environment makes no sense whatsoever and is an unwise and unnecessary use of the Laguna Madre as a unique hypersaline aquatic resource. Emmord's Hole serves as a top fishing destination by recreational anglers in the ULM. Additionally, the associated seagrass beds serve as an important nursery area for numerous species of fish and shellfish. The greater water depth on the west side of the ULM (= Emmord's Hole)serves as an important "thermal refuge" during times of extreme polar northerlies reaching South Texas. The solution for disposing of the spoil necessary to maintain the ICWW at the proper depth lies in transporting (pumping,barges)it to upland areas (eg,King and/or Kenedy Ranches) or to areas in the ULM that are already designated for receiving spoil (eg,site due east of Penescal Point, Padre Island National Seashore or the large diked area in the Land Cut). 1 2

I do not want to limit this objection to Emmord's Hole as there are countless other similar areas that are receiving no consideration/attention whatsoever. I strongly believe that the ICT should be expanded to include representation from such groups as the Coastal Conservation Association, the Corpus Christi Guides Association, etc. I also think that each area should be evaluated on a site-by-site basis. Too many sites escape consideration when a plan such as this one is presented and approved "carte blanche". With the large number of stakeholders in the Corpus Christi-area that would be very concerned about this dredging plan and the continued healthy of the ULM, it is absolutely crucial that all public notices receive appropriate advertisement so that the "public" will be aware of and attend the hearings! Few people (even scientists like myself) tend to read the Federal Register!!! 3 4

History has shown that open bay disposal sites are slow to recover and that the resuspension of sediments by currents and prevailing winds long affects the adjacent seagrass areas and the associated aquatic organisms(case in point- spoil disposal at Penascal Point in the 1980's). I urge you to consider other alternatives for spoil disposal. An economic assessment of the value of the estuarine areas affected will far outweigh the cost of pumping or transporting the spoil to other sites. Thank you. 5

Dr. David McKee, Professor of Biology, (area marine biologist for 25 years), Texas A&M University-Corpus Christi, Coastal Conservation Association-Board of Directors

RESPONSE TO COMMENTS

David Mckee
dmckee@falcon.tamucc.edu

Comment No.	Response

1. The option to place some of the dredged material normally designated for PAs 183, 185, 187, and 188 in Emmord's Hole or PA 186 was not selected by the ICT easily. These PAs are located inside the boundaries of PINS and the park service has a management plan that focuses on eliminating impacts to the natural resources in the Park, versus the ICT's consideration for the natural resources of the entire Laguna Madre. Based on their plan, the park service requested the USACE and ICT to relocate dredged material not needed to improve existing man-made islands to areas outside the PINS. The ICT debated placing the excess material at existing PAs located on the west side of the GIWW and near Emmord's Hole rather than creating new and additional impacts by establishing new PAs in shallow, vegetated areas. However, any excess material placed in the existing PAs will create impacts to nearby seagrass beds greater than the historical impacts. The area around the existing PAs has adjusted to regular disposal of a certain quantity of material over the last 50 years, but additional quantities of material placed at the site will alter this equilibrium and could result in new reductions of seagrass coverage.

   To avoid this additional impact, the ICT considered placing the material in excess of the PINS management plan into PA 186. The material designated for PA 186 would be placed into the deepest areas of Emmord's Hole just outside of the PA to avoid overloading the PA. The deepest areas of Emmord's Hole (5-6 feet) are devoid of seagrass. A sediment transport model was used to determine the fate of all the dredged material that would normally be placed at PAs 186, 187, 188, and 189 as a worst-case scenario. The model indicated that turbidity plumes created by initial placement and subsequent wave and current action above the non-disposal levels and high enough to lower seagrass photosynthesis below survival levels would extend about 7.5 miles north of the disposal site inside Emmord's Hole for the first month of analysis. However, turbidity would subside to near background levels for the remainder of the one-year analysis (see Appendix H for a summary of the model study or visit the USACE web site for a complete report of the study). The disposal quantity used in the model was much higher than the amounts that would normally be placed in PA 186, therefore, it can be assumed that the impacts to Emmord's Hole and the surrounding seagrass beds would be much less than indicated in the model. The amount of material from the PAs inside PINS that would be placed in PA 186 is unknown and would be determined prior to each dredging cycle by the ICT only after considering the benefits and impacts of such disposal. The depth and extent of the material placed in Emmord's Hole would be monitored by the USACE so the data could be reviewed by the ICT prior to any subsequent disposal action.

2. The ICT considered an upland disposal alternative, but rejected it because of the permanent loss of seagrass caused by dredging access channels for the pipeline and equipment from the GIWW to the mainland and excess pumping distance in most of the Laguna Madre. The distance from the GIWW to the mainland at Emmord's Hole is

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probably the shortest in the Laguna Madre and may be economically feasible, but the ICT determined there would be less damage to seagrass beds and other natural resources by utilizing the deepest area of Emmord's Hole for disposal rather than cutting a channel through the seagrass beds to shore to access upland sites. The ICT also determined that many of the low areas on the mainland are ecologically sensitive wetlands and should not be impacted by dredge pipe or covered with dredged material. The concept of "thermal refuges" in a well-mixed (strong north winds), shallow body (holes less than 7 feet deep for the most part) like the Laguna Madre was refuted by the NMFS in an ICT workshop. Empirical data indicate that even the GIWW is well mixed during strong northers and cannot provide a thermal refuge for fish."

3. The ICT, comprising personnel from State and Federal agencies that have the responsibility, under the laws of the U.S. to protect the resources that constitute the human environment, spent eight years to develop the DMMP. They did it with full cognizance of the information that is noted in this letter, plus extensive additional information. Nothing is provided here that would require the process of the alternatives analysis be reevaluated. As the name implies, the Interagency Coordination Team is composed only of State and Federal resource agencies with jurisdictional responsibility and interest in a proposed Federal project. The opportunity for the public and public organizations like the CCA to participate in this and other Federal projects is provided in the NEPA process through public scoping meetings and review of draft and final EISs.

4. Section 7.0 of the EIS lists the public involvement opportunities relative to the project. The public meeting notice was published in the Corpus Christi Caller Times (and on their web site) on 4/27/03 and on 5/1/03 for the meeting on 5/7/03. There are no more public hearings planned during the public review period for the Draft EIS.

5. Please see Response to Comment 3.