United States
Environmental Protection
Agency

Region 6
1445 Ross Avenue
Dallas, TX 75202

EPA/906/07-90-008
July 1990

EPA

US Army Corps
of Engineers

ENVIRONMENTAL IMPACT STATEMENT

DRAFT

Freshwater Bayou Ocean Dredged Material Disposal Site Designation

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

July 24, 1990

TO INTERESTED AGENCIES, OFFICIALS, PUBLIC GROUPS AND INDIVIDUALS:

Enclosed is a copy of the Draft Environmental Impact Statement (EIS) concerning the Environmental Protection Agency's (EPA's) designation of the Freshwater Bayou ocean dredged material disposal site. The National Environmental Policy Act does not apply to EPA activities of this type. EPA has voluntarily committed to prepare EISs in connection with its ocean disposal site designation program. EPA and the New Orleans District Corps of Engineers jointly prepared this EIS.

EPA encourages agency and public participation in the decision-making process. Written comments on this Draft EIS will be considered in the preparation of the Final EIS.

The Final EIS will be sent to those making substantive comments on the Draft EIS and to those specifically requesting a copy (subject to EPA supply limits). Written comments or inquiries regarding this Draft EIS should be sent to: Norm Thomas, Chief, Federal Activities Branch, at the above address by the date stamped on the cover sheet following this letter.

Sincerely yours,

Robert E. Layton Jr., P.E.
Regional Administrator

Enclosure

DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR
THE FRESHWATER BAYOU
OCEAN DREDGED MATERIAL DISPOSAL SITE (ODMDS) DESIGNATION
VERMILION PARISH, LOUISIANA

Responsible Agencies: U.S. Environmental Protection Agency, Region 6
U.S. Army Corps of Engineers, New Orleans District

Administrative Action: The purpose of this action is to comply with the Marine Protection, Research, and Sanctuaries Act of 1972 by providing an environmentally acceptable ocean disposal site (ODMDS) for material dredged from Freshwater Bayou, in compliance with the Ocean Dumping Regulations (40 CFR Parts 220-229).

Contacts: Mr. Norm Thomas (6E-F)
U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Mr. Robert Martinson
U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267

ABSTRACT

The proposed action is the designation of the existing Freshwater Bayou, Louisiana ODMDS. In 1977, the EPA approved the site for interim use, based on historical use of the site since 1968. Other alternatives considered were no action, relocation of the ODMDS to alternate ocean areas, land disposal, marsh creation, and beach nourishment. Adverse environmental impacts of disposal at the site include: 1) occasional and temporary increases in concentrations of suspended sediments and other pollutants (e.g., mercury and manganese); 2) short-term changes in grain size of ODMDS surficial sediments; 3) localized burial of benthic organisms; and 4) potential temporary mounding of substrate.

COMMENTS ON DRAFT EIS DUE: September 24, 1990

RESPONSIBLE OFFICIALS:

for Robert E. Layton Jr., P.E.
Regional Administrator

Richard V. Gorski
Colonel, U.S. Army
District Engineer

SUMMARY

PURPOSE AND NEED - The purpose of this draft Environmental Impact Statement (EIS) is to evaluate the Freshwater Bayou Ocean Dredged Material Disposal Site (ODMDS) as an appropriate EPA designated site. This site, at the gulfward end of Freshwater Bayou has been used for disposal of dredged material since 1968. The site received interim designation by EPA in 1977, the same year an Environmental Assessment was prepared to determine impacts of channel maintenance and ocean dumping (COE, 1977). Designation of the Freshwater Bayou ODMDS would provide an environmentally acceptable site for future disposal of dredged material that is in compliance with the Ocean Dumping Regulations (40 CFR Parts 220-229). Freshwater Bayou is a link to the Gulf Intracoastal Waterway (GIWW) and Intracoastal City.

ALTERNATIVES - Alternatives considered in this EIS include:

1) No Action.
2) Relocation of the ODMDS to an alternate ocean area: near-shore, mid-shelf, or off-shelf sites.
3) Non-ocean disposal - beach nourishment, marsh creation, and land disposal.
4) Preferred-designation of the interim Freshwater Bayou ODMDS.

RATIONALE FOR THE PREFERRED ALTERNATIVE - The preferred alternative is designation of the Freshwater Bayou ODMDS, which has been used for about 20 years. The no action alternative is unacceptable because it leaves the site in an interim status. Relocation would subject other areas to effects of disposal without resulting in environmental advantages. Relocation of the site, marsh creation, or beach nourishment would also be more costly than use of the existing site because distances to transport the dredged material would be increased; substantially in the case of the mid-shelf or off-shelf sites. The Freshwater Bayou ODMDS has been evaluated using the eleven specific and five general criteria listed in the Ocean Dumping Regulations and found to be environmentally acceptable.

ENVIRONMENTAL IMPACTS - Past use of the Freshwater Bayou ODMDS has resulted in minimal, short-term adverse impacts. Temporary increases in turbidity occur, but conditions return to ambient soon after cessation of disposal. Concentrations of other pollutants such as mercury and manganese may also increase temporarily in surrounding waters when disposal occurs.

The grain size of the substrate east of the channel is somewhat finer than that existing in the ODMDS (COE, 1977), but no other effects of previous disposal on sediment physical characteristics are discernable. Benthic organisms are buried during disposal, but repopulation usually occurs within 2 to 3 months. Temporary mounding of dredged material may occur within the site, but the mounds disperse quickly.

INTRODUCTION

The Freshwater Bayou, Louisiana, project serves as a link to the Gulf of Mexico for Intracoastal City and the GIWW (Figures 1 and 2). The U.S. Army Corps of Engineers (COE), New Orleans District, is responsible for planning and conducting necessary maintenance dredging of Freshwater Bayou. In 1977, the COE prepared an assessment on the maintenance dredging and ocean dumping for this project (COE, 1977).

The Marine Protection, Research, and Sanctuaries Act (MPRSA) of 1972 made designation of dredged material disposal sites in the ocean mandatory. The only ocean disposal from Freshwater Bayou is in an 1,242-acre site running about 4.1 mi. long and 0.5 mi. wide, parallel to the west side of the channel (Figure 3). Approximately 1.2 million cubic yards (cy) of dredged material are disposed in this site during each disposal operation. Disposal generally occurs once every 2-3 years. The Freshwater Bayou Ocean Dredged Material Disposal Site received a 3-year interim designation by EPA in 1977. This interim designation was based on historical use of the site since 1968. In January 1980, the interim status of the site was extended indefinitely.

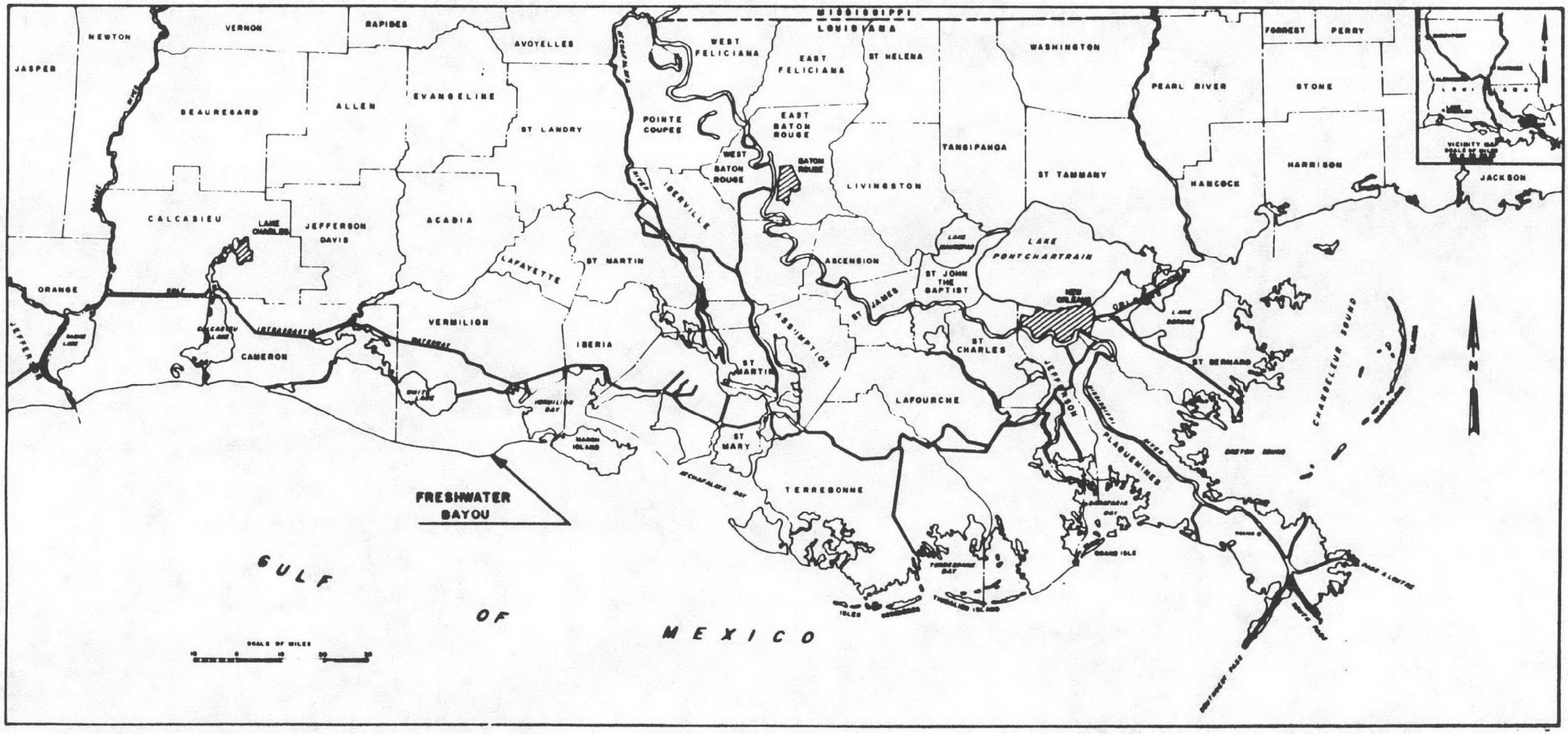

Figure 1. Vicinity map for the Freshwater Bayou ODMDS.

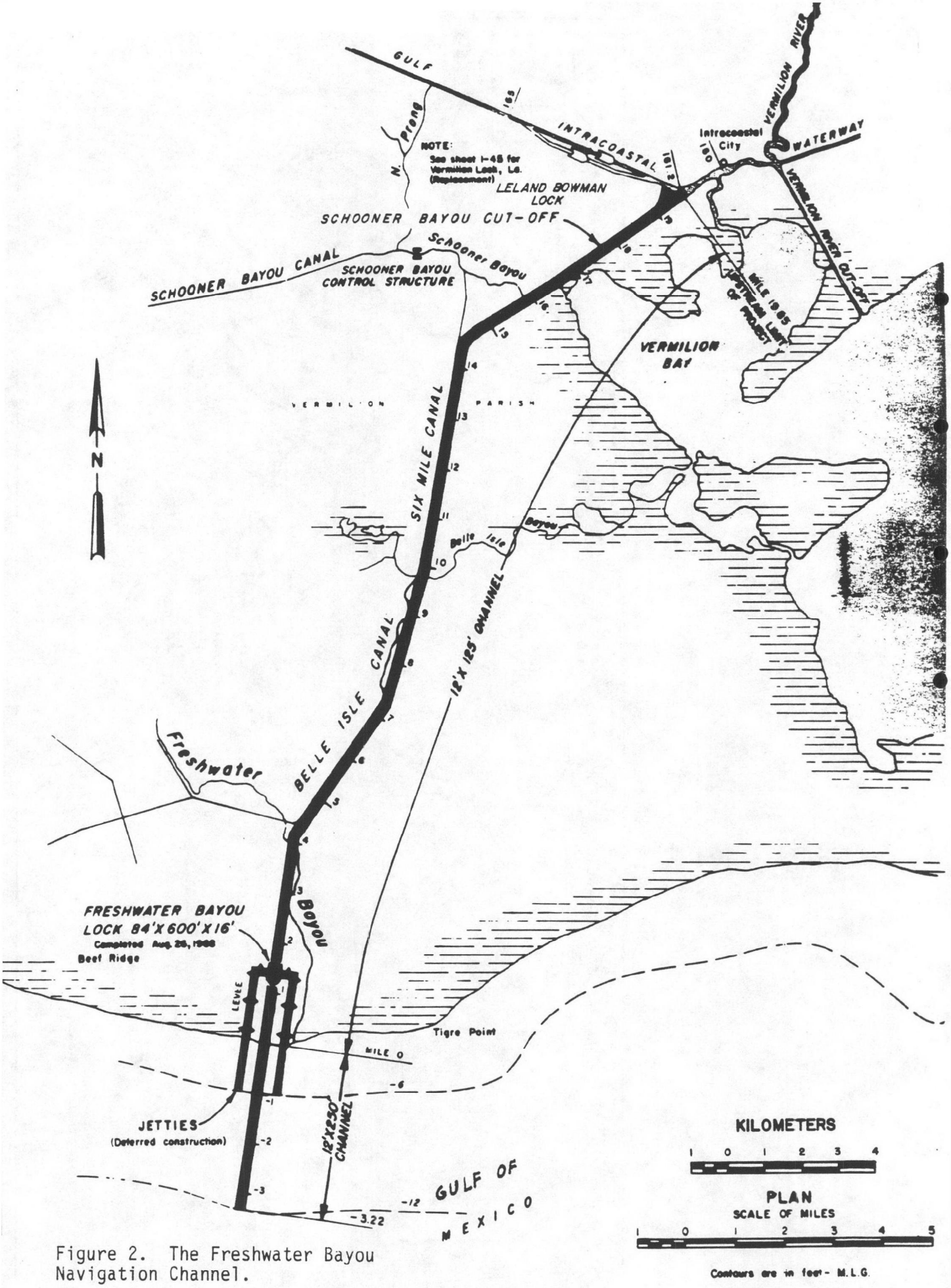

Figure 2. The Freshwater Bayou Navigation Channel.

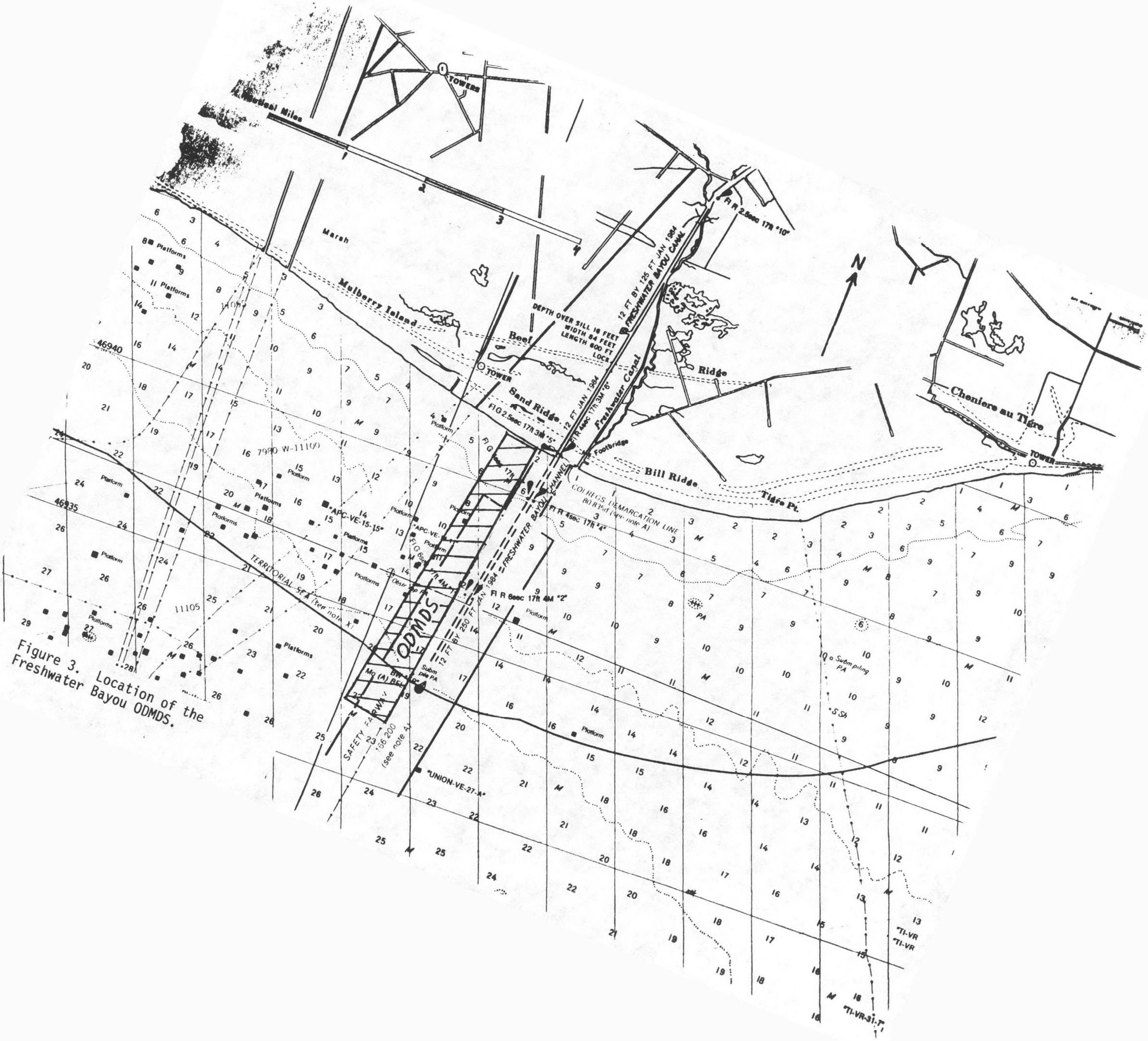

Figure 3. Location of the Freshwater Bayou ODMDS.

The proposed action in this EIS is the designation of the Freshwater Bayou ODMDS. The EIS presents the information used to evaluate the suitability of the site and is based on environmental studies conducted in the area.

The COE is likely to be the sole user of the Freshwater Bayou ODMDS. The COE does not issue itself a permit; however, the requirements that must be met before dredged material from a COE project can be discharged into the ODMDS are the same as when a permit is required. Prior to dredged material disposal, the COE evaluates the material for compliance with 40 CFR Part 227 criteria and provides the results of its evaluation to the EPA and other agencies. The EPA reviews the information and determines whether the proposed dumping complies with the criteria. If a non-Federal entity desires to use the Freshwater Bayou ODMDS for dredged material disposal, the COE would apply the criteria in 40 CFR Part 227 during its public interest review of the permit application.

PURPOSE AND NEED

The purpose of the proposed action is to designate an environmentally acceptable ocean location for continued disposal of materials dredged from the offshore reach of Freshwater Bayou.

The Freshwater Bayou is an important entrance to and from Intracoastal City, Louisiana, and the Gulf of Mexico. The channel provides access for commercial traffic carrying crude petroleum, fish, manufactured products, water and clay. A designated ocean disposal site is needed for material dredged from the offshore portion of Freshwater Bayou (COE, 1977).

The nearest land disposal area occurs on a beach and sand ridge adjacent to the north end of the ODMDS. Also available are 191 acres paralleling the east side of the land cut from the beach to the Freshwater Bayou lock (COE, 1981). However, this area is already used for disposal of material dredged from the land cut. The remainder of nearby land areas are beach, chenier ridge, or marsh. The beach could use additional material if sufficiently coarse grained, but the material from the Freshwater Bayou Gulf Channel is

very fine. Placement of material on the marsh in this area could be detrimental by smothering otherwise healthy marsh. Also, using other sites would increase costs by necessitating acquisition of new areas.

The authority for designation of ocean disposal sites is the MPRSA of 1972 (86 Stat. 1052), as amended (33 U.S.C.A. § 1401 et seq.). Section 102(c) of Title 1 of the Act authorizes EPA to designate recommended ocean disposal sites and times for disposal of dredged material. The EPA's Ocean Dumping Regulations (ODR) (40 CFR 220-229) must be followed for site evaluation and management. This EIS is being prepared under EPA's voluntary EIS preparation policy.

In accordance with the ODR, site designation will be promulgated by formal rule-making. The proposal by EPA to designate the Freshwater Bayou ODMDS will be published in the Federal Register and will be based on appropriate Federal statutes, disposal site evaluation studies, the draft EIS and supporting documentation. The final rule-making package will be prepared and published in the Federal Register after expiration of the review period on the final EIS.

ALTERNATIVES. This section describes the alternatives that were considered and explains the rationale for their elimination.

NO ACTION. The interim designation of the Freshwater Bayou ODMDS does not have a specific termination date. If no action is taken, the interim designation and the disposal of acceptable dredged material at the site would continue for an indefinate period. The interim designation was made pending completion of any necessary studies and evaluation of the site's suitability for continued use. The environmental studies and evaluation have been completed, and in accordance with the ODR, a decision regarding designation is required.

RELOCATION OF ODMDS TO ALTERNATE OCEAN AREAS. The location of an alternate shallow-water site (one with comparable depths to the interim

site, 0.0-7.0 feet) was determined by avoiding locations of conflicting activities (oil and gas activities, fishing areas, shipwrecks, etc.)(COE, 1984). An alternate shallow-water ODMDS could be located on the east side of the navigation channel or immediately west of the Freshwater Bayou interim ODMDS. These alternate sites would be approximately the same depth and size as the interim site. Environmental effects of dredged material disposal on the physical, chemical, and biological environment of the alternate shallow-water site would be similar to those at the interim ODMDS. Longshore current patterns in the area appear to be generally to the west (MMS, 1989, 1987), but have been studied inadequately (Wells et al., 1981; Murray 1976). Murray (1976) states that very little is known about currents inside the 10-m depth contour along the Louisiana coast. Sediments brought to the Chenier Plain are derived from the Atchafalaya River resulting in active progradation in some areas (Wells et al., 1981). No environmental benefits would be gained by moving the disposal site to either shallow-water alternative location and channel maintenance costs could be increased at the east site due to a possible increased frequency of dredging. Costs would be increased in the area further west because of greater pumping distance. There are no other shallow water sites that would be less damaging environmentally and/or less costly.

Selection of an alternate mid-shelf site was based on criteria similar to those for the alternate shallow-water site. An alternate site in approximately 60 feet of water, located about 30 miles south of the interim site would be acceptable because there are no active oil and gas leases. Because of its greater depth, the mid-shelf area is less dynamic than the shallow-water area. Bottom organisms would be buried as they would be at the interim site. The mid-shelf site would be further from the dredging site than the interim site; thus transportation costs would be much greater. Safety hazards, resulting from transporting dredged material greater distances through areas of active oil and gas development and shipping, would be increased. Surveillance methods would be similar to those at the interim site, but surveillance would be more expensive because of the additional travel time to the site. Monitoring would also be more expensive due to greater distances and water depths involved. In addition,

use of the mid-shelf site would remove sediments from the nearshore environment and make them less available for movement and deposition by longshore currents.

The deep-water region lies off the continental shelf seaward of the 400-foot depth contour. An alternate deep-water ODMDS could be located off the continental shelf about 100-110 miles south of the interim site. No specific site was selected for evaluation, but the characteristics of a deep-water site were considered. The dredged material would be dispersed over a larger area because of the dissipation of the descending plume. Sediments reaching the bottom would tend to remain in place because of the slow erosion and transport. Effects on benthic organisms would be less than those at the interim site or mid-shelf alternate sites because it is a natural deposition zone (MMS, 1987). Safety hazards would be increased by longer distances required to transport the material. Surveillance and monitoring would be more costly and difficult because of deep water. Annual costs of disposal would be significantly increased over costs at the interim site because special deep-water barges would be required and travel time would be increased over use of a mid-shelf site. With existing equipment, it is not feasible to dredge and transport the necessary volume of material. Use of the deep-water site would remove sediments from the nearshore environment and make them unavailable for deposition.

BEACH NOURISHMENT AND MARSH CREATION ALTERNATIVES. Beach nourishment and marsh creation with the material dredged from the Freshwater Bayou Gulf channel are options supported by some state and Federal agencies, including the EPA and the COE. EPA believes that marsh creation and/or beach nourishment should be evaluated each time the COE or any other entity plans to use the site. Site designation will not preclude the use of material for marsh creation and/or beach nourishment.

The material is mostly silt and clay (91%) (COE, 1978) and would not be the best material for beach nourishment. Fine grained material taken from the Gulf channel would quickly wash away if placed on the beach. Also, it would be more expensive ($400,000 greater) than using the ODMDS.

Material could also be pumped to an area of broken marsh (about 210 acres), 2.5 mi. northeast of the Freshwater Bayou Gulf channel, for marsh creation. However, this would increase costs by up to $640,000 per disposal. Should another entity desire to absorb these costs, the COE would coordinate the effort with them. The COE may be able to fund the increase in costs, depending on budgetary constraints via Section 150 of the Water Resources Development Act (WRDA) of 1976, or it could be cost-shared (75 percent Federal, 25 percent local) under Section 1135 of WRDA 1986. The COE must apply for the extra funds each dredging cycle. An acceptable ODMDS would be necessary if funding is not approved.

PREFERRED ALTERNATIVE

The alternative preferred by the EPA and COE is the designation of the historically-used interim Freshwater Bayou ODMDS. The boundary coordinates of the preferred site (Figure 3) are 29° 31' 59" N., 92° 18' 47" W.; 29° 32' 04" N., 92° 19' 17" W.; 29° 28' 24" N., 92° 19' 28" W.; 29° 28' 29" N., 92° 19' 57" W.; thence to the point of beginning. A need exists for locating and designating an acceptable ODMDS in the vicinity of the Freshwater Bayou Gulf channel. The need for continued disposal of dredged material from Freshwater Bayou has been demonstrated (COE, 1977; 1981) and the no-action alternative is considered unacceptable. Because creation of marsh with the material may not be possible for every dredging cycle, an acceptable ODMDS is needed. Selection of this alternative is based on the following information: 1) the Freshwater Bayou site has been in use for some 22 years with minimal adverse environmental effects, 2) no adverse environmental effects were detected outside the site boundaries during environmental surveys, 3) relocation of the site to other ocean areas would subject new areas to adverse effects of dredged material disposal, without resulting in environmental advantages over continued use of the interim site, and 4) the costs of using any other sites would be greater than those associated with the interim site. Utilizing the eleven specific criteria (40 CFR 228.6) and the five general criteria (40 CFR 228.5), EPA has determined that the final designation of the Freshwater Bayou ODMDS is environmentally acceptable.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

The Freshwater Bayou ODMDS is located in southwest Louisiana about 20 miles south, southwest of Intracoastal City, in Vermilion Parish (Figure 3). The area from Vermilion Bay into Texas is the Chenier Plain, a complex mixture of wetlands, uplands, and open water formed by sea level rise and fall associated with glacial advance and retreat (Gosselink et al., 1979). The continental shelf extends about 100 miles south of the interim ODMDS. Much of the Chenier Plain is currently retreating to the north. Longshore currents are generally to the west (MMS, 1989; Federal Energy Administration, 1977). The mouths of rivers from the Chenier Plain have been shifted progressively toward the west by the dominant currents to the west (Gosselink et al., 1979). This phenomenon is exemplified by the Mermentau River. Beaches in the immediate area are mostly sand, east of Freshwater Bayou, or silt, west of Freshwater Bayou. The area from about 6-7 miles west of Freshwater Bayou to the Freshwater Bayou area was stable or accreting, while the area east of the bayou for about 8 miles was eroding (COE, 1971). Study of infrared photography from 1978 to 1988 shows these phenomena are still occurring.

The climate in the area is subtropical, rainfall averages about 144 cm (57 in) per year, and winds are generally southeasterly, although northerly winds occur more frequently in winter (Murray, 1976). Hurricanes and tropical storms occur in summer and early autumn, with a frequency of about once every three years in or near southwest Louisiana (COE, 1972). These storms have a tremendous influence on sediment movement, erosion, and deposition.

SPECIFIC AND GENERAL CRITERIA

Section 228 of the ODR mandates that 11 specific criteria and five general criteria be utilized to select and evaluate a potential ODMDS. These

criteria are discussed in the following paragraphs; the impacts of site designation and past use on each criteria are analyzed.

Specific Criteria (§ 228.6)

1) "Geographical position, depth of water, bottom topography and distance from coast."
See Figures 1, 2, and 3 for the location of the proposed site. Water depths at the site range from 0.0 to 4.9 m (0.0-17.0 ft). Bottom topography slopes gently to the south (5.0 ft/mi). The site begins adjacent to the shore and extends approximately 4.1 miles offshore.

2) "Location in relation to breeding, spawning, nursery, feeding, or passage areas of living resources in adult or juvenile phases."
Breeding, spawning, nursery, feeding, and passage of shrimp, menhaden, bottom fish, and other organisms occur within the entire northern Gulf of Mexico, and thus, also in the vicinity of the ODMDS. The Freshwater Bayou Gulf channel is a pathway for movement of fish and shellfish between the Gulf and the Vermilion estuary. Migration of fish and shellfish through passes is heaviest during spring and fall (Darnell et al., 1983). Major estuaries including Rockefeller National Wildlife Refuge, the Vermilion Basin, and Rainey Wildlife Refuge and Game Preserve are located in the area (Gaidry and White, 1973). The Freshwater Bayou ODMDS represents a small area of the total range of fisheries resources. Impacts to endangered or threatened turtles and whales that might utilize the disposal area are negligible. No known waterbird nesting colonies are located near the ODMDS (Keller et al., 1984).

3) "Location in the relation to beaches and other amenity areas."
The ODMDS is 0.5 miles west of the nearest beach, only mudflats occur west of Freshwater Bayou for several miles. The beach is sparsely used because of shallow turbid water, lack of access, and its distance from population centers. The turbidity plume resulting from disposal would go to the west and would not adversely impact the beach, which is predominantly mud.

4) "Types and quantities of wastes proposed to be disposed of and proposed methods of release, including methods of packing the waste, if any."

The material to be disposed is from the Freshwater Bayou Gulf channel and consists of a mixture of sand, silt, and clay obtained by hydraulic dredge. Sediments are dominated by fine-grained material (silts and clays), comprising 88 percent of the sediment in the channel at mile -1.0 (COE, 1981). This compares with 93 percent silts and clays in the ODMDS in an adjacent location. Approximately 1.2 million cubic yards of material are disposed in the site during each use, based on historical use (Table 1). Included in this volume is material dredged from the land cut to the lock, which is deposited in inland disposal areas, so it is an overestimate. The material is removed with a hydraulic dredge and released in the ODMDS. The material is not packaged in any way. Future disposal is expected to be similar to past actions, in terms of material types, quantities, and method of disposal. The Corps of Engineers would likely be the only user of the site.

TABLE 1
HISTORIC DISPOSAL VOLUMES - MERMENTAU RIVER
ODMDS, 1960-1988

Dredging Period	Volume (yd^3)
1968	1,439,000
1970	1,265,000
1972	1,000,000
1974	830,000
1978	1,217,000
1982	1,266,000
1985	1,067,000

5) "Feasibility of surveillance and monitoring."

Surveillance is possible by shore-based radar, aircraft, or day-use boats. No surveillance is currently performed by the U.S. Coast Guard. Monitoring would be facilitated by the fact that the ODMDS is nearshore, in fairly shallow waters, and has baseline data available. The primary purpose of monitoring is to determine whether disposal at the site is significantly affecting areas outside the disposal area and to detect any unacceptable

adverse effects occurring in or around the site. Based on historic data, an intense monitoring program is not warranted. However, in order to provide adequate warning of environmental harm, the EPA will develop a monitoring plan in cooperation with the COE. The plan would concentrate on periodic depth soundings and sediment and water quality testing. Details of the monitoring plan will be developed and implemented after completion of the proposed site designation action.

6) "Dispersal, horizontal transport, and vertical mixing characteristics of the area, including prevailing current direction and velocity, if any." Mixing processes, current characteristics, and sediment transport in the nearshore region off the Chenier Plain are influenced by tidal currents, winds, and storms. Because of the shallow water, the water column is generally well mixed. Using data collected off shore of Vermilion Bay, the area can experience density stratification during periods of very low freshwater inflow, mainly September and October (Barrett et al., 1978). In the summer, bottom waters on the Louisiana shelf are occasionally oxygen depleted (Rabalais et al., 1985), which can cause mortality of benthic organisms. This phenomenon does occur during the summer off the coast of the Chenier plain region (Gaston et al., 1985), but does not occur in the Vermilion Bay area (Rabalais et al., 1985). This is apparently related to the low probability of density stratification. It appears that the predominant current is to the west, but easterly currents occur with storm events (MMS, 1989; Federal Energy Administration, 1977; Murray, 1976). Data on the specifics of currents in the area are sparse (Murray, 1976).

7) "Existence and effects of current and previous discharges and dumping in the area (including cumulative effects)."
Dredged materials from construction and maintenance of the Freshwater Bayou channel have been disposed at the interim ODMDS since 1968 and no significant adverse impacts have resulted. Previous disposals have caused minor effects, such as temporary increases in suspended sediment concentrations, temporary turbidity, sediment mounding, smothering of benthic organisms, release of nutrients, possible minor releases of trace

metals, and a temporary change in sediment grain size. The material is swept in a westerly direction by prevailing currents. Because the effects of disposal are temporary, there are no cumulative effects.

8) "Interference with shipping, fishing, recreation, mineral extraction, desalination, fish and shellfish culture, areas of special scientific importance, and other legitimate uses of the ocean."

In the vicinity of the ODMDS the majority of shipping traffic is confined to the Freshwater Bayou channel. Dredging Freshwater Bayou facilitates shipping; periodic deposition of material dredged from Freshwater Bayou in the ODMDS has some potential for interfering with ship movement in the area during disposal operations.

Nearshore and estuarine areas of the Chenier Plain also contain a diverse and highly productive fishing ground for a number of commercial and recreational species (Barrett et al., 1978). The Freshwater Bayou ODMDS represents a very small proportion of the total nearshore fishing grounds in the Chenier Plain and adverse impacts from its use would be temporary and minor. Interferences with fishing may occur if any shoals are created by dredged material disposal, as this could cause groundings of shrimp boats within disposal site boundaries. If the material is spread evenly, it would raise bottom elevations within the ODMDS by about 0.5 ft, which should present no problems for shipping and other uses. The material would eventually move toward the west, which would occur naturally if the dredging and disposal in the ODMDS did not occur.

The nearest oyster leases are just west of Chenier au Tigre near Vermilion Bay (Dunham, 1989; personal communication), some 5 miles to the east of the ODMDS. Designation of the ODMDS would not impact these or any other lease areas. Desalination areas do not occur in the vicinity of the ODMDS. The site is located about 12 miles east of the Rockefeller National Wildlife Refuge and 9 miles west of Paul J. Rainey Wildlife Refuge and Game Preserve. There has been no impact to the refuges from the use of the site and no impact is expected to occur in the future.

Petroleum and mineral-extracting activities occur offshore within 2,000 feet of the ODMDS and are not impacted by use of the site. Also, there are oil and gas pipelines that occur throughout the area that have not been impacted by the deposition of dredged material. Intermittent dumping does not interfere with the exploration or production phases of resource development, or with other legitimate uses of the ocean.

9. "The existing water quality and ecology of the site as determined by available data or by trend assessment or baseline surveys."

Physical Environment Baseline Conditions - Water and sediment samples were taken in the project area in 1977 (COE, 1977). These data demonstrated that concentrations of copper, lead, mercury, and nickel in the water (Table 2) were above EPA chronic criteria for saltwater aquatic organisms (EPA, 1986). Data from Arcement et al. (1989) indicate that the Atchafalaya River is apparently a source of pollutants in the area; however, the concentrations of copper found are unusually high and may be in error. Sediment data show that chemical concentrations in the channel and the disposal area are similar (COE, 1977). Elutriate data from the channel sites showed exceedence of the EPA chronic criteria for mercury and manganese at all the channel sites (see Table 2 for locations). Copper concentrations were within the criterion (EPA, 1986). Elutriate mercury concentrations were within the EPA acute criterion, which is a better gage for predicting disposal impacts. Few data are available concerning toxicity of manganese to marine organisms. However, manganese is the second most abundant metal in the earth and it is a micronutrient. Few cases of manganese toxicity to humans have been found throughout the world (EPA, 1986). Further testing is planned this year to identify any changes in conditions.

Water temperatures parallel air temperatures and range from 31°C in summer to 10°C during winter. Surface salinities vary from 0 to 24 ppt near the Freshwater Bayou ODMDS (Barrett et al., 1978). The water is generally well oxygenated (3.5-11.4 mg/l) (see Specific Criteria Number 6) and alkaline

TABLE 2

ARSENIC AND HEAVY METALS IN NATIVE WATER AT THE FRESHWATER BAYOU-GULF CHANNEL (1977) *

Parameter (ug/l)	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	EPA Criteria Chronic	Acute
Arsenic	2	1	1	1	1	1	1	1	36	69
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	none	none
Cadmium	<0.5	<0.5	<0.5	<0.5	<0.5	12	<0.5	<0.5	9.3	43
Chromium	30	20	20	20	20	20	20	20	50	1100
Copper	**7** **	**4**	**35**	**27**	**25**	**5**	**4**	**3**	2.9	2.9
Lead	4	2	**6**	0.5	<0.5	<0.5	<0.5	<0.5	5.6	140
Mercury	**0.7**	<0.05	<0.05	<0.05	<0.05	<0.05	**1.7**	<0.05	.025	2.1
Nickel	6	4	5	8	6	5	**23**	3	8.3	75
Manganese	70	50	50	60	60	50	40	30	100	100
Zinc	40	50	50	30	50	50	50	30	86	95
Selenium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	54	410
Vanadium	240	290	300	350	330	340	290	340	none	none

* Site 1: Inland Channel, mile 1.0
Site 2: Channel, mile -1.0
Site 3: West Side, mile -1.0
Site 4: East Side, mile -2.0
Site 5: Channel, mile -2.0
Site 6: West Side, mile -2.0
Site 7: Channel, mile -3.0
Site 8: West Side, mile -3.0

** Boldface values exceed EPA criteria

(Barrett et al., 1978). Water quality appears to be fair in the area of the ODMDS and highly influenced by the Atchafalaya River.

Nutrient concentrations, turbidity, and suspended solids, are directly related to discharge from the Atchafalaya River. All are generally high in the area of the ODMDS (Barrett et al., 1978) with peaks occurring from February-May.

Physical Environment Impacts - Temporary mounding can occur within the ODMDS during discharge, which reduces water depths. The disposed sediments are reworked by waves and littoral currents and are moved out of the ODMDS. The direction and speed of currents are variable, but sediments generally drift toward the west under most circumstances. The channel has coarser grained material than the ODMDS at two of three stations, leading to a slight difference between sediment grain size in the ODMDS and areas east of the channel (COE, 1978). These grain size differences are expected to remain with continued use of the site.

Contaminants are generally not released into the water following disposal, but remain associated with the sediments, especially silts and clays (Brannon et al., 1978), which predominate in the Freshwater Bayou-Gulf channel. Elutriate tests indicated that concentrations of mercury and manganese could exceed EPA chronic criteria (COE, 1977) during disposal. Mercury was within the acute criterion. Data (Arcement et al., 1989) indicate that contaminants are derived from the Atchafalaya River. Contaminant release, toxicity, and bioconcentration due to disposal should be minor because of the sediment type, short duration of disposal, and limited area of the work. Mercury should be within the acute EPA criterion and manganese is unlikely to be toxic or bioaccumulate to an appreciable extent in the few days of disposal, despite possible high concentrations initially. Planned water quality tests should help to clarify any possible problems because of manganese release. The chronic criterion of 100 ug/l was recommended for manganese by EPA to protect humans that consume shellfish.

Disposal would temporarily increase turbidity at the site. The duration of the plume depends on particle size, currents, and mixing, but should not extend over an area greater than about 71 acres beyond the ODMDS at any given time. The fine sediments may remain suspended for hours, but would eventually settle and turbidity would return to ambient conditions. The Freshwater Bayou ODMDS is actively used for disposal an average of 14 days per operation. Thus, turbidity would be increased for approximately 2 weeks each year that disposal occurs.

Plankton Baseline Conditions - Plankton communities at the ODMDS fluctuate seasonally and annually as are typical of nearshore waters of the gulf. Phytoplankton consists primarily of marine diatoms and dinoflagellates with populations most closely following seasonal trends in the flows from the Atchafalaya River that bring nutrients. The amounts of phytoplankton generally decrease in a Gulfward direction (Barrett et al., 1978). Dominant components of the zooplankton include gastropod larvae, copepods, and ostracods. Numbers of zooplankton lag behind peak concentrations of phytoplankton with a lag period of about two months (Barrett et al., 1978).

Impacts to Plankton - Impacts of disposal on plankton would be temporary. Plankton in the ODMDS during disposal may be entrained in the dredged material, subjected to decreased light transmission, and possibly exposed to increased levels of contaminants. Solid phase, and liquid and suspended particulate bioassays in 1979 on post larval mysid shrimp and grass shrimp, using sediments collected near the ODMDS, showed no statistically significant mortalities in any test treatment. The bioassay results indicate that dredging in winter would be less likely to produce adverse environmental impacts. The results would be a temporary, localized decline in the concentration and production of phytoplankton and zooplankton. The area has naturally high suspended solids concentrations from the Atchafalaya River, so impacts would be relatively minor.

Benthos Baseline Conditions - Data on benthos at or near the ODMDS are sparse. However, offshore areas near the Calcasieu River were comprised

mainly of polychaete worms and the clam Abra alqualis (Gaston et al., 1985). These organisms are well adapted to the area and are common along the Gulf Coast. They are expected to be common at the ODMDS.

Impacts to Benthos - Benthic organisms in the ODMDS would be buried during disposal. Motile species could burrow upward through the expected 15 cm of substrate (Slotta and Williamson, 1974; Barnes, 1968). Recolonization would start at the cessation of dumping and would be essentially complete within a period of 2-3 months (Gaston et al., 1985). Disposal of dredged material in the ODMDS occurs once every three years; therefore, disturbance would occur approximately 10 percent of the time. Solid phase bioassays conducted in 1978 on mysid shrimp, the Atlantic quahog, a polychaete, and oysters showed no statistically significant differences in test organism survival between controls and any test treatment.

The potential for bioaccumulation of pesticides, polychlorinated biphenyls, heavy metals, and petroleum hydrocarbons in tissues of marine organisms at the Freshwater Bayou ODMDS project area was assessed using Atlantic quahog clams and oysters exposed to test and reference sediments during the solid phase bioassay. In many cases, the tissue concentrations of these constituents were below the detection limits of the analytical procedure. For all but four constituents, the analytically determined concentrations of these materials in animals exposed to test sediments from three stations in the Freshwater Bayou bar channel were either less than or statistically no greater than concentrations found in animals exposed to the reference sediments. Chlordane in the summer series was significantly greater in clams exposed to sediments from two stations than in animals exposed to the reference materials. Aliphatic petroleum hydrocarbons in oysters exposed to test sediments in the summer series from all three stations and aromatic petroleum hydrocarbons in oysters exposed to test sediments in the summer series from one station were statistically greater than concentrations in animals exposed to the reference sediments. Mean cadmium concentration was significantly greater in clams exposed to material from one station than in animals exposed to the reference sediment in the winter series.

Nekton Baseline Conditions - Numerous recreationally and commercially important fishery species exist in Gulf waters off Louisiana. The Vermilion Bay area has shown signs of erosion and increased salinities (Eleuterious, 1971). However, Dugas (1970) presents evidence of decreased salinities in Vermilion Bay. Abundance and composition vary seasonally as many species spend part of their life cycle in the inshore marsh/estuarine complex. The nearshore water in the Vermilion Bay area is the least productive and contains the least diversity of any area along coastal Louisiana (Barrett et al., 1978). Species most common to nearshore waters in the area include white shrimp, bay anchovy, and Atlantic croaker (Barrett et al., 1978). Table 3 summarizes important data concerning these species.

Impacts to Nekton - Due to the ability of nekton to avoid the disposal activities, effects would be minimal. Burial of benthic prey could have a slight, temporary adverse impact on bottom feeders. Data in Table 3 show April through December is the major time period for migrations to and from estuarine areas. Freshwater Bayou is a migration avenue for all estuarine species, especially in the spring and fall (Gosselink et al., 1979). However, Freshwater Bayou was not listed among the most significant passes in terms of fishery migration and tidal movements (Burk and Associates, Inc., 1977). Migration in this area may be adversely impacted while disposal is occurring.

Mammals, Turtles, Birds, and Endangered and Threatened Species Baseline - The numbers and diversity of marine mammals and turtles are low in nearshore waters. The Atlantic bottlenosed dolphin is common in tidal passes (DOI, 1979). Five species of endangered or threatened sea turtles [green (threatened), Kemp's ridley (endangered), hawksbill (endangered), leatherback (endangered), and loggerhead (threatened)] occur in the northern Gulf. Several species of endangered whales may occur in the offshore area including finback, humpback, right, sei, and sperm whales (see letters from FWS and NMFS) (Attachment 1). Several species of oceanic birds and waterfowl may occur throughout the year in the nearshore waters of the area. There are no seabird nesting colonies in the project area (Keller et al., 1984).

TABLE 3

MOST COMMON FISHERIES SPECIES IN NEARSHORE WATERS OF FRESHWATER BAYOU

Common Name	Sci Name	Spawning Area	Major Migratory Time	Source
White Shrimp	*Penaeus setiferus*	7-31m depth	June-Dec	Rounsfell (1975) White & Boudreaux (1977)
Bay Anchovy	*Anchoa mitchilli*	<20m depth	April-August	Robinette (1983) Sheridan et al. (1984)
Atlantic Croaker	*Micropogonias undulatus*	9-73m depths	Oct-Feb May-July	Sheridan et al. 1984 Barrett et al. 1978 Overstreet & Heard 1978

Impacts on Mammals, Turtles, Birds, and Endangered and Threatened Species - Effects of disposal should be minimal on these highly mobile animals. The feeding of sea turtles may be disrupted by burial of prey, but disposal is infrequent and effects are temporary and localized, so significant negative impacts should not occur. Disposal would have little effect on migration or breeding of sea turtles or whales. Food sources of endangered whales would not be affected. Bird nesting colonies on the coast would not be adversely affected by disposal at the site. A Biological Assessement of impacts to threatened and endangered species of turtles and whales was prepared by the COE and forwarded to the NMFS. The analysis showed there would be no adverse impact on threatened and endangered species. The NMFS concurred with this finding (Attachment 1).

Commercial/Recreation Fisheries Baseline Conditions - Waters off the central Louisiana coast, shoreward of the 20m contour, comprise one of the most heavily fished areas in the world (Kutkuhn, 1966). Fishing occurs throughout the year, but activities are more intense from March through October (Adkins, 1972; Dugas, 1981). The most valuable resources have been penaeid shrimp, menhaden, blue crabs, redfish, tuna, and spotted seatrout (Adkins, 1972; Barrett et al., 1978; Barrett and Gillespie, 1973; O'Bannon, 1988).

The port at Intracoastal City, Louisiana, some 21 miles to the north of the ODMDS is the eighth busiest fishery port in the United States, with well over 200 million pounds of fish landed annually in recent years (Holliday and O'Bannan, 1989). In 1988, the total landings at Intracoastal City were 210 million pounds, valued at $14.7 million.

The commercial redfish fishery in Louisiana has been closed until September 1, 1991. In Federal waters, there is an indefinite ban on the commercial redfish fishery and recreational fishermen can not keep any redfish. A number of management plans for Gulf fishes have been developed by the Gulf of Mexico Fishery Management Council and approved by the National Oceanic and Atmospheric Administration.

Impacts to Commercial/Recreational Fisheries - There would be some physical interference with commercial and recreational fishing during disposal. However, it would be confined to the ODMDS itself and impacts should be minimal. There would be minimal danger of heavy metal or CHC contamination of fish and or shellfish during disposal as shown by elutriate analyses and bioaccumulation studies discussed earlier in this report.

Shipping and Navigation Baseline Conditions - Shipping tonnage on Freshwater Bayou was 200 thousand tons in 1987 (COE, 1989). Commodities included mainly crude petroleum, water, clay, and machinery.

Impacts To Shipping and Navigation - Temporary shoaling after disposal may reduce water depths within the site. However, the Freshwater Bayou ODMDS is marked on NOAA navigation charts. The dredges may interfere with shipping by temporarily blocking sections of the channel. This is an unavoidable adverse impact resulting from disposal at the site.

Esthetics Baseline Conditions - Turbidities in the vicinity of the ODMDS are high from November-June, but tend to be lower during June-October when wind patterns are more stable from the south and the Atchafalaya River has low flows. Man-induced noise in the area is from passing vessels and oil and gas activity.

Impacts to Esthetics - Disposal would cause a temporary turbidity plume of about 2,000 feet from the end of the discharge pipe (May 1973; Carstea et al., 1976; Stern and Stickle, 1978; Bokuniewicz and Gordon, 1980) that would disperse soon after disposal ceases. The dredging and disposal activities would temporarily increase noise levels in the vicinity of the ODMDS, but should not disturb wildlife.

Industrial Development Baseline Conditions - The nearest land masses to the ODMDS is the beach area and the saline marsh behind it. The entire area of beach near the ODMDS is sparsely developed and has no roads connecting it to inland highways. The town of Intracoastal City is the nearest sizeable

community to the ODMDS at a distance of about 21 miles. It serves as a base for commercial fishing, oil and gas development, and agriculture. There are numerous active oil and gas wells in the vicinity of the ODMDS.

Industrial Development Impacts - There would be no impact on oil and gas or other industrial activities by use of the ODMDS.

10. "Potential for the development or recruitment of nuisance species in the disposal sites." No nuisance species have developed at the Freshwater Bayou ODMDS, and none are expected to develop in the future.

11. "Existing at or in proximity to the site of any significant natural or cultural features of historical importance." Cheniers and beach ridges in the area are ancient Gulf beaches that serve important functions as wildlife habitat, storm barriers, and limiting salt water intrusion into marshes (Burk and Associates, Inc., 1977). A survey to identify archeological and historical resources is not required at this time. However, a Nautical Resources Plan for the COE is being prepared in consultation with the Louisiana State Historic Preservation Officer. Under guidelines established by this plan, studies may be done in the future to evaluate impacts to historic shipwrecks that may result from use of the Freshwater Bayou ODMDS.

General Criteria (§228.5)

(a) The dumping of material into the ocean will be permitted only at sites or in areas selected to minimize the interference of disposal activities with other activities in the marine environment, particularly avoiding areas of existing fisheries or shellfisheries, and regions of heavy commercial or recreational navigation.

The interim ODMDS is located adjacent to the Freshwater Bayou Gulf approach channel. A hydraulic dredge is used generally for about two weeks every three years and there is limited transport and interference with

other activities in the marine environment. There may be some minor interference with fishing and navigation during the dredging and disposal activities. It is expected that there will be no interference with these or other marine activities outside these brief periods. Dredging the channel will facilitate commercial and recreational activity.

(b) Locations and boundaries of the disposal sites will be so chosen that temporary perturbations in water quality or other environmental conditions during initial mixing caused by disposal operations anywhere within the site can be expected to be reduced to normal seawater levels or to undetectable contaminants or effects before reaching any beach, shoreline, marine sanctuary, or known geographical fishery or shellfishery.

There would be a turbidity plume of about 2,000 feet during the actual dredged material disposal operations (May 1973; Carstea et al., 1976; Stern and Stickle, 1978; Bokuniewicz and Gordon, 1980). This plume should be dispersed beyond 2,000 feet to the point where it is undetectable from the turbidity naturally occurring in the area. It could reach a small section of nearby beach to the west of Freshwater Bayou. However, this beach area is naturally muddy, so impacts would be minimal. Any temporary changes in water quality would also return to ambient concentrations within a short distance and would have a very minor impact on the beaches. There are no marine sanctuaries in the area. Commercial fisheries exist; however, these are not unique to the area of the site, and would be minimally impacted.

(c) If at anytime during or after disposal site evaluation studies, it is determined that existing disposal sites presently approved on an interim basis for ocean dumping do not meet the criteria for site selection set forth in §§228.5 - 228.6, the use of such sites will be terminated as soon as suitable alternative disposal sites can be designated.

The studies to date indicate that the interim ODMDS meets the requirements of both §228.5 and §228.6. Surveys of the site indicated the water quality and sediments were generally similar inside and outside the ODMDS. No permanent adverse environmental effects inside or outside the site boundaries due to dredged material disposal have been noted.

(d) The sizes of ocean disposal sites will be limited in order to localize for identification and control any immediate adverse impacts and permit the implementation of effective monitoring and surveillance programs to prevent adverse long-range impacts. The size, configuration, and location of any disposal site will be determined as a part of the disposal site evaluation or designation study.

The configuration of the interim ODMDS has resulted from the ease and economics of disposal from maintenance dredging the Freshwater Bayou Gulf channel. The proximity led to the establishment of a site parallel to the channel in the direction of prevailing current. The site lends itself to surveillance of individual dredged material disposal operations and long-term monitoring because of its distinct location and proximity to inland docking areas.

(e) EPA will, wherever feasible, designate ocean dumping sites beyond the edge of the continental shelf and other such sites that have been historically used.

The interim site has been used historically for disposal of dredged material; there is no environmental advantage to locating the site beyond the shelf without incurring large increases in the cost of disposal. Material would have to be transported some 100 miles south of the bar channel near the Bauma Bank and other banks. Therefore, impacts to shipping and the oil and gas industry could be greater than deposition in the interim ODMDS.

CUMULATIVE IMPACTS

There are active oil and gas platforms located just west of the ODMDS. Production and associated impacts of inshore developments probably have been declining since the late 1960's (MMS, 1984). Pipelines from offshore oil and gas rigs traverse the area. The adverse impacts from offshore oil and gas development in the Gulf are generally temporary and localized. The occasional use of the ODMDS would result in additional temporary, localized impacts to the nearshore area. Use of the ODMDS would not adversely impact marsh, Cheniers, or beaches in the area.

PUBLIC INVOLVEMENT

Coastal Zone Consistency - The EPA is coordinating with the Louisiana Department of Natural Resources (LDNR) concerning the consistency of final designation of the Freshwater Bayou ODMDS with the Louisiana Coastal Zone Management Plan. Designation by EPA only makes the site available for disposal of dredged material. Site designation does not preclude the consideration of other disposal options, including beneficial use. Each time the COE desires to use the site, they would go through the same actions as if they were applying for a permit.

History of Public Involvement - The COE prepared an EIS in 1975 (COE, 1975) for operation and maintenance work in Freshwater Bayou. The COE published an Environmental Assessment to update the EIS in 1981 (COE, 1981). Also, a Maintenance Dredging Ocean Dumping Assessment was prepared in 1977 (COE, 1977).

A Notice of Intent to prepare the EIS for the Freshwater Bayou ODMDS was published in the Federal Register on 8 December 1989. A scoping input request was sent to all interested parties in November 1989. A scoping document was sent on January 10, 1990, to all parties responding to the scoping input request. Comments received from said parties have been incorporated into the EIS. Letters regarding endangered and threatened

species were sent to the FWS, the NMFS, and the Louisiana Department of Wildlife and Fisheries; responses are included in this document (Attachment 1). Biological Assessments were prepared by the COE and sent to the NMFS. The NMFS concurred with the COE conclusion that the proposed action would not adversely impact threatened and endangered species (Attachment 1).

Coordination of the draft EIS - This EIS will be sent to the following agencies, groups, and individuals:

FEDERAL

Honorable J. Bennett Johnston
Honorable Lindy Boggs
Honorable Robert Livingston
Honorable Jimmy Hayes
Honorable Jim McCrery

Honorable John B. Breaux
Honorable Jerry Huckaby
Honorable Richard Baker
Honorable Billy Tauzin
Honorable Clyde Holloway

Dept. of the Interior
Washington, DC

U.S. Fish and Wildlife Service
Lafayette, LA

Mineral Management Service
New Orleans, LA

U.S. Dept. of Commerce
Washington, DC

Advisory Council of Historic Preservation
Washington, DC
Golden, CO

U.S. Coast Guard
New Orleans, LA

Dept of Agriculture
Alexandria, LA

National Marine Fisheries Service
Baton Rouge, LA
St. Petersburg, FL

Forest Service
Atlanta, GA

Dept. of Health and Human Services
Washington, DC

Centers for Disease Control
Atlanta, GA

STATE OFFICIALS AND AGENCIES

Governor of Louisiana

Honorable Cecil J. Picard
Honorable Jack Doland
Honorable "Randy" Roach
Honorable "Sam" Theriot

Attorney General of Louisiana

La. Dept. of Health and Human Resources

La. Dept. of Wildlife and Fisheries

STATE OFFICIALS AND AGENCIES (Cont'd)

La. Dept. of Transportation and Development

La. Natural Heritage Program

La. Dept. of Natural Resources
Office of Environmental Affairs
Division of State Lands
Coastal Resources Program
Coastal Restoration Division

La. Dept. of Culture, Recreation and Tourism
State Historic Preservation Officer
Office of State Parks

LSU
Center for Wetlands Resources
Curator of Anthropology

Technical Coordinator for Coastal Activities

La. Dept. of Environmental Quality
Water Pollution Control Division

La. Dept. of Commerce

La. State Planning Office

La. Geological Survey

Archeology NOT not deliverable

Governor's Coastal Protection Task Force

LOCAL AGENCIES

Vermilion Parish Library

Mr. Ernest Trahan, President, Cameron Parish Police Jury

Mr. Harris F. Vallo, President, Vermilion Parish Police Jury

ENVIRONMENTAL GROUPS

Orleans Audubon Society

Mermentau not DEIS not deliverable

Environmental Defense Fund

Chappepeela Group, Sierra Club

National Wildlife Federation

National Resources Defense Council

South LA. Environmental Council

Gulf States Marine Fisheries Comm.

Gulf Coast Conservation Assn.

Gulf Coast Conservation Association

Delta Chapter, Sierra Club

Tulane Law School

Louisiana Wildlife Federation

League of Women Voters of LA

Fund for Animals

Sea Grant Legal Program

Gulf of Mexico Fisheries Management Council

Description of EIS and Rule-making Processes - The draft EIS is being distributed to the above entities for a 45-day review and comment period. A final EIS will be prepared taking into account comments on the draft EIS. Site designation also requires publication of proposed and final rule-making packages in the Federal Register by EPA. The proposed rule should be published concurrent with the draft EIS review period. The final rule will be published after expiration of the 30-day comment period on the final EIS.

LIST OF PREPARERS

The draft EIS was prepared by Robert J. Martinson (Environmental Resource Specialist in the New Orleans District, COE) in cooperation with Darlene Coulson (EIS Project Officer of EPA, Region 6).

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ATTACHMENT 1

Letters from U.S. National Marine Fisheries Service,

the U.S. Fish and Wildlife Service,

and the Louisiana Natural Heritage Program

Concerning Threatened and Endangered Species

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

Southeast Regional Office
9450 Koger Boulevard
St. Petersburg, FL 33702

November 13, 1989 F/SER23:TLD

Mr. R. H. Schroeder, Jr.
Chief, Planning Division
U.S. Dept. of the Army
New Orleans District, COE
Post Office Box 60267
New Orleans, LA 70160-0267

Dear Mr. Schroeder:

This responds to your November 3, 1989, letter requesting information on endangered and threatened species under the jurisdiction of the National Marine Fisheries Service (NMFS) which might occur in the vicinity of the proposed project. The enclosed list contains species under NMFS purview that may occur in the marine environment off Louisiana.

If you have any questions, please contact Dr. Terry Henwood, Fishery Biologist, at FTS 826-3366.

Sincerely yours,

Charles A. Oravetz

Charles A. Oravetz, Chief
Protected Species Management Branch

Enclosure

ENDANGERED AND THREATENED SPECIES AND CRITICAL HABITATS
UNDER
NMFS JURISDICTION

Louisiana

Listed Species	Scientific Name	Status	Date Listed
finback whale	*Balaenoptera physalus*	E	12/02/70
humpback whale	*Megaptera novaeangliae*	E	12/02/70
right whale	*Eubaleana glacialis*	E	12/02/70
sei whale	*Balaenoptera borealis*	E	12/02/70
sperm whale	*Physeter catodon*	E	12/02/70
green sea turtle	*Chelonia mydas*	Th	07/28/78
hawksbill sea turtle	*Eretmochelys imbricata*	E	06/02/70
Kemp's (Atlantic) ridley sea turtle	*Lepidochelys kempi*	E	12/02/70
leatherback sea turtle	*Dermochelys coriacea*	E	06/02/70
loggerhead sea turtle	*Caretta caretta*	Th	07/28/78

SPECIES PROPOSED FOR LISTING
None

LISTED CRITICAL HABITAT
None

PROPOSED CRITICAL HABITAT
None

United States Department of the Interior

825 Kaliste Saloom Rd.
Brandywine Bldg. II, Suite 102
Lafayette, Louisiana 70508

November 21, 1989

Mr. R. H. Schroeder, Jr.
Chief, Planning Division
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160

Dear Mr. Schroeder:

This is in response to your November 3, 1989, letter in which you requested information concerning listed and proposed threatened and endangered species that may be impacted by disposal of dredged material at two ocean dredged material disposal sites in the Gulf of Mexico. One site is near the mouth of Freshwater Bayou Canal in Vermilion Parish and the other is near the mouth of the Mermentau River Channel in Cameron Parish. The following comments are provided in accordance with provisions of the Endangered Species Act (87 Stat. 884, as amended: 16 U.S.C. 1531 et seq.).

Our records indicate that no endangered, threatened, or proposed species or their critical habitat occur within the disposal areas. However, the National Marine Fisheries Service is responsible for aquatic marine threatened or endangered species. Contact Terry Henwood (813/893-3366) in St. Petersburg, Florida, for information concerning those species.

If you anticipate any changes in the scope or location of this project, please contact Kim Mitchell of this office for further coordination.

Sincerely yours,

David M. Smith
Acting Field Supervisor

NOV 1 3 1989

State of Louisiana

DEPARTMENT OF WILDLIFE AND FISHERIES
POST OFFICE BOX 98000
BATON ROUGE, LA. 70898
PHONE (504) 765-2800

VIRGINIA VAN SICKLE
SECRETARY

BUDDY ROEMER
GOVERNOR

November 7, 1989

R. H. Schroeder, Jr.
Chief, Planning Division
Environmental Analysis Branch
Department of the Army
New Orleans District, Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160-0267

RE: Disposal of dredged material in two ocean dredged material sites - Mermentau River and Freshwater Bayou (Letter dated 3 Nov. 89)

Dear Mr. Schroeder,

A review of the Louisiana Natural Heritage Program's data base for significant ecological features revealed no occurrences of endangered or threatened plants or animals within the proposed project boundary.

The Louisiana Natural Heritage Program has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. While this information is available for preparation and review of environmental assessments, it is not a substitute for on-site surveys. The quantity and quality of data collected by this inventory are dependent on the research and observations of many individuals and organizations. In many cases, information on environmental elements is not the result of comprehensive field surveys.

For this reason, the Louisiana Natural Heritage Program cannot provide an absolutely definitive statement on the presence, absence, or degree of health of environmental elements in Louisiana.

Sincerely,

Gary Lester

for Virginia Van Sickle
Secretary

VVS:GDL/plh
cc: Ecological Studies Section

EPA/906/07-90-008

Environmental impact
statement: Freshwater
Bayou ocean dredged...

FEB 2 1 1990

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

Southeast Region
9450 Koger Boulevard
St. Petersburg, FL 33702

February 12, 1990 F/SER23:TLD

Mr. R. H. Schroeder, Jr.
Chief, Planning Division
U.S. Dept. of the Army
Post Office Box 60267
New Orleans, LA 70160-0267

Dear Mr. Schroeder:

This responds to your January 17, 1990, letter regarding the potential impacts of ocean disposal of dredged materials at two sites, offshore Louisiana. A Biological Assessment (BA) was submitted pursuant to Section 7 of the Endangered Species Act of 1973 (ESA)

We have reviewed the BA and concur with your determinations that populations of endangered/threatened species under our purview would not be adversely affected by the proposed action.

This concludes consultation responsibilities under Section 7 of the ESA. However, consultation should be reinitiated if new information reveals impacts of the identified activity that may affect listed species or their critical habitat, a new species is listed, the identified activity is subsequently modified or critical habitat determined that may be affected by the proposed activity.

If you have any questions, please contact Dr. Terry Henwood, Fishery Biologist at 813/893-3366.

Sincerely yours,

Terry Henwood

for Charles A. Oravetz, Chief
Protected Species Management Branch

cc: F/SER1
F/PR2