

Restoration Plan/ Environmental Assessment

for

the Apex Barges Oil Spill, July 28, 1990

May 28, 1997

Prepared by:

Texas General Land Office
Texas Natural Resource Conservation Commission
Texas Parks and Wildlife Department
U. S. Department of the Interior,
 U.S. Fish & Wildlife Service
U. S. Department of Commerce,
 National Oceanic and Atmospheric Administration

SUMMARY

This Restoration Plan describes restoration actions which State and Federal natural resource trustees intend to implement to restore or enhance natural resources injured by the Apex barges oil spill of July 28, 1990 in Galveston Bay, Texas. The document also describes the process followed by the trustees - the Texas General Land Office, Texas Natural Resource Conservation Commission, Texas Parks and Wildlife Department, Department of Interior, U.S. Fish & Wildlife Service, and National Oceanic and Atmospheric Administration of the U.S. Department of Commerce (the "Trustees") - to evaluate the appropriate restoration alternatives and select the restoration actions identified in this plan. These actions will be implemented using funds recovered by the Trustees as part of an October 1994 settlement of natural resource damage claims associated with the oil spill. These funds are required by law to be spent to benefit natural resources and associated resource services injured, destroyed or lost as a result of the spill.

On July 28, 1990, at approximately 1630, the M/V Chandy N was pushing T/B Apex 3417, 3503, and 3510 inbound through the Houston Ship Channel (HSC) in Galveston Bay, Texas. The M/T Hellespont Faith was proceeding in the same direction when it came upon and overtook the M/V Chandy N and the Apex barges. The M/T Shinoussa, proceeding outbound through the HSC, met and passed the M/T Hellespont Faith and collided with the T/B Apex barges. As a result of the collision, approximately 694,000 gallons of a petroleum product (catalytic feedstock oil) were discharged into Galveston Bay from T/B Apex 3417 and 3503.

The oil spill caused injuries to several natural resources. The Trustees conducted a natural resource damage assessment to address those injuries. The assessment focused on losses of finfish and shellfish as a result of direct exposure to oil, the lost use of Galveston Bay fisheries due to spill-related closures, and on injuries to the oiled salt marshes.

In developing this restoration plan, the Trustees focused on the restoration of estuarine emergent wetlands since the productivity and abundance of fishery resources in Galveston Bay, the resources associated with the predominate injuries and losses, are functionally related to the health and abundance of these wetlands. Estuarine emergent wetlands provide a broad array of ecological services benefiting the Galveston Bay system such as water quality improvement, nursery and adult habitat for fishery resources, and avian habitat. All of the natural resources injured by the spill would be restored, replaced, or enhanced, either directly or indirectly, by wetland restoration efforts.

Restoration proposals were solicited from the public and interested agencies. The Trustee Council developed criteria for use to evaluate project proposals and make appropriate project selections. A total of ten proposals received, together with a "No

Action" alternative, are evaluated in this plan according to these criteria. The evaluation of individual restoration proposals was based on information provided in proposals, interviews with restoration proposal managers, current technical literature sources, and the best professional judgment of restoration specialists within each trustee agency. The level of analysis is consistent with that required by the National Environmental Policy Act (NEPA), and this document serves as an Environmental Assessment (EA) under that Act.

The Trustees have selected three restoration alternatives: Pierce Marsh Wetland Construction, Interstate 45 Highway Corridor Wetland Construction, and Galveston Island State Park Wetland Construction. Further, the Trustees have a conditionally approved allocation of \$109,000 to implement the San Jacinto State Park Wetland Construction, subject to the resolution of contaminant issues concerning dredged material to be used in the project. If, in the judgment of the Trustees, these issues cannot be adequately resolved, the funds will be used to implement wetland construction in Galveston Bay.

Each project selected for implementation will undergo additional environmental and NEPA review in the permitting process. Although no negative impacts on endangered species were identified for the selected projects, a Section 7 (Endangered Species Act) consultation will be made for each of the projects to ensure compliance. Projects will also be reviewed for compliance with the Texas Historic Preservation Act. All restoration actions selected will, upon implementation, be placed in public trust in perpetuity.

Table of Contents

	Page
1.0 Introduction	5
1.1 Purpose and Need for Action.....	5
1.2 Authority.....	5
1.3 Public Participation.....	5
1.4 Administrative Record and Availability.....	6
2.0 Overview of the Oil Spill.....	6
2.1 Summary of the Incident.....	6
2.2 Receiving/ Affected Environment.....	6
2.3 Scope of Natural Resource Injuries Assessment.....	7
2.4 Summary of Settlement.....	8
3.0 Restoration Planning Process.....	8
3.1 Apex Trustee Restoration Council.....	8
3.2 Trustee Council Strategy for Restoration Planning.....	8
3.3 Trustee Council Activities.....	9
4.0 Restoration Alternatives.....	9
4.1 Alternatives Considered.....	10
5.0 Evaluation of Alternatives.....	15
5.1 Trustee Selection Criteria for Project Evaluation	15
5.2 Evaluation of Alternatives	17
6.0 Selected Alternatives	21
7.0 Finding of No Significant Impact	22
8.0 Trustee Council Signatures	23
 Figure 1. The extent of oiling in Galveston Bay from the Apex oil spill and locations of restoration alternatives in Galveston Bay.....	 25
Appendix I. List of people involved in the preparation of draft plan.....	26
Appendix II. Public Comment Received and Analyzed	27

1.0 INTRODUCTION

1.1 Purpose and Need for Action

This Restoration Plan and Environmental Assessment (RP/EA) describes restoration actions implemented using natural resource damages recovered jointly by State and Federal natural resource Trustees for the injury, loss, destruction, or loss of use of natural resources as a result of the July 28, 1990 Apex barges oil spill in Galveston Bay, Texas. These damages were recovered by the Trustees on behalf of the public as part of a joint settlement entered in Golnoy Barge Co. and Apex R.E. & T. Inc. vs. M/T SHINOUSSA, et al., Civil No. 90-2414 (S.D.Tex.), on October 26, 1994. The Trustees are required by law to use recovered damages to plan and implement actions to restore, rehabilitate, replace or acquire natural resources and services provided by these resources equivalent to those affected by the spill.

1.2 Authority

This Restoration Plan has been developed and prepared jointly by the Texas General Land Office, Texas Natural Resource Conservation Commission, Texas Parks and Wildlife Department, U. S. Department of the Interior (DOI), U.S. Fish & Wildlife Service, and National Oceanic and Atmospheric Administration (NOAA) of the U. S. Department of Commerce, (collectively, "the Trustees") pursuant to their respective authority and responsibilities as designated natural resource trustees under Section 311(f) of the Federal Water Pollution Control Act, 33 U.S.C. 1321(f), Subpart G of the National Contingency Plan 40 CFR 300.600 - 300.615, the Texas Oil Spill Prevention and Response Act, Subpart F of 43 C.F.R. Part 11, and other applicable state and federal laws. For NOAA and DOI, this RP/EA also presents an Environmental Assessment of identified restoration actions (preferred alternatives) pursuant to the National Environmental Policy Act, 42 U.S.C. 4321 et seq.

1.3 Public Participation

A notice of availability of the draft RP/EA was published March 4, 1997 in the Texas Register by Texas Parks and Wildlife Department (TPWD). A 30 day public comment was established with April 7, 1997 as the final date for submitting comment. A concurrent news release was also issued by TPWD soliciting public comment on the DRP/EA.

Comments were submitted in writing to:

Allan Strand, U.S. Fish and Wildlife Service, Lead Administrative Trustee
Representative, APEX Restoration Council, 6300 Ocean Dr., Campus Box 338, Corpus Christi TX 78412-5599. FAX: (512) 994-8262.

The Trustees considered all written comments prior to adopting a Final Restoration Plan. Further, NOAA and DOI considered all comments in making findings required by the National Environmental Policy Act (NEPA) based on the RP/EA. The written comments received and the Trustees' response, have been summarized in Appendix II.

1.4 Administrative Record and Availability

Records documenting the actions of the Trustees in developing this RP/EA, including identifying, screening and evaluating possible restoration alternatives and all public comments received on the draft RP/EA, have been maintained by the U.S. Fish and Wildlife Service as the lead agency selected by the Trustees to coordinate the restoration planning process. These records are available and may be viewed during business hours of 8 AM to 4 PM CST at the offices of the U.S. Fish and Wildlife Service, 6300 Ocean Dr., Campus Box 338, Corpus Christi TX 78412-5599. Please contact Allan Strand, Lead Administrative Trustee Representative at 512-994-9005 to facilitate access to the record documents.

2.0 OVERVIEW OF THE OIL SPILL

2.1 Summary of the Incident

On July 28, 1990, at approximately 1630, the motor vessel M/V Chandy N was pushing tank barges T/B Apex 3417, 3503, and 3510 inbound through the Houston Ship Channel (HSC) in Galveston Bay, Texas. The M/T Hellespont Faith was proceeding in the same direction when it came upon and overtook the M/V Chandy N and the Apex barges. The M/T Shinoussa, proceeding outbound through the HSC, met and passed the M/T Hellespont Faith and collided with the T/B Apex barges. As a result of the collision, approximately 694,000 gallons of a petroleum product (catalytic feedstock oil) were discharged into Galveston Bay environment from two of the Apex barges, T/B Apex 3417 and 3503. The Responsible Parties for the discharge were identified as Golnoy Barge Company, Apex R.E. & T., Inc. (d/b/a Apex Towing Company), Shinoussa Shipping Corporation, and Fidelis Shipping Corporation.

2.2 Receiving/Affected Environment

The Galveston Bay estuary covers 1420 square kilometers and is the seventh largest estuary in the United States and the largest in Texas. The Galveston Bay system is composed of four main bodies (Galveston Bay, Trinity Bay, West Bay, and East Bay) and several, small, shallow, productive tertiary bays. The estuary is typically six to 12 feet deep.

The estuary contains significant amounts of coastal wetlands that provide nursery areas for estuarine fishery resources and important habitat for avian and mammalian fauna. Approximately 61% of the estuarine shoreline is vegetated by intertidal emergent plant

communities, or coastal wetlands, totaling 108,200 acres. A Galveston Bay National Estuary Program study indicates that the Galveston Bay estuarine community is generally healthy based on the diversity of species.

Estuarine organisms of commercial, recreational, and ecological importance, typically have inshore and offshore components of their life histories. Many species in the Galveston Bay estuary spawn offshore or near estuary passes, and their larvae or postlarvae migrate into the estuarine nursery area to grow and develop prior to offshore migration and maturation. Other taxa such as birds, reptiles, and mammals use estuarine habitats for feeding, refuge, and reproduction. Many estuarine dependent species of fish are harvested from Galveston Bay including flounder, Atlantic croaker, spotted sea trout, sand sea trout, and red drum. In addition, five species of invertebrates (oysters, blue crabs, and three penaeid shrimps) are commercially harvested from the Galveston Bay estuary. During their juvenile stages, these organisms utilize estuarine habitats such as marshes, seagrass beds, oyster reefs and mudflats for feeding and protection. Many species are more abundant in vegetated habitats such as emergent marshes and submerged aquatic vegetation than in adjacent non-vegetated habitats. Fishery production is directly proportional to wetlands acreage. The bay's water and habitats are also important foraging areas for the federally endangered green sea turtle (Chelonia mydas) and Kemp's ridley sea turtle (Lepidochelys kempi), as well as the threatened loggerhead sea turtle (Caretta caretta).

2.3 Scope of Natural Resource Injuries Assessment

Approximately fifty percent of the surface waters of Galveston Bay were exposed to oil over the course of the spill event (Figure 1). A significant amount of oil eventually washed into salt marsh habitat between Houston Point and Cedar Bayou in upper Galveston Bay. The Texas Department of Health issued orders officially closing portions of the bay to finfishing for 2 days, to shrimping for 8 days and to crabbing for 16 days, beginning August 4, 1990. A central portion of the HSC was closed to navigation in full or in part from July 28 to August 6, 1990, while clean-up operations proceeded, with some navigational restrictions remaining in place through August 10, 1990.

The Trustees proceeded with natural resource damage assessment actions necessary to jointly assess injuries and define an appropriate claim for natural resource damages based on these injuries. That assessment mainly addressed four natural resource injuries caused by the spill - losses of finfish and shellfish as a result of direct exposure to oil, lost use of Galveston Bay fisheries due to spill-related closures, injuries due to oiling of salt marshes, and lost use of Galveston Bay surface waters for navigation attributable to spill-imposed restrictions in the Houston Ship Channel. Injuries to and the lost use of fishery resources dominated the assessment and represented the most significant part of the potential natural resource damages claim.

2.4 Summary of Settlement

A joint settlement of all claims of the Trustees associated with this oil spill was achieved with the Responsible Parties in October of 1994. That settlement included \$1,312,962.24 to compensate the public for the natural resource injuries resulting from this oil spill. These recovered funds were placed into the Galveston Bay Oil Spill Trust Fund, an account established with the Registry of the Federal District Court, Southern District of Texas, pending joint planning and decisions by the Trustees as to the appropriate use of these funds to implement actions to restore, replace, rehabilitate or acquire the equivalent of natural resources injured by this spill.

3.0 RESTORATION PLANNING PROCESS

3.1 Apex Trustee Restoration Council

By Memorandum of Agreement finalized on June 16, 1995 (MOA), the Trustees established the "Galveston Bay/Apex Barges Oil Spill Natural Resource Trustee Restoration Council" (the "Trustee Council") to oversee the development and implementation of a plan to provide for appropriate restoration actions using natural resource damages recovered for the Apex oil spill. The Trustee Council was guided by the MOA in the implementation of these responsibilities, including provisions dealing with the scope, objectives, coordination practices, public participation and use of funds in the restoration planning process.

3.2 Trustee Council Strategy for Restoration Planning

The overall objective of the restoration planning process was to identify restoration actions appropriate to restore, rehabilitate, replace or acquire natural resources and their services equivalent to those injured or lost as a result of this oil spill. To meet that objective, the benefits of restoration actions must be related or have an appropriate nexus to natural resources injuries and losses that occurred. To ensure restoration actions would achieve this fundamental objective, the Council relied on two primary selection criteria.

Ecological relationship to injuries/losses - The majority of the natural resource injuries that resulted from this oil spill involved aquatic organisms in Galveston Bay. The oil spill also adversely affected the functioning of some emergent wetland habitats in the area pending natural recovery. These were the predominant injuries resulting from the oil spill. The Trustee Council used these injuries as a primary guide in the development of this RP/EA. Because these injuries involved either emergent wetlands or aquatic organisms that are ecologically dependent on wetlands, the Trustee Council considered the creation or enhancement of wetland habitats as having an appropriate nexus to the key injuries that occurred.

Geographic relationship to injuries/losses - To further ensure restoration actions were appropriately linked to injured natural resources, the Trustee Council determined that the benefits of such actions should accrue to injured resources "on-site", i.e. in the geographic vicinity relevant to those resource injuries. The Trustee Council approached restoration planning with the view that the injured natural resources are part of an integrated ecological system - the Galveston Bay Estuary - and that this system represented the relevant geographic area for siting restoration actions. Within that system, Galveston Bay itself was considered the primary geographic area for siting restoration actions as most injuries and losses occurred in that area. West Bay, East Bay, Trinity Bay, and their associated tertiary bays were considered primary alternative areas in applying this criteria to the evaluation of restoration proposals. Areas further removed from the direct impact of the spill or outside of the tidal Galveston Bay system were not considered as within the geographic vicinity relevant to the resource injuries.

3.3 Trustee Council Activities

The Trustee Council developed a set of criteria to guide the selection of appropriate restoration actions and applied these criteria to objectively evaluate restoration proposals submitted for consideration. This process included a screening of project proposals based on their fundamental selection considerations - whether project benefits would accrue to natural resources and their services injured as a result of the spill, whether project benefits would accrue to such resources in the geographic impact area of the spill, and whether project implementation costs were within the amount recovered in damages. A more detailed description of the criteria used and the process followed by the Trustee Council to identify restoration alternatives and to apply developed criteria, is included in Section 4.0, RESTORATION ALTERNATIVES and Section 5.0, EVALUATION OF RESTORATION ALTERNATIVES.

4.0 RESTORATION ALTERNATIVES

The Trustees began soliciting restoration proposals for consideration in February 1994 through a letter to local public interests groups, governmental agencies and scientific professionals. Responses to this letter varied from general restoration concepts to detailed proposals.

Upon review, the Trustees found that responses to the initial solicitation did not present a reasonable number of restoration alternatives for consideration and, further, that most of the responses did not include sufficient information to address and support a reasoned evaluation of the proposed restoration alternatives. The Trustee Council did attempt to remedy some of the information deficiencies through informal communications with project proponents, but this process yielded mixed results. Finally, in September 1995, the Trustee Council suspended further consideration of these initial restoration proposals and actively solicited additional restoration proposals from the local scientific community, public interest groups and governmental agencies through several public

meetings held in the Houston/Galveston area. This second solicitation included additional guidance on the required content for submitted proposals and set a September 25, 1995 deadline for further restoration project submissions.

Including the detailed restoration proposals received during the initial submission period, a total of ten restoration proposals were received for consideration. Each of these proposals, as well as a "No Action" alternative, are presented and evaluated in this RP/EA. These proposals are each listed and described below, and their locations are shown in Figure 1. The framework for and evaluation of these alternatives is presented in Section 5.0, EVALUATION OF RESTORATION ALTERNATIVES.

4.1 Alternatives Considered:

1 - No Action - Under a No Action alternative, restoration actions would not be undertaken by the Trustees. Natural resources and services would be allowed to return to baseline as the result only of natural recovery, and the Trustees would not take any action to assist in this recovery of injured natural resources.

2 - San Jacinto River Wetland Construction - This alternative would construct an unspecified acreage of wetlands through planting efforts along the San Jacinto River which empties into the Galveston Bay system. The project targets a 10-mile stretch between Lake Houston and Buffalo Bayou for restoration efforts. Much of the initial work proposed in the project would involve adapting brackish marsh plants to the riverine conditions found at the planting site. The adapted species would then be planted along an unspecified length of the river. The project was proposed by the U.S. Department of Agriculture Natural Resources Conservation Service. The proposal requests \$180,000 to fund a portion of the total project cost of \$295,000. Construction of wetlands in this proposal would benefit aquatic organisms that use these freshwater wetlands along the river. These wetlands also provide water-quality functions that should benefit aquatic organisms in the bay system.

3 - Habitat Restoration and Enhancement at the Galveston Bay Prairie Preserve - This alternative would implement a multi-faceted habitat restoration and enhancement effort in the Galveston Bay Prairie Preserve located along the western shore of Galveston Bay. This proposal by the Texas Nature Conservancy is comprised of numerous small projects including 1) acquisition of Attwater Prairie Chicken habitat and wetlands (\$500,000); 2) enhancement of Moses Slough through the construction of double baffled oyster reefs (\$75,000); 3) enhancement of Potts' Cove with the construction of a slotted weir with flap gate to prevent saltwater intrusion (\$17,500); 4) improvement of hydrology through the construction of thru-road structures such as regrading, resurfacing, cattle-guards (\$33,000); 5) establishment of smooth cordgrass along the shoreline of Moses Bayou (\$15,000); 6) control of Chinese tallow trees in the prairie ecosystem (\$21,000); 7) implementation of a prairie burning program (\$25,620); 8) establishment of a managed

protected waters. Project proponents also anticipate that natural sediment accumulation will occur once barriers are installed, and this shoaling will result in additional wetland growth in the area. The barrier will be constructed with large tidal passes and bird nesting areas, and the protected areas behind the barrier will provide ideal locations for future deposition of dredged sediment and creation of wetland habitat. The amount of wetlands actually constructed in the project will be dependent upon the length of rock barrier. TPWD estimates that the cost of two barrier segments and the construction of 20 acres of wetlands will total \$1.1 million. The construction of salt marsh habitat would benefit aquatic organisms, because this habitat provides nursery functions for many finfishes and crustaceans in Galveston Bay. These wetlands also provide water-quality functions that should also benefit aquatic organisms in the bay system. In addition, this alternative would benefit birds by providing nesting, resting, and foraging habitat.

7 - Wetland Construction in Galveston Bay - This alternative would construct emergent estuarine wetlands within Galveston Bay. ENTRIX, Inc. proposes to implement a phased plan that would consist of site selection, permitting, construction of wave barriers, transplanting smooth cord grass, and follow-up monitoring. Potential sites would be evaluated by the following criteria: presence of critical wetland loss; property ownership; vegetative colonization potential; public access; equipment type and accessibility; exposure to wave energy; and direct restoration of habitat injured by the Apex spill. Potential sites identified include Marrow Marsh; Swan Lake; Mesquite Knoll; Tahhs Bay; Dickinson Bay; northern shoreline of East Galveston Bay; Goose Creek; and the western shoreline of Trinity Bay. The estimated cost is \$29,900 per acre of salt marsh constructed. The construction of salt marsh habitat in this alternative would benefit natural resources in the Galveston Bay system. These marshes provide nursery habitat for many finfishes and crustaceans and foraging habitat for birds. In addition, these wetlands provide water-quality functions that should also benefit aquatic organisms in the bay system.

8 - Pierce Marsh Wetland Construction - This alternative would construct 34 acres of estuarine emergent wetlands and submerged aquatic vegetation on state owned lands within Pierce Marsh, Galveston County, Texas. The project is proposed by the U.S. Fish and Wildlife Service (USFWS) and the Galveston Bay Foundation (GBH). Wetlands will be constructed in shallow open water by building low levees or terraces in an open box design. The terraces will be planted with smooth cordgrass, and the protected areas within the cells will be planted with seagrasses. This technique has been successfully used for wetland construction in Louisiana. The estimated cost of the project is \$207,000. Project proponents have also applied for matching funds through the North American Wetland Conservation Act. If obtained, these funds would be used to acquire 1600 acres of wetlands adjacent to the proposal site, and a conservation easement would provide for protection of these wetlands in perpetuity. The construction of salt marsh and seagrass habitats in this alternative would benefit natural resources in the Galveston Bay system. Marshes and seagrass beds provide nursery habitat for many finfishes and

cattle grazing program (\$35,000); and 9) mechanical removal of nuisance brush (\$18,500). While greatly benefiting the endangered Attwater Prairie Chicken and several upland communities, the benefits of this project to estuarine and marine resources would mainly come from the construction of a small amount of wetlands along the shoreline of Moses Bayou and oyster reef in Moses Slough.

4 - Dredging the Channel to Liberty for Reconstruction of Vingt-et-Une Islands - This alternative would reduce the shoaling problem in the channel to Liberty, Texas and use dredge material for creation of an island (part of the Vingt-et-Une Islands) that could be enhanced in the future as a rookery island. The Vingt-et-Une Islands are state-owned and provide colonial waterbird nesting habitat. Due to extensive erosion, only one island remains from the 21-island chain mapped in 1831; this island has been leased by the National Audubon Society from the Texas General Land Office for the past thirty-five years. Jeri's Seafood, Inc., proposes to dredge 16,400 linear feet of the federally authorized channel to Liberty between stations 340 to 410 near Smith Point, Chambers County to obtain material for construction of a new island. The cost of this alternative would fund only the dredging and is estimated at \$1.6 million. The primary benefit of this project would be to improve navigational access to portions of the Galveston Bay system. The island construction associated with dredging would provide nesting habitat for colonial waterbirds. If the island provides erosional protection to the wetlands of Smith Point, the project would benefit natural resources dependent on these wetlands. Salt marsh habitat provides nursery functions for many finfishes and crustaceans in Galveston Bay and foraging habitat for birds. These wetlands also provide water-quality functions that should benefit aquatic organisms in the bay system.

5 - Restoration of Colonial Waterbird Nesting Habitat on Vingt-et-Une Islands - The Vingt-et-Une Islands located near Smith Point in western Galveston Bay have undergone severe erosion, and only one island remains from the 21-island chain mapped in 1831. This project, proposed by the Houston Audubon Society, would restore the remaining relatively-low elevation island to a 5-acre island suitable as colonial waterbird nesting habitat. The source of construction material is likely to be sand from a nearby site, and geotextile tubes are proposed to prevent future erosion of island shorelines. The project cost is \$529,650. This alternative would mainly benefit colonial waterbirds. If the island provides erosional protection to the wetlands of Smith Point, the project would benefit natural resources dependent on these wetlands. Salt marsh habitat provides nursery functions for many finfishes and crustaceans in Galveston Bay and foraging habitat for birds. These wetlands also provide water-quality functions that should also benefit aquatic organisms in the bay system.

6 - Swan Lake Wave Barrier and Wetland Construction - This alternative proposed by the Texas Parks and Wildlife Department (TPWD) involves construction of a segmented rock barrier at the entrance to Swan Lake and construction of salt marsh behind the barrier. This area on the western shore of Galveston Bay is subject to high wave energy and erosional forces. The rock barrier is necessary to allow construction of wetlands in

crustaceans and foraging habitat for birds. In addition, these wetlands provide water-quality functions that should benefit aquatic organisms in the bay system.

9 - Galveston Island State Park Wetland Construction - This alternative proposed by the Texas Parks and Wildlife Department (TPWD) involves construction of 4000 linear feet of wave-protection berms with associated wetland habitats on the West Bay shoreline of the Galveston Island State Park. The berms would simulate sand/shell spits and nesting islands, and would act as cells for receiving material to increase the level of submerged land to wetland planting grade. Habitats created would include a minimum of 115 acres of intertidal wetland, 25 acres of salt-flat/high-marsh wetland, one acre of seagrass beds, and three acres of colonial waterbird nesting habitat. The total project cost is \$1,987,000, and TPWD has requested \$537,000 in funding from the Apex Trustee Council. TPWD will provide some of the remaining funds but is also applying for a grant through the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) program. If the CWPPRA grant is not received, TPWD proposes to utilize the requested Apex funds to undertake a scaled-down version of the project that includes the construction of 1000 linear feet of shoreline protection (barrier islands) and development of at least 30 acres of intertidal wetlands. The construction of salt marsh and seagrass habitats in this alternative would benefit natural resources in the Galveston Bay system. Marshes and seagrass beds provide nursery habitat for many finfishes and crustaceans and foraging habitat for birds. In addition, these wetlands provide water-quality functions that should benefit aquatic organisms in the bay system. This alternative would also benefit birds by providing nesting and resting habitat.

10 - Interstate 45 Highway Corridor Wetland Construction - This alternative involves construction of a 57-acre wetland at a dredge-disposal site and borrow pit. The project area is located within a large salt marsh complex along the main highway onto Galveston Island and is currently used as a leveed dredge-disposal storage area. Several deep open-water ponds are also present on the site. This project is proposed by Scenic Galveston, an affiliate of Scenic Texas/America, in conjunction with the U.S. Fish and Wildlife Service (USFWS) and will relocate the stored dredge material to adjacent ponds and construct an emergent wetland. The project is estimated to cost \$350,000 and implementation is dependent upon acquisition of the targeted property by Scenic Galveston using dedicated private funding. Negotiations on the acquisition are in progress. The construction of salt marsh habitat in this alternative would benefit natural resources in the Galveston Bay system. These marshes provide nursery habitat for many finfishes and crustaceans and foraging habitat for birds. In addition, these wetlands provide water-quality functions that should also benefit aquatic organisms in the bay system.

11 - San Jacinto State Park Wetland Construction - This alternative involves the creation of emergent brackish marsh in open-water ponds within the San Jacinto Historical State Park. This project proposed by the Texas Parks and Wildlife Department will use dredged material from the HSC (from near Morgans Point) to create approximately 40

acres of wetlands. The proposal calls for installing a temporary water-control structure, filling the area with dredged sediments, and planting with smooth cordgrass. The cost of the project is estimated to be \$139,100. The construction of brackish marsh in this alternative would benefit natural resources in the Galveston Bay system. These marshes provide nursery habitat for some finfishes and crustaceans and foraging habitat for birds. In addition, these wetlands provide water-quality functions that should also benefit aquatic organisms in the bay system.

5.0 EVALUATION OF ALTERNATIVES:

5.1 Trustee Selection Criteria for Project Evaluation:

The extent to which individual proposals would benefit injured resources and the services provided by those resources was determined according to criteria established to evaluate restoration alternatives. The first set of criteria was applied in a primary screening to determine the overall appropriateness of each project for funding by the Trustee Council. This primary screen consisted of the following questions:

- 1) Is the project within the Galveston Bay tidal system impacted by the spill?
- 2) Does the project address the injured natural resources and the services they provide?
- 3) Does the project cost \$1.3 million or less?

The first question reflects the objective of the Trustee Council to implement restoration actions within the tidal system of Galveston Bay as the relevant area for spill impacts. The second question reflects the requirement that the restoration actions undertaken provide a substantial benefit to the natural resources injured as a result of the oil spill. This question was perhaps the most important of the three screening criteria as restoration proposals that did not substantially benefit one or more of the key injury categories were eliminated from further consideration. The third question addressed the limit of available funds and resulted in the elimination of any proposal requesting more than the funds available to implement a plan.

If the Trustee Council considered the answer to any of these three primary screening questions to be clearly "no", then the alternative was eliminated from further consideration. Proposals that emerged through this initial screening (answers to all primary screening questions were yes or not clearly no) were examined in more detail in a secondary screening. In this secondary screening, the alternatives were analyzed on the basis of the following five factors: environmental, cost, risk, legal, and community acceptance. Most of this analysis centered on environmental and cost factors; thus, these factors were emphasized in the evaluation of alternatives. Risk, legal, and community acceptance factors only entered into the decision-making process if these factors had a strong negative or positive bearing on the proposed project.

Environmental factors - This analysis considered the habitat type being restored or constructed and the potential relative productivity of that habitat for the injured resources. For example, salt marsh and seagrass habitats were considered more beneficial than brackish or fresh marshes in replacing productivity of fishes and crustaceans. The Trustee Council also considered the total number of habitat acres involved in the project. Hydrology and salinity regime were considered in this analysis; brackish and marine habitats were felt to be more beneficial in restoring the injured natural resources than freshwater habitats, and the presence of water-control structures

that may inhibit access to the area was considered detrimental to a fully functional habitat for fishery organisms. In this analysis, the Trustee Council considered whether one habitat was being replaced with another in the project and what the benefit of the existing habitat was for the injured natural resources. The possibility of the project site being contaminated was considered along with the potential for use of contaminated dredged sediments in the project; the Trustee Council considered habitat constructed with or on contaminated sediments to be of reduced benefit to injured natural resources. Compatibility of the project with the surrounding land use was also considered; the presence of buffer zones around the project was considered a positive project attribute. Potential conflicts with any endangered species were also considered here.

Cost factors - The cost per acre of habitat constructed or restored was considered as a major factor in the economic analysis. Problems associated with project timing were considered, and the potential for substantial delays in project implementation was assessed. The Trustee Council considered whether unforeseen problems getting access to the project site (for example with heavy equipment) would increase project costs. Recognizing the importance of documenting project successes, the presence of an adequate monitoring component was also considered a positive attribute. The potential for leveraging project funds through other grant programs was considered a positive project attribute in this analysis; although the project also had to be economically viable without such leveraging.

Risk factors - In this analysis, the Trustee Council considered technical factors that represented either risk to the success of project construction or the long-term viability of the habitats involved. For example, high rates of subsidence at a project site were considered a risk to long-term existence of constructed habitats. Project sites that were susceptible to future degradation or loss through contaminant spills or erosion were considered less viable in this analysis. The Trustee Council also considered whether unexpected technological difficulties in project implementation were likely and whether maintenance of project features was likely to be necessary and was included in the proposal.

Legal factors - In this analysis, the Trustee Council considered future project site ownership and management. Ownership by state or federal agencies and the opportunity for conservation easements to protect the public interest in the restoration project were considered positive project attributes. Problems in obtaining state or federal permits were considered along with problems of acquiring the land needed to complete a project, and potential liability from project construction were also considered in this analysis. An assessment of any potential archeological impacts was also conducted.

Community acceptance factors - In this analysis, the Trustee Council assessed the level of support for a project from local communities and from governmental agencies. Projects that appeared to be supported by the widest group of constituents were

considered more favorably than other projects. The Trustee Council also considered community access and educational opportunities provided by a project as positive attributes.

5.2 Evaluation of Alternatives:

1 - No Action - This alternative was not preferred. No action would be appropriate where no significant injuries occurred as a result of the oil spill or where restoration actions to benefit injured natural resources and their services are relatively not cost-effective or technically feasible. The alternative was not acceptable since significant injuries occurred in the Galveston Bay ecosystem as the result of the Apex oil spill. The no action alternative would not impact the physical, biological, or cultural environment since natural recovery is occurring.

2 -San Jacinto River Wetland Construction - This alternative was not preferred. Consideration of this alternative did not advance past the primary screening process because the project location, while within the Galveston Bay watershed, is not within the general Galveston Bay tidal system. The freshwater wetlands to be constructed do not directly or immediately support fishery resources (fishes and crustaceans) injured by the Apex oil spill. These wetlands are not used as nursery grounds for fishes and crustaceans to the same extent as brackish and saltwater wetlands. Project benefits include potentially increasing the variety of plants available for future construction efforts, by adapting these plants to varying saline conditions. For planted areas, erosion of the river bank could be reduced, but the actual quantity of wetlands is undefined. No negative impacts to the physical and biological environment are predicted during the planting phase. There are no negative impacts to the cultural environment anticipated as a result of this action.

3 - Habitat Restoration and Enhancement at the Galveston Bay Prairie Preserve - This alternative was not preferred. Consideration of this alternative did not advance past the primary screening process because only a small portion of the project (limited wetland construction and oyster reef construction) would benefit aquatic resources injured by the Apex oil spill. Most of the project area consists of upland habitats, which were not impacted by the spill, and the planned water control structures may actually decrease marine fisheries productivity by restricting access to habitats used by fishery species. Predicted negative impacts to the aquatic resources would include interim effects during the construction phase, in the form of decreased water quality, disturbance of sediment and benthos, and impacts to the surrounding area. These impacts can be minimized by onsite construction controls. Oyster reef construction would result in the benthos underneath the reef being impacted, but this should be offset by the increased productivity associated with the reef. There are no negative impacts to the cultural environment anticipated as a result of this action.

4 - Dredging the Channel to Liberty for Reconstruction of Vingt-et-Une Islands - This alternative was not preferred. Consideration of this alternative did not advance past the primary screening process because the project did not adequately address the aquatic resources injured by the Apex oil spill, and the project cost exceeded the entire restoration budget of \$1.3 million. No wetland habitats were proposed for restoration or construction on the dredge disposal island, and the Trustee Council did not consider that any substantial benefit to fishes and crustaceans would be derived from the hypothesized protection of wetlands on Smith Point. Negative impacts to the physical and biological environment are expected due to the dredging action and to the placement of dredge material, which could cause injury to the benthos and significantly remodel the subtidal area. There are no negative impacts anticipated to the cultural environment as a result of this action, and the positive cultural effects would be the improved navigation access for recreational and commercial boaters.

5 - Restoration of Colonial Waterbird Nesting Habitat on Vingt-et-Une Islands - This alternative was not preferred. Consideration of this alternative did not advance past the primary screening process because the project did not address the aquatic resources injured by the Apex oil spill. The alternative would primarily benefit colonial waterbirds by providing foraging and nesting habitat. Negative impacts to the physical and biological environment are expected due to the dredging action and to the placement of dredge material, which would destroy the subtidal area under the footprint of the island restoration. The cultural environment is not anticipated to be negatively impacted as a result of this action, and may in fact be enhanced by the provision of bird watching opportunities to the public.

6 - Swan Lake Wave Barrier and Wetland Construction - This alternative was not preferred. This project involves construction of two segments of rock barrier and 20 acres of salt marsh wetlands at a cost \$1.1 million. The alternative addresses aquatic resources injured by the Apex oil spill and is located within the Galveston Bay tidal system. In addition, the potential exists for future wetland development projects adjacent to the proposed construction area. However, the project is not an acceptable alternative because the cost per acre of constructed wetland (approximately \$55,000 per acre) was much higher than other comparable projects. In addition, the proposed site is near the refineries at Texas City, which makes the wetland vulnerable to impacts from oil or other toxic materials released in the immediate vicinity. Predicted negative impacts to the aquatic resources would be interim effects during the construction phase, in the form of decreased water quality, disturbance of sediment and benthos, and impacts to the surrounding habitat. There would be additional negative impacts to the biological environment due to injury of benthic communities from placement of the barrier, and the removal of subtidal area. There are no negative impacts to the cultural environment anticipated as a result of this action.

7 - Wetland Construction in Galveston Bay - This alternative would construct emergent estuarine salt marsh along shorelines within Galveston Bay. The Trustee Council

tentatively considered this a preferred alternative, specifically in regard to wetland construction at the Marrow Marsh location. Wetlands at Marrow marsh were directly impacted by the Apex spill, and wetland construction at this site would directly compensate injury to these wetlands in addition to the fishery resources supported by the wetlands. However, the cost per acre of constructed wetlands (\$29,900) in this proposed project is relatively high, and the Trustee Council intends to implement this alternative only if one of the other preferred alternatives cannot be constructed due to unsuitability of the site. The predicted negative impacts to the aquatic resources would be minimal since no dredging or regrading would be required, and planting would be by the least impacting method. Any impacts that occur as a result of the construction could be minimized by onsite construction controls. There are no negative impacts to the cultural environment anticipated as a result of this action.

8 - Pierce Marsh Wetland Construction - This alternative was preferred. The project will construct 34 acres of estuarine emergent wetlands and submerged aquatic vegetation on state owned lands within Pierce Marsh, Galveston County, Texas. The wetlands to be constructed will provide a complex habitat and are expected to be extremely productive in supporting fishery resources injured by the Apex oil spill. The proposed wetlands would also benefit bird resources by providing foraging habitat, and they would improve water quality in the bay. This projection is based on the higher productivity associated with the varied elevations and submerged aquatic plants of the proposed project. The estimated cost of the project is \$207,000; thus constructed wetlands are estimated to cost \$6,100 per acre. Negative impacts to the physical and biological environment include the destruction and modification of shallow-water bay bottom. Interim negative impacts during the construction phase include decreased water quality, disturbance of sediment and benthos, and impacts to the surrounding area. These negative impacts would be offset by the increased productivity of the constructed habitats for fishery resources, and interim effects can be minimized by onsite construction controls. There are no negative impacts to the cultural environment anticipated as a result of this action.

9 - Galveston Island State Park Wetland Construction - This alternative was preferred. The project will construct wave-protection berms with associated wetland habitats in the Galveston Island State Park; 1000 linear feet of shoreline protection will be constructed along with at least 30 acres (in the absence of additional requested grant funding) of intertidal salt marsh at a cost of \$17,900 per acre of constructed wetland. Restoration of these wetlands is expected to be highly beneficial for aquatic and fishery resources injured during the Apex oil spill. The proposed wetlands would also benefit bird resources by providing nesting and foraging habitat, and they would improve water quality in the bay. The predicted negative impacts to the physical and biological environment would be benthos and subtidal loss due to berm and fill material placement, and interim effects during the construction phase, in the form of decreased water quality, disturbance of sediment and benthos, and impacts to the surrounding area. These impacts would be offset by the increased productivity of the created wetlands, and construction impacts can be minimized by onsite construction controls. The cultural

environment is anticipated to be enhanced as a result of this action, by providing fishing and bird watching opportunities.

10 - Interstate 45 Highway Corridor Wetland Construction - This alternative was preferred. The project will construct a 57-acre wetland out of degraded habitat (dredge-disposal site and borrow pit), and this wetland is expected to be highly beneficial and productive for fishery resources injured during the Apex oil spill. The proposed wetland would also benefit bird resources by providing foraging habitat, and it would improve water quality in the bay. The cost per acre of wetland construction for the project is \$7,000. The project has a great deal of community support and high visibility due to the current degraded conditions at the site. The site is also adjacent to additional wetlands, so the proposed project would become part of a larger wetland preserve. The predicted negative impacts to the physical and biological environment would be interim effects during the construction phase, in the form of decreased water quality, disturbance of sediment and benthos, and impacts to the surrounding area. These impacts would be offset by the increased aquatic productivity and water quality resulting from the wetland creation, and can be further minimized by onsite construction controls. The cultural environment is expected to be enhanced by creating bird watching and scenic enjoyment of the preserve, and no negative impacts are anticipated.

11 - San Jacinto State Park Wetland Construction - The Trustee Council tentatively identified this project as a preferred alternative. The project would use dredged material from the Houston Ship Channel to construct approximately 40 acres of intertidal brackish wetlands in open-water ponds within the San Jacinto Historical State Park. The construction of brackish marsh habitat at this site should substantially improve production of fishery resources and provide nesting and foraging habitat for birds. However, concerns about contamination of the dredged material to be used in marsh construction have delayed final selection of this alternative, and it would only be considered for remaining funds if the issues associated with the proposed dredged material are resolved successfully. An evaluation of the dredge material for contaminants would need to be conducted prior to approval of this proposal. Negative impacts to the physical and biological environment are expected due to the dredging action and to the placement of dredge material, removing some subtidal areas and temporarily decreasing water quality. These impacts would be offset by the increased productivity of the brackish wetlands and the improved water quality. The cultural environment is expected to be enhanced as a result of this action, since the marsh has a historic role in the fight for Texas independence, and this action would preserve this area.

6.0 SELECTED ALTERNATIVES

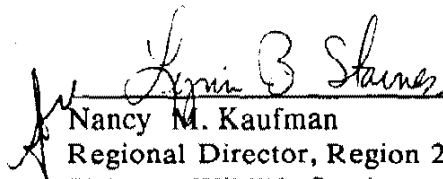
After careful review and consideration of all selection criteria, the Trustees have selected the following three alternatives for restoration of the injured natural resources of Galveston Bay from the Apex Oil spill: Pierce Marsh Wetland Construction, Interstate 45 Highway Corridor Wetland Construction, and Galveston Island State Park Wetland Construction. The Trustees have also conditionally approved an allocation of \$109,000 to the San Jacinto State Park Wetland Construction project. The final selection of this project is conditioned upon confirmation by the Trustee Council that the dredged material designated for marsh construction is adequately free of contamination and the project is otherwise technically suited for successful wetlands creation. If these conditions are not met, the Trustee Council will apply these funds to the Wetland Construction in Galveston Bay project as its alternate choice for the construction of wetlands in the Galveston Bay system.

Each project selected for implementation will undergo additional environmental and NEPA review in the permitting process. Although no negative impacts on endangered species were identified for selected projects, a Section 7 (Endangered Species Act) consultation will be made for each of the projects to ensure compliance. Projects will also be reviewed for compliance with the Texas Historic Preservation Act. Each funded restoration action will compensate for injuries due to the Apex oil spill, and all projects constructed as a result of these restoration activities will remain in the public trust in perpetuity.

7.0 Finding of No Significant Impact

Finding of No Significant Impact.

Having reviewed the attached environmental assessment and the available information relative to the proposed actions in Galveston Bay, Texas, I have determined that there will be no significant environmental impacts from the proposed actions. Accordingly, preparation of an environmental impact statement on these issues is not required by Section 102 (2) (c) of the National Environmental Policy Act or its implementing regulations.

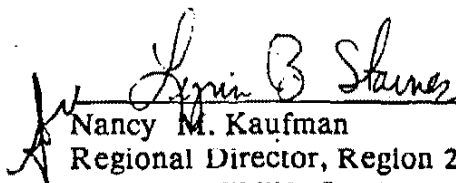
 _____ Date 7/16/97
Nancy M. Kaufman
Regional Director, Region 2
Fish and Wildlife Service
U.S. Department of the Interior

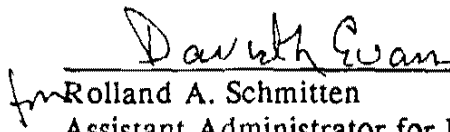
_____ Date _____
Rolland A. Schmitten
Assistant Administrator for Fisheries
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

7.0 Finding of No Significant Impact

Finding of No Significant Impact.

Having reviewed the attached environmental assessment and the available information relative to the proposed actions in Galveston Bay, Texas, I have determined that there will be no significant environmental impacts from the proposed actions. Accordingly, preparation of an environmental impact statement on these issues is not required by Section 102 (2) (c) of the National Environmental Policy Act or its implementing regulations.

 Date 7/16/97
Nancy M. Kaufman
Regional Director, Region 2
Fish and Wildlife Service
U.S. Department of the Interior

 Date 10/27/97
Rolland A. Schmitten
Assistant Administrator for Fisheries
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

RECEIVED

JUN 03 1997

8.0 Trustee Council Signatures

In accordance with the Memorandum of Agreement among the U.S. Department of Interior (DOI) represented by U.S. Fish and Wildlife Service (FWS), the National Oceanic and Atmospheric Administration (NOAA), the Texas Parks and Wildlife Department (TPWD), the Texas Natural Resource Conservation Commission (TNRCC) and the Texas General Land Office (GLO), executed 06/16/95, the following designated members of the "Galveston Bay/ Apex Barges Oil Spill Natural Resources Trustee Restoration Council," indicate by signature below, their agreement to adopt, in its entirety, this final "Apex Barges Oil Spill Restoration Plan/ Environmental Assessment.

The date of final approval for this document shall be the date of the final Trustee Representative's signature.

For DOI/FWS

Allan M. Strand 05-28-97
Allan M. Strand Date
Lead Administrative Trustee Representative
NRDA specialist
U.S. Fish and Wildlife Service
TAMU-CC, Campus Box 338
6300 Ocean Drive
Corpus Christi, Texas 78412

For NOAA/NMFS

Dr. Thomas Minello Date
Chief Fishery Ecology Division
Galveston Laboratory
National Marine Fisheries Service
NMFS/SEFC Galveston Lab
4700 Avenue U
Galveston, Texas 77551

For TPWD

Don Pitts 6/2/97
Don Pitts Date
Natural Resource Damage Assessment Coordinator
Texas Parks and Wildlife Department
Resource Protection Division
4200 Smith School Road
Austin, Texas 78744

In accordance with the Memorandum of Agreement among the U.S. Department of Interior (DOI) represented by U.S. Fish and Wildlife Service (FWS), the National Oceanic and Atmospheric Administration (NOAA), the Texas Parks and Wildlife Department (TPWD), the Texas Natural Resource Conservation Commission (TNRCC) and the Texas General Land Office (GLO), executed 06/16/95, the following designated members of the "Galveston Bay/ Apex Barges Oil Spill Natural Resources Trustee Restoration Council," indicate by signature below, their agreement to adopt, in its entirety, this final "Apex Barges Oil Spill Restoration Plan/ Environmental Assessment.

For DOI/FWS

For NOAA/NMFS

For TPWD

23

For TNRCC

Richard Seiler 6-5-97
Richard Seiler Date
Unit Manager, Natural Resource Trustee Program
Texas Natural Resource Conservation Commission
Pollution Cleanup Division
P.O. Box 13087
Austin, Texas 78711-3087

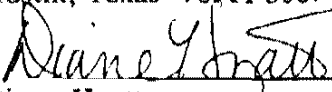
For GLO

Diane Hyatt
Diane Hyatt Date
Natural Resource Damage Assessment Coordinator
Texas General Land Office
Legal Services
Stephen F. Austin Building
1700 North Congress Avenue
Austin, Texas 78701

For TNRCC

Richard Seiler Date
Unit Manager, Natural Resource Trustee Program
Texas Natural Resource Conservation Commission
Pollution Cleanup Division
P.O. Box 13087
Austin, Texas 78711-3087

For GLO

 10-9-97
Diane Hyatt Date
Natural Resource Damage Assessment Coordinator
Texas General Land Office
Legal Services
Stephen F. Austin Building
1700 North Congress Avenue
Austin, Texas 78701

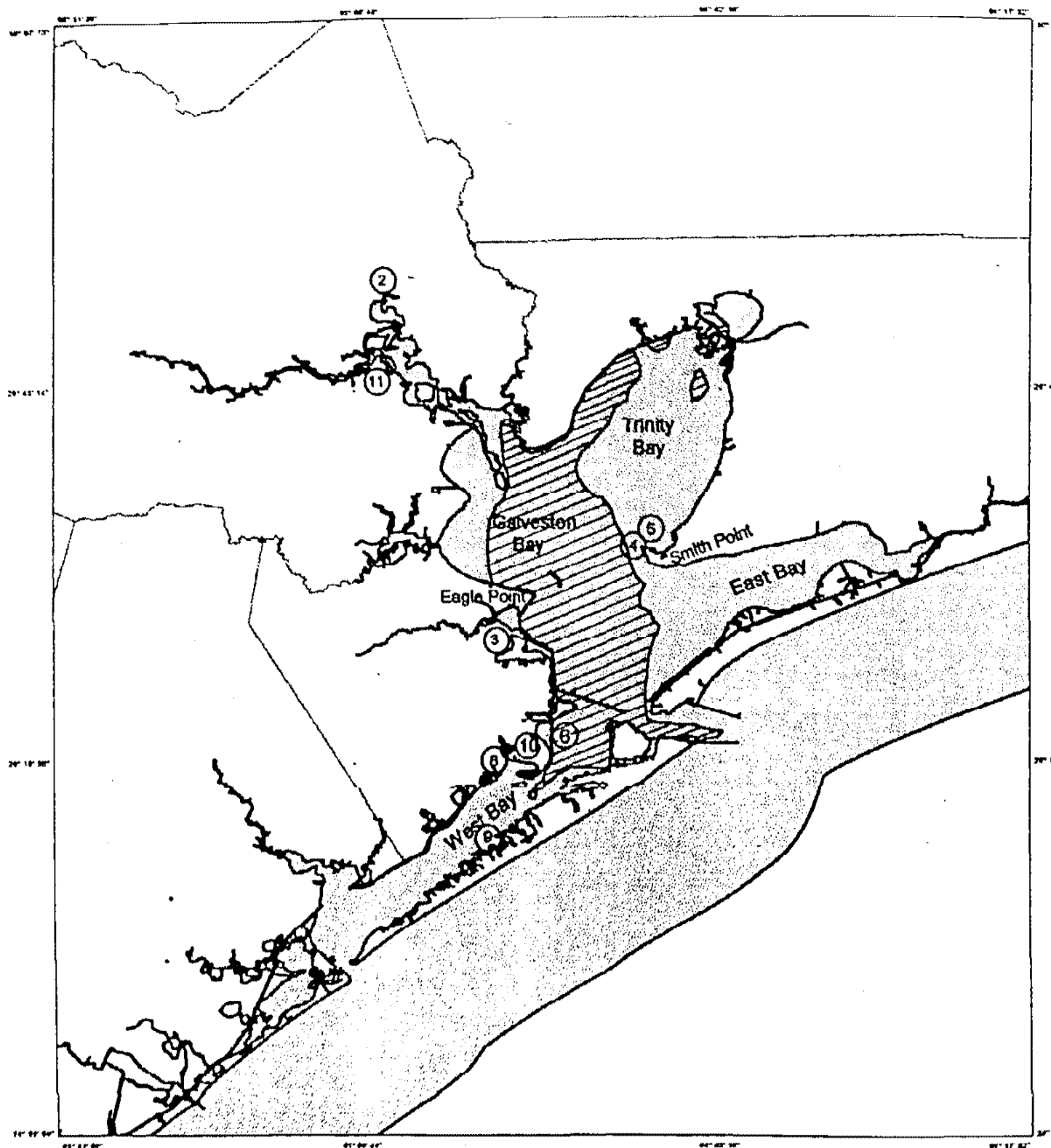


Figure 1. Oiling in Galveston Bay from the Apex oil spill. The hatched area represents the extent of oiling, regardless of the degree of oiling (sheen to heavy oiling). Information was compiled from observations taken on U.S. Coast Guard overflights during the event. Also shown are locations of restoration alternatives (2-11) in the bay system. Alternative 7 is not indicated because a specific location was not given.

Appendix I

List of people involved in the preparation of this draft plan

(* indicates member of Trustee Council)

(** indicates Lead Administrative Trustee Representative)

Name	Title	Affiliation
Allan Strand **	Natural Resource Damage Assessment Specialist	Department of Interior, U.S. Fish and Wildlife Service
Peter A.H. Samuels	Environmental Quality Specialist, Natural Resource Damage Assessment	Texas General Land Office
Richard Seller *	Unit Manager, Natural Resource Trustee Program	Texas Natural Resource Conservation Commission
Don Pitts *	Natural Resource Damage Assessment Coordinator	Texas Parks and Wildlife Department
Thomas Minello *	Chief, Fishery Ecology Division Galveston Laboratory	U.S. Department of Commerce, National Atmospheric Administration, National Marine Fisheries Service
Michael Devany	Southeast Restoration Center Manager	U.S. Department of Commerce, National Atmospheric Administration, National Marine Fisheries Service
Stephanie Fluke	Attorney-Advisor	U.S. Department of Commerce, National Atmospheric Administration, Office of General Counsel

Appendix II

Summary of results from notice of availability and request for comments on the Draft Restoration Plan (DRP) and Environmental Assessment (EA).

A notice of availability of the draft RP/EA was published March 4, 1997 in the Texas Register by Texas Parks and Wildlife Department (TPWD). A 30 day public comment was established with April 7, 1997 as the final date for submitting comment. A concurrent news release was also issued by TPWD soliciting public comment on the DRP/EA.

Written comments received from the following:

1. Received April 7 from Mr. Greg Mason, Houston, Texas.
Letter in Support of the I-45 Highway Corridor Wetland Construction Project (see attached).
2. Received April 7 from Evangeline Loessin Whorton, Galveston, Texas
Letter in support of the I-45 Highway Corridor Wetland Construction Project (see attached).

Requests received for copies of the DRP/EA:

1. Ambiotec (Carol Jackson), Harlingen, Texas.
2. David Pitts, Plano, Texas.
3. Hill Country Environmental (William R. McCurley) Austin, Texas.
4. Turner, Collie & Braden, (Ben West), Austin, Texas.
5. Dr. James Parker, La Marque, Texas.
6. KUHf Radio Houston (Paul Pendergraft), Houston, Texas.
7. TAMU Sea Grant (John Jacob), Bryan, Texas.
8. Mayor, Day, Caldwell & Keeton, (Kathleen Bethune), Houston, Texas.

Copies of the DRP/EA were mailed to each of the above named requestors within 48 hours of receiving the request.

In addition copies of the DRP/EA were mailed March 7, 1997, to the following named project proposal participants:

1. Ms. Gretchen Mueller, Executive Director, Houston Audubon Society, Houston, Texas.
2. Dr. Robert McFarlane, Houston Audubon Society, Houston, Texas.
3. Mr. Rusty E. Swafford, National Marine Fisheries Service, Galveston, Texas.
4. Mr. Andrew V. Sipocz, Texas Parks and Wildlife Department, Seabrook, Texas.
5. Mr. Ben H. Nelson, Jeri's Seafood, Inc., Anahuac, Texas.

6. Mr. Ray Johnson, Texas Nature Conservancy, Nassau, Texas.
7. Mr. Eddie Seidensticker and/or Ms. Nancy Webb, U.S. Department of Agriculture, Baytown, Texas.
8. Mr. Ted Hollingsworth, Texas Parks and Wildlife Department, La Port, Texas.
9. Ms. Evangeline Warton, Chairman, Scenic Galveston, Inc., Galveston, Texas.
10. Mr. Robert W. Nailon, ENTRIX, Houston, Texas.
11. Ms. Linda Shead, P.E., Executive Director, Galveston Bay Foundation, Webster, Texas.
12. Mr. Robert Potts, Texas Nature Conservancy, San Antonio, Texas.
13. Mr. Will Roach, U.S. Fish and Wildlife Service, Clear Lake, Texas.

Comment Consideration: The trustee have considered all written comments received during the public comment period. No negative comments were received. Supportive comments did not request modification of the DRP/EA. The Trustees herein determine the DRP/EA does not require amending and adopt it as the final plan.

R. Gregory Mason

2201 Macarthur Street at Montclair

Houston, Texas 77030

April 7, 1997

Mr. Allan Strand
Lead Administrative Trustee Representative
Apex Restoration Council
United States Department of the Interior
Fish and Wildlife Service
c/o TAMU-CC Campus Box 338
6300 Ocean Drive
Corpus Christi, Texas 78412

Via fax: (512) 994-8262

Re: I-45 Scenic Estuarial Corridor

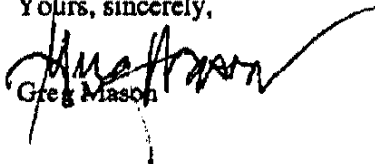
Dear Allan:

My wife is on the Board of Scenic Galveston, and has given a tremendous amount of time and energy to the I-45 Estuary. She felt a little awkward about writing to you yet another support letter, since she is clearly a project participant and not an 'innocent bystander', but I have no such compunctions. I write to you today to urge you to assist this project by releasing the much-needed remediation funds for use in the Estuary, to help remove the Tamburine 'landfill' from the marsh in question.

The fill site is an environmental tragedy of horrendous proportion. I am an avid coastal saltwater flyfisherman (besides being a member of Ducks Unlimited, the Coastal Conservation Association, the Nature Conservancy, the Fly Fishing Federation, etc.) I pass by the I-45 Estuary constantly on weekends. I cannot tell you how many of my friends and coworkers and fellow fisherman, upon hearing socially of my wife and her Board's work with the I-45 marshlands, ask me: "What's the story with that enormous pile of dirt as you go down to Galveston? Is that part of the project? Can they really get rid of it?"

Please support this hard-working volunteer group and help them rid Galveston County's remaining wetlands of this nightmare. Your funds will never find a more appreciative audience.

Yours, sincerely,


Greg Mason

Office - Noram Energy Services, Houston: (713) 654-5584
Home: (713) 664-1584



SCENIC GALVESTON Inc.

An Affiliate of Scenic Texas, Inc.

20 Colony Park Circle
Galveston, Texas 77551
409-744-7431

April 7, 1997

Board of Directors 1996-1997

Evangeline Whorton
Chairman

Richard C. Kirkpatrick
Vice Chairman

Frances Rieser
Treasurer

Betty Armstrong
Martin Baker
Evangeline Bondurant
Frank T. Crews
Dr. William P. Deiss
Rebekah Doherty
William J. Edwards
Dr. E. Burke Evans
Rosie L. Faust
Valerie A. Jackson
Raymond Johnson
Bebe Lising
Cage Martin
Lalise W. Mason
Beverly Nichols
Leo Reitan
Mary Rudenberg
Dr. John M. Wallace
Page S. Williams
Jeanette Winfree

Advisory Directors 1996-1997

Eugenia H. Campbell
Eleanor Childs
Bob Higley
Gleaves James
Margo Kelso
Hetta T. Kempner
Robert L. K. Lynch
E. Douglas McLeod
George P. Mitchell
Holly Montalbano
Robert M. Moore
John E. Walker
Frederick T. Werner
Roger Zimmerman

Mr. Allan M. Strand
Lead Administrative Trustee Representative
Apex Restoration Council
United States Department of the Interior
Fish and Wildlife Service
c/o TAMU-CC, Campus Box 338
6300 Ocean Drive
Corpus Christi, Texas 78412

Via Fax (512) 994-8262

Dear Allan:

SCENIC GALVESTON and the Friends of the I-45 Estuary, as proponents of the Apex restoration projects of the Galveston Bay system, comment specifically on this last day of public comment in favor of these private set-aside penalty funds to be used for the restoration of the degraded landfill uplands and borrow ponds within the habitat preservation project being performed by our organization within the I-45 Estuary.

Our diverse nonprofit conservation organization has raised almost \$800,000 of private funding for a 1:94 to 1 match to leverage \$400,000 of North American Wetlands Conservation Act (NAWCA) wetlands purchase funds to accomplish the acquisition and remediation of the 900-acre corridor wetlands on the high visibility interstate approach to Galveston. The substantial amount of private funds raised was instrumental in NAWCA's selection of the I-45 Scenic Estuarial Corridor project for funding. As well, the Apex Restoration Trustees selection 'for remediation' of a potential threat for development in heavily degraded uplands in the Estuary was a significant reason the project was funded by NAWCA. With the \$350,000 set-aside funds from the Apex Trustees, the major visual and ecological problems within the wetlands will be resolved.

Negotiations with the landowners in the I-45 marshes is ongoing currently and moving quite well. One parcel has been acquired and another offer, for almost 440 acres, should be accepted this week. We are excited about the present momentum. Ray Johnson, with The Nature Conservancy of Texas, and our pro bono negotiator for the acquisition phase, is delighted with the progress.

Thank you for this opportunity for comment. Please accept our communication as the strongest endorsement for the use of the Trustee funds.

Sincerely yours,

Evangeline Whorton
Evangeline Loessin Whorton
Chairman



An Affiliate of Scenic America, Inc.