



LAKE PONTCHARTRAIN, LOUISIANA
AND VICINITY HURRICANE PROTECTION PROJECT

COMBINED PHASE I TYPE GENERAL
DESIGN MEMORANDUM AND REVISED
ENVIRONMENTAL IMPACT STATEMENT
PLAN OF STUDY

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Prepared by: US Army Engineer District, New Orleans
September 1981

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HURRICANE PROTECTION PROJECT

PHASE I TYPE GENERAL DESIGN MEMORANDUM AND PLAN OF STUDY

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LAKE PONTCHARTRAIN, LOUISIANA, AND VICINITY HURRICANE PROTECTION PROJECT -
COMBINED PHASE I TYPE GENERAL DESIGN MEMORANDUM AND REVISED ENVIRONMENTAL
IMPACT STATEMENT - PLAN OF STUDY

This Plan of Study (POS) for a Phase I Type GDM report including a revised environmental impact statement (EIS) has been prepared in response to LMVPD-P (LMV 23 Mar 81) 2nd Ind (23 Jul 81) regarding subject project. Data has been presented in sufficient scope and detail to summarize and justify the work necessary to revise the current EIS (placed on file with CEQ on 8 Jan 75) in response to the modified US Fifth District Court Order of 30 Dec 77.

1. Project Authorization Data

a. The Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection project was authorized for construction on 27 October 1965 by Public Law 89-298, the Flood Control Act of 1965 (House Document 231/89/1). The final environmental impact statement (EIS) was filed with the Council on Environmental Quality (CEQ) on 9 Jan 75. On 30 Dec 77, the Honorable Judge Charles Schwartz of the US 5th District Court, ruling on combined suits which had been filed against the project, held that the final EIS was legally inadequate and enjoined further construction of several project features until such time as the EIS deficiencies were rectified. Judge Schwartz subsequently modified the original injunction in separate actions on 8, 10, and 27 March 1978. As modified, the injunction stops any construction of the barrier features of the authorized plan at the Rigolets and at Chef Menteur Pass until the final EIS is revised to the satisfaction of the court while allowing construction of other project features to proceed.

b. To adequately respond to the specifics of the court's ruling effectively requires preparation of a new EIS and Phase I GDM. Revised EIS studies have been underway for some time, but a Notice of Intent to Prepare an EIS Supplement has not yet been published.

c. Two types of concepts form the basis for all alternatives being considered; they are: building barrier structures such as those authorized in tandem with construction of levees and floodwalls (barrier plans), or simply building levees and floodwalls (high level plans). Alternatives consist of varying levee alignments, degrees of protection, and types of construction. Any of the alternatives which are price competitive with the authorized plan and provide Standard Project Hurricane (SPH) protection could be approved by the Chief of Engineers under his discretionary authority as design changes (based on a reading of Corps' regulations).

d. Current data on project justification is contained in incl 1.

2. Statement of Controversial Issues and Areas of Concern.

a. With regards to the authorized plan, there is wide-spread concern that construction and operation of the proposed barrier complexes at the Rigolets and Chef Menteur Pass would result in significant long term environmental degradation of Lake Pontchartrain as a result of altering tidal exchange. The environmental impact analyses of these proposed structures in the existing EIS were specifically found to be inadequate by the court. Since the injunction, we have contracted with WES, Louisiana State University (LSU), and the University of New Orleans (UNO) to perform extensive studies focusing on the lake's tidal exchange mechanisms. We also contracted separately with LSU to perform baseline environmental studies of the main body of the lake; these studies are essentially complete. WES studies of tidal prisms and the proposed structures' effects upon same are essentially complete. The LSU and UNO tidal transport contracts were broken down into two phases; phase I, which is complete, consisted of study design and phase II was to consist of a 1-year sampling program and subsequent data analyses. LSU was responsible for physical and biological transport and UNO for chemical transport. LSU's contract has been terminated and the district has requested permission to terminate the UNO contract. Phase II work can be contracted if future study results warrant such action, i.e., if results indicate that we would likely recommend a barrier type plan. It should also be noted that navigation interests were opposed to the barrier plan because they perceived that the proposed complex at the Rigolets would limit the size of future navigation.

b. The existing levee alignment in the New Orleans East area incloses about 19,000 acres of wetlands. Environmental interests are opposed to development of these wetlands. In our original economic analyses, we claimed enhancement benefits (now called location benefits) for future development. Using current criteria, we do not claim location benefits for development of the inclosed wetlands, nor do we need such benefits to justify the existing levee alignment; however, the district recently received a permit application from New Orleans East Inc. to develop 9,800 acres, much of which is wetlands. They have been advised that we cannot

act upon the application until they prepare an EIS, which they are doing. Their EIS preparation is scheduled for completion in about 2 years. It is the district's position that future development in New Orleans East are actions which must be addressed on their own merits, separately from the hurricane protection project.

c. We have received requests from environmental interests to investigate the feasibility of leaving four existing drainage structures through the South Point to GIWW levee in the New Orleans East area open to normal tidal exchange for the purpose of nourishing wetlands. It is not clear at this time whether or not any operations of the structures which do not threaten the integrity of the hurricane protection fall within our purview.

d. The original authorizing document specified a 50%/50% cost allocation of the Seabrook Complex, a feature of the MR-GO project, between the hurricane protection project and the navigation project. The cost sharing was specified because the Seabrook Complex would serve several functions; it could be operated as a barrier complex for hurricane protection (thus benefiting the hurricane protection project), it could be operated to reduce hazardous currents (a benefit to MR-GO navigation), and it could be operated to control salinities in the lake (mitigation for MR-GO). Under a barrier plan recommendation scenario, no change in the Seabrook Complex's status is contemplated. However, if a high level plan were recommended, then we foresee recommending deferment of the Seabrook Complex for two reasons, cost sharing and feasibility. The Seabrook Complex would not be needed for hurricane protection; therefore, if we recommend a high-level plan, we foresee recommending changing the authorized cost sharing for Seabrook to 100 percent MR-GO funding at the same time by separate report. Also, there is a cheaper alternative to eliminating currents hazardous to navigation, i.e., relocation of a restrictive railroad bridge; thus, the incremental costs of building and operating the complex would be attributable to its mitigation function. The feasibility of the incremental investments and operational procedures for environmental enhancement/restoration will not have been determined at the conclusion of any "fast track" schedule, so our recommendations would

be to defer construction until adequate feasibility studies could be funded and performed under the MR-GO project.

e. There is an unresolved issue with regards to the three main outfall canals in New Orleans which empty into Lake Pontchartrain along the reach known as the New Orleans Lakefront. Return levees flank these gravity drainage canals for a considerable distance inland from the lake, tying into lift pump stations at the head of the canals. Since the time of project authorization, it has been determined that the return levees are inadequate in terms of both grade and stability. Five basic alternatives have been formulated to address the problem of deficient return levees for both high-level and barrier type plans. The economics of the alternatives are similar for either plan, i.e., choosing the same type solution for both plans would not affect plan selection.

(1) The first solution would involve raising and strengthening the return levees to assure SPH protection without concern for the number of house relocations necessary. At current price levels, this solution would cost about \$200,000,000.

(2) ~~The second solution would be the same as the first except that all house relocations would be avoided.~~ This solution would cost about \$250,000,000.

move?
(3) A third solution would involve building floodgates at the mouths of the outfall canals which could be closed when lake levels threaten the integrity of the return levees. During such times, pumping capacity would be zero and interior rainfall flooding would be somewhat greater. However, closure operations of the floodgates would occur infrequently and generally be of short duration, also, such operations would occur during times of high lake levels when the capacities of the existing pumping stations would already be greatly reduced. Therefore, increased annualized residual flood damages due to closure of the floodgates would be minor in dollar terms. The costs of the floodgates is estimated to be \$20,000,000.

(4) A fourth solution would be the same as the third solution except that auxillary pumping stations would be provided at the lake with bypass lines to allow continued pumping when the floodgates were closed. The estimated cost of these improvements is estimated at \$120,000,000 (\$20,000,000 for floodgates and \$100,000,000 for pumping stations); however, the \$100,000,000 cost estimate for the pumping stations may be very low. Further, the New Orleans Sewerage and Water Board and our own engineering staff have serious concerns that this solution will work because of potential surging problems between stations.

(5) A fifth solution would involve relocating the existing pumping stations to the lake; however, the cost of improving gravity drainage to the relocated stations, i.e., necessary improvements of the existing outfall canals would be much more expensive than raising and strengthening return levees only, so these costs in tandem with the cost of pump station relocations were assumed to be prohibitive and estimates were not developed.

(6) Several of the alternatives involve large increases in project costs and those involving construction of pumping stations would be classified as modifications to drainage works (a local responsibility); except for the third solution, floodgates only, any of the other solutions would result in a substantial increase in costs to the New Orleans Levee Board, the local assurator, and in fact, any of the solutions involving pumping stations might well result in the levee board having to bear more than a 30 percent share of a substantially increased project cost in New Orleans.

(7) The politically sensitive nature of the outfall canals problem would seem to dictate that resolution of the issue will require close coordination and exchange between Corps and New Orleans Levee Board decision makers.

f. There are several legal, technical, and planning problems associated with construction of the St. Charles Parish Levee feature of the project.

(1) The authorized project provides for construction of a levee along the lakefront in St. Charles Parish. In the early 70's before the court suit, this feature was indefinitely deferred because of concern regarding the environmental impacts upon the large area of wetlands which the proposed levee would inclose and the fact that the State of Louisiana had included two streams in the area under its Natural and Scenic Rivers Act whose natural drainage would be blocked by construction of the lakefront alinement.

(2) Subsequent to our decision to defer construction, we were sued to force us to construct the authorized levee by landowner interests. The US 5th District Court delayed ruling on this suit pending filing of our revised EIS mandated by the 30 Dec 77 court injunction. Also, we do not have Section 404 approved from EPA for construction of this feature.

(3) Since the court injunction, we have designed and costed three levee alinements for St. Charles Parish for both barrier and high level design concepts. At the time the project was authorized, the St. Charles Parish levee was primarily justified by virtue of projected future development of wetlands which would be inclosed (location benefits). As previously discussed, under current criteria we cannot claim the vast majority of these benefits. As a result, preliminary data indicates that no levee alinement, for any degree of protection, is presently justified. However, of the three alinements considered, the "best," for any plan, would follow the existing St. Charles/Jefferson return levee and then run generally parallel to and just north of Airline Highway, tying into the east guide levee of the Bonnet Carre Spillway to the west.

(4) There are several other points of interest regarding this issue:

(a) The President of the St. Charles Parish Police Jury has been informally briefed on the results of our preliminary studies and informed that he will be kept abreast of any future findings and/or decisions concerning this feature.

(b) A decision to indefinitely defer construction of this feature is within the discretionary authority of the Chief of Engineers.

(c) Such a decision would dictate a need to improve and extend the existing return levee to prevent flanking of the Jefferson Parish Lakefront levee.

g. The authorized Mandeville Seawall feature, whose purpose is erosion control, is not incrementally justified under either main design concept. Further, we do not have local assurances for this feature. However, the town of Mandeville has expressed the intention of getting funds and providing local assurances. The possibility exists that the seawall construction (primarily rehabilitation work) will be complete prior to filing of the final revised EIS.

h. An issue raised in the court suit which was not addressed (the court held its right to rule on the matter in abeyance pending final revision of the EIS) was the ability of local sponsors, specifically the New Orleans Levee Board to meet their cost sharing responsibilities. How to address possible modifications of local assurances or analyses of local sponsors' abilities to pay are subjects which will require ongoing coordination between local sponsors, and district and division staffs.

i. Inclosure 2 contains additional information concerning issues identified during coordination of the EIS.

3. Discussion of Completion - Time Completion:

a. The extreme risk to human life in the absence of adequate hurricane protection for the metropolitan New Orleans area dictates that we complete our revised EIS studies in the most timely manner possible.

b. The degree of study effort to produce an adequate EIS depends to a large extent upon the recommended plan. Of the two basic design concepts under consideration, the barrier concept poses the most study problems and

the high-level concept poses the least study problems with regards to environmental impact analyses. Since our engineering and economic studies are well along and pose, in themselves, i.e., disregarding their relationships to barrier impact analyses, no esoteric study problems, our course of action with regards to environmental studies will control the overall study completion date (critical path). Our Phase I tidal transport study contracts with LSU and UNO have defined the extent of studies (phase II) which would be necessary in order to adequately analyze environmental impacts analyses for a recommended barrier concept plan. A recommended high level concept plan would, in the district's opinion, require a lesser degree of environmental impact analyses than for any barrier concept alternative.

c. While we are not in a position to make any tentative recommendations with regards to plan selection, the preliminary data indicates that on the basis of overall feasibility, a high level design concept is competitive with a barrier design concept. Further, strictly based upon a reading of Corps regulations, it appears that if a high level design concept were to be recommended; it could be implemented under the discretionary authority of the Chief of Engineers, i.e., such a decision would not delay project implementation. This point needs clarification with OCE counsel.

d. Several study scenarios are possible, ranging from a complete "state of the art" analysis of all alternatives (maximum study time and effort) to a fast track analysis focusing on high-level alternatives with analysis of barrier alternatives' tidal transport impacts limited to examination and use of existing data (minimum study time and effort). Regardless of what study scenario is followed, our capabilities will allow us to switch to any study mode within the range of reasonable study scenarios should future study results dictate. It should be noted that any switch from one study scenario to another will result in some additional study slippage, the amount of which will be dependent upon the degree and timing of change in study effort. It should be noted that a "two-track" approach could be used; that is, two study scenarios could be pursued

simultaneously to keep study options open. Such an approach would, of course, require a greater commitment of study resources than pursuing a single study scenario. Also, if a decision were made to select a barrier plan, then it would be necessary to complete one of the transport study scenarios.

e. Inclosure 3 discusses the estimated study effort under several different study scenarios.

4. Recommendations

a. The amount of study effort, study completion time, and time to complete the project are highly dependent upon the final recommended plan. The main unknown factor regarding plan selection at this time is public reaction to the plans. An early public meeting would appear to be the most logical vehicle for getting a quick reading of the public's views. A fast track schedule, which would focus analyses on a high-level plan and analyze a barrier plan using available data offers the potentially shortest course of action for study completion. This study effort should result in a final revised EIS being placed on file with EPA in November 1983. It is recognized that future study results may dictate an increase in study time and effort; however, pursuing a fast track study effort appears to be a justified calculated risk at this time.

b. It is recommended that we pursue a fast track study effort (as described in inclosures 3, 4, and 5) at this time, hold a public meeting in mid-November 1981, and, based on the results of that meeting, make a firm decision concerning future study direction in mid-December 1981.



CHARLES E. DEWEESE

LTC, CE

Acting Commander and District Engineer

Division: Lower Mississippi Valley
District: New Orleans

6 August 1981

STATEMENT OF JUSTIFICATION

CONSTRUCTION GENERAL - FY 1982

1. Name of Study. Lake Pontchartrain and Vicinity (Hurricane Protection) - 09350
2. Authorization. Public Law 298-Section 204, 89th Congress, 1st Session, approved 27 October 1965, authorized the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project substantially in accordance with the recommendations of the Chief of Engineers in House Document No. 231, Eighty-Ninth Congress, except that the recommendation of the Secretary of the Army in that document shall apply with respect to the Seabrook Lock feature of the project.

3. Summarized Financial Data:

Total Estimated Cost	\$700,000,000
Allocation Through FY81	114,364,000
Budget Estimate FY82	16,000,000 ¹
Proposed Allocation FY83	18,800,000
Balance Required After FY83	550,836,000

¹Includes \$1,000,000 funds deferred in FY 81.

4. Description of Study Area and Nature Problem. The "Lake Pontchartrain, Louisiana, and Vicinity" hurricane protection project is located in southeastern Louisiana in the general vicinity of New Orleans. The project area comprises the lowland and water areas from the Mississippi River alluvial ridge and the west and north shores of Lake Borgne to the Pleistocene escarpment to the north and west. Lake Pontchartrain, a shallow land-locked tidal basin approximately 640 square miles in area and averaging 12 feet in depth, dominates the topography of the area. It connects with lesser Lake Maurepas to the west and through Lake Borgne and Mississippi Sound to the Gulf of Mexico on the east. Project works will be located in the parishes of Orleans, Jefferson, St. Bernard, St. Charles, and St. Tammany. The project area includes all of the metropolitan area of New Orleans east of the Mississippi River. Much of the developed area in New Orleans and Jefferson Parish is below normal lake level. Stages attending a standard project hurricane would cause overtopping of all existing protective works by several feet and cause ponding as deep as 16 feet in some developed areas. This inundation would cause enormous damage to private and public property, disruption of business and community life, and require a larger expenditure of public and private funds for evacuation and subsequent rehabilitation of local residents.

5. Current Status and Work to be Performed in FY 82. In addition to ongoing construction work, preparation of most of the input for the draft revised EIS is tentatively scheduled for accomplishments.

6. Work to be Done in FY83. In addition to ongoing construction work, a final public meeting is tentatively scheduled for the second quarter of FY83 and submission of the revised draft revision of the EIS to LMVD is tentatively scheduled for the end of the 3rd quarter of FY83.

7. Change in Scope and Cost During Past Year. The current Federal Cost Estimate of \$700,000,000 is a decrease of \$1,000,000 from the latest estimate (\$701,000,000) presented to Congress. This change includes increases of \$19,925,000 for higher price levels, \$156,000 based on actual bid, \$155,000 based on actual cost of completed work, \$3,531,000 based on design modifications, and \$145,000 based on more detailed project cost estimates. These increases were offset by a decrease of \$24,912,000 due to reanalysis of Federal cost sharing requirements.

8. Other Ongoing Studies in the Area. The following studies are currently underway in the area.

- a. Bayou Bonfouca
- b. Lake Pontchartrain, Jefferson Parish
- c. Lake Pontchartrain, North Shore
- d. Lake Pontchartrain, West Shore
- e. Mississippi and Louisiana Estuarine Areas
- f. New Orleans-Baton Rouge Metropolitan Area

9. Other Pertinent Information. Funds to initiate preconstruction planning were appropriated in FY66 and for construction in FY67.

Save Our Wetlands, Inc., filed suit on 8 December 1975 in United States District Court for the Eastern District of Louisiana against the New Orleans District Engineer, the Secretary of the Army, the Administrator of the Environmental Protection Agency and the President of the Orleans Levee Board. The Clio Sportsman's League joined the suit on 21 June 1976. The St. Tammany Parish Police Jury joined suit on 30 March 1977. The suit alleges the following: (1) that a regional cumulative Environmental Impact Statement should be accomplished prior to proceeding with the project; (2) that the Corps has not complied with the conditions of final approval of the Environmental Protection Agency of Section 404 requirements of the Federal Water Pollution Control Act; (3) that the Corps has not completely eliminated the St. Charles Parish lakefront levee as required by the Environmental Protection Agency. The suit also seeks to have the New Orleans East lakefront levee removed and to have three openings for tidal interchange provided under the Southern Railroad embankment.

The Government moved to dismiss the lawsuit based on an unexcusable delay in forwarding a claim and the contention that the allegations of the plaintiffs were not liable to trial in a court of justice under the National Environmental Policy Act. A hearing was held on 5 November 1976 and the court denied the motion on 7 December 1976. In addition, a hearing was held on 15 December 1976 on the Orleans Levee District's (a codefendant) motion to dismiss issues regarding assurances for the project. The court then denied the motion.

On 30 December 1977, Judge Charles Schwartz of the Federal District Court in New Orleans issued an order enjoining any further construction of the Chef Menteur and Rigolets Complexs, New Orleans East area (east of Paris Road) and the Chalmette area of the project until a revised environmental statement has been prepared.

On 8, 10, and 27 March 1978, Judge Schwartz lifted the injunction on the New Orleans East area (east of Paris Road) and on 10 March 1978 he lifted the injunction on the Chalmette area plan.

A group of individuals in St. Charles Parish filed suit on 12 April 1977 asking that the court direct the Corps to construct the St. Charles Parish portion of the project which has been deferred. At a 17 May 1978 hearing, Judge Charles Schwartz declared that the suit was premature and deferred further consideration until completion of the revised Environmental Impact Statement.

10. Alternatives Being Considered.

a. Chalmette Area. Hurricane protection for the Chalmette area is provided by a levee and floodwall system which starts and ends with the existing Mississippi River levee. The combined effect of the hurricane protection and the Mississippi River levee is to provide a closed loop of flood protection around the Chalmette area. The Chalmette area protection is completely independent of hurricane protection for adjacent land area.

b. Other Project Areas. Protection for the remaining project areas (New Orleans East, Citrus, New Orleans West of IHNC, Jefferson Parish East of Mississippi River, and St. Charles Parish East of Mississippi River) can be accomplished either with a "barrier" concept of protection or with "high level" levees and floodwalls. Under the Barrier Plan, portions of St. Tammany and Tangipahoa Parishes bordering Lake Pontchartrain receive a degree of protection. This added degree of protection cannot be achieved under the high level plan.

(1) Barrier Plan. The barrier concept provides for a system of controls at the Rigolets, Chef Menteur, and Seabrook inlets to Lake Pontchartrain which limit the tidal rise in Lake Pontchartrain in event of a hurricane. Protective works bordering the lake are designed accordingly and do not have to be as high as required if the hurricane surge was permitted to enter the lake. Reaches of protection directly affected include St. Charles and Jefferson Parishes, Orleans Lakefront, and the eastern side of New Orleans East. Reaches of protection not affected by the presence of the barriers are the east and west banks of the IHNC, the Citrus back levee, and the New Orleans East back levee. The repairs presently authorized for the Mandeville Seawall are irrespective of the barrier plan.

(2) High Level Plan. Under this plan the hurricane surge is permitted to enter Lake Pontchartrain and protective works bordering the lake are designed accordingly. Except for a portion of the New Orleans East back levee, protective works bordering the lake are designed for the standard project hurricane.

11. Capability. To be added.

12. Scheduled Completion Date. The entire project is presently scheduled for completion in September of 1991. This reflects no change over the last completion date submitted to Congress.

Completion Funding Schedule

FY 1984 - \$21,900,000

FY 1985 - 21,500,000

FY 1986 - 20,200,000

FY 1987 - 17,000,000

Balance to Complete \$470,036,000

13. Transfers.

FY 1981: None.

Anticipated: None.

FY 1982: None.

Anticipated: None.

14. Interested Senators and Representatives.

Senator J. Bennett Johnston

Senator Russell B. Long

Robert L. Livingston (1st District)

Lindy Boggs (2nd District)

Billy Tauzin (3rd District)

Henson Moore (6th District)

Gillis W. Long (8th District)

Issues Identified in Coordination of Project EIS

a. Environmental Opposition. The known environmental opposition to the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection project is summarized below:

(1) The Orleans Audubon Society opposes the disposal and ponding of dredged material in the marshes along the Chef and Rigolets Passes, along the MR-GO and in New Orleans East, and the proposed borrow area on Apple Pie Ridge along US Highway 90. They believe these disposal and borrow plans will destroy valuable marshland that Louisiana cannot afford to lose. They also recommend that levees be built around populated areas only and elimination of the barrier plan.

(2) The Louisiana Wildlife Federation recommends that the St. Charles Parish segment be eliminated from the project plan because it will instigate further encroachment and deterioration of a rapidly dwindling and fragile marsh ecosystem. They feel that the placing of the barrier structures as proposed on the Rigolets and Chef Menteur Pass may have severe, irreversible consequences on the delicate balance which differentiates between the fine line which constitutes a fresh and a saline marsh ecosystem.

(3) The Sierra Club, Delta Chapter believes that wetlands represent economic, environmental and recreational values which are far more important to the public interest than the claimed benefits from developing such lands for increased taxes. For this reason they recommend that the project should be used to protect existing settlement, and not to encourage intensive development in one of the large flood plains between the Mississippi River and the Gulf of Mexico.

(4) The Bonnet Carre Rod and Gun Club and the St. Charles Environmental Council oppose the St. Charles Parish levee segment as it is now proposed. They favor a hurricane protection levee generally along Airline Highway (US Hwy 61) in St. Charles Parish. They believe this alignment would be environmentally acceptable and would still protect the presently developed areas in St. Charles Parish.

(5) The Clio Sportman's League of New Orleans position is that they favor hurricane protection but oppose the "so-called" policy of unnecessary private land enhancement at the expense of the public and the environment. They opine that the barriers with its borrow, disposal and ponding areas and accompanying future developments will play a leading role in the destruction of Lake Pontchartrain and eventually, the entire Maurepass, Pontchartrain, Catherine and Borgne estuary system.

(6) The St. Tammany Environmental Council is of the opinion that the acknowledged and potential adverse environmental and economic impact of the Lake Pontchartrain, Louisiana and Vicinity hurricane protection plan far outweigh the benefits our population may receive in the form of hurricane protection.

(7) The St. Tammany Sportsman's League is opposed to the "Floodgates" at the Rigolets because they say it will destroy the interplay between the lake and the marshes, which supplies 50 percent of all nutrients that feed the flora and fauna in Lake Pontchartrain. "The loss of these nutrients will result in the death of the lake," they opine.

(8) The Environmental Defense Fund has expressed concern regarding the whole project, more specifically the New Orleans East Area. They consider the wetlands in the New Orleans East Area are still viable and could be restored to a high level of productivity given appropriate redesign of the levees, provision for tidal flows and water circulation and stringent regulation of dredge, fill and drainage activities in accordance with the Corps' regulations and wetland policy.

b. Other Environmental Opinions.

(1) The US Fish and Wildlife Service and the National Marine Fisheries Service have fully cooperated in developing a plan for hurricane protection for the metropolitan area of New Orleans that will alleviate, to the fullest extent feasible, any project impacts on the fish and wildlife resources in area. Both have opposed the St. Charles Parish levee, as

presently proposed, and have made specific recommendations in the other segments of the project to help minimize the destructive features of the project.

(2) The Environmental Protection Agency has also fully cooperated in helping us to develop an environmental feasible plan. In their review of the statement of findings for the plans for placement of dredged material for this project they stated that tidal interchange should be allowed into the New Orleans East area until developed areas are threatened and that the Seabrook Lock should be constructed as soon as possible in order to reduce saltwater intrusion into Lake Pontchartrain.

(3) The Louisiana Wildlife and Fisheries Commission expressed concern regarding damages to productive oyster beds near the Chef Menteur Barrier Structure. In the spirit of full cooperation, they have requested that the design of the ponding areas and wing walls for the Chef structure be coordinated with them and that a periodic review and evaluation regarding the effects of the other project works on fish and wildlife resources be scheduled during the entire construction period. This will insure the minimum destruction of the fish and wildlife resources. They have stated that the Seabrook Complex will provide the capability for managing salinities within the lake.

(4) The EPA in their review of the 404 proceedings has requested us to study whether the drainage structures in the South Point to GIWW levee should be changed with regards to their operation. They would like to see the structures remain open during normal tidal conditions to nourish the marsh in New Orleans East with the lake water. The Louisiana Wildlife Federation and the US Fish and Wildlife Service are supportive of this recommendation. Coordination with the Orleans Levee District, Sewerage and Water Board, Mosquito Control Board, and the City Planning Commission has been completed. The respective agencies stated views on this recommendation are conflicting. We are not at ^{this} their time in a position to recommend any water management plan for the wetlands in the New Orleans East area. Further, the existing levees were initially constructed by local interests

before being incorporated into the project, and the hydrology of the area was altered at that time. Therefore, it can be argued that developing and/or implementing a water management plan falls within the purview of local authorities.

(5) The New Orleans City Planning Commission has requested us to study the possibility of purchasing wetlands outside the protected area to mitigate the loss of wetlands included in the project. Development of inclosed wetlands is not a factor in the current economic justification of the project. Since such potential development would be accomplished by private interests, any mitigation requirements should also be borne by the development interests, not the Federal Government. The environmental values of wetlands lost to direct construction will be determined during the EIS studies with assistance from the US Fish and Wildlife Service. However, any possible recommendations to purchase mitigation lands would not be included in the Phase I report, but rather included in a separate report, as such recommendation would require additional legislative authority to implement.

6. Status and Impact of Compliance with Section 404, Federal Water Pollution Control Act of 1972. In response to a request from former Congressman F. Edward Hebert, the New Orleans District conducted a public meeting to discuss the entire project on 22 February 1975. A portion of this meeting was dedicated to a presentation of methods for the disposal of dredged effluents for all portions of the project with the exception of the St. Charles lakefront levee, as required by Section 404 of the Federal Water Pollution Act of 1972. The Statement of Findings on the meeting was forwarded to the Environmental Protection Agency on 22 August 1975 for review and approval. Approval of the plan for the disposal of dredged material was granted on 1 October 1975. However, even for the authorized plan, after 1 Oct 81, new guidelines will require additional investigations. Clarification of the status of the St. Charles Parish Lakefront Levee was provided to the Environmental Protection Agency to indicate compliance with the conditional approval. EPA has clarified their position by stating that deauthorization of the levee is not essential to

meeting their condition. Furthermore, EPA stated that it was not their intent to require the elimination of hurricane protection studies in St. Charles Parish.

Discussion of Estimated Phase I GDM Type Study Effort

The revised EIS studies have been undertaken as a result of the modified 30 Dec 77 court injunction. Pertinent portions of the injunction are as follows:

...It is clear from the evidence in this case that the final environmental impact study for the Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection Project prepared by the United States Army Corps of Engineers dated August 1974 does not comply with the requirements of Title 43 United States Code Section 4332 which provides in pertinent part: ... all agencies in the Federal Government shall - utilize a systematic, interdisciplinary approach in decision making ... include in every recommendation or report or proposals for legislation ... a detailed statement by the responsible official on the environmental impact of the proposed action ... alternatives to the proposed action.... as written the EIS actually precludes both public and governmental parties from the opportunity to fairly and adequately analyze ... the proposed plan and any alternatives to it.... the court's opinion is limited strictly to the finding that the environmental impact statement of August, 1974 for the project was legally inadequate. Upon proper compliance with the law with regard to the impact statement this injunction will be dissolved and any hurricane plan thus properly presented will be allowed to proceed ...

Significant changes in physical and economic conditions and Federal and Corps water resource planning procedures have occurred since the project's initial authorization. These changes, coupled with the court's

mandate effectively dictate preparation of a new plan formulation document (Phase I GDM type report) and EIS based on current conditions.

The study effort to produce such a study document basically falls into four categories: engineering studies, economic studies, environmental studies, and plan formulation studies.

Engineering studies are well advanced. Foundation studies, hydraulic studies, and design and cost studies for a full range of alternatives have essentially been accomplished with the exception of certain items, notably the New Orleans outfall canals. Future study efforts will consist primarily of refining and updating design and cost estimates and providing input for the DEIS. These studies are not now nor expected to be on the study's critical path.

Economic studies are also well advanced. Benefit/loss analyses are complete with the exception of computing yearly costs and area redevelopment benefits, which are dependent upon engineering input, and recreation and fish and wildlife benefit/loss computations, which are dependent upon environmental input. Economics Branch is currently compiling and verifying data from completed benefit analyses and has initiated preparation of the economic appendix for the DEIS. Preliminary data indicates any alternative under consideration will be overwhelming economically justified on an overall basis; however, some separable project features may not be incrementally justified. These studies should not be critical.

Preliminary Plan Formulation Studies based on existing data were initially completed in early 1980. It is anticipated that Plan Formulation Branch's primary future study efforts will be study coordination, public involvement, and report preparation. Since these functions are dependent upon input from other study elements, plan formulation should not be a critical factor to the study schedule.

Environmental studies have posed the most study problems to date, and it is anticipated that these studies will continue to constitute the

critical study effort. The question as to how to approach tidal transport analyses has lead up to develop five different environmental analyses study scenarios which basically reflect different levels of tidal transport analyses effort (attachment 1).

Discussion of Estimated Phase I GDM Type Study Effort

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ENVIRONMENTAL ANALYSIS BRANCH
STUDY ESTIMATES FOR
LAKE PONTCHARTRAIN EIS REVISION

ATTACHMENT 1

ENVIRONMENTAL ANALYSIS BRANCH STUDY ESTIMATED FOR
LAKE PONTCHARTRAIN EIS REVISION

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ENVIRONMENTAL ANALYSIS BRANCH STUDY ESTIMATES FOR
LAKE PONTCHARTRAIN EIS REVISION

Introduction. All study effort will be the same for water quality, recreation or cultural investigations; however, the study effort required from environmental quality section will depend upon the future direction of our tidal transport impact analyses investigations. Several study scenarios have been developed to cover the range of efforts which could be pursued with regards to tidal transport.

Water Quality Impact.

- a. 404 samples: 10
- b. statistical analyses of data obtained from computer scan:
3 man-months
- c. 404 data Evaluation and write-up: 3 man-months
- d. water quality appendix write-up/development, input to DEIS:
3 man-months

FY82								
Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
(404 sampling & chemical analyses)								
(statistical anal-data from computer scan)			Water Quality App. Dev.		(404 data analysis) (404 Evaluation write-up)		(Water Quality App. write-up and input to SEIS)	

CULTURAL RESOURCES INPUT

1. The proposed schedule for the Revised EIS studies submitted to LMVD is essentially for cultural resource input into the Draft EIS assuming a slipped start date of 1 July 1981. Further evaluation and mitigation, if required, will not adversely affect the FEIS schedule; however, it could effect the construction schedule of some project features.

2. Cultural resources surveys conducted under contract to the New Orleans District have covered various portions of the authorized Lake Pontchartrain project. These include the Chef Menteur and Rigolets Barrier Complexes, the existing right-of-way of the Citrus and New Orleans East Lakefront levees between Downman Road and South Point, project levee alignments along the GIWW right-of-way, and project levee alignments along the Mississippi River-Gulf Outlet between Paris Road and the Gulf of Mexico. Cultural resources surveys required for the revised EIS studies will include terrestrial surveys of some portions of the authorized plan and the levee/floodwall rights-of-way required under the Hi-Level alternative and magnetometer surveys of offshore borrow and right-of-way areas.

3. The proposed studies are consistent with guidance provided in ER 1105-2-460 and the draft revisions to ER 1105-2-460. The proposed studies will provide the data base for a comprehensive and accurate assessment of each alternative's impacts upon significant cultural resources.

4. Potential problems which could adversely affect the study schedule are:

a. Right of entry: the proposed schedule for the revised EIS studies assumes timely receipt of right of entry from Real Estate Division. In the near future, Cultural Resources Section will review existing right of entry and notify Engineering Division and your office of what further right of entry is required by a particular date. Any delays in receiving right of entry will adversely affect the proposed schedule.

b. Camps on the Citrus and New Orleans East Lakefront: a recent (12 Jul 81) article in the Times-Picayune newspaper reported that the Haynes Boulevard Camp Association will soon nominate the approximately 145 camps on the lakefront for inclusion in the National Register of Historic Places. By telephone conversation of 24 Jul 81 with Mr. Duke Rivet of the SHPO's office, Mr. Stout was informed that the nomination had not yet been received, but that they would keep us informed during the nomination process. Should these camps be listed on the National Register and should it be determined that the hi-level alternative will adversely affect these camps, the study schedule could be adversely impacted. The construction of the levees in this area could not proceed until any adverse effects upon these properties is addressed in accordance with 36 CFR Part 800.

5. The proposed work effort is summarized below:

<u>Item</u>	<u>Dates</u>
Preparation and award contracts	8/81 - 1/82
In-house survey, report prep & coordination	10/81 - 2/82
Contract surveys	2/82 - 8/82
Prep DEIS Input	7/82 - 9/82

RECREATION INPUTS

Although recreation is not an authorized project purpose, all recreational features in place prior to implementation of the high-rise levee hurricane protection plan will be replaced in kind in accordance with applicable regulations and current design standards. The existing use of in-place facilities has not been quantified, however, it is known that the Jefferson-Orleans linear park system is one of the highest used park complexes in the state. Existing conditions will be inventoried, analyzed and assessed. Significant land-use patterns will be determined as well as existing impacts upon primary modes of use (e.g., boat ramps and small park developments along the linear park system). Recreation use patterns (commercial, residential, and public) and recreation attendance will be determined and replacement will be planned to accomplish the original

intent of all existing recreation facilities in place prior to levee construction, if possible.

Recreation participation usage rates will be assessed and evaluated based upon the Louisiana Comprehensive Outdoor Recreation Plan (SCORP). If overcrowded conditions exist in the preproject condition, new facilities will be proposed to alleviate crowded conditions based upon current Corps of Engineers design standards and optimum carrying capacities. Information used in the study will come in part from SCORP planning region 1, personal on-site investigation, and coordination with various parish planning agencies including Orleans Park and Parkway Commission and Jefferson Parish Department of Parks and Recreation.

The focus of this recreation evaluation will be to determine existing usage of all in place recreational features. The linear park system in Jefferson Parish may be affected by levee construction. It may not be possible to replace identical in kind facilities due to the configuration of levee design. However, it will be possible to replace the man-days lost by proposing development of similar facility types.

The recreation work effort is summarized below. This effort includes typing, time for draft report writing and editing for any revisions.

1. Existing conditions determination and assessment...	36 man-days\$6,650
2. Demand/Need Use.....	64 man-days	...\$11,821
3. Assessment of Alternatives.....	28 man-days\$5,172
4. Development of recreation plans.....	29 man-days\$5,357
Total cost.....	157 man-days	...\$29,000

It should be noted that completion of this work task is dependent upon input from other elements, i.e., environmental analyses, etc., but it is not considered to be on the study's critical path.

ENVIRONMENTAL QUALITY INPUT.

For all alternatives certain tasks will be the same: endangered species assessment, determining future with and without project conditions, HEP and HES impact analyses, preparing report input, preparing the DEIS, and resolving comments on the DEIS. Additional efforts may be required with respect to tidal transport studies and are reflected in incl 1 and subsequent paragraphs.

Scenario 1a.

Assumption: Reactivate and Complete Tidal Pass Studies as Originally Conceived

Once a decision is made to reactivate the contract, the district must obtain division approval to negotiate. Following division approval, LSU will be requested to prepare a revised proposal. This proposal will undergo both legal and administrative review. We have been advised that if 6 months has elapsed since the contract was terminated, a review audit would probably be required. Subsequent to this review, negotiations and finalization of contract matters must be resolved. Several problems still remain unresolved and they are noted as follows: The first is the problem of LSU restaffing for the contract. Since contract termination, most of key personnel were released and must be replaced. Estimates regarding restaffing must be considered flexible because it can only be roughly calculated how long it will take to locate and hire specialists from the various technical fields needed. Along with this problem, LSU has already realigned its remaining staff toward other project priorities since our study was cancelled. It is possible that reassignment of priorities and staff assignments could take time and, thus, delay the initial start of the project. This, in turn, could again cause synchrony problems assuming UNO could be ready for Phase II work more quickly than LSU.

While UNO has not been terminated at this time they have shifted some of their staff in preparation for termination. Therefore, some realignment of staff assignments must be considered as a part of start up time for the UNO Phase II modification.

Approval to negotiate the contract modification with UNO for Phase II studies must be obtained. Then, UNO must prepare and submit proposals; the necessity of audit will be determined by the proposal costs. After finalizing negotiations approximately same amount of time allotted for LSU should be necessary for contract settlement and mobilization time. Excluding mobilization time the fieldwork for the two contracts should be completed within 12 months and the final report should be completed within 6 months after that.

The breakdown of approximate time and costs of this scenario is tabulated in incl 1.

Scenario 1b.

Same as 1a. except that a blue ribbon panel would be used at the conclusion of the studies to perform barrier transport impact analyses (see Incl 1).

Scenario 2a.

Assumption: Incorporate all Phase II studies into one contract by Modifying UNO Contract.

Following Division approval, the LSU Tidal Pass contract was terminated in June 1981. Therefore, termination of LSU is not a mere possibility, but is indeed fact. Therefore, the next step to address is the advisability of modifying the UNO contract to include the Phase II work that was previously contracted to LSU.

Our legal staff has advised us against this option due to both legal and public relations impact. We were advised that even though the contract with LSU was terminated for convenience, if the work remains to be done at a later date, the original contractor must be reconsidered for the work especially when chosen under sole source.

The other problem results in trying to modify the UNO contract. This modification would result in an enormous increase in work and complete change in scope from the original contract. With such a drastic change in scope, we have been advised to undergo competitive negotiations with several universities and private firms to determine if sole source is still applicable since the research (Phase I) phase of the contract has been completed.

Even if the UNO contract could be modified, considerable loss of time would be incurred due to the mobilization effort. Presently, only chemistry equipment and personnel are in place for the project, while key biological staff must be obtained, working through state civil service, and therefore additional mobilization time would be required. Boats, sampling gear must be rented or purchased and outfitted before the project can be mobilized. Aside from the additional time involved, the cost to the government for providing the contractor with the support capability would be costly. This scenario can be compared to others in both time and costs by referring to incl 1.

Scenario 2b.

Same as scenario 2a. except that a blue ribbon panel would also be used for barrier transport impact analyses (see Incl 1).

Scenario 3a.

Assumption: Termination of LSU and UNO and Contract with Another Source

The UNO contract must be terminated.

As mentioned in scenario 2, if a decision is made to resume the tidal pass studies in the near future, legal has advised that the two universities should be given precedence, but other bidders could be considered in competitive negotiations. This consideration should be given since the termination of the previous contracts was for the convenience of the government. Ideally, if the Phase II studies are resumed, they should be done under a single contract so that proper project management, synchrony, and efficiency can be achieved.

A significant portion of the costs expended on the transport contracts to date was utilized in developing a substantial inventory of technical equipment and sampling gear. If another contractor is chosen, these costs must be considered "sunk costs" except for certain items of specified equipment noted in the contract as Corps' equipment.

It is our belief that Phase II studies could be combined under one contract and competitively negotiated to obtain a study which is properly synchronized and timely.

If this study is completed outside of the university community, overhead will be somewhat higher. These higher overhead costs may possibly be balanced by the savings accrued in shorter mobilization and large equipment inventory owned by an established firm.

For further comparison of time and costs refer to incl 1.

Scenario 3b.

Same as scenario 3a. except that a blue ribbon panel would also be used for barrier transport impact analyses (see Incl 1).

Scenario 4

Assumption: Time and Costs for Blue Ribbon Analysis and Barrier Assessment

Following the 12-month field study, 4 months are required for the contractor to perform data analysis and provide a draft report for Corps' review. The 2-month Corps' review must be done simultaneously with the Technical Advisory Group (TAG) and Corps' consultants.

When the Corps and the TAG have concurred that the draft report is acceptable the report will be made available to the "Blue Ribbon Committee" to use in assisting the Corps with the barrier impact analysis. The contract for the Blue Ribbon Committee must be prepared at some point in time and scope preparation, review, negotiation, and contract approval is estimated at approximately 4 months. This 4-month procurement period can be done simultaneously with EIS work. The costs of the Blue Ribbon contract is estimated at about \$50,000. The Blue Ribbon Committee's work is estimated to take 6 months to complete, review, and incorporate into the EIS. These 6 months for analysis, review, and incorporation into the EIS must be done following the completion of transport work, and therefore, will impact the schedule presented in scenario 1 by approximately 5 to 6 months.

Further cost and time comparisons can be found in incl 1.

Scenario 5

Assumption: Hi-level as Tentatively Selected Plan - Barrier Assessed on Available Data.

If the "hi-level" plan is chosen as the selected plan, assessment of the impact of the barriers as an alternative could be made on the basis of available data, literature review, Corps' baseline studies on Lake Pontchartrain and consultation with the Corps' consultant staff. This approach would eliminate the need for diverting manpower from the EIS work effort to monitor the transport contracts. As a result, this means that the preparation of the EIS can begin immediately and should proceed to completion of a draft EIS in approximately 18 months.

By comparison, utilizing the barrier plan as the selected plan would require reactivation of the transport contracts which, in itself, would be very time consuming. Once the contracts have been received, then it would be at least 18 months before the final EIS is completed.

Insight obtained from the time and cost estimates given in incl 1 make it advisable to adopt this scenario.

For further comparisons in time and costs see incl 1.

SUMMARY OF ENVIRONMENTAL QUALITY INPUT
(applies to all scenarios)

Contract Termination	5 months	\$16,000
Environmental Analysis		
a. Endangered species assessment	2 months	6,400
b. Preparation of project conditions, significant resources and coordination of planning aid report	3 months	9,600
c. HEP and/or HES Impact Analysis	5 months	16,000
d. Coordination of Environmental and Economic Branch input	2 months	6,400
Draft EIS Preparation	4 months	12,800
Typing and Supervisory Review	1.5 months	4,800
NOD and LMVD comments	1 month	
Respond to NOD and LMVD comments		2,050
Public meeting and coordination DEIS	2 months	
Resolve comments	3 months	9,600
Supervisory Review	.5 month	1,600
Typing	.5 month	1,600
Reproduction	.5 month	
LMVD Review FEIS	1 month	
OCE Review FEIS	2 months	
Total man-months	33.5 or 28.5 w/o termination	
Total Cost for Environmental Quality Section	\$84,800	
Fish and Wildlife Input for FY82	<u>20,000</u>	
TOTAL COSTS	\$106,850	

INCL 1

Scenario 1a.

A. Contract Costs to Complete

a. Reactivation	\$16,000
b. Phase II Transport Studies utilizing LSU and UNO - LSU	\$1,476,351
UNO	815,357
	<u>\$2,291,708</u>
c. Contract management	30,000
d. Contract monitoring	7,000

B. Environmental Quality Section

DEIS labor costs (baseline data collection, analysis, EIS coordination, draft preparation, etc.)	\$90,000
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Scenario 1b.

Same as scenario 1a. except add \$50,000 for blue ribbon panel.

Scenario 2a.

A. Contract costs - terminate LSU and modify UNO to complete

a. Initiation and modified contract	\$13,000
b. Termination, in-house labor and settlement for administering	16,000
c. Settlement costs to LSU	407,000
d. Phase II biological studies (additional \$500,000 included to assume biological sampling capability)	2,791,726
e. Contract management	30,000
f. Contract monitoring	7,000

B. Environmental Quality Section

DEIS Preparation Cost	\$90,000
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Scenario 2b.

Same as scenario 2a. except add \$50,000 for blue ribbon panel.

Scenario 3a.

A. Contract costs - to termine existing contract and presume new contract for completion

a. Initiation - in-house initial administrative costs	\$10,000
b. Termination and settlement in-house labor	16,000
c. Settlement costs	407,000
d. Phase II Biological studies +30 percent overhead for commercial firm	3,000,000
e. Contract management	30,000
f. Contract monitoring	7,000

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Work Task Schedules for Lake Pontchartrain EIS

Scenarios 1-4

1. Reference Scenario 5 ("Fast Track") bar schedule (incl 5 to main report). All work shown on the "fast track" schedule from 1 Jul 81 to 30 Sep 82 is assumed to be a parallel effort with the transport studies efforts for scenarios 1-4. The work items reflected on the "fast track" schedule from 1 Oct 82 to 15 Nov 83 will be the same efforts under scenarios 1-4 once transport studies are complete, i.e., FEIS to EPA 13.5 months after completion of transport studies. A 15 Dec 81 start for future transport studies is assumed for scenarios 1-4.

Scenario 1a.:

<u>Item</u>	<u>Time</u>	<u>Dates</u>
Contract Reactivation	5 months	15 Dec 81 - 15 May 82
Mobilization	3 months	15 May 82 - 15 Aug 82
Field Studies	12 months	15 Aug 82 - 15 Aug 83
Report Preparation	4 months	15 Aug 83 - 15 Dec 83
Corps/TAG Review	2 months	15 Dec 83 - 15 Feb 84
(+13.5 months = FEIS to EPA 31 Mar 85)		

Scenario 1b.:

Same as scenario 1a. except add 5 months for blue ribbon panel, i.e., FEIS to EPA 31 Aug 85.

Scenario 2a.:

<u>Item</u>	<u>Time</u>	<u>Dates</u>
Contract Settlement and Modification	4 months	15 Dec 81 - 15 Apr 82
Mobilization	6 months	15 Apr 82 - 15 Oct 82
Field Studies	12 months	15 Oct 82 - 15 Oct 83
Report Preparation	4 months	15 Oct 83 - 15 Feb 84
Corps/TAG Review	2 months	15 Feb 84 - 15 Apr 84
(+13.5 months = FEIS to EPA 31 May 85)		

Scenario 2b.:

Same as scenario 2b. except add 5 months for blue ribbon panel, i.e., FEIS to EPA 31 Oct 85.

B. Environmental Quality Section
DEIS labor costs \$90,000

Scenario 3b.

Same as scenario 3a. except add \$50,000 for blue ribbon panel.

Scenario 4

A. Contract costs to complete Phase II studies and obtain Blue Ribbon analysis

a. Initiation costs for blue ribbon in-house	\$13,000
b. Reactivation of LSU in-house labor	16,000
c. Contract management for transport 1 Blue Ribbon Contracts	33,250
d. Contract monitoring for transport and Blue Ribbon	7,250
e. Blue Ribbon contract costs	50,000
f. Phase II biological studies	2,291,726

B. Environmental Quality Section
DEIS costs \$90,000

Scenario 5

A. a. In-house labor for termination proceedings \$16,000
b. Settlement cost for LSU 407,000
c. Cronin contract 30,000
d. Contract management 800
e. Contract monitoring 800

B. Environmental Quality Section
DEIS Cost \$90,000

Scenario 3a.:

<u>Item</u>	<u>Time</u>	<u>Dates</u>
Contract Termination	5 months	15 Dec 81 - 15 May 82
Scoping and Contract Procurement	6 months	15 May 82 - 15 Nov 82
Mobilization	1 month	15 Nov 82 - 15 Dec 82
Field Studies	12 months	15 Dec 82 - 15 Dec 83
Report Preparation	4 months	15 Dec 83 - 15 Apr 84
Corps/TAG Review	2 months	15 Apr 84 - 15 Jun 84
	(+13.5 months = FEIS to EPA	31 Jul 85)

Scenario 3b.:

Same as scenario 3b. except add 5 months for blue ribbon panel, i.e., FEIS to EPA

Scenario 4:

<u>Item</u>	<u>Time</u>	<u>Dates</u>
Contract Reactivation	5 months	15 Dec 81 - 15 May 82
Mobilization	3 months	15 May 82 - 15 Aug 82
Tidal Studies	12 months	15 Aug 82 - 15 Aug 83
Report Preparation	4 months	15 Aug 83 - 15 Dec 83
Corps/TAG Review	2 months	15 Dec 83 - 15 Feb 84
Procurement of Blue Ribbon Contract ¹	4 months	15 Oct 83 - 15 Feb 84
Blue Ribbon Analysis	4 months	15 Feb 84 - 15 Jun 84
Corps Review	1 month	15 Jun 84 - 15 Jul 84
	(+13.5 months = FEIS to EPA	31 Aug 85)

¹Concurrent with Transport Studies

Scenario 5:

See Incl 5 to main report.

Scenario	Termination Point	Date	Manpower (Man-months)	* (\$)
1a.	Contract Reactivation (just prior to signing contract)	15 May 82	5	16,000
	Contract Reactivation (just after signing contract)	15 May 82	5	516,000
	End of Mobilization	15 Aug 82	8	700,000
	End of Field Studies	15 Aug 83	20	2,200,000
	End of Contractor Report Preparation	15 Dec 83	24	2,350,000
	End of Corps/TAG Review	15 Feb 84	26	2,435,000
1b.	Same as 1a. through "End of Corps/TAG Review)	15 Feb 84	26	2,435,000
	End of Blue Ribbon Contract	15 Jul 84	31	2,485,000
2a.	Contract Settlement and Modification (just prior to signing contract)	15 Apr 82	4	423,000
	Contract Settlement and Modification (just after signing contract)	15 Apr 82	4	1,100,000
	End of Mobilization	15 Oct 82	10	1,800,000
	End of Field Studies	15 Oct 83	22	3,100,000
	End of Contractor Report and Preparation	15 Feb 84	26	3,250,000
	End of Corps/TAG Review	15 Apr 84	28	3,355,000
2b.	Same as 2a. through Corps/TAG Review	15 Apr 84	28	3,355,000
	End of Blue Ribbon Contract	15 Sep 84	33	3,405,000
3a.	Contract Termination	15 May 82	5	423,000
	Scoping and Contract Procurement (just prior to signing)	15 Nov 82	11	433,000
	Scoping and Contract Procurement (just after signing)	15 Nov 82	11	1,200,000
	End of Mobilization	15 Dec 82	12	1,300,000
	End of Field Studies	15 Dec 83	24	3,300,000
	End of Contractor Report Preparation	15 Apr 84	28	3,500,000
	End of Corps/TAG Review	15 Jun 84	30	3,560,000
3b.	Same as 3a. through Corps/TAG Review	15 Jun 84	30	3,560,000
	End of Blue Ribbon Contract	15 Nov 84	35	3,610,000
4	Contract Reactivation (just before signing)	15 May 82	5	29,000
	Contract Reactivation (just after signing)	15 Aug 82	5	600,000
	End of Tidal Studies	15 Aug 83	20	2,300,000
	End of Contractor Report Preparation	15 Dec 83	24	2,400,000
	End of Corps/TAG Review	15 Feb 84	26	2,450,000
	End of Blue Ribbon Contract	15 Jul 84	31	2,500,000
5	Contract Termination, Modify Cronin Contract			453,000
	End of Studies			453,000

*Does not include \$529,600 in-house costs of LMNPD-RE which apply to all scenarios

TIME AND COST SUMMARY OF SCENARIOS

Description	Scenario 1a.*	Scenario 1b.*	Scenario 2a.*	Scenario 2b.*
	Reactivate and complete contracts	Reactivate and complete contracts	Modify UNO for all phase II work	Modify UNO for all phase II work
Contract Costs				
Contract Initiation	N/A	N/A	\$13,000	\$13,000
Reactivation	\$16,000	\$16,000	N/A	N/A
Termination	N/A	N/A	\$16,000 labor \$407,000 settlement	\$16,000 labor \$407,000 settlement
Transport	\$2,291,726	\$2,291,726	\$2,791,726	\$2,791,726
Blue Ribbon	\$50,000	\$50,000	N/A	N/A
Cronin	N/A	N/A	N/A	N/A
In-house Costs for LMNPD-RE				
EIS Work	\$90,000	\$90,000	\$90,000	\$90,000
Contract Management	\$30,000	\$30,000	\$30,000	\$30,000
Contract Monitoring	\$7,000	\$7,000	\$7,000	\$7,000
LMNPD-RE Estimated Cost of Hi-Level Approach	\$529,600	\$529,600	\$529,600	\$529,600
Estimated cost of specific Scenario	\$2,484,726	\$2,434,726	\$3,404,726	\$3,354,726
Estimated Completion Date	Mar 85	Aug 85	May 85	Oct 85

*Assume 2 full time personnel on project and simultaneous administration of EIS Preparation and contract with 1 Jul 81 start date.

TIME AND COST SUMMARY OF SCENARIOS (Continued)

Description	Scenario 3a.*	Scenario 3b.*	Scenario 4*	Scenario 5
	Terminate existing con- tracts	Terminate existing con- tracts	Analysis of transport study and Barrier Impact of Blue Ribbon Panel Assistance	Hi-level Plan Tentatively Selected Prepare EIS and Barrier Impact Using Available Data
Contract Costs				
Contract Initiation	\$10,000	\$10,000	\$13,000	N/A
Reactivation	N/A	N/A	\$16,000	N/A
Termination	\$16,000 labor \$407,000 settlement	\$16,000 labor \$407,000 settlement	N/A	N/A
Transport	\$3,000,000	\$3,000,000	\$2,291,726	\$16,000 labor \$407,000 settlement
Blue Ribbon	N/A	\$50,000	\$50,000	N/A
Cronin	N/A	N/A	N/A	N/A
In-house Costs for LMNPD-RE				\$30,000
EIS Work	\$90,000	\$90,000	\$90,000	\$90,000
Contract Management	\$30,000	\$30,000	\$33,250	\$800
Contract Monitoring	\$7,000	\$7,000	\$7,250	\$800
LMNPD-RE Estimated Cost of Hi-Level Approach	\$529,600	\$529,600	\$529,600	\$529,600
Estimated cost of specific Scenario (transport)	\$3,560,000	\$3,610,000	\$2,501,226	\$559,600
Estimated Completion Date	Jul 85	Nov 85	Aug 85	Nov 83

Assume 2 full time personnel on project and simultaneous administration of EIS Preparation and contract with 15 Dec 81 start date.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY HURRICANE
PROTECTION PROJECT - REVISED EIS STUDIES

Proposed Public Involvement Program

Early Stage Public Meeting. ER 200-2-1 and recent CEQ guidance for implementing NEPA indicate we need to publish a notice of intent to prepare a revised draft environmental impact statement for the Lake Pontchartrain project. Further, we need to hold a formal scoping meeting and an early stage public meeting can meet this requirement (a draft notice of intent is attached), as well as give us an early reading regarding support for a high-level plan or barrier plan. Since public reaction to the plans will dictate our future course of study options an early public meeting has been tentatively scheduled for November 1981.

Late Stage Public Meeting. ER 11-2-2-502, paragraphs 6(3) and 6(4) indicate holding a late stage meeting is required to present the tentatively selected plan. A final public meeting is tentatively scheduled for February of 1983.

DEPARTMENT OF THE ARMY

3710-XX

NOTICE OF INTENT

To Prepare a Revised Draft Environmental Impact Statement (EIS) Supplement for the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project.

AGENCY: US Army Corps of Engineers, DOD, New Orleans District

ACTION: Notice of Intent to Prepare an EIS Supplement

SUMMARY: 1. Proposed Action. The proposed action to be analyzed in this EIS Supplement is a plan for completion of the ongoing Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection project. This plan would consist of features to provide hurricane protection to the Greater Metropolitan New Orleans Area while preserving environmental values to the maximum practicable extent. The action is being taken in response to a court injunction issued on 30 December 1977, subsequently modified by three separate actions during March of 1978, by the United States Fifth District Court on the basis that the Final Environmental Impact Statement (FEIS) prepared by the Corps in August 1974 is legally inadequate.

2. Reasonable Alternatives. The following actions are being considered in an attempt to meet the above needs: construction of barrier structures at Lake Pontchartrain's main tidal passes which could be operated to reduce the build-up of lake stages during the approach of hurricanes in tandem with construction of levees and floodwalls or construction of only levees and floodwalls. Various levee alignments, providing various degrees of design protection are being considered, as is justified for mitigation of any adverse impacts.

3. Scoping Process.

a. This study has a long history of public involvement. Shortly after the court injunction, a Technical Advisory Group (TAG) was formed to assist in designing and monitoring environmental studies. The TAG consists of representatives of the main agencies which will be responsible for

reviewing the Draft EIS (DEIS) with respect to environmental values: the US Fish and Wildlife Service, US Environmental Protection Agency, State of Louisiana Wildlife and Fisheries Commission, National Marine Fisheries Service, Dr. Eugene Cronin, a nationally known estuarine ecologist who is acting as a Corps consultant is also on the TAG. Since study initiation, representatives of the American Society of Civil Engineers (ASCE) and representatives of local assuring agencies have been periodically informed of study progress and developments. Also, close coordination has been maintained with the US Fish and Wildlife Service. These interests are expected to maintain an active role in this study.

b. Significant issues to be analyzed in the EIS include: hurricane protection of the Greater Metropolitan New Orleans Area, preservation of natural resources in the study area, impacts of the proposed plan on biological, cultural, historical, social, economic, water quality, and human resources, and project costs.

c. The US Fish and Wildlife Service will provide Planning Aid data for the DEIS and a Coordination Act Report for the FEIS.

d. The DEIS will be coordinated with all required Federal, state, and local agencies, environmental groups, landowner groups, and interested individuals.

4. A public meeting to present preliminary data concerning reasonable alternatives identified to date is scheduled for November 1981.

5. The DEIS is scheduled to be made available to the public in January 1983.

Address: Questions concerning the proposed action and DEIS can be answered by Mr. Larry M. Hartzog, US Army Corps of Engineers, Environmental Quality Section (LMNPD-RE), P.O. Box 60267, New Orleans, Louisiana 70160, telephone (504) 838-2524.

DATE

ROBERT C. LEE
Colonel, CE
Commander and District Engineer

LAKE PONTCHARTRAIN, LA., AND VICINITY HURRICANE PROTECTION PROJECT - REVISED E.I.S. STUDIES - FLOW CHART FOR FAST TRACK

1981

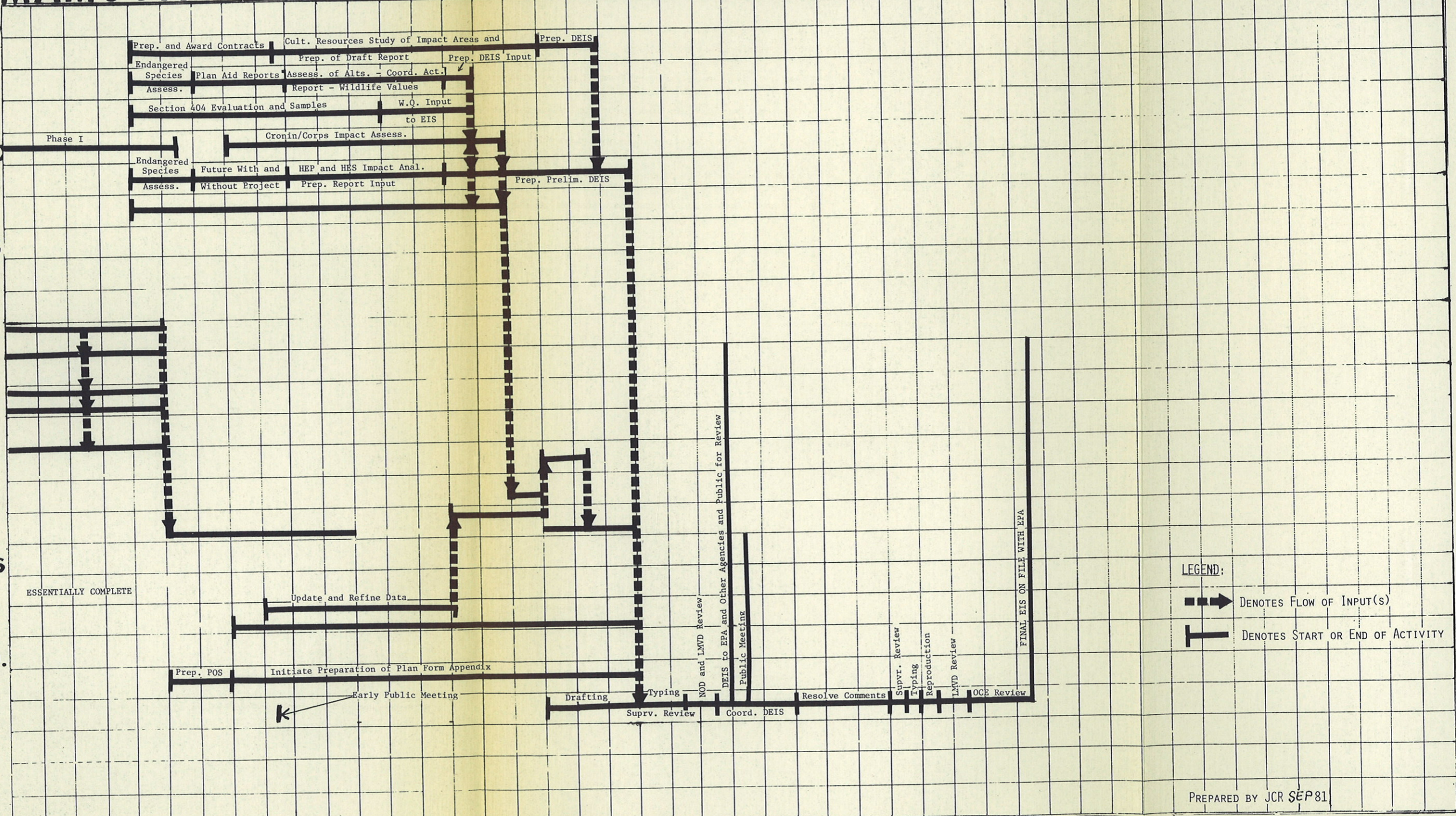
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- ENVIR. STUDIES
- CULT. RES. F. & W. L.S. COORD.
- WATER QUAL.
- TRANSP. STUD
- ENVIR. ANAL. RECREATION STUD.
- ECON. STUDIES
- COMPUTE DAMAGES AND LOSSES
- PHYS FLOOD DAMAGES
- A. EXIST.
- B. FUTURE
- LAND ENHANCEMENT
- A. INTENSIFICATION
- B. LOCATION
- EMERGENCY
- FLOOD INSURANCE
- AREA REDEVELOPMENT
- RECREATION
- COMPUTE YRLY. COSTS AND PREP. DEIS INPUT
- ENGR. STUDIES
- WES MODELING COSTS
- DEIS INPUT STUDY COORD.
- PLAN FORM.
- REPORT PREP. AND COORD. AND PROCESSING



LEGEND:
 ■■■■■ DENOTES FLOW OF INPUT(S)
 ┌──┐ DENOTES START OR END OF ACTIVITY

NOTES: A LIST OF PROPOSED MILESTONES IS ATTACHED

PREPARED BY JCR SEP81

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY HURRICANE
PROTECTION PROJECT-REVISED EIS STUDY - PROPOSED MILESTONES

<u>Milestone</u>	<u>Date</u>
26	12/82
27	1/83
28	1/83
28a	1/83
29	2/83
29a	2/83
30	8/83
31	9/83