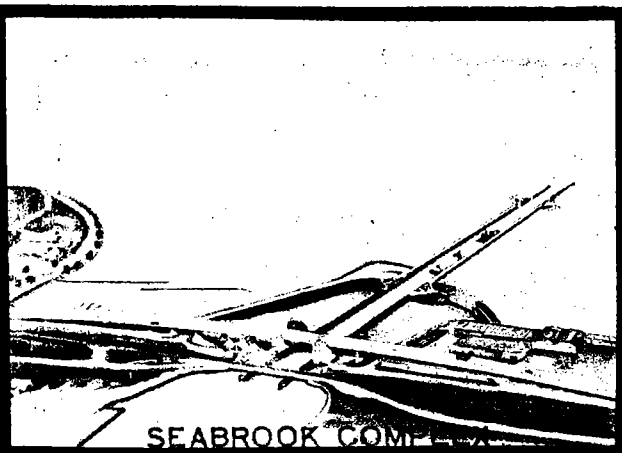
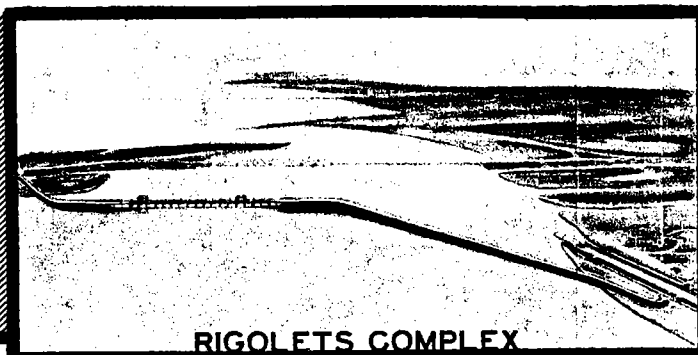


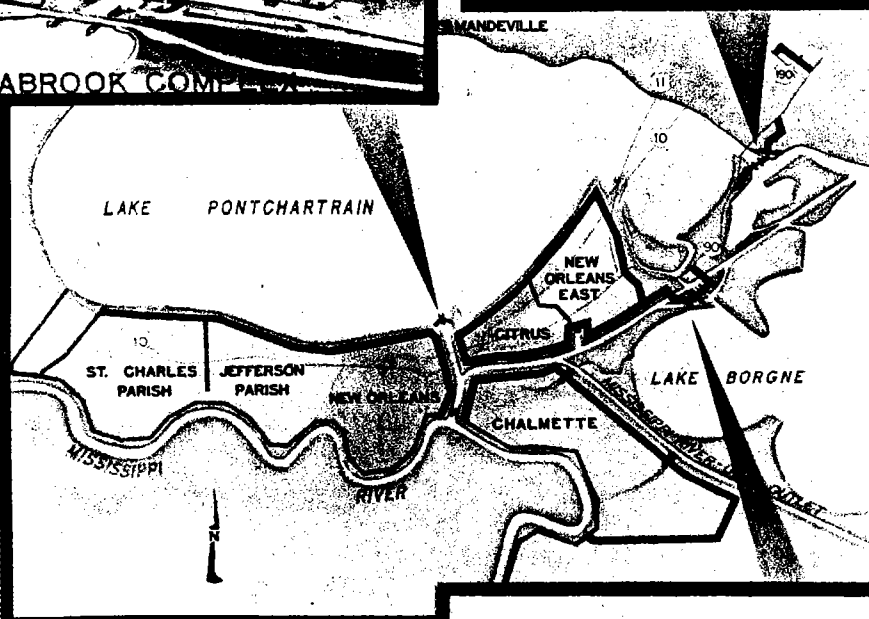
RECORD OF PUBLIC MEETING LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY HURRICANE PROTECTION PROJECT



SEABROOK COMPLEX



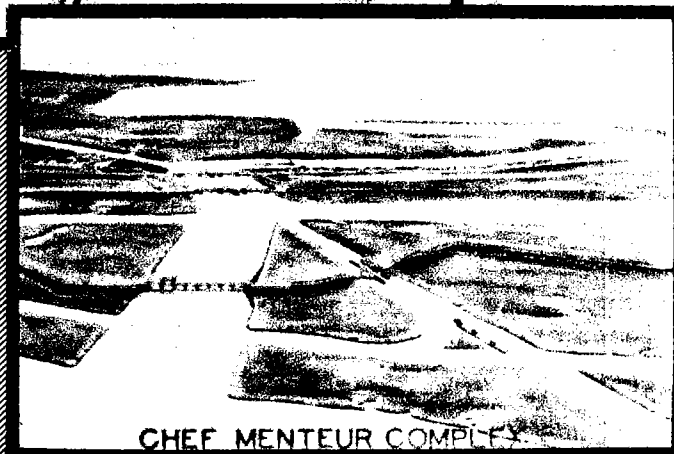
RIGOLETS COMPLEX



JUNE 1975

MEETING HELD AT
THE UNIVERSITY OF
NEW ORLEANS

NEW ORLEANS, LA.
22 FEBRUARY 1975



CHEF MENTEUR COMPLEX

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

August 1975

STATEMENT OF FINDINGS

(In compliance with 33 CFR 209.145 - Federal Projects Involving the Disposal of Dredged Material in Navigable and Ocean Waters)

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY, HURRICANE PROTECTION PROJECT

I held a public hearing/meeting on 22 February 1975 to describe the need, purpose and function of the subject project and to describe and receive public comment on the district's planned disposal of dredged material associated with construction of certain features of the project. The twofold purpose of this hearing/meeting resulted in numerous comments and statements which are summarized below:

a. Comments were received on the hurricane effects described in both the announcement of the public meeting (Exhibit 2 of the record) and in the oral presentations by my staff at the public meeting. These may be summarized as follows:

Comments: Lake Pontchartrain does not pose a flood threat to New Orleans. There has never been hurricane flooding of New Orleans from the lake. A Standard Project Hurricane (SPH) on a path critical to the area is not probable. An SPH has never occurred here. It is not possible for a storm to produce a 9-foot rise in the level of the lake by pushing water through the tidal passes of the lake.

Response: These comments form the cornerstone for many of the arguments in opposition to the project plan. The thrust of these arguments is to challenge the meteorological and hydrological data and the engineering studies upon which the authorized plan is based.

The Standard Project Hurricane (SPH) is a synthetic design storm developed by the National Weather Service. The SPH is a statistical compilation of many combined hurricane parameters or characteristics intended to synthetically simulate a natural hurricane occurrence in this coastal region. Recognizing the unpredictability of hurricanes, the SPH provides in definite and manageable terms a design storm that can be used by engineers as a design tool in computing hydrologic effects of hurricanes on the impact area. The SPH is used not only for this particular project, but is used nationwide for all hurricane protection projects where the loss of human life is possible.

Similarly, the term "critical path" has been widely misunderstood. In effect, there has arisen a belief that the project is only designed for protection against the "SPH" which traverses a "critical path." Just as the SPH is a design tool representing a probable natural event,

the critical paths are design tools. These paths are indicative of hurricane approaches that would be reasonable simulations of natural occurrences, but more importantly, these paths are used to define the most extreme consequences of the storm to specific segments of the metropolitan area. Used conjunctively, the SPH and critical paths provide a definitive hydrologic basis for the design of protective works at particular locations in the project area.

Lake Pontchartrain presents a serious flood threat to its shoreline areas. The lake is directly linked to the Gulf of Mexico by three tidal passes through which hurricane generated tidal surges can enter and elevate the water surface in the lake. The extent of this rise depends upon the characteristics of each particular storm. Areas adjacent to the lake, including New Orleans proper, have been flooded from the lake waters on many past occasions; such events have been well documented.

b. Comments regarding the function of the barrier complexes under hurricane conditions are summarized below:

Comments: Even with the barrier complexes, the tilting effect will still occur in the lake and New Orleans will be threatened with flooding; therefore, the barriers will not protect against hurricanes and are not needed. With the barriers closed to prevent inflows from storms in the Gulf of Mexico, the Bonnet Carre spillway could not be operated to relieve flood levels in the Mississippi River.

Response: The basis of the authorized barrier plan is to maintain a near normal stage in Lake Pontchartrain just prior to a hurricane landfall and to limit excessive tidal rises in the lake, thereby reducing the flood threat to all land areas adjacent to the lake. This same principle applies in reducing the flood threat due to the tilting effect. The tilting action will still occur, but the average lake level coincident with this phenomenon will be 4 to 5 feet lower due to the tidal inflow reductions caused by the barriers. The possibility of the occurrence of meteorological conditions which would necessitate the use of the Bonnet Carre spillway during the short periods of time when the barrier complexes would be closed is considered to be too remote to constitute a valid planning consideration. However, should these hydrologic phenomena simultaneously occur, we have options other than the use of the Bonnet Carre spillway to manage floodflows in the Mississippi River.

c. With respect to the environmental aspects of the barrier complexes, the following comments were received:

(1) Comment: The US Fish and Wildlife Service and the National Marine Fisheries Service suggested that studies be initiated to determine the effects of the barrier structures on Lake Pontchartrain salinity regimes, and on the ingress and egress of marine and estuarine organisms through Chef Menteur and The Rigolets passes; and that if these studies indicate that the structures are detrimental to this estuarine ecosystem, the structures should be modified to rectify the problem. A similar recommendation for a periodic review and evaluation regarding the effects on fish and wildlife was made by the Louisiana Wildlife and Fisheries Commission.

Response: We are committed to the principle of sizing the control structures at Chef Menteur and The Rigolets passes so as to avoid any significant alteration of the pattern of tidal interchange. One of the primary purposes of Seabrook Complex is to regulate and manage a salinity regime favorable to fish and wildlife. We have extensively studied the possible effects of the project on fish and wildlife and have documented our findings within various public records, most notably in the environmental statement filed with the Council on Environmental Quality. Continuing attention and study are given such matters and we are currently negotiating with Louisiana State University in an attempt to structure and implement comprehensive, basin-wide environmental studies to insure that any adverse environmental consequences attendant to project construction and operation are minimized, and that any opportunities for environmental enhancement are fully exploited. We are prepared to address fully any other legitimate environmental concerns which may arise. Certainly, if there are any indications of significant detrimental effects resulting from the barrier complexes, corrective measures would be taken to alleviate these effects.

(2) Comment: The US Fish and Wildlife Service and the National Marine Fisheries Service also recommended that the drainage structures associated with the New Orleans East segment of the project be modified and operated to nourish the interior marshes by allowing maximum tidal interchange in the protected area.

Response: A modified operating plan for the drainage structure at South Point is being investigated. If it is determined to be feasible, tidal interchange could be allowed until developed areas are threatened. It is appropriate to remark, however, that the New Orleans East area has been effectively leveed for about a quarter of a century, and is clearly destined for further development. Hence any such plan would not have a long-term effect on the area.

(3) Comment: The Louisiana Wildlife and Fisheries Commission requested more information concerning the plans to contain sediments during dredging operations of the Chef Menteur Complex because of the possible detrimental effects on nearby oyster beds.

Response: The plans and specifications for the hydraulic levee construction contracts at Chef Menteur Complex will require diked ponding areas adjacent to the levee fill areas. Spill boxes will be located in the ponding area dikes so that clarified waters will flow out of the ponding areas after the solids in the dredged effluents fall from suspension. The design of the ponding areas will be coordinated with the Louisiana Wildlife and Fisheries Commission.

(4) Comment: Clarification of the amount of time that the barrier structures would be closed is required.

Response: We have investigated records of hurricanes and tropical storms that have occurred since 1887 and find that these storms have an average life expectancy of 3 days once in the Gulf of Mexico, and further that we have experienced such events on the average of three times each year. The duration of a barrier structure closure would average about 3 days per storm. We therefore expect that the total closure time during the hurricane season (June through October) would average 9 days.

d. Comments concerning the environmental statement may be summarized as follows:

Comments: There is a great need for a cumulative environmental statement for all projects in the Lakes Maurepas, Pontchartrain, St. Catherine, Borgne estuary, and this project should be delayed until such an environmental statement is prepared. The project is partially complete while the final environmental statement has not been approved by the President's Council on Environmental Quality (CEQ).

Response: While a cumulative environmental statement of such a scope would undoubtedly be of great value to all concerned, its preparation would be an enormous undertaking. The preparation of statements on individual actions is a workable approach, which will yield adequate results provided that all significant interactions between individual proposals are identified and the corresponding impacts, whether direct or indirect, are described. The final environmental statement, now on file with CEQ, has received all of the requisite interagency approvals and public reviews mandated by NEPA. I am convinced that this statement is in all respects adequate and that it is in the public interest to continue work on the project in order to provide protection for the lives and property of the citizens of the area.

e. Specific comments regarding the navigation aspects of the project are summarized below:

(1) Comment: The sizes of the proposed navigation structures are restrictive.

Response: Numerous and varied comments on this matter were received. The navigation structures were sized with careful consideration being given to the Gulf Intracoastal Waterway system, local shipbuilding and marine related concerns, controlling depths of adjacent waterways, and existing clearances of bridges and appurtenant facilities. The planned dimensions are consistent with these considerations and with present and future navigation needs of the area. However, I will review in detail the comments received in order to insure that the project will have as little impact on the marine industry as possible.

(2) Comments: The increased current velocities in the vicinity of the barrier complexes will be a hazard to navigation. To eliminate the current velocity problem at Seabrook, the Southern Railroad bridge there should be replaced--Seabrook lock is not required. There have been no costs or detailed plans presented to the public concerning a sheltered, bulkheaded forebay area of sufficient size to accommodate waiting tows--nor is there any place for tows to wait inside the Inner Harbor Navigation Canal (IHNC). There will be a great inconvenience to navigation during the construction of the complexes.

Response: The purpose of the navigation structures (Seabrook and Rigolets locks and Chef Menteur navigation structure) is to provide a means of passing vessels through the barrier complexes. Vessels will be allowed to transit each of the structures freely except during hurricane conditions and during periods of higher current velocities at Seabrook and The Rigolets. It is anticipated that higher current velocities at certain times will make it hazardous to pass freely through the Seabrook and Rigolets locks. During these periods, lockages will be required. Due to the operational procedures of the locks, current velocities in the immediate vicinity of the navigation structures will impose no hazardous condition on navigation.

The current velocity problem at Seabrook is due to the deep, direct access to the gulf provided by the Mississippi River-Gulf Outlet (MR-GO). All of the bridges along the Inner Harbor Navigation Canal (not just the Southern Railroad bridge) provide restrictions to flow, but the velocity problem arises from the very rapid, daily tidal response of the canal due to the MR-GO. A lock is required to mitigate this problem and Seabrook lock was authorized for this purpose in addition to its hurricane protection function. Additionally, a breakwater system, intended to provide a sheltered forebay, is planned to be located lakeward of the Seabrook Complex. The need for a protected forebay has been recognized for several years although design details have not

yet been formulated. Representatives of the commercial marine industry who comprise the primary users of the IHNC have been previously contacted to provide needed data and suggestions for the proposed breakwater system. Such coordination will continue throughout the design phase of this work. The existing development along the canal precludes the possibility of establishing a tailbay layover area without the relocation of industrial development and within reasonable cost. It is not anticipated that waiting in the Inner Harbor Navigation Canal will pose a problem for tows since they must do the same now for the operation of the many bridges across the canal. Unrestricted transit of the lock will be possible during two-thirds of each day. During the remainder of the day, the adverse currents in which the tows must now operate will be eliminated by the operation of the lock making maneuvers within the canal considerably less difficult. Seldom is there vessel congestion at the Seabrook area and little waiting time due to the lock is anticipated for either free transit or locking.

The construction of the barrier complexes at Chef Menteur Pass and The Rigolets will not inconvenience navigation. At Seabrook, some slight inconveniences may be expected during construction since vessels will have to cautiously flank the construction area via temporary by-pass guidewalls in the natural channel. The construction sequences and the provision of navigational aids at all of the construction sites have been designed to preserve both tidal flow and navigation throughout the construction period.

f. Various comments regarding the protection system for areas on the north shore of Lake Pontchartrain are summarized below:

Comments: The areas north of the lake don't need levee or barrier protection. The project will provide no new protection or at best inadequate protection for the north shore areas. A new seawall is needed at Mandeville from Bayou Chastant to Chichuba Creek.

Response: Natural ground elevations on the north shore of the lake increase significantly from the shoreline to inland areas. Most of the permanent development on the north shore is concentrated at higher elevations. Considering the flood prone development at the lower elevations, it is not economically justifiable to provide more extensive flood protective improvements than the works now authorized for this area. This area is nonetheless susceptible to the same hurricane flood threat that exists for any shoreline area of the lake. The barrier structures will afford such shoreline areas a high degree of protection by maintaining a lower lake level than would naturally exist just prior to the hurricane's arrival. At Mandeville, a major north shore population center located directly on the shoreline, the project authorizes the strengthening and repair of the existing seawall.

Officials of Mandeville are opposed to the authorized plan of improvement and have accordingly refused to provide the financial assurances required to implement these works. Consequently, planning for this feature of the project has been indefinitely deferred. The type and extent of protective works desired by Mandeville officials in lieu of those authorized by the project have been studied and cannot be economically justified for implementation.

g. The comments concerning the disposal of dredged material are as follows:

(1) Comment: The US Fish and Wildlife Service and the National Marine Fisheries Service recommended that the ponding dikes be segmented following revegetation of these areas in order to restore tidal interchange.

Response: This will be included in the first levee shaping contracts after hydraulic levee construction operations are completed within an area.

(2) Comment: The US Fish and Wildlife Service and the National Marine Fisheries Service recommended that the disposal areas associated with the Rigolets Complex be relocated to the north side of The Rigolets between US Hwy. 90 and the Rigolets Entrance Light No. 2 or some other upland area.

Response: The disposal area west of Sawmill Pass, numbered 1 on attachment 1, will be relocated to the suggested area. The New Orleans District will request that the assuring agency obtain a construction easement for the use of the recommended area. The disposal area east of Sawmill Pass, numbered 2 on attachment 1, will be deleted. The waste material from construction of the control structure, approach channels, and closure dam which was to be deposited in area 2 will be disposed of in the ponding area north of The Rigolets, numbered 3 on attachment 1. This ponding area is required to contain weak materials removed from the levee base foundation, the effluent from the sand pumped into the excavated levee base, and the material excavated during the construction and maintenance of the navigation channel approaches to Rigolets lock. Relocation of this disposal area 3 is not economically feasible.

(3) Comment. The Orleans Audubon Society recommended that instead of ponding material in the marshes, we should use it for construction purposes, backfilling borrow areas, or we should dispose of this material at approved offshore locations.

Response: The material ponded in these areas is not suitable levee construction material. It is not economically feasible to remove this material to backfill borrow areas or dump in offshore locations. Natural subsidence of the ponding areas and the breaching of the dikes inclosing these areas will restore tidal interchange as mentioned above.

(4) Comment: The New Orleans City Planning Commission recommended that we determine what, if any, effect our dredging and disposal plans will have on the three archeological sites between Paris Road and South Point.

Response: This has been specifically investigated. Our construction will not affect any of these sites.

(5) Comment: The New Orleans City Planning Commission was concerned that our dredging and disposal plans will conflict with the Coastal Zone Management Plans currently being formulated.

Response: This is a possibility since Coastal Zone Management Plans have not been formulated. In the absence of these plans, the New Orleans District will coordinate with all concerned state agencies to insure, to the extent possible, that Coastal Zone Management objectives are recognized.

h. The following is a summary of various other comments received:

(1) Comment: The project will destroy the buffer action of the lake and marsh.

Response: The authorized project plan will provide much more effective protection against hurricanes than that provided by open marsh. Lake Pontchartrain offers no protection against a hurricane; rather, in its swollen state, it is a clear threat.

(2) Comment: If a hurricane struck during construction of the barrier complexes, Slidell would be flooded by backed up water.

Response: During construction, the barrier complexes can in no way increase Slidell's susceptibility to damage from a hurricane. In fact, during the later stages of construction, the barrier complexes will provide increasing degrees of protection to the lake shore areas.

(3) Comments: The project does not provide flood protection to the LaPlace, Louisiana area. LaPlace needs a levee between the Bonnet Carre Spillway and the I-10 spoil bank.

Response: A study for hurricane protection for the west shore of Lake Pontchartrain was authorized in 1971; however, no funds have been made available to initiate the study. As soon as funds are available, the necessary studies will be undertaken to formulate an appropriate recommendation concerning the west shore area. Meanwhile, the construction of the authorized project features will not aggravate any flooding which may occur at the west shore; but, on the contrary, the barrier complexes will significantly lessen the threat of hurricane flooding in the LaPlace area.

(4) Comment: The Rigolets will be closed for up to 2 years for construction and this will block navigational passage and prevent tidal exchanges and will therefore destroy the lake.

Response: This comment is unfounded. The pass will not be closed during construction operations. The sequence of such activities has been planned so that tidal interchanges and navigation will not be interrupted at any time during the construction period.

(5) Comment: The Rigolets Complex may not go where it is shown now.

Response: During the later planning stages of the project, it was determined that a site different from that originally planned for the Rigolets Complex would be more economical. This is the site indicated on all of the documents and illustrations of the project used during the last several years. It is not anticipated that the site will be changed in the future.

(6) Comment: The failure of the single gantry crane at the Chef Menteur Complex at a critical time would be intolerable.

Response: This comment is of considerable merit. It is undoubtedly true that an operational failure of this single crane during a hurricane closure would pose serious problems. In the absence of a standby secondary crane, we have attempted to incorporate backup and emergency apparatus and procedures into our machinery and structure designs in order to assure the reliability of the structure in critical periods. Nevertheless, a single crane presents a known functional risk and in order to fully temper that risk we are now studying different gate machinery and designs such as tainter gates so that a mandatory closure may be assured when a hurricane threat is apparent.

(7) Comment: The Inner Harbor Navigation Canal (IHNC) floodwalls are endangered by the derelict barges and ships in the canal.

Response: Although the breakaway of moored vessels is, of course, possible, to design the floodwalls for vessel impact would result in prohibitive costs. The floodwalls are designed essentially for flood protection. A more feasible measure in preventing such occurrences is the proper design of vessel mooring facilities and extra-precautionary measures in lashing vessels when a hurricane threat is imminent.

(8) Comment: The 3 1/8 percent discount rate used in the economic analysis of the project is unrealistically low.

Response: The Federal discount rate is established through an Act of Congress. The Water Resources Council computes the discount rate based on the average yield over the previous year on the Government's long-term bonds with 15 years or more to maturity. This discount rate applies not only to the US Army Corps of Engineers projects but also to those of other Governmental agencies. In accordance with related Federal regulations, the discount rate for this project was frozen at 3 1/8 percent at the time of first construction.

(9) Comment: The authority of the Governor of the State of Louisiana to provide assurances for local funding on behalf of local sponsors which have refused this responsibility under their own authorities is questioned.

Response: In clarification, the situation in question is an act of assurance executed by the Governor of Louisiana on 8 May 1972, covering all local cooperation requirements for the project, for and on behalf of the St. Tammany Parish Police Jury under the authority granted him by Section 81, Title 38, of Louisiana Revised Statutes of 1950. The St. Tammany Parish Police Jury refused to furnish financial assurances to provide their prorata share of project costs in demonstration of their opposition to the project. The United States cannot accept the Governor's substitute assurance until it receives an opinion from the Attorney General of the State of Louisiana stipulating the legal sufficiency of this action. The Department of Public Works for the State of Louisiana has been requested to secure this opinion.

Certain exhibits in the public record contained specific questions or requests for information. These were answered and the replies were incorporated into the record with the respective exhibits. They are Exhibits 20, 23, 25, 48, 72, 74, and 86. The replies address not only the related comments but also many other duplicate comments received.

In addition to the comments summarized above, five separate form letters, each submitted by many different individuals, and six petitions were incorporated in the record as Exhibits 32, 37, 78, 79, 94, 107, 108, 109, 110, 111, and 112. Though voluminous, these exhibits express views which have been discussed either in this statement of findings, the

replies to the exhibits indicated above, or in the final environmental statement.

Other comments made at the meeting and in the written exhibits have been considered in the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project Final Environmental Statement, dated August 1974, and the Statement of Findings.

CONCLUSIONS

I have carefully reviewed the entire contents of the record of the public meeting and, in responding to the various comments contained therein, I have arrived at the following determinations:

a. Continued study of the environmental effects of the project is necessary. This is especially true of the St. Charles Parish area and the barrier complexes. We are contemplating a thorough and comprehensive data collection and evaluation effort to augment the environmental studies of the Lake Pontchartrain estuary which we have made over the past 2 decades. This effort combined with our continuing sampling and evaluation programs will insure an adequate before and after environmental analysis of the project works. This effort will also assist in resolving the matter of the St. Charles Parish lakefront levee and the alternative works proposed for that area. Should any significant detrimental environmental effects be discovered through these analyses, the Corps of Engineers would move quickly to alleviate these effects.

b. I am cognizant of the possible impact that this project may have on the navigation interests of the area. It is vital that the dimensions of the navigation structures do not unreasonably restrict present or future marine commerce. While I feel that the navigation structures have been carefully sized, I will review in detail the comments received in order to ensure that the dimensions now planned are consistent with navigation needs of the area.

c. The status of the assurances required of the St. Tammany Parish Police Jury is most complex. The assurance executed by the Governor of the State of Louisiana on behalf of the police jury cannot be accepted by the United States until the legal sufficiency of that action has been demonstrated by the Attorney General of the State of Louisiana. I will continue my efforts to resolve this matter with the State of Louisiana.

d. Through this public meeting, in addition to my many other contacts with the public and their representatives, I have concluded that while the support remains strong in nearly all of the state and local

governmental agencies associated with the project, with the notable exception of St. Tammany Parish, there is measurable opposition to the project within the local citizenry. This grass-roots opposition is largely centered in the Slidell and Mandeville areas of St. Tammany Parish. After analyzing the content of the public record and reviewing the private correspondence on the project over the last few years, I conclude that while some opposition relates to genuine environmental concerns, the bulk of this opposition derives from a lack of understanding or a misinterpretation of the project, its necessity, function, and operation. I feel that this is due, perhaps, to insufficient contact with the public. While our coordination with local agencies and contacts with certain outspoken individuals have been extensive, our exchanges with the general public could probably be expanded, in the hope that a better understanding of the project can be developed.

e. The plan for the disposal of dredged materials in conjunction with the construction of the various project features is described in Exhibit 2 of the record. I find it desirable to modify this plan as follows:

(1) The ponding dikes will be segmented after the completion of the dredging operations and revegetation of the disposal area.

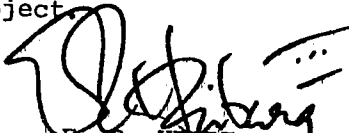
(2) The Rigolets Complex disposal area east of Sawmill Pass (Area No. 2 on Attachment 1) will be deleted as discussed in the comment above.

(3) Disposal Area No. 1 west of Sawmill Pass will be relocated to the suggested disposal area on the shoreline north of the Rigolets and west of U. S. Highway 90.

The preceding describes my final plan for the disposal of dredged materials.

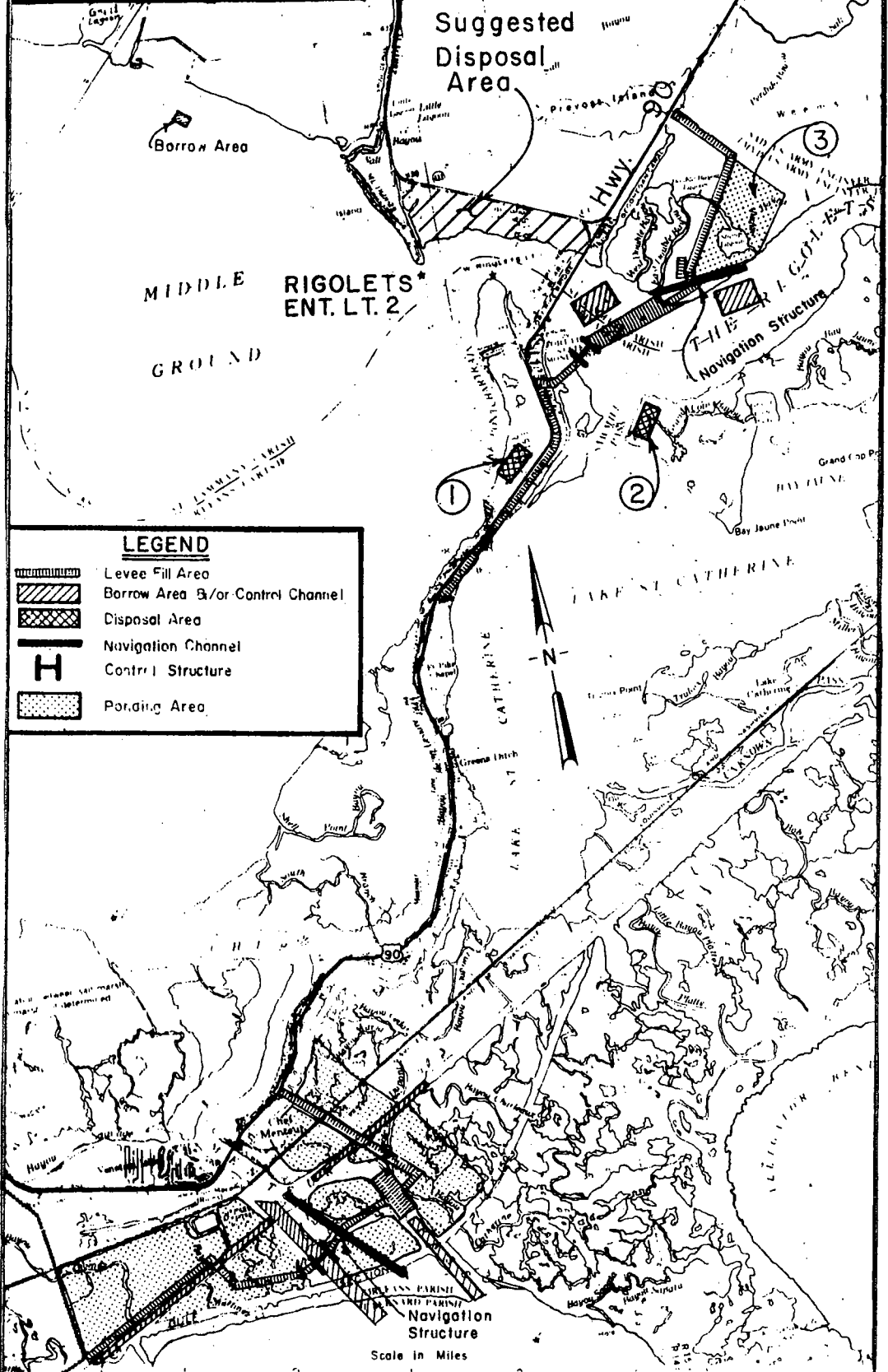
f. The Lake Pontchartrain area is facing a clear threat of hurricane losses to life as well as property. This authorized project will provide a high degree of flood protection to all of the Lake Pontchartrain shoreline areas as well as to a sizeable portion of St. Bernard Parish. I find that the project is in the best interests of public safety and/or well-being; that the project is consonant with national policy, statutes, and administrative directives; and that the total public interest will be best served by continued construction of this hurricane protection project.

DATE: August 20, 1975


E. R. HEIBERG III
BG, USA
District Engineer

1 Attachment
As stated

LAKE PONTCHARTRAIN, L.A. & VICINITY
 HURRICANE PROTECTION
 PROJECT
BARRIER UNIT
 DATE: NOVEMBER, 1974



LEGEND

	Levee Fill Area
	Borrow Area &/or Control Channel
	Disposal Area
	Navigation Channel
	Control Structure
	Padding Area

Scale in Miles

RECORD OF PUBLIC MEETING

HELD BY

COLONEL E. R. HEIBERG III, DISTRICT ENGINEER
US ARMY ENGINEER DISTRICT, NEW ORLEANS

IN

UNIVERSITY CENTER BALLROOM
UNIVERSITY OF NEW ORLEANS
NEW ORLEANS, LOUISIANA

22 FEBRUARY 1975
9:00 A.M. - 5:00 P.M.

TO DISCUSS ALL ASPECTS OF THE
LAKE PONTCHARTRAIN, LOUISIANA, AND VICINITY
HURRICANE PROTECTION PROJECT

AND

TO DISCUSS THE PROCEDURES FOR THE
DISPOSAL OF DREDGED MATERIALS

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT

RECORD OF PUBLIC MEETING
22 FEBRUARY 1975

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EXHIBITS

APPENDIXES

Appendix A	Supplementary attendance list	A-1 - A-7
	Supplementary exhibit list	A-8 - A-10
Appendix B	Excerpts on procedures for the disposal of dredged materials	

The final environmental statement dated August 1974 is considered as part of this record although it is bound separately. A copy will be provided with each copy of this record.

ATTENDANCE LIST

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Accardo, Joseph Jr.	State of Louisiana House of Representatives	Drawer F Laplace, LA
Alford, Neil	Individual	P.O. Box N Slidell, LA
Allen, Bill	Home Builders & Lions Club	P.O. Box 736 Slidell, LA 70458
Allen, Ross G.	Southern Yacht Club	7590 Lakeshore Dr. New Orleans, LA
Allen, Warren G.	St. Tammany Parish Police Jury	746 Teal Dr. Slidell, LA 70458
Alonzo, Robert J.	President, East Orleans Civic Council	4683 Galahad Dr. New Orleans, LA 70127
Amos, Ms. Claire I.	Individual	4114 1/2 State St. Dr. New Orleans, LA 70125
Anderson, J. Thomas	Individual	507 E. Thomas St. Hammond, LA 70401
Anderson, William C.	New Orleans Sportsman's League	4306 Bienville St. New Orleans, LA 70119
Angy, Mrs. B. G.	Individual	2351 Jay St. New Orleans, LA 70122
Baldwin, Gus B., Jr.	Individual	2100 Front St. Slidell, LA 70458
Baldwin, Mrs. Gus B. Jr.	Individual	2100 Front St. Slidell, LA 70458
Baldwin, Robert Jr.	Individual	1542 Front St. Slidell, LA 70458
Barber, W. H.	L&N RR Co.	P.O. Box 1030 Mobile, AL 36601
Barthet, Ron	St. Tammany Farmer (Newspaper)	P.O. Box 242 Mandeville, LA

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Bech, Malcholm A., Jr.	New Orleans Mosquito Control	6601 Lakeshore Dr.
Bechac, A. Denis	Town of Mandeville, Councilman	2025 Lakeshore Dr. Mandeville, LA
Berger, Margaret K.	Individual	1148 Harrison Ave. New Orleans, LA 70122
Beter, Robert A.	Individual	Box 3526, Route 3 Slidell, LA
Black, C. E.	Individual	4520 Wichers Dr. Marrero, LA
Blancher, Eldon C., III	Individual	6209 Cameron Blvd. New Orleans, LA 70122
Boczon, Robert S.	Venetian Isles Civic & Improvement Assn.	4620 Alba Road
Bodet, Lawrence G.	Orleans Levee Board	418 Royal St., Room 200 New Orleans, LA
Booker, Edward H.	State of Louisiana House of Representatives	2833 Gen. Pershing St. New Orleans, LA 70115
Braud, Francis J.	Bonnet Carre Rod & Gun Club	112 Goodhope St. Norco, LA 70079
Brock, Glynn H., Jr.	Slidell Sportsmen's League	Route 3, Box 243 Slidell, LA 70458
Brock, Judith W.	Slidell Sportsmen's League	Route 3, Box 243 Slidell, LA 70458
Brody, Michael S.	New Orleans Mosquito Control	6601 Lakeshore Dr.
Brumfield, Les	The States-Item	3800 Howard Ave. New Orleans, LA 70140
Bruscato, R. M.	Individual	333 Dover St. Slidell, LA
Burgess, Joseph E.	US Fish and Wildlife Service	USL P.O. Box 4753 Lafayette, LA 70501

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Cali, Ernest F.	Lakeshore Property Owners Association, Inc.	979 Crystal St. New Orleans, LA
Cambre, Milton	St. Charles Environmental Council	402 Marino Norco, LA 70079
Canal, George A.	Civic Group	Route 3, Box 352 Slidell, LA 70458
Carey, Robert E.	Village D'Lest Improvement Assn.	4900 Michoud Blvd. New Orleans, LA 70129
Carson, H. R., Jr.	Lake Vista Property Owners Association, Inc.	69 Flamingo St. New Orleans, LA 70124
Carson, Lane A.	Individual	4620 Lafaye St. New Orleans, LA 70122
Caruthers, Samuel G.	Individual	Route 1, Box 398
Casserleigh, Henry G., Sr.	Individual	Box 892 Slidell, LA
Challe, A. T.	Environmental Group	610, W. Church St. Hammond, LA 70401
Chalk, Mrs. Elizabeth Waldred	Environmental Group	1711 Crestwood Dr. Columbia, SC 29205
Chocheles, Peter	C. F. Bean Corp.	4800 Wade Dr. Metairie, LA 70003
Clark, Patricia	Individual	1441 Delachaise New Orleans, LA 70115
Closky, R. M.	Northshore Volunteer Fire Department	P.O. Box 280, Northshore Slidell, LA
Coleman, Mills R.	Individual	216 Legendre Drive Slidell, LA 70458
Colley, John	Individual	3912 I-10 Service Road Apartment 236 Metairie, LA

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Colomb, C. Earl	St. Bernard Council Chamber of Commerce	50 Madison Ave. Chalmette, LA 70043
Colomb, Raoul A.	St. Bernard Council Chamber of Commerce	1823 Schnell Dr. Arabi, LA 70032
Cook, Harold E.	N.O. East, Inc.	P.O. Box 29188 New Orleans, LA 70189
Corry, Charles E., Jr.	Individual	1826 Dupard Mandeville, LA 70448
Cousin, Gilbert	Individual	Route 3, Box 3568 (Northshore)
Crais, Arthur A.	Edgewood Gentilly Civic and Social Club/Gentilly Terrace & Gardens Assn.	2400 Filmore Ave. New Orleans, LA
Cresap, Daniel V.	Louisiana Department of Public Works	Baton Rouge, LA
Crowe, Art	Individual	3265 Ivanhoe #4 Baton Rouge, LA
Cusimano, Frank	City Official Mayor, Slidell La.	1846 Front St. Slidell, LA
Danby, Cliff	Orleans Audubon Society	4843 Gabriel Dr. New Orleans, LA 70127
Davis, C. B.	United Gas Pipe Line Co.	P.O. Box 1407 Shreveport, LA 71158
Davis, Frank	Outdoor Life Magazine	333 Dover St. Slidell, LA
Davis, Mrs. Mary Clare	Slidell Sportsmen's League	333 Dover St. Slidell, LA
Deano, Lloyd	Lakeshore Property Owners Association, Inc.	7223 General Haig St. New Orleans, LA 70124
Dendinger, Albert B.	Individual	Route 1, Box 439 Slidell, LA 70458
Dendinger, Margaret	Individual	Route 1, Box 439 Slidell, LA 70458

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Dennery, Richard	Baton Rouge Morning Advocate/States-Times	837 Burgundy St. New Orleans, LA 70116
Derbes, A. J.	Individual	7340 General Haig New Orleans, LA 70124
Dibeneditto, Steve	St. Charles Parish Police Juror	
Drago, D. W.	Individual	2986 Palm Dr. Slidell, LA 70458
Eckart, Edith	St. Tammany Environmental Council	Route 3, Box 16B
Eichholz, Benny S.	Individual	7429 Hampson St. New Orleans, LA
Elarr, E. E.	Individual	4332 Spain St. New Orleans, LA 70122
Ellzey, Eugene	Gerret's Shipbuilding Co., Inc.	6351 Essex Court Algiers, LA
Esquinance, Mr. & Mrs. Emory	Individuals	1324 Lamarque St. Mandeville, LA
Estopinal, Eugene I.	Chamber of Commerce/ Individual	Box 1183 Chalmette, LA
Ewig, Ina G.	Individual	153 W. Pinewood Dr. Slidell, LA
Exnicios, S. R.	Individual	4900 Coronado Dr. New Orleans, LA
Fannaly, Mr. & Mrs. Marion	Sierra Club	Box 334, Route 16 O'Neal Lane Baton Rouge, LA 70816
Farrer, Dean Grimes	Individual	4412(B) Tabony St. Metairie, LA
Fontenot, Mary	Individual	941 Jefferson Ave.
Fontenot, William A.	Sierra Club--Delta Chapter	111 S. Hennessey St. New Orleans, LA 70119

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Forstan, Frederick J., Jr.	New City Limits Tarpon Club New Orleans Sportsmen's League	6204 Louis XIV
Fowler, Ronald L.	US Wildlife Service, Div. of Ecological Services	P.O. Box 4753, USL Lafayette, LA
Fritz, Beverly J.	Save Our Unique Lake Committee	6802 Pine Lane, Apt 31 New Orleans, LA 70127
Frost, Robert L.	Individual	612 Legendre Dr. Slidell, LA 70458
Fruge', David W.	US Fish and Wildlife Service	P.O. Box 4753, USL Lafayette, LA 70501
Gagliano, Louis C.	Individual	2516 Pirate Dr. Chalmette, LA
Galaths, Warren "Jack"	Individual	Route 2, Box 666 Slidell, LA
Garrard, Richard F.	Individual	607 Legendre Dr. Slidell, LA
Gaucher, Capt. P. C.,	Federal Agency USCG	Chief of Staff 8th C. G. District Customhouse New Orleans, LA 70130
Gerrets, Judovic J.	Gerrets Shipbuilding Co., Inc.	1137 Annunciation St. New Orleans, LA
Gholz, Charles A.	Individual	3634 Elysian Fields New Orleans, LA 70122
Gholz, Renee C.	Individual	3634 Elysian Fields New Orleans, LA 70122
Gianorusso, Freddie J.	St. Charles Parish Police Juror	801 Barreca St.
Gex, Emile J., Jr.	Regional Planning Commission	Masonic Temple Bldg. 33 St. Charles Ave. Suite 900 New Orleans, LA

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Gibbs, L. C.	T. L James & Co., Inc.	130 Elvis Court Metairie, LA 70001
Gibbs, Vance J.	Individual	250 Evella Slidell, LA
Gilmore, William J. Jr.	Buccaneer Villa Civic Improvement Assn., Project Flood Control, Tidewater Development Association	2404 Jean Lafitte Pkwy. Chalmette, LA
Glorioso, Miss Mary Ann	Individual	1214 Filmore Ave.
Guillot, Lionel	Individual	2124 Chetta Dr. Chalmette, LA
Gomez, James C.	Individual	2234 7th St. Slidell, LA
Guth, Ron	Slidell, City Attorney	P.O. Box 649 Slidell, LA
Haas, Linda T.	Individual	469 Hickory Dr. Slidell, LA 70458
Hamilton, Rachel	League of Women Voters	41 Necomb Blvd.
Hammond, John R.	Individual	111 Sattennessey St. New Orleans, LA 70119
Harmon, E. M.	Individual	Route 1, Box 472 Slidell, LA
Harmon, Wilkes R.	Individual	Route 1, Box 472 Slidell, LA
Harper, Clarke	Venetian Isles Civic & Improvement Assn.	4501 Murano Road New Orleans, LA 70128
Hayes, Mrs. O. N.	East Orleans News Publisher	P.O. Box 26008 New Orleans, LA 70126
Hays, William A., Jr.	Individual	141 Homestead Ave. Metairie, LA

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Herr, Mrs. R. D.	League of Women Voters of LA	59 Oriole St.
Hill, Peggy	Individual	P.O. Box 1380 Slidell, LA 70458
Hill, Thomas J. Jr.	Individual	P.O. Box 1380 Slidell, LA 70458
Hingle, Alden E.	A. E. Hingle, Inc.	215 West Chester Pl. Slidell, LA
Hudson, Lawrence H. III	North Shore Civic Club	Rt. 6, Box 86, Northshore Slidell, LA
Huffman, David H.	Slidell Sportsmen's League	927 Teddy Ave. Slidell, LA 70458
Huffman, Phylliss R.	Slidell Sportsmen's League	927 Teddy Ave. Slidell, LA 70458
Humphries, Henrietta	Individual	Box 129 Lacombe, LA
Jacques, Louis	Slidell Police Department	3239 Effie St. Slidell, LA
Johnston, William H.	Southern Yacht Club	560 Audubon St.
Johnston, W. H. Jr.	Southern Yacht Club	560 Audubon St.
Jolissaint, Sheryl S.	Sea Grant Legal Program LSUBR	4723 Earl Gros, #307 Baton Rouge, LA 70808
Kattner, Harold R.	City Planning Commission	1300 Perdido Street 9th Floor, City Hall New Orleans, LA 70112
Kidd, Mr. & Mrs. John L., Jr.	Individuals	513 Legendre Dr. Slidell, LA 70458
Kirn, Dr. Joseph D.	Individual	4701 Marseilles Pl.,
Kneller, Karinlee	Individual	4606 Y. A. Tittle, #66 Baton Rouge, LA
Lambert, John D.,	City Official Councilman	2E10 City Hall New Orleans, LA

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Lambert, Patrick R.	St. Charles Environmental Group, Bonnet Carre Rod and Gun Club	630 Spruce St. Norco, LA 70079
Lamson, Gay	Essex County Ecology Center, Inc.	75 Wendell St. Cambridge, MA
Landreth, T. F.	National Wildlife Federation Member	210 Loop Dr. Slidell, LA 70458
Lannes, Greg J., Jr.	Regional Planning Commission	Masonic Temple Bdlg. 333 St. Charles Ave. Suite 900 New Orleans, LA
Laurent, Francis E.	Spanish Fort Civic Assn.	5901 St. Bernard Ave.
Lautenschlaeger, Lester J., Jr.	New Orleans Sportsman's League	1207 Whitney Blvd.
LeBlanc, H. A., Jr.	Bonnet Carre Rod & Gun Club	529 Pine St. Norco, LA 70079
LeMeiux, Guy F.	Orleans Levee Board	
Levy, David P.	Derricks Inc. A. E. Hingle, Inc.	527 Legendre Dr. Slidell, LA
Lewis, Robert B.	Individual	4511 Francesco Rd. New Orleans, LA
Lickteig, Margaret	Center for Environmental Research & Training	2400 Magazine St. New Orleans, LA
Lohman, F. J., Jr.	Abita Springs City Official	P.O. Box 508 Abita Springs, LA 70420
Luck, Penny	Individual	4216 Hessmer, #118 Metairie, LA
Lynch, Carlos R.	Individual	107 Dijon Dr. Slidell, LA
McNamara, Edward	Individual	1723 Oriole St. New Orleans, LA 70122
McNamara, John P.	Orleans Levee Board	418 Royal Street Rm. 200 New Orleans, LA 70130

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Machluso, John P.	Northshore Civic Club	Rt. 6, Box 150
Magner, Earl J., Jr.	La. Dept. of Public Works	7252 Lakeshore Drive New Orleans, LA 70124
Mahan, Fred I.	Burk & Associates	4176 Canal St. New Orleans, LA 70119
Martin, Dave Jr.	Slidell Chamber of Commerce President	P.O. Box 1327 Slidell, LA
Martin, Earl L., Sr.	Individual	261 Mockingbird Dr. Slidell, LA
Mayne, Larry	National Weather Service	701 Loyola Avenue New Orleans, LA 70113
Mello, John Joseph	Individual	52 Finch Street New Orleans, LA 70124
Menendez, Mel	Greater Gentilly Civic Council, Inc.	P.O. Box 8146 New Orleans, LA 70182
Mercadal, Glenn	Clio Sportsmen's League	4810 Gabriel Drive New Orleans, LA 70127
Merrell, Roberg H.	Slidell Sportsmen's League	110 W. Pearl Dr., Rt. 1
Miller, Joann R.	Slidell Sportsmen's League	853 Teddy Ave. Slidell, LA 70458
Miller Lawrence K., Jr.	Slidell Sportsmen's League	853 Teddy Ave. Slidell, LA 70458
Miramon, Wilson A.	Bayou Bonfouca Estates	3243 Bonfouca Dr. Slidell, LA 70458
Mirandona, Rudy Y., Jr.	N.O. Yacht Club	3620 45th Street Metairie, LA
Mix, Raymond A.	Little Woods Property Owners Association	P.O. Box 51581 New Orleans, LA 70151
Molden, Nan C.	Individual	233 Broadway New Orleans, LA 70118

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Moreau, John L.	Halter Marine Services, Inc.	1048 Lake Ave., Apt E Metairie, LA 70005
Moreau, Lloyd A.	President, New Orleans Sportsmen's League	5240 Chamberlain New Orleans, LA 70122
Mundy, John	Individual	1 Mills Lane Slidell, LA 70458
Normand, Allen F.	Village de Lest Improvement Association	P.O. Box 29005 New Orleans, LA 70189
Norris, J. H.	Southern Natural Gas Co.	P.O. Box 2563 Birmingham, AL 35202
O'Donnell, Herbert	Individual	1228 Arabella St.
Palmer, V.V.	Alliance for Good Government	3715 Coliseum
Pelzer, Patrick A.	Individual	248 Evella Dr. Slidell, LA
Perez, August III	Individual	4411 Alba Road
Perez, Cheryl L.	Individual	4411 Alba Road
Perilloux, Calvin	Individual	P.O. Box 389 Laplace, LA 70068
Phillips, Mrs. Stuart	Sierra Club	922 Octavia St.
Plaeger, Mr. & Mrs. Alvin A	Individuals	Rt. 1, Box 443-R Slidell, LA
Provensal, S. William III	Individual	1455 Webster St.
Ratliff, Theo F.	Individual	1001 Ninth St. Slidell, LA
Reeh, Pierre Cordell	Board of Commissioners Port of New Orleans	P.O. Box 60046 New Orleans, LA 70160
Repath, Philip, Sr.	Individual	1615 Mandeville St. New Orleans, LA 70117

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Rhodes, Mrs. W. M.	Individual	P.O. Box 506 Lacombe, LA 70445
Rhodes, Walter	Individual	P.O. Box 506 Lacombe, LA 70445
Rice, Mrs. Frazer L.	Individual	5316 Coliseum St.
Roach, Theodore	St. Tammany Police Jury	Rt. 1, Box 393F
Robinson, Nelson B.	Essex County Ecology Center, Inc.	Rockport, Mass.
Rocquin, Mr. & Mrs. Arnaud A.	Individual	Rt. 6, Box 184 New Orleans, LA 70129
Romig, Michael R.	Clover Construction Corp.	P.O. Box 248 Slidell, LA
Ross, John H.	Regional Planning Comm.	333 St. Charles Avenue Suite 900 New Orleans, LA
Sagona, Louis S.	North Shore Volunteer Fire Department	201 Carr Drive Slidell, LA 70458
Schneider, M.P., Jr.	Regional Planning Comm.	P.O. Box 400 Slidell, LA 70458
Schwartz, Jerome D.,	LSU Marine Environmental Researchers Chairman	Box 20112 University Station
Scogin, Edward C.	State of Louisiana House of Representatives	Rt. 1, Box 603 Slidell, LA
Scogin, Thelma O.	Apple Pie Ridge Homemakers	Rt. 1, Box 603 Slidell, LA
Scott, Carol	Individual	121 28th Street
Seit, C. J.	Individual	#1 Bluebird St. New Orleans, LA
Sentenn, Walter L., Jr.	City Planning Commission	9W04 City Hall New Orleans, LA 70112

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Sevenair, John P.	Ecology Center of Louisiana	261 Jules, Apt 38 New Orleans, LA 70118
Shelton, Mary	Individual	3358 Hans Ave. Kenner, LA 70062
Shenkel, J. Richard	Archeology - UNO	UNO Dept. of Anthropology New Orleans, LA 70122
Sibille, L. R.	La. Power & Light Co.	P.O. Box 10232 New Orleans, LA 70121
Simoneaux, Jules, Jr.	Individual	6878 Memphis St. New Orleans, LA 70124
Simoneaux, Mrs. Jules E., Jr.	Individual	6878 Memphis St. New Orleans, LA 70124
Simpson, Alfred E.	La. Dept. of Public Works	
Smollen, Joseph W. III	YMBC of Greater New Orleans	4934 Hauck Drive New Orleans, LA 70127
Sollberger, Mrs. Kenneth	St. Tammany Sportsmen's League	138 Lafayette Mandeville, LA
Stanek, Richard F.	La. Wildlife Federation	5544 Loring Dr. Baton Rouge, LA 70812
Stearns, G. Kent	Individual	13143 Cherbourg
Stewart, James H. M.D.	Individual	1441 Delachaise St.
Strauch, Weston G.	Lake Oaks Civic Association	2238 Lake Oaks Pkwy. New Orleans, LA 70122
Suttkus, Royal D.	Individual	7336 Hurst St. New Orleans, LA 70118
Tarver, Johnnie W.	La. Wild Life & Fisheries Commission	400 Royal St., RM 129 New Orleans, LA
Terrell, Timothy	Individual	1305 Milan St.
Theis, A. R.	La. Dept. of Public Works	Box 44155, Cap. Sta. Baton Rouge, LA 70804

ATTENDANCE LIST (Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Thibodeaux, Schuyler B.	New City Limits Tarpon Club, New Orleans	2147 Mexico Street New Orleans, LA
Torres, Charles	St. Charles Environmental Council	327 Marino Norco, LA 70079
Toussel, Ernest	Individual	#13 Egret St. New Orleans, LA 70124
Trau, Hector	Individual	1416 Aviators St. New Orleans, LA 70122
Trau, Miss Veronica	Individual	1416 Aviators St. New Orleans, LA 70122
Trieschmann, Dr. G. V.	Center for Environmental Research and Training	2400 Magazine St. New Orleans, LA
Tray, Miss Denise	Individual	2326 Holiday Drive New Orleans, LA
Tritico, Michael	Marine Environmental Researchers	LSU, P.O. Box 20129 New Orleans, LA
Troy, Rick	Individual	2326 Holiday Drive New Orleans, LA 70114
Troy, Mr. & Mrs. R. M.	State of La. Dept. of Justice	234 Loyola, 7th Floor New Orleans, LA
Turner, Terrence R.	Individual	6134 Orleans Ave. New Orleans, LA 70124
Uphoff, Frank, Jr.	St. Tammany Parish Official	2135 Middle Drive Slidell, LA
Veillon, Edgar F.	Louisiana Wildlife Federation	3210 Cadiz St. New Orleans, LA 70125
Vidal, Joseph E., Jr.	Buccaneer Villa Civic Insp. Assoc., Inc.	P.O. Box 1373 Chalmette, LA 70043
Viosca, Harry	Individual	5238 Gentilly Rd. New Orleans, LA
Viosca, V. Willard	Individual	6404 Argonne Blvd. New Orleans, LA 70124

ATTENDANCE LIST Cont'd)

<u>Name</u>	<u>Organization Represented</u>	<u>Address</u>
Vodegel, Henry H.	Individual	Rt. 1, Box 429 Slidell, LA 70458
Vodegal, Mrs. Virginia	Individual	Rt. 1, Box 429 Slidell, LA 70458
Wallace, W. B.	Wallace Menhaden Prod., Inc.	1221 N. Broad St. New Orleans, LA 70119
Ward, Thomas J.	La. Power & Light Co.	1001 Virgil St. Gretna, LA
Whelan, James	Individual	5028 Fairfield St. Metairie, LA 70002
White, George W.	Individual	1308 Richards Bldg. New Orleans, LA 70112
West, Donald E.	Palm Lake Home Owners Assoc.	3040 S. Palm Dr.
White, Bobbie	East Orleans News	P.O. Box 26008 New Orleans, LA 70186
Willis, Paul L.	Individual	4431 Santa Nicolo New Orleans, LA
Wilson, Don E.	Individual	169 Beverly Dr. Metairie, LA 70001
Wogan, Paul N.	Individual	7701 St. Charles Ave. New Orleans, LA
Wolsefer, R. W.	Individual	Rt. 2, Pearl River, LA
Womack, Bradley	Individual	2812 Green Acres Rd. Metairie, LA
Woodford, Donald L.	Individual	4450 General DeGaulle Dr. Suite 1110 New Orleans, LA

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS

COL E. R. Heiberg	District Engineer
LTC Harry D. Collins, Jr.	Deputy
Cathy Alesich	Design Branch
Diane M. Alexander	Red River Waterway Section, Design Memo Branch
Jerome C. Baehr	Chief, Engineering Division
Ernest E. Barton	Chief, Project Engineering Section, Design Memo Branch
Leslie E. Blaize	Shops Section, Maintenance Branch
William C. Bradley	Red River Waterway Section, Design Memo Branch
Roy E. Brupbacher	Chief, Structural Design Section, Design Branch
Frederic M. Chatry	Chief, Planning Division
Joseph T. Chenevert, Jr.	Project Engineering Section, Design Memo Branch
Anthony C. Cole	Chief, Real Estate Division
Joseph V. Crampes	Photo Section, Reproduction Branch
Louis E. Danflous, Jr.	Levees Section, Design Branch
Gerald J. Dicharry, Jr.	Project Engineering Section, Design Memo Branch
Robert T. Fairless	Project Engineering Section, Design Memo Branch
Edward L. Frois	Duplicating Section, Reproduction Branch
Billy J. Garrett	Chief, Hydrologic Engineering Section, Hydraulic & Hydrologic Branch
William Grady Gieger, Jr.	Red River Waterway Section, Design Memo Branch

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS (Cont'd)

Charles Grimwood	Hydraulic & Hydrologic Branch
Robert J. Guizerix	Structural Design Section, Design Branch
Harold C. Hart, Jr.	Levees Section, Design Branch
Everett K. Johnson, Jr.	Economics Branch, Planning Division
Walter D. Judlin III	General Engineering Section, Design Branch
Ronald P. Lee	Levees Section, Design Branch
Monica R. Lestrade	Public Affairs Office
Daniel A. Marsalone	Structural Design, Design Branch
Dr. Glen N. Montz	Environmental Quality Section, Environmental Resources Branch
Stanley R. Moskau	Radio Communications Section, Plant Branch
Rick Richter	Project Engineering Section, Design Memo Branch
Robert H. Schroeder, Jr.	Chief, Plan Formulation Branch
William B. Seale	Chief, Design Memo Branch
Stanley C. Shelton	Project Engineering Section, Design Memo Branch
Cecil W. Soileau	Chief, Coastal Engineering Section, Hydraulic & Hydrologic Branch
Bruce A. Sossaman	Chief, Public Affairs Office
Penny B. Sparkman	Red River Waterway Section, Design Memo Branch
Judith T. Zavala	Design Memo Branch

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PROCEEDINGS

MR. DANIEL V. CRESAP:

Good morning, ladies and gentlemen. I'm Daniel V. Cresap, the Chief Engineer of the Louisiana Department of Public Works, the agency designated to represent the state in the review and coordination of water resources studies and projects affecting Louisiana.

Our purpose this morning is to give you an opportunity to present to the US Army Corps of Engineers, and to my Department, your views on the Lake Pontchartrain Hurricane Protection project. The meeting today will include a general discussion of the hurricane protection project and will also describe the plans for the disposal of materials from dredging operations.

On July 22, 1974, the Corps of Engineers published in the Federal Register, new regulations governing their administrative procedures for Federal projects "involving the disposal of dredged material in navigable and ocean waters." In accordance with these requirements, the Corps issued public notices, on November 29, 1974, and January 22, 1975, notifying the public of its plan for the disposition of dredged material along the project, and soliciting comments on the plan and suggestions for alternate plans.

This hearing is being held at the request of interested citizens to provide the opportunity for all interested parties to participate in the proposals and to assist in the decision making processes for the disposal plan of this project.

Interested parties and concerned citizens having environmental and ecological information, as well as economic input, are earnestly solicited to make statements concerning these matters.

Colonel E. R. Heiberg III, the New Orleans District Engineer of the US Army Corps of Engineers, will conduct this hearing. He will call on those who have indicated on the attendance card, a desire to present formal statements.

During these proceedings, please keep in mind that the Corps of Engineers constructs projects, such as this one, only at the request of local interests. Public meetings, such as this one, are held to elicit your views and

opinions in the continuing effort of the Corps to develop plans which are truly responsive and which are responsible to applicable Federal and state laws regulating dredging and disposal of materials, and to the problems and needs of the area and the desires of its citizens.

At this time I would like to introduce some of the distinguished guests we have with us today. Would you please stand up and be recognized. Representative Edward Scogin; Representative Joseph Accardo, Jr.; A. Denis Bechac, Councilman; Freddie Generoso of the St. Charles Parish Police Jury; Joseph E. Burgess, US Fish and Wildlife Service; Guy LeMieux, President of the Orleans Levee Board; Mr. Greg Lannes, Jr. of the Regional Planning Commission; Mr. Harold Kattner of the City Planning Commission.

(Applause)

Are there any other public officials here that I don't have a list on? Would you please stand up and be recognized and state your name.

MR. FRANK CUSIMANO:

Frank Cusimano, Mayor of the City of Slidell.

MR. CRESAP:

Thank you.

MR. STEVE DIBENEDITTO:

Steve Dibeneditto, Police Juror, St. Charles Parish.

(Applause)

MR. CRESAP:

Thank you. Are there any others? Well, if not, I would like to also introduce the members of my staff who are here today: Mr. Arthur Theis, the Assistant Chief Engineer; Mr. Earl Magner, the District Engineer of the New Orleans District; and Mr. Al Simpson, his assistant.

(Applause)

It is now my pleasure to turn the meeting over to Colonel E. R. Heiberg, District Engineer, New Orleans District, US Army Corps of Engineers, who will preside over this session. Colonel.

COLONEL E. R. HEIBERG:

Good morning. I am Colonel E. R. Heiberg, District Engineer of the New Orleans District of the Corps of Engineers, and on my right is Mr. Jerry Baehr, who is Chief of our Engineering Division.

I would like to welcome you to this assembly for what I hope will be an informative exchange of comments on the project.

Today's opening presentation will be divided into two basic discussions. The first objective is designed to explain the Lake Pontchartrain Hurricane Protection project as authorized by the United States Congress. It should clarify specific aspects of the project. It is important for you to understand why the Congress has approved this particular form of hurricane protection as the most suitable plan for the Pontchartrain area. This portion of the meeting will also describe how this project affects the environment of the area.

The second objective today is narrower in scope. It focuses entirely on the matter of disposing of materials which are produced in dredging operations. The environmental concern of recent years has generated legislative directives which relate to all projects requiring the disposal of dredged materials in the Nation's navigable waterways. The hearing is aimed at obtaining public views of our disposal plans. It is my responsibility to make your views known to appropriate regulatory agencies along with my recommendation before the dredging operations can begin. The views you present today will play a significant role in this regard and will become part of the public record to allow me, my superiors, and the United States Environmental Protection Agency to arrive at a decision.

The Lake Pontchartrain Hurricane Protection project is your project. The Corps' responsibility is to design it for you. The United States Congress directed that the project be undertaken and you will ultimately decide

whether it shall be completed. The primary part of the project is supported by Federal dollars appropriated by the Congress. Your presence today evidences your concern, and your active participation is encouraged whatever your views.

The development and implementation of a project occurs over a long period, and is not a one time event. It's a process, and that process may be reformed reanalyzed, accelerated or interrupted. Every feature of the project reflects a response to a need and we are all well aware that needs change. To the greatest extent possible, we respond to these changes and a forum of this sort provides an efficient medium for discovering your desires.

In order to serve you well, the project must be flexible enough to meet many needs. Primary among these needs is flood protection, but its function is not limited to this purpose. It must also serve environmental needs. We are committed to an environmental setting. We must allow for appropriate growth within that setting in our housing, industry, transportation and livelihoods. The project must not unreasonably restrict such growth. Environmental needs also require the preservation of the natural setting around us. This setting includes the highly complex ecosystem of Coastal Louisiana. We cannot afford the indiscriminate waste of valuable resources. Of paramount importance is that this project must dignify the purpose for which it was conceived and the people and their children, who must ultimately bear its cost.

The harsh state of the Nation's economy charges each of us with the responsibility of fiscal prudence. The recent concerns for preservation of our wetland resources charge us with the responsibility of environmental prudence. Our expenses toward this and other projects must be made wisely. The Corps, and the US Congress, have concluded that this project beneficially serves every dollar spent on it.

We are also aware that this project involves some tradeoffs which may directly or indirectly affect part or all of the community that it serves. We have made an earnest effort to fully assess the economic and environmental commitments and benefits of this undertaking, and we will present them today. Each of you individually, and for persons you may represent, must make a similar assessment of these factors. Then you must make these views known.

Upon completion of today's session, the entire content of the proceedings will be compiled and assembled as a public record. I must review all that is presented in the record, and in my best professional judgment, present my recommendation for the disposition of the project.

As residents of this area, we are confronted with a serious problem. The Greater New Orleans Metropolitan Area, which includes Orleans, Jefferson, St. Bernard, St. Tammany and St. Charles Parishes is periodically exposed to the devastating forces of hurricanes, and due to the character of our region, we are highly flood prone. The Congress assigned the Corps of Engineers the task of developing and implementing a solution to this problem. We have a responsibility to you to provide, not only a workable solution, but to provide what we earnestly believe to be the best practical solution. We are equipped to accept this responsibility. We have an interdisciplinary professional staff dedicated to serving you.

The project we are discussing is authorized, funded, and nearly 20 percent complete. But the most controversial section of the project concerns the Barrier Plan, and major construction on this section will begin no earlier than this coming August. I have discovered that many do not understand this plan. I realize we, the Corps of Engineers, are not always effective in explaining one of our projects. This is why I feel that it is important to discuss the overall project in enough detail to set the stage. This is my hearing, designed to provide me, and my superiors, through the written record, your views. But I think it is important that before I listen to your views that I give you our current view of the project. Most people, it is my experience, offer their views in a spirit of helpfulness. Those views are most useful to the decisionmaker if they are offered in knowledge of the present project as it is now planned.

Please listen to our description of the project. If there are areas you do not understand, please talk to members of my staff who will be available at the breaks, or at the end of this meeting. If you do not agree, put your views on the record, orally or in writing.

No longer can we afford the massive flood damage and personal hardships that were suffered in the wake of Hurricane Betsy in 1965. We were extremely fortunate to

have escaped Hurricane Camille that so badly ravaged our Gulf Coast neighbors in Mississippi, Alabama, and Plaquemines Parish. There is little we can do to affect our exposure to hurricanes which enter the gulf, but there is a lot we can do to prevent the extensive flood damage that normally accompanies such storms. That's what this project is all about.

We've got a lot of ground to cover today and I want today's session to flow as smoothly and as efficiently as possible. Before I call on my staff members, I would like to briefly describe the format that I intend to follow.

I have tailored the Corps' presentation to last about an hour. Our presentation will be followed by statements from elected officials or officials representing public agencies. I have been told by some parties that I should arrange to hear public views last. I have not concluded that this is in the public interest. Public officials have an obligation, if not a requirement, to express their views. Further, those views represent a large constituency, either a section of the electorate, or through a public body, an agent of the electorate. I conclude that it is in the full public interest for all of us to listen to those views before allowing individuals or private groups to make their views a matter of record.

The public official is representing an agency view, arrived at through many months or years of coordination. Regardless of this, however, I will cut short public agency views at noon today, and will begin to hear the views of the general public or private agencies or organizations at 1:00 o'clock this afternoon. If I have left some public officials unheard, I will call on them at 3:00 p.m. before hearing the remaining witnesses. I intend to limit oral presentations to 5 minutes each, in fairness to all of you who intend to speak today. I have made some exceptions which I will explain. I shall recess this meeting at noon for a 1-hour lunch break. After lunch, I shall call on interested citizens in completely random order for individual speeches. Everyone will be afforded an opportunity to be heard. I want to adhere to this format as rigidly as possible in complete fairness to all. Written statements may be submitted to me today, or mailed to me at the District up to March 24, which is a Monday, a month from today. Each written statement will be included in the public record of this meeting and given the same weight in my review, and of my superiors, as if it had been presented orally. It is therefore, not imperative that you make your views known

orally. Last month, the environmental statement for this project was filed with the Council of Environmental Quality, as was required by law. This document is now public, and since it does relate to today's presentation, I shall append the environmental statement to the record of today's proceedings so it may be cited as a reference.

Therefore, all of the comments and criticisms that we received on the Environmental Statement are already a part of the public record. I shall be pleased to provide any interested person or group with a complete copy of the entire proceedings for the cost of reproduction. This record will require about 2 months from today to be compiled.

I thank each of you in advance for your attendance today, which amply supports your concern. I should now like to kick off the meeting.

I would like to introduce Mr. Rick Richter and Mr. Stan Shelton, both of whom are project engineers, to describe the project and its development.

MR. RICHARD RICHTER:

Thank you very much Colonel Heiberg. Good Morning, ladies and gentlemen. My name is Rick Richter. Stan and I will describe the need for a suitable plan of protection, why we selected this particular plan, and how it will function. Afterwards we will describe the individual components of the plan.

Southeastern Louisiana is a coastal region. Our metropolitan area is separated from the Gulf of Mexico only by the delta marshes. Unfortunately, these marshes do not provide us with much protection against hurricanes. Accordingly, we are extremely vulnerable to the high winds, high tides and heavy rainfalls produced by these storms. Since nature has not given us the natural means to resist these forces, we must rely on artificial methods to protect ourselves. This project is one such method.

We've learned a lot about hurricanes and the way they affect our area mostly from our past experiences with them. Understanding how a hurricane affects us is an important factor in developing a plan to protect ourselves. But, a hurricane is one of the most unpredictable forces in nature. It's impossible to predetermine the

size or the path of a hurricane. For this reason, any storm which enters the Gulf of Mexico must be regarded as a potential threat to our area.

As a hurricane approaches the Louisiana coastline, we do know what to expect. Initially, the hurricane generated tides along the coastline rise far above normal elevations. Our coastline communities are the first to experience this rise and the initial flooding. The height of the rise varies according to the nature of each particular storm. For instance, during Hurricane Betsy tides ranged from about 8 feet above sea level at Grand Isle and Biloxi to more than 14 feet above mean sea level at Pointe-a-la-Hache, just south of New Orleans.

As the hurricane moves inshore, its high winds and heavy rains further aggravate the areas which had already felt the high tides. The high winds cause waves to develop on open bodies of water, and heavy rains may yet cause flooding in areas that were able to resist the high tides and waves.

To design against an unpredictable force, we needed a start; we had to know more about hurricanes. So we contacted the Hurricane Research Center of the National Weather Service. The Weather Service studied the many historical records available, and they provided us with a design hurricane. We call this storm the "Standard Project Hurricane." This design hurricane is used not only for this particular project, but is used nationwide for all hurricane protection projects where the loss of human life is possible.

Next, we had to determine how the "Standard Project Hurricane" would affect this metropolitan area. The area of our concern is essentially that which is adjacent to Lakes Pontchartrain and Lake Borgne. A hurricane threat to this metropolitan area will be generated from one or both of these lakes.

Under existing conditions, as a hurricane approaches the city from the gulf, the tides in advance of the storm begin to rise. The rate of this rise depends on the storm, but it is generally gradual. Due to the connections with gulf waters at Chef Menteur Pass, The Rigolets, and at Seabrook, which is the junction of the Inner Harbor and Lake Pontchartrain, the water levels in Lake Pontchartrain would rise to above normal elevations. The extent of this rise depends on the hurricane's size and location (SLIDE 4).

If the design storm entered this shaded zone (illustrating on map), the water levels in Lake Pontchartrain would be about 3 to 5 feet above mean sea level. Lake Borgne would be slightly higher. Low lying unprotected areas along the coast, Lake Borgne and Lake Pontchartrain would experience moderate flooding. (SLIDE 5).

If the hurricane continued inshore into this next shaded area (illustrating on map), the water levels in Lake Pontchartrain would be about 5 to 9 feet above mean sea level. Again, Lake Borgne would be somewhat higher and the gulf waters would still be flowing into Lake Pontchartrain through the passes. At this time the metropolitan area would begin feeling the heavy rainfalls and hurricane winds. Waves created by the winds would be building up on Lake Pontchartrain and Lake Borgne. Unprotected areas adjacent to these lakes would experience significant flooding. But, within this zone (SLIDE 6) (illustrating) there is an even more critical area. If the hurricane moved into this critical zone, our metropolitan area would feel the full thrust of the storm. The water levels in Lake Pontchartrain would rise from 9 to 13 feet above mean sea level. Once again Lake Borgne would be even higher. There could be extreme flooding in the highly populated areas near the lakes. Greater New Orleans would be virtually surrounded by high water. Sustained hurricane winds would produce very large waves on top of the already high water levels in the lakes thereby worsening the flood threat.

Since the storm drainage system, as well as natural drainage systems of adjacent communities discharge into Lake Pontchartrain, the high water level in the lake would deny adequate drainage, and the systems could not provide proper relief against the flooding from heavy rainfalls (SLIDE 7).

This slide shows some of the major storms that have threatened our area and their relationships within these zones. They include Betsy, Camille, Hilda, Flossy, Carmen, the hurricane of 1915, and the 1947 hurricane. But, if the "Standard Project Hurricane" passed through this critical zone, its effect on this metropolitan area would be more severe than any hurricane of record.

Lake Pontchartrain (SLIDE 8) is a very large lake. It has a surface area of about 640 square miles. Although it is

very large, it is relatively shallow. In one sense, it is like a large saucer full of water. Because it is so large and shallow, it responds very quickly to high winds, and waves can form very rapidly on its surface. As I mentioned earlier, when a hurricane moves progressively closer to our area, the water level (SLIDE 9) in the lake continually rises, and this rise can range up to 9 feet higher than normal, depending on the location and the size of the storm.

Once the lake is exposed to the sustained hurricane winds it experiences a very unusual condition. This condition is called the "tilting effect" (SLIDE 10) because under sustained high winds the water surface in the lake would tilt against the windward shore. (SLIDE 11)

In summary then, a severe threat of flooding to shoreline areas results from the combined influences of high tides, waves, and this tilting condition. These combined conditions can produce lake levels of up to 13 feet above mean sea level at any location along the lake depending on the direction of the wind. This is the problem that must be dealt with in order to prevent widespread flood damages and possible loss of life. The Corps of Engineers had to develop a plan of protection that would best remedy this problem.

This was our challenge. We knew that the area was highly flood prone and why it was. Preventing the flooding, however, was very complex. One plan of protection that we studied was called the "high level" plan. It seemed rather simple. Just raise all of the existing protection levees and construct additional high levees to a height that would prevent flooding of the developed areas. But detailed studies revealed that this plan had many drawbacks. First, the soils in our area will not easily support certain types of construction without excessive settlement. Therefore, to reach the high levels that would be required, levees would have to be overbuilt or built in stages to compensate for the settling problem. That takes more time, and that means more exposure to hurricanes without full protection. To reach higher levels, the base of the levees would have to be widened, requiring more land. In a city where land areas are congested, this means that homes and persons would have to be relocated, and that means higher cost and personal hardships. And another serious problem is drainage. Our current pumping system would have to be drastically modified

in order to pump over the high levees into the lake. Natural drainage systems would back up due to the high level in the lake. Each of these factors means higher cost.

The high level plan would not reduce flooding along the Inner Harbor Navigation Canal. Flooding the many industries along that canal would severely disrupt the commerce of this area.

In view of these drawbacks, the Corps, in extensive coordination with many related agencies, tried to develop a better protective plan. We developed the plan that we are presenting today. It is called the "barrier system".

The "barrier" is indeed the most distinguishing element of the recommended hurricane protection plan. The barrier consists of three basic features: (SLIDE 12) namely, the Rigolets Complex, the Chef Menteur Complex and the Seabrook Complex. Each of these complexes includes a gated flood control structure, a navigation structure, and a closure embankment.

The purpose of the barrier is to control the water level in Lake Pontchartrain just before a hurricane strikes. As I stated earlier, when a hurricane approaches the Louisiana coastline, the area in advance of the storm experiences a gradual tidal rise. For the design hurricane, this rise, combined with the "tilting effect," could produce lake levels up to 13 feet above normal elevations at any shore of the lake, not just the New Orleans shore, not just the Mandeville shore, but any shore of the lake.

The barrier will prevent the lake from reaching such high levels. As a hurricane moves toward the city, the gated flood control structures at Chef Menteur Pass, The Rigolets and at Seabrook would be closed, thereby preventing the hurricane produced tides from entering and raising the lake to extreme heights. The barrier would keep the lake near its normal level just prior to the passage of the storm. During the storm, some flow will be driven over the barrier, but before this occurs, more than 90 percent of the water which would have entered the lake without the barrier would have already been kept out of the lake. The water which does go over it will raise the lake level less than 1 foot. (SLIDE 13)

The effect of the barrier can be seen on this slide comparing the hurricane's combined effect on the lake first without the barrier, and then with it. The barrier will reduce the possibility of a flood threat that might come from Lake Pontchartrain.

The barrier plan (SLIDE 14) has many important advantages over the high level plan. First, it affords a higher degree of protection to all land areas adjacent to Lake Pontchartrain since the water level in the lake would be much lower with the barrier plan than with a high level plan. This factor in itself produces added benefits in several ways. Areas adjacent to the lake get storm drainage in two ways. The first way is by natural means through city collector systems into nearby streams, bayous and rivers and then into the lake. The second way is through pumping systems. With the lake at a lower level each of these systems can perform more efficiently, and that is a plus for interior drainage. Another added benefit is that the levees can be built to lower elevations with a barrier plan. That means less cost for construction, for the needed rights-of-way and for relocating utilities, property and people. These savings will also apply to any future levee and drainage systems which might be built adjacent to the lake. (SLIDE 15)

The gated structure at Seabrook Complex will permit the saltwater level in the lake to be regulated. Since the construction of the Mississippi River-Gulf Outlet, the inflow of the waters from the gulf have raised saltwater levels in the lake. This inflow must be controlled to preserve a good environment in the lake--the Seabrook Complex can provide that control.

This control structure, in conjunction with with the rock dike will also allow high flood levels in the Industrial Canal to be relieved into Lake Pontchartrain during hurricanes. The control structure will be fully opened when the water in the canal reaches the top of the banks, and if the water rises higher, it can freely flow over the rock dike into Lake Pontchartrain. This relief is only possible with the lake at a reduced level, that is, with a barrier system.

The barrier will require a shorter construction period than a high level plan, cutting the number of years that

we are exposed to hurricanes without proper protection. And, of great importance is cost. Our comparative cost estimates showed that the high level plan would cost about 50 percent more than the barrier plan.

That's why a barrier plan of protection is recommended instead of a high level plan as being the best suited for this project area.

Realizing that the barrier concept was a desirable form of protection, the Corps had to be certain that it would work. During early project planning, we engaged the services of the Waterways Experiment Station in Vicksburg, Mississippi to construct the the barrier complexes in model form. The major purpose of the model was to determine the effect of the barrier complexes on the salinity and flow characteristics of the lake and to develop structural designs for each of the complexes that would retain the natural balance of the lake.

Some of our more recent studies showed that the structural complex at The Rigolets could be relocated to a more economical site. In order to be certain that this redesign did not affect its proper operation, and in order to reevaluate environmental effects, the services of the Waterways Experiment Station were needed once again. A hydraulic model of the Rigolets Complex was recently constructed there, and studies are now underway to assure the performance of the redesigned complex.

Incidentally, we're not the first area to use a barrier type of protection. Similar barrier systems are now being planned, and some have already been completed. Examples are at the New York harbor at Jamaica Bay, New Bedford Harbor in Massachusetts, at Stamford Harbor in Connecticut, at Fox Point in the Providence River in Rhode Island, and more, not only in the United States, but also abroad.

Today there is an urgent need for environmental awareness. In order for the barrier structures to be responsive to our needs, they must perform well not only during hurricane conditions, but also during day-to-day normal weather conditions. They must be environmentally sound. We must be certain that they do not upset the natural balance in the lake. For this reason, much time and effort has been devoted in planning the barrier portion of the project and

that is why the Corps of Engineers has required the detailed model studies, the services of environmental consultants and professional design consultants, and has performed, and is presently performing, the many detailed hydraulic studies relating to the barrier complexes.

During all normal weather conditions, the gated flood control structures at the Chef Menteur Pass and at The Rigolets will remain fully opened. In this opened position, these structures are designed to preserve normal tidal exchanges. These structures will not be closed until a hurricane enters the Gulf of Mexico and threatens the Louisiana coastline. Only in this event will the structures function as a barrier to prevent flow into Lake Pontchartrain; they will remain at all other times an artificial equivalent of the natural passes and will have a negligible effect on the lake.

I would now like to turn the floor over to Stan to describe the many and varied components of this project.

MR. STAN SHELTON:

Thank you, Rick. Good Morning, ladies and gentlemen. My name is Stan Shelton. (SLIDE 16)

The recommended project consists of two major protective systems: the Lake Pontchartrain Barrier Plan and the Chalmette Area Plan.

The Lake Pontchartrain Barrier Plan consists of barrier complexes, which Rick discussed, and which I'll describe in more detail, and a system of levees and floodwalls along the water course perimeters of this city. The authorized plan includes levees along the lakefronts of St. Charles Parish, Jefferson Parish, and New Orleans which are connected to the Mississippi River levee system by levees and floodwalls along the Inner Harbor Navigation Canal. Citrus and New Orleans East will be inclosed by levee systems around their perimeter.

The plan also includes the strengthening and repair of the existing seawall in Mandeville.

As Rick brought out, each of the barrier complexes includes a gated flood control structure, a navigation structure and a closure embankment (SLIDE 17). At The Rigolets, the

gated flood control structure is situated in the natural pass. It is connected by the closure embankment to a navigation lock situated in a man-made cut. (SLIDE 18) The gated flood control structure consists of a number of open gate bays which can be closed at the approach of a hurricane by dropping steel leaves into the openings. This is accomplished through the use of gantry cranes. In the case of The Rigolets, the current designs call for 16 gate bays and 2 gantry cranes. The structure is 30 feet deep and 800 feet long or about as long as 3 football fields. The barrier complexes will not dam the passes. I wish to point out that this and all of the control structures are open structures allowing the free passage of the natural tidal flows. The base of this structure is 30 feet below the water surface.

The control structures at each complex are designed to pass the existing natural flows and are thus artificial equivalents of the natural passes (SLIDE 19).

At Chef Menteur Pass, the gated flood control structure and the navigation structure are both situated in man-made cuts. This allows more efficient use of the pass by straightening the alinement both for tidal flows and for navigation. The gated flood control structure is similar to that at the Rigolets except that it has 8 gate bays and one gantry crane. The structure is 25 feet deep and 400 feet long.

The navigation structure here has only one set of sector gates; thus, it is not a lock as is planned for The Rigolets and Seabrook. This structure will remain open at all normal times and will be closed only during hurricane conditions. Also, a realinement of the Gulf Intracoastal Waterway at this location is required to provide uninterrupted navigation along that waterway. (SLIDE 20).

The Chef Menteur and Rigolets Complexes will be connected by barrier levees, and also by the use of the roadway embankment of US Highway 90. The Highway 90 embankment will provide barrier protection to White Kitchen. At this point, the barrier will be extended northward toward Slidell. This will be accomplished by using the US Highway 190 embankment and by constructing new barrier levees where necessary. In essence then, the barrier will extend from New Orleans East to the existing high ground near Slidell. (SLIDE 21)

At Seabrook, the gated flood control structure, the navigation lock and the rock dike are situated in the lake. The flood control structure has three gate bays and serves several purposes. Primarily, like the control structures at Chef Menteur and The Rigolets, it provides a means of passing the natural flows through the barrier, and a means of excluding hurricane tides.

Closing the structures throughout a hurricane, however, would tend to increase the susceptibility to flooding for the industries along the Industrial Canal. For this reason, we developed a plan to operate Seabrook so that when the water level in the canal reaches a height of 3 1/2 feet mean sea level, the control structure would be fully opened. This would allow the waters in the canal to flow into the lake and would provide some initial lowering of the water levels in the canal.

The rock dike is designed to a low elevation so that as the waters in the canal rise further, the water would flow over the dike into the lake. The average lake level increase caused by this type of operation will be only a few inches. This plan, then, would prevent the majority of the hurricane tides from entering the lake, but would also allow for the reduction of the floodwater levels in the Industrial Canal.

Bear in mind, however, that the industries along the canal are outside of the levee and floodwall system and must expect some flooding of their facilities. This we cannot prevent, but we can reduce the water levels in the canal more with the barrier plan of protection than would be possible under either existing conditions or with a high level system.

Two other purposes are served by the Seabrook Control Structure. One is to provide a constant flow of water in the canal for New Orleans Public Service. This company has a nearby electrical generating plant which requires the continual flow in the canal for cooling purposes; therefore, the structure will provide a certain constant flow at all times for their use. The second purpose is salinity control. We designed the structure so that the flows can be regulated in order to provide beneficial salinity levels in Lake Pontchartrain. This regulation will be performed by coordinating continually with the Louisiana Wildlife and Fisheries Commission.

The barrier plan as initially authorized provided for a new earthen levee (SLIDE 22) along the St. Charles Parish lakeshore from the Bonnet Carre Floodway to the St. Charles-Jefferson Parish line. Construction of this feature of the project has been indefinitely deferred because of the inclusion of Bayous Trepagnier and LaBranch in the Louisiana Natural and Scenic Rivers System and also because of the need for additional environmental studies as will be further discussed by Dr. Montz.

The Mandeville feature of the project is also inactive. This feature provides for the strengthening and repair of the Mandeville Seawall. The inactive status is due to the lack of financial participation in the project by St. Tammany Parish sponsors.

As I stated earlier, this project is made up of two major protective systems: The Lake Pontchartrain Barrier Plan, which I have just described, and the Chalmette Area Plan. The Chalmette portion is a wholly independent protective system included in the overall hurricane protection project. Since the Chalmette area is outside of the influence of the Barrier Complexes, it is a high level form of protection. This plan consists of a system of levees and floodwalls along the Inner Harbor Navigation Canal and the Mississippi River Gulf Outlet to Verret, with a return levee from Verret to the Mississippi River levee at Caernarvon.

It also includes navigable floodgates on Bayous Bienvenue and Dupre near their junctions with the Gulf Outlet. Construction of the Chalmette Area Plan is already well advanced.

That completes the general description of the project. Now let's focus on a very important factor of our planning.

An integral part of the project is navigation access. With the barrier structures in place, adequate provisions for marine access must be incorporated into the overall project plan. Three avenues of marine access for Lake Pontchartrain will be included in the project. They are the Seabrook Lock, the Rigolets Lock, and the Chef Mentheur Navigation Structure. (SLIDE 23)

The currently approved dimensions for the Seabrook Lock are 800-foot usable chamber length, 84-foot chamber width

with a sill depth of -15 feet mean low gulf. This lock will serve navigation by reducing adverse current velocities and eddies in the Inner Harbor Navigation Canal. The existing currents jeopardize marine safety, erode channel banks and undermine wharves and bridge foundations along that canal.

The normal daily operating procedure for this structure provides for the lock gates to remain in the opened position as shown here, allowing vessels to pass freely through the structure without lockage. When the current velocity through the structure exceeds 3 feet per second; however, the gates would be closed and vessels would have to be locked through. Studies show that lockage would be required for about 7 hours over each 24-hour period. The vessels which currently use the Industrial Canal, and the future prime users of Seabrook Lock, are in vast majority industrially related. The lock will benefit these users by eliminating the adverse currents now causing hazardous conditions in the Canal.

In advance of a hurricane, and throughout the storm, the lock gates will be closed. Locking operations will continue until safe lockages can no longer be accomplished. During such periods the flood control structure adjacent to the lock will provide flood relief to industrial concerns in the canal as previously discussed. (SLIDE 24)

I might add that the dimensions of the various navigation structures have been extensively coordinated with state and Federal agencies and with appropriate waterway associations. (SLIDE 24).

Another lock will be built at The Rigolets. The currently planned dimensions for this lock are 800-foot usable chamber length, 110-foot chamber width, and a sill depth of -13.2 feet mean low gulf. Like the Seabrook Lock, this structure will remain open during all normal conditions allowing vessels to pass freely through the structure without lockage. When the current through the structure would not permit safe passage, the vessels have to be locked through. Studies reveal that locking would be required for about 5 hours per day for 15 days of each month. During hurricane periods, the lock gates will be closed. Locking will continue until it can no longer be safely accomplished. (SLIDE 25)

There is also a navigation structure at Chef Menteur. This structure is 84 feet wide and has a sill depth of -16.0

feet mean low gulf. This structure is not a lock. It will remain open at all times except during a hurricane. Under hurricane conditions, the structure would be closed at the same time as the other barrier structures. Navigation would then be rerouted through either the Seabrook Lock or the Rigolets Lock. (SLIDE 26)

In addition to the structures described above, two navigation structures have been incorporated into the Chalmette portion of the project. These structures are located on Bayous Bienvenue and Dupre. Here you see the Bayou Bienvenue structure (indicating on map). Each of these structures is 56 feet wide and has a sill depth of -10.0 feet mean low gulf. The navigation structure planned for the Chef Menteur Complex is similar, though larger than these structures.

It is important that all of these navigation structures satisfy the needs of the marine users of this area. To do this we studied the recreational and commercial uses of the structures in relation to the Gulf Intracoastal Waterway system, local shipbuilding and marine industries, the natural depths of adjacent waters, and with the existing clearances of bridges and other facilities. Our studies have already resulted in substantial increases in the original dimensions of the Chef Menteur Navigation Structure and the Rigolets Lock. We feel that the structures are now sized to meet the present and future navigation needs of this area throughout the life of the structures.

Thank you for all your kind attention. I'd now like to introduce Dr. Glen Montz of our Environmental Resources Branch to discuss the environmental considerations of this project.

DR. GLEN MONTZ:

Thank you, Stan. Good morning, ladies and gentlemen. My name is Glen Montz.

This presentation will cover environmental impacts associated with the project, and also 404 requirements will be discussed in detail by Harold and Charlie after my talk.

The draft and final environmental statements were filed with the President's Council on Environmental Quality on

17 August 1972, and 17 January 1975, respectively. Detailed impacts on the environment may be examined in these statements. Seventeen letters, which commented on the draft environmental statement, were received and are included in the final environmental statement. Comments extracted from these letters and Corps of Engineers responses are included in the final environmental statement. A statement of findings reveals the tradeoffs involved with construction of this project. Copies of the statement of findings are available upon request during breaks at the head table.

Construction, operation, and maintenance of the barrier will require the commitment of about 2,060 acres of land in construction rights-of-way and spoil and borrow areas. The lands committed, which are predominantly marsh, will be permanently altered and the alteration will imply a loss of habitat and decayed organic material to the associated estuary, and a minor loss in the overall productivity of that system.

The construction of the proposed barrier along the east side of Lake Pontchartrain will not affect the existing salinity levels in the lake. In model studies, existing lake salinities were not altered significantly by control structures in the Chef Menteur and Rigolets Passes. Model studies are underway for the restructured Rigolets plan. The Seabrook Lock outlet structure will be operated to provide a desirable salinity regimen in Lake Pontchartrain to the end that deleterious alterations in lake ecology will be avoided. This complex will allow salinities in Lake Pontchartrain to be adjusted as may be necessary for the maintenance of fish and wildlife resources. The Seabrook outlet structure will mitigate certain detrimental effects of salt water intrusion which resulted from construction of the Mississippi River-Gulf Outlet.

Construction and maintenance operations will induce temporary increases in turbidity in surrounding water areas, with minor impact on water quality and flora and fauna. The imposition of structures, in particular, the locks and control structures on the existing landscape will alter natural surroundings. The position of the Corps is that the openings in the proposed structures at the Chef Menteur and Rigolets Passes will not interfere with the movements of organisms and nutrient substances.

The situation in St. Charles Parish is most complex. Unlike the other features of the project, the St. Charles Parish levee may have more adverse environmental impacts than can be justified by offsetting flood protection benefits. The need for hurricane protection for existing development, as well as the need for developable land to support anticipated expansion in the metropolitan population, are both well established. On the other hand, the levee would directly and irrevocably alter about 24,700 acres of estuarine marsh and swamp. The contribution of the St. Charles Parish wetlands to Lakes Pontchartrain and Lake Borgne is not, at the present state of our knowledge, susceptible to precise evaluation. Nevertheless, the Corps is convinced that, by any standard, this contribution is significant. The inclusion of Bayous Trepagnier and LaBranche in the Louisiana Natural and Scenic Rivers System currently forecloses the possibility of proceeding with the levees without contravening state law. While this impediment, as well as much of the potential for adverse environmental impact, could be removed by locating the levee near the Airline Highway, the economics of constructing such a relocated levee are highly unfavorable. Should the impediment imposed by the Natural and Scenic Rivers System be removed in the future, additional studies will be needed to fully evaluate the relationship of the marsh to the surrounding ecosystem, and provide a basis for a decision on whether the levee should be built. Accordingly, construction of this feature of the project has been indefinitely deferred.

Alternatives to the proposed plan include: no action, the high levee plan, and various fully responsive and partially responsive alternatives. These are discussed in greater detail in the final environmental statement and in the notice for this meeting.

Approximately 5,270 acres of land are required as rights-of-way for the entire project. Of this total, about 920 acres of intermediate marsh in St. Charles Parish; about 1,660 acres of brackish marsh at Chef Menteur; and 400 acres of brackish marsh at The Rigolets are required for construction features. Approximately 20 acres of deep water bottom will be required at the Seabrook area. Construction of these four features of the project have not begun. A total of about 2,290 acres of lands are presently occupied or will be occupied by project features

upon completion of all remaining portions excluding The Rigolets, Chef Menteur and Seabrook Structures and the St. Charles levee.

Acreeage by habitat type in each unit of this project is summarized in the final environmental statement.

Relocation of Bayous Bienvenue and Dupre with navigable floodgates in the relocated channels has been completed. The old channels of both bayous have been closed in the immediate area of the structures and dredged material has been placed on brackish marsh adjacent to the structures and new channels.

Initially, tidal interchange will be maintained in the Chalmette area. Conversion to urban type uses will likely occur, however, and as it does, habitat will be lost as will decayed organic material to the associated estuary.

Relocation of the Gulf Intracoastal Waterway near the Chef Menteur has been completed. Dredged material has been placed on brackish marsh south of this new alinement.

Placement of dredged material on existing levees involves the covering of weedy species. The levees affected by additional dredged material will revegetate again with roadside weeds.

Dredging activities in adjacent waters for fill material will result in temporary turbid water conditions which will decrease the amount of primary production in the disturbed area by decreasing the light available to the phytoplankton and other aquatic plants. Shading and silting will result in the destruction of rooted shoreline vegetation. Silting may result in the direct destruction of bottom organisms including clams, worms and other important food organisms in the disturbed area.

Placement of dredged material on wetlands in the project area for construction of levees, control structures, navigable floodgates and drainage structures will result in permanent loss of aquatic habitat for aquatic organisms. The commitment of marsh and swampland to levee and closure structures is irreversible and irretrievable. The esthetic appeal and opportunities for hunting and trapping now provided by the area to be committed for construction sites will be permanently lost.

The project plan will hasten urbanization and industrialization of valuable marsh and swampland by providing conditions conducive to further flood protection and reclamation. The marsh and swampland made available by the project for conversion to urban use will be lost as development of these areas occurs. Should the anticipated increase in rate of development in the protected areas occur, an increase in the quantities of solid and liquid wastes cannot be avoided. Disposal of these wastes will be accompanied by corresponding environmental stresses. Thank you. Colonel.

COLONEL HEIBERG:

Thank you, Dr. Montz. That concludes our general discussion portion of the meeting. I would like to proceed with the hearing portion of this session which involves the disposal of dredged materials.

The purpose of the Section 404 hearing this morning is to give you an opportunity to present to the Corps of Engineers, and to local assuring agencies, your views concerning the procedures for disposal of dredged material in connection with the continued construction of the project.

Interested parties and concerned citizens having environmental, ecological or other comments regarding the project are asked to make statements concerning these matters. All oral statements will be heard, but to insure an accurate record, we suggest that all important facts and arguments also be submitted in writing. Written statements may be submitted up here, during or after this hearing, or mailed within 30 days to me at the District.

This is a public hearing under the provisions of the Federal Water Pollution Control Act of 1972, passed by the 92d United States Congress. Let me explain what this Act does and does not cover.

The Act requires an examination of the methods for disposing of dredged material removed from navigable water to insure that proper regard is paid to water pollution concerns. The Act also requires an examination of alternative methods of dredging, to insure that the least damaging, while still practicable, method of dredging is selected and to consider the effects of a "no dredging" alternative.

Where the "no dredging" alternative is examined, then we are required to contemplate the ensuing results. Often, this means a "no project" conclusion, or a conclusion which will not withstand the test of economic feasibility.

The provisions of the Federal Water Pollution Control Act are not designed for an after-the-fact examination of the project formulation process.

I will now call upon Mr. Harold Hart and Mr. Charles Grimwood to discuss what work has been accomplished, what work, particularly work involving dredging operations, is scheduled for the future, and how this work relates to water quality. Mr. Hart.

MR. C. HAROLD HART:

Thank you, Colonel. Good morning, ladies and gentlemen.

Construction of the project under consideration this morning began with the construction of floodwalls along the Inner Harbor Navigation Canal in April of 1967. The following is a summary of what has been accomplished since 1967, and what is now planned, particularly as regards the disposal of dredged materials. (SLIDE 27)

The Jefferson Parish Lakefront reach has been constructed with earthen levees the Mississippi River and Tributaries projects, and has subsequently been elevated by means of earthen topping and/or steel sheet piling. Future work will consist of additional wavewash protection on the floodside of the levee.

The New Orleans Lakefront reach has been constructed with earthen levees. Future improvements include raising interim levees, raising the levees on the three drainage outfall canals, and construction of floodwalls in the area of the New Orleans Marina, the Pontchartrain Amusement Park, and the area surrounding the proposed Seabrook Complex. (SLIDE 28)

The Citrus Lakefront reach is now under design. Improvements will consist of floodwalls in the area of the New Orleans Airport and Lincoln Beach and raising existing levees in the remaining portion.

The New Orleans East Lakefront reach is now under construction and will consist of an earthen levee.

The New Orleans East-Southpoint to the Gulf Intracoastal Waterway reach has been constructed and consists of an earthen levee.

A first lift has been constructed for the New Orleans East and Citrus back levees. In addition to the earthen levees within this reach, floodwalls are in place on the west bank of Michoud Canal and are now under construction on the east bank of the canal. Also, from Paris Road through the Michoud slip, a floodwall has been constructed.

Floodwalls on the east and west side of the Inner Harbor Navigation Canal from the proposed Seabrook Complex, south to the Inner Harbor Navigation Canal lock are constructed with the exception of the short reaches in the Florida Avenue area.

The New Orleans East unit will require approximately 14,000,000 cubic yards of dredging and is scheduled to commence in August of 1975 and end in 1981 along the Gulf Intracoastal Waterway, and commence in March, 1975, and end in 1977 along Lake Pontchartrain. Dredging along the GIWW will not be continuous, but the Lake Pontchartrain work will be continuous. The material will be deposited in adjacent levees and adjacent stockpile sections. A ponding area is located in the South Point area. (SLIDE 29)

The Chalmette reach, consisting of an earthen levee on the south bank of the Gulf Intracoastal Waterway, commences at the Inner Harbor Navigation Canal, proceeds generally eastward, then southeastward along the Gulf River--excuse me--along the Mississippi River-Gulf Outlet, then southward through Verret, then westward to Caernarvon. A first lift in this reach has been constructed. The Bayou Bienvenue and Bayou Dupre control structures have also been constructed. This reach will require approximately 20,000,000 cubic yards of dredging and is scheduled to commence in November of 1975 and end in 1977 in the Orleans Parish area; and commence in September, 1975, and end in 1982 in the St. Bernard Parish area. Dredging will be continuous in the Orleans Parish area but will not be continuous in St. Bernard Parish. The materials will be deposited in existing levee sections. Ponding areas are adjacent to the levees. (SLIDE 30)

The Chef Menteur Complex includes a gated flood control structure and a navigation structure with approach channels, a levee across a portion of Chef Menteur Pass and across the existing GIWW channel, and levees which connect the structures to the New Orleans East levee system on the west and US 90 embankment to the north of the complex. A channel has been excavated on the floodside of the complex which will be the new route of the GIWW when the works are constructed.

This complex will require approximately 27,000,000 cubic yards of dredging and is scheduled to commence in September of 1975 and end in 1990. Dredging will not be continuous during this time frame. Material will be deposited in the aforementioned levees. Ponding areas are adjacent to the structures and levees.

The Rigolets Complex includes a gated flood control structure and a navigation lock with approach channels, a levee across a portion of The Rigolets and earthen levees which connect the complex to US Highway 90 embankment north and south of the complex. This complex will require approximately 8,700,000 cubic yards of dredging and is scheduled to commence in September of 1975 and end in 1981. Dredging will not be continuous during this time frame. The material will be deposited in the aforementioned levees, and in disposal areas south of the site. A ponding area is contained within the site area.

The Seabrook Complex includes a gated outlet structure, a navigation lock and a rock and shell embankment which ties into flood protection system on each side of the complex. This complex will require approximately 300,000 cubic yards of dredging and is scheduled to commence in 1977 and end in 1980. Dredging will not be continuous during this time frame. The material will be deposited in nearby levee enlargements.

The aforementioned dredging will involve the deposition of dredged materials on areas which are now legally considered as navigable waterways. The magnitude and location of these areas were previously discussed by Dr. Montz and are also shown in our public notice. Dr. Montz's remarks will be made part of this 404 record. Additional details concerning proposed dredging operations are contained within our public notice of 22 January 1975, which will also be made a part of this public record.

Mr. Charles Grimwood will now discuss water quality data relative to this project as required by the provisions of Federal Regulations, Title 33, CFR 209.145. Mr. Grimwood.

MR. CHARLES GRIMWOOD:

Good morning. The Corps of Engineers has a network of sampling stations where water quality measurements are taken periodically throughout the project area. (SLIDE 31) This map (indicating) shows the approximate location of 125 stations where water quality measurements were taken every 2 weeks in 1973. This network has been in operation since June, 1972. In addition, there are several stations at which daily water samples are collected and then analyzed for chloride concentration.

We use chloride concentration as a means of measuring salinity. In these terms, pure sea water has a chloride concentration of about 20,000 parts per million; that is, 20,000 parts of chlorides in 1,000,000 parts of water. The US Public Health Standard for drinking water is 250 parts per million chlorides maximum. Some sources consider up to 1,000 parts per million chlorides to be suitable for human consumption. The other parameters most intensively monitored in this sampling program are pH, temperature, and dissolved oxygen. (SLIDE 32)

In Lake Pontchartrain, chloride concentration values of less than one hundred parts per million at Bayou La Branche and as high as 4,300 parts per million near The Rigolets, were observed in 1974. The gradient between these extremes is fairly uniform. The mean value of chloride concentration at the center of the causeway was approximately 1,000 parts per million in 1974. In the Rigolets and Chef Menteur Pass areas, the chloride level increases to a mean value of 1,500 parts per million recorded in 1974. The maximum and minimum values recorded in 1974 were 4,300 parts per million, and 500 parts per million, respectively. (SLIDE 33)

The highest chloride concentration observed in Lake Borgne in 1974 was 7,000 parts per million at Bayou St. Malo, and the lowest was less than 500 parts per million at a point 9 miles northeast of Proctor Point.

In the Industrial Canal, the chlorides varied from a maximum of 4,700 parts per million to a minimum of 100 parts per million observed at the Seabrook Bridge in 1974.

In the MR-GO, the chloride concentration ranged from less than 1,000 parts per million to 10,000 parts per million in 1974.

The water quality criteria set by the Louisiana Stream Control Commission does not place a limit on the chloride concentration for any of these areas, as they are all under tidal influence. It does, however, place limits on the deviations of the pH to an acidity level of 6.5 and to an alkalinity level of 9.0 standard units. The pH of pure water is 7.0 standard units. The temperature is to be below 35 degrees centigrade and the dissolved oxygen is to be above 4 parts per million at all these locations, except for Lake Borgne, Eloi Bay and the Chandeleur Sound, where it must not fall below 5 parts per million. The pH in these areas is fairly stable and does not deviate too far from these limits. (SLIDE 34)

There are a few stations, however, such as one just north of Moisant International Airport, where the highest and lowest pH values recorded in 1974 were considerably above and below these limits. No temperatures above the 35-degree centigrade limit were recorded in 1974. All dissolved oxygen readings, with the exception of one reading, were above the minimum values set by the Louisiana Stream Control Commission.

A preliminary summary of the water quality data available for these areas has been prepared and is available to you. In addition to the parameters just mentioned, it summarizes physical parameters such as turbidity and color, chemical characteristics such as dissolved metals, nitrogen, phosphorus, biochemical oxygen demand, hardness, et cetera, and biological pollution in the form of coliform organisms. Additional water quality data are available from the US Geological Survey which have been published and include some soil chemistry data from the analysis of bottom deposits.

Once dredging operations begin, the sampling is intensified and additional testing of the samples will be carried out in compliance with environmental protection agency requirements.

Thank you, ladies and gentlemen. I would like to now return this floor to Colonel Heiberg. Colonel.

COLONEL HEIBERG:

Thank you Mr. Hart and Mr. Grimwood.

I have asked the Governor's representative agency on the overall project to make its comments, the Department of Public Works, Mr. Cresap.

MR. CRESAP:

Thank you, Colonel.

Mr. Roy Aguillard, our Director, regrets he couldn't be here personally today but wishes me to assure you of his continued support of your efforts.

I would like to ask Mr. Arthur Theis, my assistant, to read the statement from the Department of Public Works. Arthur.

MR. ARTHUR THEIS (DEPARTMENT OF PUBLIC WORKS):

Ladies and gentlemen, I am Art Theis, the Assistant Chief Engineer for the Louisiana Department of Public Works, Mr. Roy Aguillard, Director, and I would like to read a letter to Colonel Heiberg from Mr. Roy Aguillard, and it reads as follows:

"Dear Colonel Heiberg: This is in response to your announcement dated January 22, 1975, of a public meeting to discuss the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project and plans for disposal of dredged materials that is required by the Federal Water Pollution Control Act of 1972.

"The Louisiana Department of Public Works has been designated as the state agency responsible for the coordination of all Federal projects in Louisiana related to the flood control, navigation, hurricane protection, and related water resources projects. In addition, the Governor of Louisiana has designated this department as the coordinator for the Lake Pontchartrain and Vicinity hurricane protection project. In this role, we are responsible for coordinating the Federal project with the affected state and local interests to insure the best possible protection system for this area of the State of Louisiana. It is in

this position that we present these comments today for your consideration on this project.

"The Lake Pontchartrain and Vicinity project was authorized by the Flood Control Act of 1965. The purpose of this project is to provide adequate hurricane protection to the Greater New Orleans Metropolitan Area, including all or portions of some 10 parishes, the principal beneficiaries being Jefferson, Orleans, St. Bernard, and St. Tammany Parishes. The project, as you have outlined today, consists of a series of levees, floodwalls, control structures and locks to provide protection to this area against hurricane generated tides.

"The need for this type project in this area has been dramatically indicated in the passage of several major hurricanes, such as Betsy in 1965, and Carmen in 1969. A considerable portion of the damages suffered by this area could have been alleviated had the project been completed at this time. The New Orleans Metropolitan Area is the major urban area of Louisiana, and, in fact, this entire region of the United States. This highly populated and industrialized section deserves the best available protection that can be devised in order to insure the continued and orderly development of our economy, as well as protecting the lives and properties of its citizens. We believe the proposed plan of development provides this protection and the completion of this project at the earliest possible date is urgently needed. The existing protective facilities are inadequate to insure the protection of this area.

"The environmental aspects of this project have already been thoroughly documented and commented on by interested local, state and national agencies, as well as the general public. The environmental impact statement for this project has been filed with the President's Council on Environmental Quality as required by the NEPA Act of 1969; therefore, no further comments are considered necessary as pertains to this statement.

"Section 404 of the Federal Water Pollution Act of 1972, requires public meetings, when appropriate, to consider the dredging and disposal of material in navigable waters as associated with Federal projects. The term "spoil disposal" is inappropriate in regard to this project since

we are discussing the construction of earth embankments for hurricane protection in this area. The dredging is, of course, necessary to obtain material to construct the embankments required.

"The areas designated as spoil disposal areas are coincidental with and pertain directly to the embankment location. These areas are adequately defined on the project plans and also indicated on drawings furnished with your hearing notices. In most cases, these areas have already been utilized in the construction of the hurricane levees, and land use will not be changed from that already established. Primary consideration, in regard to spoil disposal, dredging operations, and effluent discharges, should be directed toward the establishment of locations which will provide the least disturbance to the existing ecological balance of this area. Since this area of our state is a highly productive shellfish and seafood area, care should be exercised in all operations near existing oyster leases and other productive sites. We will work very closely with your District and with other appropriate state and local agencies in the development of satisfactory plans to accommodate these features.

"It is hoped that today's meeting will provide additional impetus to proceeding with this project as rapidly as funding will permit. We appreciate the opportunity to participate and comment on these features of the project and look forward to a continued and early completion of the project. Sincerely yours, Roy Aguillard, Director."

Thank you.

(Whereupon, the document was offered into evidence as Exhibit No. 7)

COLONEL HEIBERG:

Thank you, Mr. Theis. During the presentations today, some items will be discussed that have been well covered both in past meetings and/or in the published environmental statement. As an example, in the 7 or 8 months since I've been here, I continue to hear the comment: "The Rigolets opening is only 25 percent of the natural opening and, therefore, only 25 percent of the tidal passage of water will be possible." This statement is

simply not supported either by hydraulic studies or by the extensive water model testing that we have done.

If you do hear statements not addressed by our presentation today, please make use of the engineer staff, to my right, at the breaks; or write to me, and if you want your exchange to become part of the record of this meeting or hearing, ask in your letter for that.

You may ask why I do not answer questions here today. To do so one-by-one would insure that a meeting with the obvious wide public interest of this one would last far too long and that is why my staff is here with me today. And while one purpose of this meeting is to inform the public, that is secondary to the primary purpose of this meeting and hearing: To provide me with information, through the public record, to inform my superiors with this information and those that will pass on my judgments for their ultimate decisions.

In order to allow for the greatest number to speak today, I am insisting on a 5-minute rule, except where I have agreed to longer presentations by prior arrangement, as I announced in the public notice. To that end I am asking Ms. Judy Zavala, down front, Judy, to time the presentation. The speaker, up here, will see a yellow light when there is 1 minute left. A red light at stop, and then if you go beyond that red light, we'll give you a signal. If you want to make a rebuttal or a longer statement, you have three options: Make the statement in writing as long as you want within the 30-day period--all of you who want to make an additional 5-minute statement can do so after all the initial statements are made. I want to provide the opportunity for everyone to have an initial opportunity for everyone to have an initial opportunity to speak first. I admit that will probably be late today. All who want to make longer statements, within reason, I will allow to do so within the--after the second 5-minute statements have been made later today.

Please give us your written comments, or for the sake of accuracy, your oral notes, if you use them when you come forward. And again, Judy will take them up front.

I will next call on elected officials who have indicated a desire to speak. First on my cards is State Representative Joseph Accardo of LaPlace.

(Applause)

MR. JOSEPH ACCARDO (STATE REPRESENTATIVE, LA PLACE):

Thank you, Colonel, and ladies and gentlemen. I represent the parishes of St. John and St. James. We are not a part of the hurricane protection system, and this is why I am here today.

First, let me say that I am in favor of hurricane protection. I do not favor the killing of marshes. I do not come here to try to tell you where to place your levees or locks. That is a decision that must be made by someone else. But, for a number of years, I have expressed my concern to the Corps of Engineers and to other public officials, to congressional people, that in the planning of the hurricane protection system, the parish of St. John, which has an extensive boundary on Lake Pontchartrain, as you can see, stretching from the area near the spillway all the way past Manchac, is not included in any kind of protection system.

Further, let me also say that I do not advocate the leveeing of all of the marshland in St. John Parish. I do not advocate anything of that kind. What worries me is that in letters from the Corps and in statements I heard today, we were told that tides in excess of 13 feet could occur at any point on the lake and specifically, at Frenier. Previous hurricanes, especially the hurricane of 1915, caused devastation in St. John Parish at Fenier.

I am told in correspondence from--and I have correspondence from the Corps, from the predecessor from the current Director, that we could expect flooding at Frenier even after the barrier system is built to at least an 8-foot level. I am told that the barrier system would reduce flooding at Frenier by 5 feet. Five feet from 13 feet leaves 8 feet. The entire interstate system in St. John Parish is built at about a 3-foot level. There are now people living, significant numbers of people living, north of the Airline Highway in my parish, whose homes are built in areas that are below 8 feet. These are cultivated areas, farmed areas, areas that have been historically considered farmlands and areas that people could live in.

It worries me that the Corps of Engineers requested authority from the Congress in 1971 for a study of the western shore of Lake Pontchartrain, and the Congress

authorized the study, but no funds have ever been presented for it, so that the study could be conducted.

It worries me that the Corps is proceeding to build the system without adequate studies of that--of the effects of the system on the parishes that I represent. Bear in mind that Lake Maurepas and Lake Pontchartrain serve as the collection basin for much of the drainage area of south-east Louisiana and a large portion of Mississippi.

The only thing I ask is that--and I suggest to the Corps-- is that this project should not proceed to its completion without adequate studies of how it will affect the people I represent. I say that you should not have started without adequate funds. I am sure that a study of this kind could have been conducted at a cost of under a million dollars, but yet I notice you budget in excess of \$300 million but not enough money for study to determine the effect on the people I represent.

I urge you not to make a mistake because we will be the people who will pay the price. I have confidence in the Corps of Engineers and in the Department of Public Works. I ask you to exert some effort to get a little bit of money to finish the studies.

Thank you very much.

(Applause)

COLONEL HEIBERG:

Thank you, Representative Accardo. For the next speakers, I would ask that you use the microphone closer to me and then this will give you an opportunity to hand your papers to Judy as you come forward.

State Representative Scogin has asked me for 30 minutes to make his presentation as an exception to my 5-minute limit. I would agree to that length only if he agreed to wait until mid-afternoon, which he could not do. I did agree to give him 15 minutes this morning. Mr. Scogin.

REPRESENTATIVE EDWARD C. SCOGIN (SLIDELL):

Thank you very much. Colonel Heiberg, Mr. Cresap, members of your retinue, however many they may be, distinguished guests, public officials, ladies and gentlemen.

You've just seen a very slick presentation.

(Applause)

One designed to overwhelm you. Looked to me like it might have been prepared by some of the Madison Avenue boys. I think most of you know who they are.

I know that each one of these young men that spoke up here is dedicated, sincere, whether he be from Arizona, Kansas, Nebraska or from Louisiana. Whether he's ever been in a boat or not is no concern of mine.

Before I commence, I would like to present for the record, copies of the things that I will say and some other things that people have asked me to present for the record. First, from the Haas Enterprises in Slidell, their written opposition; from Southern Shipbuilding Corporation in Slidell, an employer of 400 to 800 people, their written opposition and their request, if we must have it, for modification in order that they will not have to shut down their operation; a copy of my criticism of the environmental statement from the Corps of Engineers, prepared by an engineer for me, a former employee of the Levee Board; a statement prepared for me by Mr. Henry G. Casserleigh, a former member of the Corps of Engineers, in a very responsible position in opposition which I will attempt to read. I will attempt to do what I can do in 15 minutes-- it would take an hour if I were permitted the time. Another for the official printed record, criticism from me, from, with signatures attached, a number of people with their reasons for objection; from Mr. W. J. Brogan with his reason for objection, a letter, a personal letter from Mrs. Noel Mansfield, with her reasons for objection. She happened to live in Carolyn Park at the time of the flood there caused by prior Corps project, the Mississippi River-Gulf Outlet, and she states that the water rose to her rooftop in minutes, in spite of what Mr. Swallow (sic) has said about the water being slow rising water; a letter from Mr. J. E. Throop, stating his reasons for opposition; also, I'd like entered into the official public records, printed public records, an editorial criticism of "Levee Millage and Barriers" from the Times-Picayune telling you what's being done with tax money in spite of what you voted for it to be done with; another from the States-Item concerning this particular hearing that states, and I'm going to again refer to me having 15 minutes:

"There can be little doubt that those powerful public agencies and groups with vested interests in the lake project will, as in the past, be heard amply at the hearing."

And finally, prepared for me by an engineer, whom I think is as capable as any I've heard here today, what I will read to you. These are for the official public records.

(Whereupon, the above mentioned documents were offered in evidence in toto and marked for identification as Exhibit No. 94)

I have a map here that outlines all prior hurricanes in this area. I was informed that a stand would be here and someone would place this map on the stand. I assume that that is possible. I will be referring to it on occasion is the reason I ask.

I probably will be cut off in the middle of this, so you'll just have to bear with me because I don't think there's a possible way that I can get it in 15 minutes. You've heard an hour and a half presentation.

You know, people are divided into three groups in this world. There are those who have something to do with half the things that are happening or can happen or are not happening; and there are those that watch things happen; and there are those that wake up and wonder what did happen.

Mankind's presumption that it must straighten out rivers, rearrange coastlines, fill in wetlands, in short, improve on nature, has become too prevalent. I'm going to skip some other opening remarks.

This book says, "Why Bottle Up Lake Pontchartrain?" I'm going to try to get this in.

"The Corps of Engineers-Orleans Levee Board's Hurricane Protection Plan to bottle up Lake Pontchartrain is based on the theory that a so-called 'Killer Hurricane,' following either the No. 1 or the No. 2 path," which we've never had, "will by means of counter-clock-wise winds dump the lake water over the New Orleans Lakefront seawall and the Jefferson Parish Lakefront levee, thus flooding the low areas behind. In the past several hurricanes of great

intensity, their paths, shown on the attached map, followed these paths very closely and the following results occurred:

"The hurricane of 1915: In September of 1915 the most severe hurricane of record, up to that time, in the New Orleans area occurred across the city and Lake Pontchartrain. Winds reached a velocity of 120 miles per hour at the New Orleans Post Office weather station and tides reached 6.1 foot mean sea level, at West End. The north shores of Orleans and Jefferson Parish along the lakefront were flooded, as there were no protection levees along the lakefront at that time.

"The hurricane of 1947: At the time this hurricane struck, the city of New Orleans was protected along the lakefront with a concrete seawall and locks at the New Basin Canal and Bayou St. John, built to an elevation of 10 feet above m.s.l. (mean sea level). The old embankment of the New Orleans-Hammond Highway, along the east Jefferson Parish at an average elevation of only 3 1/2 foot m.s.l."--and I'm, say, mean sea level--"The hurricane winds reaching an estimated velocity of 110 miles per hour and the maximum tide level reaching 5.42 feet at mean sea level, overtopped most of the levee along the Jefferson Parish lakefront." That was 1947. "Of the total, 48.6 square miles were flooded. Over 3,900,000 property damage was sustained, but none in the New Orleans area.

"The hurricane of 1965, Betsy: Not one drop of the water that flooded those homes came from Lake Pontchartrain. I only want to make that known to you. It came from outside and would be outside of what the barriers is today.

"Shortly after the 1947 hurricane, the United States Government authorized the Corps of Engineers to construct flood protection for the east bank of Jefferson Parish. A levee with a 50-foot crown, built to elevation of 10 foot mean sea level and protected on the lake side with riprap and asphalt was constructed and has withstood hurricanes of '49 and 1965, the latter of greater intensity than the hurricane of '47.

"However, the city of New Orleans and St. Bernard and Plaquemines Parishes experienced severe flooding caused by the 150-mile per hour winds and high tides of Hurricane

Betsy. Although the New Orleans lakefront seawall was topped by wave action, the levees behind the seawall, previously built to elevation 14 foot m.s.l., restrained the lake water from flooding. The elevation of the lake at West End reached 7.6 m.s.l., which broke the 50-year record by the 1915 hurricane.

"The flood damage caused by this hurricane in the Ninth Ward of New Orleans and St. Bernard Parish was caused by the floodwaters of the Mississippi River-Gulf Outlet,

(Applause)

"—which is known in engineering circles throughout the world as a 'white elephant,' topping the low levees built by the Corps of Engineers when this waterway was constructed." Topping the low levees built by the engineers when this waterway was constructed.

"The low levees of the Mississippi River in Plaquemines Parish," did, indeed, as someone pointed out earlier, "were also topped by the flood tide backing up the river." Backing up the river.

"Since 1965 the levees along the Industrial Canal, New Orleans drainage canals emptying into the lake, and the Mississippi River-Gulf Outlet have been substantially built to a minimum elevation of 14 foot m.s.l. and the main river levees have been raised to prevent a reoccurrence of 1965 in Plaquemines Parish. Since the raising of the levees in Orleans and Jefferson Parish east bank, the Federal Government has subsidized flood insurance rates on home with floor elevations as low...as low as two foot below m.s.l." You can get flood insurance. "Fixing the rate as low as 5 cents per one hundred dollars.

"With such protection built since 1965 by the Orleans Levee Board and the Corps of Engineers it is apparent that construction of the proposed barrier across and between the Chef Menteur and the Rigolets Passes will not be necessary, and if constructed, it may impose additional flood hazards and be detrimental to the Lake Pontchartrain-Maurepas Basin. The following are reasons why this proposed expenditure of over \$300 million of your tax dollars, 70 percent Federal and 30 percent local, should not be spent.

"No. 1, Tidal flow of the Pontchartrain-Maurepas drainage basin will be impeded.

"This drainage area, depending on free tidal flow through the two passes, consists of over 5,200 square miles in Louisiana and Mississippi; the Louisiana area approximately 20 percent of the total state surface. This drainage area shed runs off through over 20 rivers and creeks, the slow flow of which depends on the diurnal tidal fluctuation of the lakes, which approximates only 1 foot in elevation, each 24 hours. The fresh water discharge of this drainage area, together with the occasional discharge of the Bonnet Carre Spillway, in time, will affect the salinity of the lakes." That may be moot. The salinity of the lakes has been altered now 200 parts in low inflow years and 400 percent in the high inflow years already. I think most of you know that the estuaries behind the sand spit around the lake are already dead.

"The ecology of these two lakes will be affected by restricting flow through the two passes.

"According to the 1974 report of the Louisiana Stream Control Commission and the Louisiana Health and Social and Rehabilitation Services Administration, there are over 28 industrial plants and 55 municipal treatment plants, many overtaxed, discharging over 48,000,000 gallons of untreated sewerage, waste and effluent daily into the above drainage area. This discharge at present is from 377,000 people, which number should increase to 560,000 by 1980, according to the report.

"None of this discharge has better than secondary treatment, much with only primary treatment, much is raw sewerage from overtaxed plants, camps, marinas and boats in the rivers and lake areas. In addition, polluted runoff from the cattle and dairy operations of the lakes, drains into the rivers, which empty into the lakes.

"Flow from the Orleans and Jefferson Parish drainage canals also contribute to the pollution of Lake Pontchartrain, forcing the closing now of bathing beaches, after heavy rains flush out the bottom deposits of these canals. The shallow water of these two lakes act, at present, as oxidation ponds, the pollutants of which must have free exit through the two passes. An occasional storm tide actually benefits the lake waters by flushing out these pollutants.

"No. 3. The planned barrier would destroy the buffer action of the two lakes, before and during a hurricane.

"The reservoir area of the two lakes, rivers, and surrounding wetlands, consisting of over 750 square miles," and if you consider Maurepas and Pontchartrain, its 969 square miles, "will hold over 670,000,000,000 cubic feet of storm water, with a rise of 8 feet. Assuming a tidal flow of 4 foot per second through the two passes, which is high, as the tide builds up during the approach of a hurricane, the time required for the tide to increase to +8 m.s.l., would be approximately 3 days." To build up to that level will take 3 days. "Before the 3-day period, the eye of the hurricane will have passed over Lake Pontchartrain and counter-clock-wise winds would be blowing. With seawalls and canal levees built to the 14-foot m.s.l. elevation, and the two passes unobstructed, the storm water would start a back flow through these channels into Lake Borgne and the Mississippi Sound. During Hurricane Betsy, which followed the path of the No. 2 critical hurricane to some extent, the tide level only reached 7.6 m.s.l. at West End, and all of the lakefront protections held.

"This reversal of hurricane floodwaters was evident during Hurricane Camille on the Mississippi Coast, when a 20-foot tide at Gulfport flowed back into the gulf in less than 1 hour after the eye of the storm passed over the coastline." It was back where it came from.

"Suppose that a hurricane of the magnitude of Camille," and this Standard Project Hurricane, I have been told is sustained winds of a hundred miles per hour--we've designed a barrier, and we've now designed a hurricane to fit it. "Suppose that a hurricane of the magnitude of Camille struck the area between the Chef and The Rigolets, with the proposed floodgates closed and levees raised. Such a storm would produce tides that would top the gates and US Highway 90, and by circling Apple Pie Ridge," and what you saw is not the way it's actually going to be built out there, "at only 7 foot m.s.l. foot and flood the entire area of Slidell, not above elevation 10 foot m.s.l. And one thing, how would the floodgates be opened in time to relieve the high lake water when the counter-clock-wise winds backed up the tides along the south shore of Lake Pontchartrain and the barricade structures?"

I might point out at this time, I've lived on the bank of The Rigolets for 54 years. I am a former tugboat captain. I have hunted and fished. I worked on oyster boats and shrimp boats in that area all my life.

"No. 4, Restriction of cross section areas at the Chef and Rigolets Passes would change the salinity of the Lake Pontchartrain and Maurepas."

I'm going to skip that because it may not be of major significance--the salinity, but I am going to say that, "When this barricade was first proposed by the Corps it was assumed that the velocity of tide water would be increased through the restricted openings by tidal buildup. This is difficult to believe as during normal tidal flow, the diurnal change is only 1 foot in 24 hours. Salt water from Lake Borgne and fresh water and pollutants from Lake Pontchartrain would be backed up at the floodgates during normal tidal flow." Remember, you are raising the level of the bottoms.

"In time, the two lakes would become polluted bodies of stagnant water." it may take 30 years, it may take less, "unfit for fishing, recreation or propagation of food fish. The reproduction of clam shells which provide a \$12 million yearly operation, necessary for furnishing material for road and foundation construction, would be ruined. In this connection, the following recommendation submitted from the Louisiana Wildlife and Fisheries Commission's 'Study of the Clam, in Lake Pontchartrain and Lake Maurepas.'

"The most important recommendation for the clam shell industry to consider encompasses steadfast opposition to any environmental disruption, any environmental disruption, from any source, "affecting the ecology of the lakes. All the information derived and compiled in technical knowledge of factors directly or indirectly affecting shell production should be utilized in preventing environmental disruption. If wisdom is not used, the industry can no longer"--the industry can no longer, Mr. Ed Lennox, if you're here--"the industry can no longer expect abundant production of this renewable natural resource that has been so long enjoyed. The voice of the clam shell dredging industry should be clamorous in order to protect, maintain and possibly enhance production in Lake Pontchartrain and Maurepas.

"No. 5, Should this proposed barrier be built across the two deep passes, construction difficulties would impose hazardous flood conditions in the area and great unforeseen costs."

I am going to mention something to you that nobody has mentioned up until now. The construction period of these-- whatever you want to call them.

In order to construct the foundations for floodgates in 30 foot of water or 96 foot of water, extensive and costly cofferdam construction would be required that would completely close the passes for periods of 2 years or more." You cannot work on a wet bottom to do what they propose to do in The Rigolets or the Chef. You've got to work on a dry bottom. It would require cofferdams, one on each side draining out the center to do the work that has to be done. And possibly for 2 years your passes, up to 2 years, could be totally closed during construction. You can't dig the navigation canal at The Rigolets to allow this during this because you'd get a new Rigolets if you did that. That's something that's very important. It is quite possible that you won't have any pass for quite some while, yet in the environmental impact statement, it clearly states that any closure exceeding 48 hours at any given time. the damage will be irretrievable. That's their statement; not mine.

MS. ZAVALA:

Time's up.

MR. SCOGIN:

Time up? I'd like to, I'd like to--with your permission, Colonel, I would ask for 5 more minutes to finish.

COLONEL HEIBERG:

Okay, sir, I note that we have some more public officials that I'm also going to get in before noon, or they're going to have to get shuffled with the rest of the cards. I note Mayor Cusimano's next. Does he want to give up--do you want to give up your time?

MAYOR FRANK CUSIMANO (SLIDELL)

No. I want Mr. Scogin, as representative of the people, allowed to have the proper time; whatever it takes, 30 minutes or an hour. I demand that you give him the time.

(Applause)

COLONEL HEIBERG:

Sir, this is my meeting and not yours.

(Applause)

COLONEL HEIBERG:

Mr. Scogin, can you finish in the next 5 minutes?

MR. SCOGIN:

I can finish, I think in 5 to 8 minutes.

COLONEL HEIBERG:

Okay, go ahead.

MR. SCOGIN:

I would ask you, I know your feelings and I respect them very much, to let us proceed in an orderly manner. I understand your position.

"In order to construct the foundations for flood gates in 30 or 90 foot of water, extensive and costly cofferdam construction will be required that will completely close the passes for periods of 2 years, possibly more. Subsoil conditions in the Chef-Rigolets area are indeed very poor. US Highway 90 has been raised several times to take care of settlement and the piers of L&N Railroad bridges were sunk to a depth of over 100 feet to obtain safe bearing.

"Should a hurricane strike between the Chef and Rigolets during construction, with the passes blocked with high level cofferdams, the Slidell area will indeed be flooded with backed up tides from the east, the camps along US 90 would be destroyed and the low areas west of the Chef in Orleans Parish would be flooded." Venetian Isles on out. "Also, an increase in construction costs will be excessive or would be excessive.

"In conclusion, it should be remembered that this hurricane protection plan was submitted to the Louisiana taxpayers on three separate occasions and was rejected by overwhelming votes. However, later a 3-mill property tax was voted for 'building and raising levees' in Orleans

Parish by the Orleans Levee Board. It has developed that this plan was a subterfuge, as practically all of the levees in Orleans Parish have been completed to a hurricane proof sections and elevation. This 3-mill tax will be used as the Orleans Levee Board's contribution toward the proposed \$300 million protection plan. This would mean a contribution of a least \$90 million by the Orleans taxpayers, at least \$90 million, or 30 percent of the total cost.

"In the latest plan of Protection of Lake Pontchartrain and Vicinity the following statement is incorporated." This is theirs; not mine.

"Due to the importance of getting the barrier structure complexes at Rigolets and Chef Menteur and Seabrook under construction as quickly as possible, the New Orleans District placed major emphasis on their engineering and design. To this end the engineering capabilities of the District are being augmented by that of three other Corps Districts, and five local architect-engineering firms." Five local architect-engineering firms. They may not be any special interest.

I'm going to start this one, I believe I can finish. It's only two page. It was prepared by an engineer, former Corps of Engineer, Henry G. Casserleigh, for me.

"The voters of St. Tammany Parish rejected this plan on three occasions. Statewide voters rejected it two times. True, the vote was against the bond issue to finance the work; however, my bond was against the project. I did not want to see the natural passes closed. Many others I have spoken to expressed the same feeling. The fact the Representative Ed Hebert's bill allows 25 years for payment of local entry share does not change the basic fact that the voters don't want the project, or at least the barrier passes.

"Echoing Joe Accardo, I am not against hurricane protection as such. And if those people who think they are getting hurricane protection from the levees want it, they can certainly have it. I'm asking that the passes be left open.

"With a hurricane crossing Lake Pontchartrain in the vicinity of New Orleans moving south to north or southwest to northeast with the barrier gates closed at The Rigolets and Chef under the influence of the west wind from the southwest quadrant of the storm, the tilting phenomenon, saucer effect, will cause the lake waters to flood a large area of St. Tammany Parish that has not had storm water on it since the 1915 hurricane. How quickly, and can and will the gates be opened?

"Because of dangerous currents through the structures at The Rigolets during flood and ebb of nearly every tide of every day of every year. The Corps says for only 15 out of every 30 days. It will be necessary to lock boats through, according to them, for about," and this has been changed, we were told by a prior engineer 12 hours out of every 24 and they now tell us "5 hours a day for only 15 days." I don't know. Perhaps we don't have a tide for the other 15 days.

"This will prove a serious handicap to commercial and sport fishing boatmen. I cannot imagine a lock 110 foot wide and 800 foot long operating to let my 18-foot skiff through. Isn't it more likely that actual practice will require a wait until a number of boats are standing by to negotiate the lock." Not one at a time, skiffs, pirogue, or whatever. "A boat trip from Lake Pontchartrain to Lake Borgne via The Rigolets could well end up a 2-day trip or at best, an overnight layover.

"After one good flooding of developed areas between the lake and Highway 190, including the Eden Isles area, the local citizens will scream for protection. Uncle Sam will put 70 percent of the necessary funds, local interests the rest, and a levee will be built from North Shore along the lakefront to Pass Manchac with flood gates systems on Bayou Bonfouca, Bayou Lacombe, the Tchefuncta River and the Tangipahoa River." They tell you it calls for further flood protection after we build it. You saw that already. "Except for the marsh on the lake in St. Charles Parish the last vestage of life-giving to the lake, that is, marsh, will then have been destroyed. The lake will become a barren and desert body of water or at best a mighty poor fishing area.

"As the plan now stands, its purpose appears to be for the protection of one particular area only. The plan provides

no new protection for St. Tammany or Tangipahoa Parishes, except for the highly debatable 6-foot lower lake level during a hurricane. It is interesting to note that, quote, 'work on the Mandeville seawall is inactive due to lack of financial participation in the project by the St. Tammany Parish sponsors'." They did not want a pumped in pile of sand there.

"The greatly increased salinity of the lake since the MR-GO was constructed has already had a detrimental effect on the crab fishery. This can be verified by talking to many of the old time crab fishermen. If the salinity of the lake is not sharply reduced fairly soon, the much prized 'fat Lake Pontchartrain blue crab' will be a thing of the past.

"The flat statements that construction and operation of the barriers will have no appreciable effect on the life patterns of larvae and very young migrating specimen, nor on more mature specimens, is pure theory. Pure theory. Where in this country or elsewhere in the world have similar works been undertaken. Marine biologists will be hesitant to mention Florida where some regrettable and costly mistakes were made." They are now trying to rectify these, as these gentlemen from the Corps can tell you.

"Just about every hurricane of the past that came near New Orleans put water over Highway 90 in the vicinity of The Rigolets and Chef Menteur from 6 to 8 foot. And water deep enough to float large boats and buildings across the roadway. Therefore, I cannot agree that barriers to the same elevation as Highway 90 will prevent storm driven water in large quantities from entering the lake, even during storms of lesser intensity than the design hurricane.

"In my opinion, it would border on criminal action by sponsors and builders to proceed with the barrier phases of this plan. It seems to me that there is legal grounds to request an injunction or at least a referendum on the project as now proposed, not a bond issue vote."

In closing, just one thing, Thomas Jefferson counseled democracy's leaders to trust in the informed judgment of the people. Sometimes they are wrong. But in the long run common sense and considerable wisdom nearly always prevails. Despite this, our public leaders too often

exhibit the attitude that people are children and we know that is best for them. This is not leadership, but the arrogance of power. The arrogance of power and the entire nation has suffered its devastating results. Those of you who must go back across the lake or across The Rigolets or into the Chef there, through the marshes, I ask you to blow it a goodbye kiss. Thank you.

COLONEL HEIBERG:

Thank you, Mr. Scogin. Mayor Frank Cusimano, Slidell.

MAYOR FRANK CUSIMANO (SLIDELL):

Colonel Heiberg, Mr. Baehr, Mr. Cresap, ladies and gentlemen, elected officials, from the outset I want to go on record as opposing the--and being totally against the format of this public hearing.

(Applause)

This has been officially called as a public hearing. And what is a public hearing? A meeting is for the public to be heard; and anytime the US Corps of Engineers, who is conducting this public hearing can take as much as time as they please and then curtail the public, it is not a public hearing.

(Applause)

Mr. Scogin is truly a representative of the people. These people you see here, the US Corps of Engineers are not representatives of the people. They are working for the people and they are being paid for by the people.

(Applause)

I have with me a Resolution from the St. Tammany Parish Municipal Association. I would like to enter this into the record as being against the Barrier Plan and they have specified their reasons. I also have specified their reasons. I have a Resolution here from the Mayor and the City Council of the City of Slidell opposing the erection of the barrier plan of this hurricane protection plan. We, in Slidell, everywhere--we have the same feeling for life and property whether it be in Slidell, St. Tammany Parish, New Orleans, New York or anywhere. We are not

opposed for hurricane protection for people. But we are opposed to the Barrier Plan.

I strongly oppose the construction of the barriers at the Chef, The Rigolets and Seabrook for many reasons. But I'm only going to talk about four. Mr. Ed Scoggins has talked about all of them that I have here today, but I would like to get my little 2 cents in.

The Barriers will not do what they are intended to do and what the engineers say they will do. They say it will keep the water out of the lake; it will prevent the tide from rising. And they say it will protect New Orleans from the waters of Lake Pontchartrain. This is not so. They have forgotten one thing: If the barriers were in place and they were working 100 percent, there is water in the lake, 12 to 14 foot of water in the lake over 600 square miles. How are you going to protect the people of New Orleans from water in the lake? There will always be water in the lake, whether you've got barriers or not. The only way to protect the people of New Orleans from water in Lake Pontchartrain is to put barriers all around it and stop up every drainage ditch, every bayou, every stream, every river that empties in it and then pump the lake dry. Then you'll protect them from the waters of the lake. That's the only way you could ever do it. How are you going to protect New Orleans from the waters of the Mississippi River? You're going to put a barrier across the Mississippi River and divert the water around it? You build levees, that's how you protect it and this is exactly the way they are protecting the people from the waters of the Mississippi River, by levees; and New Orleans can be protected from any hurricane by the levee system, the alternate system that they have.

But they say they're going to do this because it's the cheapest, not the best protection.

No. 2, the ecosystem of the lake will be totally destroyed and Mr. Scogin brought out the point that during construction, 2 years, with no flow in and out--you know that tide goes through The Rigolets--as soon as they put any earthen dam or do anything to The Rigolets that beautiful body of water is immediately destroyed. The Rigolets will be destroyed and during the construction of 2 years, The Rigolets will be destroyed and so will Lake Pontchartrain.

We have the Eighth Wonder of the World in New Orleans and we're mighty proud of it. I know I, for one, am proud of it, and that's the Dome Stadium. I think this is the greatest thing; the Tourism Bureau of the City of New Orleans and the Tourism Bureau of the State of Louisiana should be vitally interested. We have the Eighth Wonder of the World in the Dome Stadium. We're going to have the ninth, if the Barriers are built. You're going to have the largest cesspool in the world.

(Applause)

Industry: Now, let's get to industry. You cannot improve industry on Lake Pontchartrain in Slidell Area, Madisonville, anywhere around the lake, even on the New Orleans side of the lake. You cannot put in an industry that will build-- will build larger, say, rigs for the gulf--oil rigs. You are restricted to a path at The Rigolets of 110 foot wide--I heard it was 84, but today I heard it was 110 foot wide. So, industry will be forever, forever, all for all eternity contained to a small--you could never build a big ,industry on the lake.

And pleasure craft and sailing craft will have to be locked through, as Ed told you.

But the main thing that worries me most--I'm an American of Italian descent. I believe in American. I love America. I believe in our democratic system. I love it. And they tell me, I've heard the system is working. But the system is not working in the case of the Barriers. What have they done with the vote of the people? The people have voted. The people have said they do not want this protect-- these barriers. This has been three times.

Now, these people, the proponents, whoever they may be, are bringing this plan further and to completing these barriers are completely ignoring the vote of the people. I am an elected official, the Mayor of the City of Slidell. We constantly have bond issues and they are put to the vote of the people for millage and when the people vote "no" that's it, ladies and gentlemen. We cannot go any further. The people have voted "no" and they are going to build this thing. This is just a bone thrown to us today. They are going to go ahead with it.

(Applause)

They are going to go ahead with the plans. They are only giving us this public hearing today, which is not a public hearing, because we've pressured Mr. Hebert to call for this public hearing. That's the reason why. Quite a few people have pressured Mr. Hebert to get this. This is a bone thrown to us. They are, I firmly believe, that they are going to go ahead with these Barriers regardless of the vote of the people. The people have voted against it. What right--who gives these men authority to go ahead with this project, when the people voted it down? Who, who gives these people the right to go ahead with this project when the people have voted it down. I say this is illegal and definitely it's immoral. It's no way morally right. It's not right in any way, shape or form. Thank you, ladies and gentlemen.

(Applause)

(Whereupon the above mentioned resolutions were offered in evidence in globo and marked for identification as Exhibit No. 34)

COLONEL HEIBERG:

Thank you, Mr. Mayor. Councilman A. Dennis Behec, Mandeville.

MR. A. DENNIS BECHAC (COUNCILMAN OF MANDEVILLE):

Colonel Heiberg, ladies and gentlemen. Ed Scogin and Mayor Cusimano are a real tough act to follow.

With regards to the public hearing to be held Saturday, the 22d of February, 1975, to discuss various proposed plans of improvement to Lake Pontchartrain, Northshore, Louisiana, Study, the following comments reflect the views of the Mandeville Town Council and pertain to that area within the corporate limits of the town of Mandeville, Louisiana.

Lake Pontchartrain and Vicinity, Louisiana, Study. We object to the portion of the study which pertains to improvements to the lakefront area as outlined in Section 4, paragraph 17 (J), page 64, example: The mudwall and

riprap. We have consistently opposed this suggested improvement and feel that this improvement has definitely been removed from future consideration.

National Shoreline Study Inventory Report of the Lower Mississippi Region. We object to that portion of this study as suggested in Section 7, "Improvements Method," page 68, except that we do desire the replacement of the existing seawall and extension to cover the entire length of the corporate limits of Mandeville.

With reference to the announcement of the public meeting to be held on the 22nd of February, we submit the following:

Paragraph 3, Item C: That the seawall in Mandeville be replaced and extended along the entire lakefront to the corporate limits of Mandeville, Louisiana. This, we feel would provide the best protection throughout the years this would prove to be economical and beneficial to this rapidly developing area.

Paragraph 4, Item A: Provisions of a sand beach 300 feet wide in front of the entire existing seawall at Mandeville Louisiana. This we reject in its entirety.

Paragraph 4, Item B: Federal assumption of maintenance responsibilities for Bayou Chastant. We concur in this improvement and feel that this will be of great benefit, not only to Mandeville, but to the St. Tammany Parish and all boating interests throughout the Lake Pontchartrain area.

We would also like to take this opportunity to again request the complete replacement of the existing seawall with a new step wall. This new wall should begin at Bayou Chastant and continue west to Chinchuba Creek.

I would like to also state, personally, at this time that I am opposed to the proposed plan for the Lock and Barrier System to be constructed in the Rigolets and the Chef Menteur Pass area. I am sure that many long hours have been spent developing this plan, but I personally believe that additional study of alternate plans, especially for The Rigolets and the Chef Menteur Pass area, should be fully exploited.

Thank you for giving me this opportunity to present these views to you and presenting this project.

COLONEL HEIBERG:

Thank you, Mr. Bechac.

(Applause)

COLONEL HEIBERG:

I've been asked for those that come forward to please repeat their names and position in addition to my mentioning them when they come forward. Please do so.

Next, I'd like to call on Mr. Joseph E. Burgess, representing the United States Fish and Wildlife Service Department of the Interior.

MR. JOSEPH E. BURGESS (US FISH AND WILDLIFE SERVICE, LAFAYETTE, LOUISIANA):

Thank you, Colonel Heiberg. My name is Joseph E. Burgess, Jr., Fish and Wildlife Service, Lafayette, Louisiana.

Colonel Heiberg, distinguished guests, ladies and gentlemen, I am presenting this statement today on behalf of the Regional Director, Kenneth E. Black, US Fish and Wildlife Service. This statement represents the official position of the Fish and Wildlife Service on the Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection project.

Four major features of this project plan are of particular concern to the Fish and Wildlife Service. They are the Chalmette Area Plan, the New Orleans East Area Plan, the Barrier Structures located in Chef Menteur and Rigolets Pass and the St. Charles levee.

Completion of the Chalmette Area Plan will inclose approximately 18,000 acres of swamp, intermediate to brackish marsh and open water. The open tidal ponds and creeks in adjacent tidal marsh located within this project segment constitute an important nursery area for numerous sport and commercial fishes and shellfishes.

This area will supply nutrient and detritus material so valuable to the continuous high production levels in the adjacent estuarine areas.

The New Orleans East portion of the project, which encompasses approximately 21,000 acres has an estimated 14,000 acres of marsh and associated water bodies which have not been drained or developed. Although these wetlands which have been separated from tidal influence, they still provide important habitat for numerous wetland wildlife species, including water fowl, fur bearers, game and non-game animals.

The final EIS contained a response by the District Engineer to a comment on the draft EIS by the New Orleans East, Incorporated. He noted: "That there is an interchange of water between the marsh and the lake at South Point." And that this exchange would tend to preserve the estuarine nursery by providing the release of traverse and the ingress and egress of juvenile and larvae forms of marine species.

We wholeheartedly concur and strongly recommend that before drainage structures, which are part of the New Orleans East, South Point to GIWW levee be modified to allow for the restoration of the estuarine character of approximately 14,000 acres of undeveloped and essentially unaltered wetlands located within the New Orleans East segment.

Another area of concern to the Service is the barrier structures to be located at Chef Menteur and Rigolets Passes. Lake Pontchartrain is an integral part of a vast estuarine complex in southeastern Louisiana. The value of the area has been documented in the final EIS and previous Fish and Wildlife Service Reports. The Fish and Wildlife Service is concerned that there is an insufficient amount of biological knowledge available to accurately predict the effects of the Barrier Structures on the movement of organisms into and out of the lake.

Contingency plans related to the modification of the barrier structures should be developed if it becomes apparent that the salinity regimens and/or the movement of organisms are adversely affected by these structures. This determination could be made by utilizing the data obtained during pre-construction and post-construction study of the movement rain and estuarine organisms through Chef Menteur and Rigolet Passes.

In the event that adverse effects exist, causes could be identified, the barriers modified to eliminate these problems.

The final area of concern relates to the St. Charles Parish levee portion of the project. Prior Fish and Wildlife Service comments and the Final EIS document the value of the area and the project induced effects that the proposed works on approximately 25,000 acres of marsh, swamp and open water areas in St. Charles Parish.

According to the final EIS, two streams in the St. Charles Parish area have recently been added to the Natural and Scenic River System of Louisiana. Construction of the St. Charles Parish levee, as currently planned, would involve the alteration of either or both of these bayous. Because this would contravene state law, this feature of the project is currently in a deferred status. We support this decision. We wish to point out that this action should not be based on the alteration of scenic streams alone. Recently, published research regarding the extraordinary fish and wildlife productivity of wetlands, coupled with public concern for the loss of these vital resources, has compelled many natural resource agencies to establish policies of wetlands preservation. The Fish and Wildlife Service is opposed to the needless destruction of wetland areas associated with the project proposed for the St. Charles levee.

In view of the above considerations, the Fish and Wildlife Service recommends the following items be accomplished:

1. That the St. Charles Parish segment of the project not be constructed as currently proposed.
2. That navigation floodgates located at Bayous Bienvenue and Dupre continue to be operated to allow maximum tidal exchange of waters from either side of the Chalmette area levees, except immediately prior to and during hurricanes.
3. Drainage structures associated with the New Orleans East segment be modified to allow maximum tidal interchange between the waters located on either side of the protection levee. This action would restore the estuarine character of the enclosed marshes and would help mitigate the project induced losses to valuable fish and wildlife habitat.

4. Ponding dikes associated with the New Orleans East barrier segment following the revegetation of the ponding areas in order to restore tidal influence. The time and extent of this action should be determined through consultation with representatives of the Fish and Wildlife Service and Estuarine Fisheries Service and the Louisiana Wildlife and Fisheries Commission.

5. The plans for spoil disposal areas near The Rigolets be moved to previously utilized sites located on the north side of this pass between US Highway 90 and The Rigolets entrance light No. 2, or on the upland site north of Lake Pontchartrain.

6. Studies be initiated to determine the effects of barrier structures on salinity regimens and on the ingress and egress of marine estuarine organisms through Chef Menteur and Rigolets Passes.

If these studies indicate that the structures are detrimental to the estuarine ecosystem, the structures should be modified to rectify the problem. This study should be accomplished--rather, should consist of at least 1 year pre-construction inventories; extend throughout the construction period and include the 2-year postconstruction inventory. It should be designed in consultation with the Fish and Wildlife Service, the National Marine Fishery Service and the Louisiana Wildlife and Fisheries Commission. This would prevent--this would, rather, permit verification of the results of model tests conducted at the Corps' experiment station in Vicksburg, Mississippi.

We note references in the public notice to losses and benefits if wetlands within the project--protective levees are not converted to urban development. The structures proposed for hurricane protection obviously make possible the conversion and development of wetlands that would be left in their natural state without the project.

The Fish and Wildlife Service does not object to the project features designed to protect developed areas of Metropolitan New Orleans from damaging hurricanes; however, we cannot concur in the construction and operation of features which cause or accelerate the development of valuable wetlands. We believe that the intent of Congress

regarding the conversion of the wetland areas to urban development was clearly established in House Report 91-917 on page 3, when it said:

"The Corps' obligation to consider all facets of the public interest in protecting estuaries, rivers, lakes, navigable waters, also arises from a national policy and directive expressed in many statutes and executive orders designed to minimize pollution, maximize recreation, protect esthetics, preserve natural resources and promote comprehensive planning and the use of water bodies to enhance the public interest rather than private gain."

We must also strive to preserve the highly productive ecosystems for future generations and strongly urge the Corps of Engineers adopt our previously discussed recommendations so that the destructive features of the Lake Pontchartrain and Louisiana and Vicinity hurricane protection project can be minimized.

Thank you.

(Applause)

MR. BURGESS:

Colonel, we will be forwarding our comments from the Regional Office.

COLONEL HEIBERG:

Okay. Thank you, Mr. Burgess. I neglected to mention, and I should have, that I arranged with Mr. Burgess ahead of time to give him 10 minutes.

I next call on Councilman John D. Lambert, City of New Orleans.

MR. JOHN D. LAMBERT (COUNCILMAN, CITY OF NEW ORLEANS):

Ladies and gentlemen, Colonel Heiberg, and my friend, Representative Scogin and Mayor Cusimano, and my other friend, Councilman Bechac, ladies and gentlemen.

I think that--can your hear me--I'm sorry.

I think that Representative Scogin, Frank Cusimano, myself--and we go back a long ways over in St. Tammany Parish--have the same love here and that's the love of the community in which we live in; not necessarily, Orleans or St. Tammany, but those areas surrounding the lake.

As to how we approach the protection elements to protect our communities we might differ in certain areas; but you can't discount the fact that we all are here with the same underlying principle. And, as I said, that's the love of the community.

And, as they have said, and I know it's a completely honest statement, that they are in favor of flood protection. The big problem is: How do we do it? How do we prevent New Orleans from being flooded? From what I understand, under the present conditions, if the project hurricane hits better than 90 percent of the city of New Orleans, if it takes the critical path, would be under water and the only area that would not be under water would be the uptown area. This is the information that's been available to me.

I don't know how you determine the project hurricane, except to go to somebody who has some sort of expertise, and I understand that's what the Corps did. I'm not going to try and challenge the National Weather Bureau. They've gone through the computers and some people don't like computer science and I sometimes wonder about computer science myself; but it is the only expertise that we had available to determine what the project hurricane would be and the one that we should protect against, and they've come up with a "project hurricane." And that's what we have and that's what we have to cope with. The big problems that comes up is: How to do it?

I, with all due respect to Mr. Scogin, can't rely as a representative of the Seventh and Eighth Wards of the city of New Orleans, which entire district would be flooded if project hurricane took the critical path, can't rely on the fact that a hurricane has never yet crossed that critical path or that project hurricane has never hit the city of New Orleans, and under that basis, it may not. I can't accept that, not if my experts tell me that there is that possibility and this is that type of hurricane. I'd be remiss in my duties, so I'm going to try to do something to help protect the people who live in my district, the people who live in the city of New Orleans. Not at the

sacrifice of the boatmen or the sportsmen or the people in St. Tammany or the salinity of the lake or the beauty of the lake. But I want to have some protection, and within those parameters I would like to have that. So, I can't sit back and do like General Custer did and rely on his guide who told him, "Don't worry, those Indians, you know, they never attack under these conditions and in this particular area." So, and I don't think General Custer was an engineer. Colonel Heiberg, that's for you.

So I'm interested in this, and I have to rely upon what they say. I don't think that the Corps is going out and trying to manufacture a hurricane. So we have a "project-type hurricane." Now, how do we protect against it? Well, the city of New Orleans was faced with--one way of course is, building the levees, and the Corps of Engineers says that's too expensive and they're not going to fund it. So, they've come up with, after their studies, this particular project here. From what I've been able to gather, in my own conscious, is that No. 1, the inflow and outflow into the lake by the waters coming in with the ebb and tide is not affected appreciably to cause any problems to the lake. The salinity of the lake in the tests that they have run shows that the salinity is within the parameters that presently exist, and if it's not, then they are going to have to correct their project. But they have that within their parameters as a requirement to do.

And the other factors involved, as I understand it, is that, and one of the major concerned areas for me is that the areas other than the city of New Orleans--now we know we're protecting the city of New Orleans--I'm not going to come up here and tell my friends from St. Tammany Parish that we aren't interested in protecting the city of New Orleans; but, do we create any additional harm to the residents of the city of Slidell or the residents of St. Tammany Parish. And, from the best information I've been able to gather that, that is not--that the situation there is not going to be worsened any. The present conditions may not--this construction may not create any appreciable advantage, although I think there is one and I'll talk to you about it in a minute as a result of some inquiries I've made on my own. But there is not going to be any additional harm.

One of the questions that I had to the experts on the staff of the Corps of Engineers was: If the project hurricane takes a critical path which would throw winds

northward instead of southward, in other words, the winds that's going to pile the water up on the north bank of the Lake Pontchartrain. What happens to the communities over there and particularly Councilman Bechac's community of Mandeville? They said that the effect, although not as devastating as in Orleans Parish, would be the same and that Mandeville would be flooded.

So, I think that the project hurricane can flood, if it hits one critical pass, St. Tammany, as well can flood and do some devastating damage to the citizens in the community of New Orleans if it takes another critical path.

I'm satisfied in my own mind, and I'm speaking only for myself, that the boatsmen and the sportsmen will have the opportunity under what I understand to be the revised Rigolets project--will have the opportunity to continue to use that facility as they have in the past.

So, speaking personally for myself and as one of the representatives of the city of New Orleans, and not in the official capacity for that body, but as one of the speakers on that body, I am going to have to support the project. I don't know of any other alterantive. I think that in my own mind the parameters of the protection that I think are important have been met and that is the use of the lake will continue to be used by the sportsmen and their ingress and egress through The Rigolets and the Pass will not be harmed. The salinity of the lake, according to the tests that they have made are going to remain the same. The ebb and flow of the tide is not going to be affected and if we can keep additional water out of the lake in order not to throw it past our present barriers that we have, the levees that we have, then I think that the efforts of the Corps are going to be rewarded in the salvation or property and lives for the citizens of the city of New Orleans.

I would hope that you all might take a reanalysis of this situation if you have come in here with an opposing view and maybe--and find yourself to thinking the same way I do. Although I hope we go away with still being friends. Thank you all very much. Bye-bye.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Lambert. I would next like to call on Mr. Johnnie W. Tarver, Louisiana Wild Life and Fisheries Commission.

MR. JOHNNIE W. TARVER (LOUISIANA WILD LIFE AND FISHERIES COMMISSION):

Thank you, Colonel. Colonel Heiberg, distinguished guests, public officials, and ladies and gentlemen.

This statement is presented on behalf of the Director, Mr. J. Burton Angelle.

The Louisiana Wildlife and Fisheries Commission appreciates the opportunity to appear at this meeting and provide our comments as they relate to the fish and wildlife interests within the project area.

The Commission has been interested in this project since the discussions of a proposed hurricane protection scheme which preceded the actual authorization of this project by Congress in 1965. It was our interest and concern, along with that of the US Fish and Wildlife Service, that pushed far and participated in a model study of the lake.

This model study allayed some of our fears regarding the interdiction of flows by the construction of the barrier structures at The Rigolets and at Chef Menteur Passes. If the data produced by the model study proves valid, the interception of nutrient waters, the movement of organisms into and from the lake and the interchange of saline and fresh waters will not be significantly altered by these structures.

We do have some serious concern regarding the damages to productive oyster beds, especially in Lake Borgne, near the Chef Menteur barrier structure. Dredging near and construction of the wingwalls have a potential for a considerable harm to the existing highly valuable oyster beds.

Two important factors here are the plans for the containment of sediment which results from the project work, as well as the apparent lengthy duration of the construction. We

would like more information on each of these and would like an opportunity to work with you in planning to eliminate or reduce, to the greatest possible extent, the damages to this oyster producing area. We feel that oyster mortalities and closures of privately leased bedding grounds should be fully compensated by the project.

The proposed Seabrook structure was designed for addition to the Mississippi River-Gulf Outlet to partially correct the high salinities that are occasioned in the lake by waters from that navigation channel. This structure will provide the capability for managing salinities within the lake. Excessive salinities in the upper part of the lake, which were historically fresher, have caused considerable marsh deterioration and mortality of fresh water vegetation. The most spectacular evidence of this is the dead cypress trees visible from Interstate 10.

The damages due to prior urban development are noted in your announcement of January 22, 1975. The investment of valuable wetlands that formerly supported this important ecosystem, for previous developments has doubtlessly contributed to a decline in primary productivity.

Previous developments--we calculated that within 2 miles of the lake, of both lakes--we lost to industrialization and commercialization, or both, 50,000 acres since 1900.

We note that the suspension of the planning for the St. Charles Parish portion of the hurricane levee. You correctly state that the disruption of flows from this wetland would have serious adverse effects on the productivity of the lake. You further conclude that implementation of this part of the original protection plan would lead to urban type development of this still productive wetland. The realignment of the hurricane levee along US Highway 61, as you discuss on page 9, would minimize the damages to fish and wildlife interests.

Since the proposed construction is for the period 1975 through 1990, a periodic review and evaluation regarding the effects on fish and wildlife resources, in light of other prevailing factors, should be scheduled. It is suggested that such a review involving appropriate state and Federal fish and wildlife agencies be held at least every 3 or 4 years.

We will continue to maintain a high interest in Lake Pontchartrain because of its productivity and the very high degree of utilization by the populace pursuing water related activities. Its proximity to the urban population in excess of a million people, provide ample incentive for all agencies to work together to assure its continuation as a viable recreation and commercial facility.

This statement should be considered as an interim statement and may be amended after careful review of the proposed project works by the Board of the Louisiana Wild Life and Fisheries Commission. The next regular meeting of this Board is Tuesday, February 25, 1975.

Our comments on the spoil disposal portion of this meeting will be forwarded during the period that the record is held open for comment. We will be soliciting more information from your staff in order to properly evaluate the placement of spoils.

Thank you.

(Applause)

(Whereupon, the above statement was offered in evidence and marked for identification as Exhibit No. 13)

COLONEL HEIBERG:

Thank you, Mr. Tarver. Next, we will hear from Mr. Guy F. LeMieux, President of the New Orleans Levee Board.

MR. GUY F. LEMIEUX (PRESIDENT, ORLEANS LEVEE BOARD):

Good morning, Colonel Heiberg, distinguished guests, ladies and gentlemen.

I am Guy LeMieux, President of the Orleans Levee Board, and I am here to say a few words in favor of the Lake Pontchartrain and Vicinity hurricane Protection Plan. This would seem only natural, since I am sure most of you know the Orleans Levee Board and that I, personally, am completely convinced of the necessity for and the integrity of this plan.

As some of you may know, I am an engineer, a civil engineer by trade and an almost life-long resident of this area. I am a graduate of Tulane University. I have been involved with hurricanes and with hurricane damages over a number of years, and during that time I have served as an expert witness in countless hearings and insurance claims that resulted from hurricanes in this area. I served as an advisor in writing the Plaquemines Parish Building Code in order that the people in that parish could mitigate in the future the unfortunate losses that have beset them in the past.

Incidentally, as a private pilot I flew doctors and medical supplies to the Mississippi Gulf Coast at daybreak following the disastrous Hurricane Camille.

After I was appointed to the Orleans Levee Board and elected President of that Board, I studied the problem even more intently than I had done before. I have consulted with our own Levee Board engineers, the National Hurricane Center, the US Corps of Engineers, the Louisiana Engineering Society, the Consultant Engineers Council of Louisiana, and every expert that I could find in order to know what the best answers to hurricane protection for New Orleans and for the rest of this area are.

I have studied, in depth, every plan that has been presented for the protection of this area, and as a result, I have concluded, without a doubt, the plan being offered today is the best answer for hurricane protection, not only for the city of New Orleans but best for Jefferson, St. Charles, St. Bernard and St. Tammany Parishes also.

Civic association after civic association representing hundreds of thousands of people have endorsed this plan after serious consideration of all alternatives. I have in my hand a letter from the Village de l'est Improvement Association, which just represents one of the associations which have endorsed this plan and I'll read this letter into the record and make it a part of the record. It is to the Board of Levee Commissioners, and it is to my attention, and it's subject is: Position Paper, Lake Pontchartrain Vicinity hurricane protection project, and it's from the Executive Board and the General Membership of the Village de l'est Improvement Association:

"Dear Mr. LeMieux: Our Association engineers, and other interested members of the Village de l'est, have studied the project and are in full agreement with the project, its plan of action and the proposed implementation.

"Our association represents over 7,000 persons living in Village de l'est subdivision and is a sounding board for the 10,000 people living in the Michoud vicinity. We have found not one negative position for the plan in our sample poll conducted in late December and early January.

"Our evaluation of the plan and our analysis of the studies done by others, prove to us that the proposed floodgates will not hamper fishing or be detrimental to any marine life in the lakes and rivers involved. Sincerely, A. F. Norman, President, Village de l'est Improvement Association."

The Orleans Levee Board has been so convinced of the necessity of this protection that construction on their portion of the plan was begun within six months after the US Congress authorized implementation of the project. This was in 1966. Anyone who says that building levees higher would suffice, deludes himself. The only answer to a hurricane on a critical path in this area is to keep the water out before it gets in. This plan will do that for all of the parishes surrounding the lake. I am also convinced that it will do its job with minimal damage to the environment.

I am an avid fisherman and sportsman, and I can certainly share the concern of any outdoorsman for our lakes and their abundant wildlife. For this reason, I have searched even deeper into every possible problem that could arise from the building of the control structures. I am convinced that this plan, now being offered, which has been meticulously researched, subjected to years of intensive study and proven proof exhaustive tests to be the answer to protection of the environment and protection of the people, the most important part of our environment. I sincerely urge the construction of this critical protection project continue without delay.

Thank you.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. LeMieux, I'll next call on Mr. Walter L. Sentenn, City Planning Commission.

FROM THE FLOOR:

I wish to protest the discussion in the back of the room. We can't hear the speakers from here.

COLONEL HEIBERG:

I agree with you. Let's get some of our people back there to try to urge people to carry their conversations on outside the door so those of us that want to give the courtesies to the speakers up here can do so.

Go ahead, sir.

MR. WALTER L. SENTENN (CITY PLANNING COMMISSION):

Thank you, Colonel.

My name is Walter Sentenn. I am appearing here on behalf of the New Orleans City Planning Commission and its Director, Harold Katner. The City Planning Commission, at its meeting on February 5th, directed the staff to appear at this meeting and to place before this body its recommendations and its feelings with regard to this hurricane protection plan. It indeed has also reviewed insofar as it has been able to the multitude of material that has been presented on this project.

Unfortunately, the City Planning Commission does not assert itself as capable engineers to assess the engineering techniques of the project and does, as most of you are aware of, with planning techniques approach the general overall plan and to perceive the general effect that it will have on the community.

As such, the City Planning Commission has asked us, the staff, to present these recommendations and that is that the City Planning Commission recommends the following to the United States Corps of Engineers:

1. That the City Planning Commission concurs that proper hurricane flood protection is a vital element

in the welfare and safety of the citizens of New Orleans and its neighbors.

2. That the City Planning Commission recognizes that the Corps of Engineers has devised, tested, and recommended the barrier plan as the best system for hurricane flood protection in New Orleans.

3. That this plan should be supported and encouraged in the absence of a more feasible system.

4. That without regard to the other considerations involved, the Corps of Engineers should be encouraged to proceed with the implementation of this plan with an abundance of caution for the vitality of the surrounding natural resources.

With particular regard to the Section 404 public hearing, the Commission directs the Corps' attention to proper surveillance of the archeological sites that are in the area and evaluation of the Sawmill Pass disposal areas; but, indeed, concurs in the procedures otherwise proposed for review in the Section 404 public hearing.

For the matter of the record, the archeological sites that the City Planning Commission seems to believe could be impacted by the disposal segment of the project consist of three primary sites:

1. Designated 16 OR 12, which is the South Point partially destroyed shell midden;
2. 16 OR 11, which is the Dwyer Canal, dredged shell midden; and
3. 16 OR 28, which is the Haughs Canal in the Little Woods quadrangle, and it is a potentially a significant archeological site.

In addition, further attention, as I said, should be given to the location of the disposal areas west and east of Sawmill Pass in the barrier units since the adjacent marsh and their impact on the provisions of the developing Coastal Zone Management Plan, which seeks to protect such marsh areas from further erosion and degradation could be important.

47 Thank you, Colonel.

(Whereupon, a reproduction of the semi-monthly Planning Meeting of Wednesday, February 5, 1975, was offered into evidence and marked as Exhibit No. 95)

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Sentenn. We'll next hear from Mr. Ron Guth, City Attorney for the city of Slidell.

MR. GUTH:

Colonel, I would like to defer to the mid-afternoon, please.

COLONEL HEIBERG:

Yes, sir. We'll next hear from Mr. Greg J. Lannes, Jr., Regional Planning Commission.

MR. GREG J. LANNES, JR. (REGIONAL PLANNING COMMISSION):

I am Greg J. Lannes, Jr., Chairman of the Hurricane and Levee Protection Committee of the Regional Planning Commission for Jefferson, Orleans, St. Bernard and St. Tammany.

My reason for being here today is to talk briefly about the options and alternatives which really go a step beyond whether you are for or against the barrier and levee plans. We have looked rather carefully at the alternatives and options and we would like to quickly lay them on the table in one, two, three fashion.

Option No. 1. Go with the barrier-levee plan; Option No. 2. Scrap the barrier-levee plan, but raise all existing levees to greater heights and complete the levee system for the region using the higher levee specifications and modify the pumping stations where necessary to handle a much larger capacity; Option No. 3. Do nothing and pray that we never have a hurricane on a critical path through our area again.

Let's look at Option No. 1, the barrier-levee plan. All existing and planned levees, pumping stations and other control structures have been built thus far on the premise that the barrier plan will be approved, funded and completed. Options No. 2 and 3 are alternatives to Option No. 1.

Now, let's suppose we decide that Option No. 1, the barrier-levee plan, is too high a price to pay, both ecologically and moneywise, so we move down to Option No. 2, which we will call raise-the-levee plan.

The Corps tells us, and they are the only ones who have done extensive studies on it, that the raising of the levee heights in the entire system is going to be fantastically expensive. We must get additional rights-of-way and there are a thousand sticky engineering problems because of the subsoil conditions. Even if we raise the levees, the Corps tells us that they won't stay raised. In a few years they'll sink below a specified height and we'll have to establish a continuing budget to keep them in required shape. The alternatives to the raise-the-levee plan is Option No. 1 or No. 3.

Option No. 3, which we call the do-nothing-and-pray option has a nice fatal ring to it. It doesn't cost anybody a dime, it doesn't tamper with the ecobalance and it might even be a shot in the arm for the sagging rosters of churchgoers in the area, but that's about all you can say in its favor.

Some might think that evacuation of the population would be a viable alternative to our three options, but there is a 12-hour time lag between pinpointing the storm's exact path into the area and getting everyone off to inland evacuation points. Statistics say that this would be an exercise in futility and perhaps an invitation to be trapped in a traffic jam in the middle of a hurricane. It is my personal opinion that evacuation of the metro area, or even of any significant percentage of the population of the area, as an alternative, does not even merit further debate.

The environmentalist groups and individuals have made us all aware of our precious natural resources and our wetlands around the region. We know that there will be some kind of impact by putting up man-made barriers. We don't know just exactly what that impact will be.

The Corps of Engineers environmental statement on the project, which is now on file with the President's Council on Environmental Quality, contains statements from wildlife agencies which appear to be in conflict with the conclusions drawn in the statement. What is the quantitative impact? I don't think anyone knows at this point. I believe it may cost several hundreds of thousands of dollars to find out.

We know what kind of protection is feasible from an engineering standpoint, from a cost benefit standpoint, from a modeled control standpoint. We do not know, positively, the long range impacts to the environment of our area and especially to the ecosystem of Lake Pontchartrain.

I would very much like to see a professional in-depth study of the lake's ecosystem. We have read that marine life receives nutrients from the western portion of the lake and, therefore, it would seem that any levee along the St. Charles Parish boundary of the lake would affect that natural food giving source. However, this and much of the talk of the free movement of marine life in and out of the passes is little more than speculation or, at best, an educated guess at this point. The fact is that we don't know and won't know unless and until a comprehensive and very extensive study of the lake's ecosystem is completed and published.

So the agencies responsible for hurricane protection, the Levee Boards and their respective parochial or municipal governments, are saying: Here is the best form of hurricane protection which modern technology can offer. We think it will work to save lives in the event of a hurricane, and we don't believe it will harm the hydrology or ecology.

The Federal Government is saying: You decide what you want in the area of hurricane protection, show us it won't do more harm than good, and we'll shell out most of the money to build it, provided you raise the rest from your local taxpayers.

The environmentalists are saying: You are going to be sorry if you mess around with nature. We can't tell you for sure that the cure will be worse than the disease, but everything else is either polluted or unnatural in the name of progress. Some of us think it would be better to

take our chances with the odd makers that we won't have a hurricane rather than mess up a good lake.

Some vested interests are saying: You'll ruin my business. You'll kill off the crabs and croakers and shrimp and specs. How will I get my sailboat through your barriers? Where will it all end?

In our opinion, all the votes have not as yet been counted. There are still some counties to be heard from. I, personally, want to see the results of this public meeting today.

Whatever the outcome, we, at the Regional Planning Commission, will continue to provide the forum to discuss the issues and to keep the problem in the public awareness.

When all the words are spoken and all the divisive elements have had their day in court, we will still need hurricane protection in this vicinity of Lake Pontchartrain if we intend to remain in this area.

Thank you.

(Whereupon, the statement of the Regional Planning Commission was offered into evidence and marked as Exhibit No. 59)

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Lannes.

I have cards for something over 40 people who want to make oral statements. We're now going to take all the cards indicating that an oral statement will be made and shuffle them. Mr. Sossaman is coming forward now and will be the manager of this, and you are all welcome to watch down here in front.

We will publish the order of presentations right after Mr. Sossaman has the shuffling and the drawing made.

We have provided you, on your handouts, a list of nearby places to eat if you're not brown-baggers. Please be back at 1:00 o'clock. We'll now break for lunch.

(Whereupon, at 11:45 o'clock a.m.
a luncheon recess was taken.)

AFTERNOON SESSION

COLONEL HEIBERG:

Would you please sit down. We've got a number of people to be heard and I want to give them each a chance to talk. Thru error on our part--we misread one of the cards--I did not call on one of the elected officials this morning, who is going to take 5 minutes or less, so since this was my fault, I'm going to give him 5 minutes now. Mr. Steve Dibeneditto, St. Charles Police Juror.

MR. STEVE DIBENEDITTO (ST. CHARLES POLICE JUROR):

My name is Steve Dibeneditto and I am a member of the St. Charles Parish Police Jury. My main concern was over here to see how the protection levee would make out for the east bank of St. Charles. We've had several problems with tide water in the area, and we all blame it due to the ship channel that the Corps of Engineers and Department of Public Works were responsible for digging.

They talked about the barrier in the lake, but the only thing I could get out of the barrier was that the only time that it would have did St. Charles Parish any good is when--during a hurricane--when they would close it. But the problem of St. Charles Parish is when the southeast wind blows for 4 or 5 days, our people get water in their houses, they get water in their yards, so our problem is not only when there is a hurricane but just about all year 'round with these southeast winds that blow.

The levee has been killed on account of a scenic river, from what I can get out of it. The scenic river that killed the levee in St. Charles Parish where it hit the lake is exactly about 8 feet wide. So that means that 10 miles of St. Charles Parish will not get any kind of protection from the floodwater on the simple reason of a scenic river that is 8 feet wide.

What I would like to put before the Corps of Engineers and the Department of Public Works, as an elected official of St. Charles Parish, I would like for them to make a study

on trying to do something for the people in St. Charles, if they have to use the US 61 as a boundary, because most of the people on the east bank of St. Charles live on the south side of US 61, and if we could use US 61 as a barrier, we could most probably keep a lot of people's homes dry and plenty of yards dry through the whole year.

And I thank you.

(Applause)

COLONEL HEIBERG:

Thank you, sir.

If those of you have not seen where your names are, I believe we have these posted in the back, don't we, Bruce? So you--okay, back at that "out" door, is that right? Okay.

I'll call four or five names now that are up and the first five from the luck of the draw, so that you'll know when you'll be coming. Mr. Vidal was drawn No. 1 and he is yielding to Mr. Colomb. So we'll call at this time from Mr. Colomb. And, I've given Mr. Colomb 10 minutes.

MR. C. EARL COLOMB (ST. BERNARD COUNCIL CHAMBER OF COMMERCE):

If we could get this map put up here. And I would like to make a general statement, which I will furnish the Committee.

My name is C. Earl Colomb. And I am a resident of Chalmette, St. Bernard Parish. I am a realtor and builder in the metropolitan area of the city of New Orleans for the past 45 years, during which time, I have been actively engaged in the civic and business life of this community.

Since 1947 I have been actively engaged in levee and hurricane protection activities, having served on the Board of the Chalmette Back Levee District and for 25 years served as chairman of various organizations in St. Bernard in levee hurricane protection.

I am one of those volunteers who has worked up to my waist in mud to get our parish out of water in the 1947 hurricane. And I would like at this time to properly acknowledge the

Appreciation of the great assistance given at that time and in 1965 by the District Corps of Engineers to our people.

And I likewise want to acknowledge my appreciation of the courtesies extended to me in the past and have a keep appreciation, Colonel, of your interest and honest desire to serve the best interests of all concerned in this matter.

But at the very outset, I want to say that our Committee, like the renowned hurricane expert, who endorsed the theory of the controlled structures to hold the tides low--at low levels during periods immediately before a hurricane.

We note, with great interest, the statement of Dr. Simpson to the effect that he could not speak to the question of the location or the designs of the structures proposed in this plan. But we agree basically with Dr. Simpson when he says: If you use controlled structures, if the tides are held down 6 feet, then it is only natural to assume that at the time of a hurricane surge, the waves will be 6 feet less in height.

And it is for this very logical reason that we must oppose the proposed structure of this project to be built in the Industrial Canal at Lake Pontchartrain.

Now, Mr. Chairman, as a layman without any technical knowledge, I would like to go to the map and demonstrate to you our reasons for being opposed to this structure.

Although we talk of hurricanes and design protection against 200-year-cycles, we must remember that hurricanes were here in 1947, '56, '65, and the worst in 1969. Four devastating hurricanes that put water in St. Bernard Parish in 25 years.

If you want to know what this is I'm wearing on me, this is a chain I've got around my neck because every month I pay two SBA loans. One for me, personally, because my house had 7 feet of water in it; and one for my company, because it had several feet of water in some of it's apartment buildings.

So, Mr. Chairman, I want to present to you now, the reasons for our opposition of the structure at the

Industrial Canal and the lakefront. And I would like to remind you of the statement of our good friend from St. Tammany when he said, "Nobody flooded from Lake Pontchartrain. We all flooded from the MR-GO."

As I said, our basic opposition to it is based on these facts. That since the MR-GO has been built and the tides come up the MR-GO, here is where the damage has been done in 1965 (illustrating). These levees here were broken; they were topped. These levees here were broken. And our first line of defense levee here (indicating) were broken. And this entire area had some \$60 million or \$70 million of damage.

Now, if the theory that if you can hold the tides down in Lake Pontchartrain by 6 feet and help this upper area of Orleans--this area of Orleans Parish--why isn't it equally logical to say: If you can hold the tides down in the Mississippi River-Gulf Outlet when a storm comes, then we won't break these levees (indicating) and we won't flood the poor people out between the Industrial Canal and, possibly Franklin Avenue, and the entire area below the Industrial Canal.

And there is an alternative. There is one that has been thought well of by the United States Engineers, I understand. But, we down in St. Bernard have a difficult problem of separating the hurricane-the Lake Pontchartrain hurricane protection plan from the Mississippi River-Gulf Outlet problems itself and now we're proposed to be saddled with what our people call the connecting link between the Mississippi River and the Mississippi River-Gulf Outlet.

Now, we recognize the fact that there's a need for this. It's our contention it ought to have been put at the Industrial Canal--and I serve on the Tidewater Development Committee, where for 3 years, the testimony of Colonel Lewis, the former head of the United States Engineers said that's where it ought to go. But now we're going to get it in St. Bernard, and I want to ask you to consider, Colonel, as you know, I've said before, an alternate. The alternate that I found out the other day is called the Shaw Plan. I never heard of that before. Somebody was accusing me of originating it. But I'm glad we had a young man or a person in the United States Engineers and he came up with the Shaw Plan. And, incidentally, it's in

your impact study. It's one of the last maps in the impact study and here it is (illustrating).

It picks up a levee at the Chef and comes along the shores of Lake Borgne and comes down, and can be tied in even here (indicating). This is the proposed cut. It could be tied in here. And then the entire MR-GO, and with a structure here at the Inner Harbor Canal, those two areas would be tide water development. Tide water area protected from storms.

You know what happened in 1965 when Betsy went up the Mississippi River and broke barges and ships. We have more derelict barges and ships anchored in this area per square foot, probably, or per square mile, than any other place. And I invite you--and this is not criticism what I'm going to say, because I think that which was done at that time was the best that could be done--I invite you to walk the levees of the Industrial Canal from St. Claude Street to Florida.

I had a dream last night and I've got to tell you about it. I dream about this all the time, but I dreamt that I saw Guy LeMieux; he was drowned. And I want to tell you how he drowned. And I don't mean this critically. I just want to tell you that I actually had this dream. You know, they built a levee along here and this was the best they could do. They've got a levee built along here and it zig-zags and runs through plants and its got gates, lifts and flaps. I looked at it this morning and there's a boxcar, right now, as I came up--there's a boxcar parked right in the gate. I don't suppose it would be there if there was a hurricane. I sure of that. But I dreamt Guy LeMieux was in this steel plant trying to raise one of these flips that they've got. They actually have inside of these plants--now I want you to know this--the wall comes up a certain height, right through the middle of this plant, and they they have hinged this wall down so that their cranes can operate. And if they ever need to raise that back up--and I dreamt that Guy got in there and *the damn flap didn't go up and he got caught in the storm. Really. I did that. I just wanted you to know.

But what I'm proposing here to you is that if they build this structure here, wherever it has to be terminated, then all of this major channels, both the Inner Harbor

Canal and the Mississippi River-Gulf Outlet and this area here (indicating) will be protected and flooded. And you heard them say earlier that the industries located along this would have to be flooded if we had a storm. There just no way--at the proposed structure--would do it.

Now, here's where they want to build that structure (indicating). They want to let all this water come up here and pile at this "T" where it broke last time. Now, you know, if you get hit once, that's bad enough. When you get twice--and I've got two of them--and I got one in '47 and I had one in '65. And I contend to you, Colonel Heiberg, and I urge you to give careful consideration to the Shaw Plan.

I have one closing remark. It is for this reason early stated--primarily that the engineers' decision to locate the locks in St. Bernard Parish between the Mississippi River and the MR-GO and showing to you on this map, I would appreciate a revised study of the location of the proposed barrier and put it in the GIWO (sic) and in the MR-GO, as proposed in the alternate plan known by the United States Engineers and they have said to me that this is a good plan. But it's a little bit more costly.

Now, we had \$100 million, Colonel, of losses in our parish, and you know about it--\$100 million. And the industries tell me that their loss in trying to save the people ran into millions that's not counted. I believe that you ought to look at that plan and I humbly ask you to do so.

I thank you for your time.

(Applause)

(Whereupon, the text of the above presentation was offered into evidence and marked as Exhibit No. 31.)

COLONEL HEIBERG:

Thank you, Mr. Colomb. The next speakers will be Mrs. Herr, Mr. Levy, Mr. Gilmore and Mr. Mercadal. Mrs. R. D. Herr.

MRS. R. D. HERR (LEAGUE OF WOMEN VOTERS OF LOUISIANA):

My name is Marietta Herr and I'm representing Mrs. Doris McWilliams, President of the League of Women Voters of Louisiana.

The League of Women Voters of Louisiana, in accordance with its position of supporting unique aspects of the Louisiana wetlands, urges the Corps of Engineers to reconsider its proposed Lake Pontchartrain and Vicinity hurricane protection plan.

Furthermore, inasmuch as this project has been rejected by the voters on three separate occasions, we feel it is an affront to the public to proceed with it.

We, in the League, have supported sound coastal zone management as recommended by the Louisiana Advisory Commission on Coastal and Marine Resources. We, therefore, suggest that before such a massive project as the proposed hurricane protection barrier plan be considered, that it be part of a total plan for the entire coastal zone.

The Louisiana Legislature, no doubt, will again consider coastal zone management legislation in the upcoming session. We hope a good program will be passed in the not too distant future. Hence, any major activity in the coastal zone should await the passage and implementation of sound coastal zone management.

(Applause)

(Whereupon, the text of the above presentation was offered into evidence and marked as Exhibit No. 77)

COLONEL HEIBERG:

Thank you, Mrs. Herr. Next, Mr. David P. Levy, Slidell.

MR. DAVID P. LEVY (DAVID P. LEVY ENTERPRISES):

My name is David Levy. I live at 527 Legendre Drive in Slidell and I'm representing the firms Derricks, Incorporated, in Slidell; A. E. Hingle, Inc. Shipyard; and myself as an individual and a resident of St. Tammany Parish, as well as a former resident of Orleans Parish.

I don't have a map. I'm not a public speaker, and my 5 minutes is going to be a little short, but I'll do the best I can with this presentation and read it.

I'd like to begin my questioning the necessity of the barrier plan. A review of the history books, which is almost irrefutable shows that since Bienville founded New Orleans in the year 1715, that's 260 years ago, there has never been a hurricane flood of densely populated areas from Lake Pontchartrain. You've had rain flooding the pumping stations have failed; but there has never been a case in 260 years where salt water from the lake was driven by a hurricane causing an extensive loss of life or property.

The New Orleans and Jefferson Parishes lakefront are now very well leveed, and it is possible this could be improved in these improvements. Since the levees were built, starting after the 1947 hurricane, four hurricanes have struck on almost every conceivable path, with no ill effects.

On the other hand, New Orleans has experienced numerous floods from the Mississippi River and a serious flood from the MR-GO and Industrial Canal in 1965.

The barrier plan would increase this already serious jeopardy to the city by preventing future use of the Bonnet Carre Spillway and restricting the water at Seabrook from flowing into the lake, which can easily absorb it. The statements made by the Corps of Engineers this morning are absolutely incorrect. The same statements were made in the notice of the hearing regarding a lower lake. Since the same southeast winds that blows the water up the MR-GO will blow it away from the south shore and the Corps proposal, instead of relieving the Seabrook restriction, will decrease the cross-sectional area at Seabrook by over two-thirds.

I would digress a little from my prepared text to note that in the middle of Hurricane Betsy, which was somewhere around 10:00 or 11:00 o'clock on the night of September the 9th, there was a literal waterfall at the Seabrook Bridge. The water not being able to escape in the lake and piling up at the Industrial Canal. You are probably aware that there is a restriction at Seabrook caused by the two landfills to the Southern Railroad bridge that restricts the width of the canal from some 400 feet to approximately 84 feet, causing scouring, and I'll take it at a later time, if I have time, to mention the navigational aspects of this restriction.

The population of the area does not want to see the barrier plan implemented. On three previous occasions the voters rejected the project, least it be argued that the people were voting against a tax increase. It is crystal clear that this is not the case when on March 5, 1974, the people voted, not for a 2 1/2-mill increase, but for a 3-mill increase when they were assured that tax monies would not be used to build the barriers. I cannot accept unsupported vague statements than an alternate plan would cost more. Such a plan should encompass the following to obtain meaningful hurricane protection for the area.

1. Survey and, if necessary, raise approximately 30 miles of levees along the Orleans Parish lakefront. There is no need for additional levees, nor do the people on the north shore want levees around the periphery of the lake, as the people are convinced they do not need it. Certainly, 30 miles or 160,000 linear feet of sheet piling cannot cost in excess of \$80 million, which is the old figure used for construction of the barrier. And I'll digress--I understand it's considerably higher now.
2. Assist the Sewerage and Water Board to modernize its pumping system which is obsolete and inadequate.
3. Remove the restriction presented by the landfill approaches to the old Southern Railroad Bridge at Seabrook. This will eliminate the swift currents and a lock won't be necessary. I might say, off the record.
4. Help prevent--I'm almost finished--help prevent a similar catastrophe as Hurricane Betsy, should a future hurricane such as Betsy have similar characteristics--and that point was very well taken by Mr. Colomb.

In conclusion, I would appeal to the Corps of Engineers and any interested governmental agencies not to build the obsolete counterproductive, expensive and unpopular barrier.

Thank you very much.

(Applause)

Whereupon, the documents of David P. Levy Enterprises, Derricks, Inc. and A. E. Hingle, Inc. were introduced into evidence and marked for identification as Exhibits No. 61, 39, and 52, respectively)

COLONEL HEIBERG:

Thank you, Mr. Levy. Mr. William J. Gilmore, Jr., Tidewater Development Association.

MR. WILLIAM J. GILMORE, JR.:

Colonel Heiberg, staff and distinguished guests. I am William J. Gilmore, President of the Buccaneer Villa Civic Association, also the Chairman of the project flood control, which consists of 20 different civic organizations in St. Bernard Parish. And I'm also a member of the Tidewater Development Association.

I'd like to make this statement, trying to emphasize the absolute need of the safety of human beings, life and property must come first in this message.

I would endorse the alternate method or the Shaw Plan, as outlined by Mr. Colomb. I can't see the need for the structure to be built at the mouth of the Industrial Canal. If you can get rid of that structure at the mouth of the Industrial Canal and the alternate method is put into place, with the levee built along the shores of Lake Borgne from The Rigolets down to the Verret area, and a structure or a lock put in the Mississippi River-Gulf Outlet at that point, it would control the flow of water coming up the Mississippi River-Gulf Outlet. The industries all along the Industrial Canal would be able to prosper and do without flooding that they are going to have even if this barrier is put at the mouth of the Industrial Canal, because they are on the outside of the levees. And, like Mr. Colomb had pointed out, some of them have levees going through the plants which will create other problems for them and stop their growth.

If the levees would be maintained at a 20-foot height along the area from the Lake Borgne down to this structure in the Mississippi Gulf Outlet, we would take and withstand any storms. I can't see how you can build a structure with 14 to 17 foot levees and all of a sudden, when you get where

the structure is going to be built in the Chef and The Rigolets, it drops to 9 feet. It seems to me that that's a fallacy there that you're only going to channel water into an area faster.

Another thing, why use a highway as a barrier. That should be kept open at all times because that's a lifeline to us. In essence, please consider the alternate plan, the Shaw Plan, that we were talking about in this thing and stop the building of this barrier at the mouth of the Industrial Canal.

I thank you.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Gilmore.

Glen Mercadal, Clio Sportsman's League. Following Glen Mercadal we'll have Cliff Danby.

MR. GLENN MERCADAL (CLIO SPORTSMAN'S LEAGUE):

I am Glen Mercadal, and I am here representing the Members of the Clio Sportsman's League of New Orleans.

First, the members of our club, who mainly live in the New Orleans Metropolitan Area, would like to point out that we are not opposed to hurricane protection. However, we are opposed to placing protection levees around undeveloped marshes and swamps.

We object to the environmental impact statement's omittance of cost to the environment in the benefit-cost ratio. A value can be placed on marshland and swamps and has been in recent studies by members of the University of Georgia's Institute of Ecology. Therefore, the value of marsh and swamps can be included in the benefit-cost ratio and would greatly reduce the ratio to a questionable point regarding the economic feasibility of the project.

The Corps has admitted, several times, in the final statement that the project will hasten urbanization and industrialization of valuable marshes and swamps by providing for further flood protection and land reclamation.

What is mentioned on paper will be felt in real life by the sportsman-citizen taxpayer who will see their recreation areas dwindle at the hand of landowners.

The Corps' main purpose for the project is protection of lives and property. Yet, we feel the Corps has failed to completely explain why levees are placed around undeveloped areas, or is it for the explicit purpose of development?

Barriers on the Chef Menteur Pass and Rigolets are backed by claims that they'll be minimal environmental effects. We disagree and feel such 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 Maurepas, Pontchartrain, Catherine, and Borgne estuary system.

A final environmental impact statement has been prepared and not yet been approved by the President's Council on Environmental Quality while the Bayou Bienvenue floodgate, Bayou Dupre floodgate, and the Chef Menteur Gulf Intra-coastal Waterway relocation is already complete. Work has also begun on several levees in the project.

This leaves us to believe that this meeting, like most held by the Corps, is only to fulfill a requirement of the law and no matter what is said or done, this project will be completed.

Closing, I would like to reaffirm our club's position in favor of the flood protection and opposing the policy of unnecessary private land enhancement at the expense of the public and the environment.

Thank you.

(Applause)

Whereupon, the document presented was introduced into evidence and marked as Exhibit No. 67)

COLONEL HEIBERG:

Next, Mr. Cliff Danby, who by prior arrangement, has my permission to speak up to 10 minutes. After Mr. Danby will be Mr. Veillon.

MR. CLIFF DANBY (ORLEANS AUDUBON SOCIETY):

My name is Cliff Danby. I live in New Orleans and I am here today to speak for the nearly 1,000 members of the Orleans Audubon Society.

The Orleans Audubon Society wants it clearly understood that we favor hurricane protection of areas presently populated.

On the other hand, we completely oppose hurricane protection for unoccupied marshes and swamps. This Corps project proposes to levee or fill in more than 50,000 acres of undeveloped swamps and marshes, excluding the 25,000 acres in St. Charles Parish. To do so would be economically unsound, ecologically disastrous and a monetary windfall to the owners of the land. Furthermore, the Corps can easily avoid placing levees around marshes and swamps while still protecting populated areas.

Let's examine the economics of the Corps' plan. Placing levees around swamps and marshes will lead to drainage and urban development of the land. These lands are essential to fisheries, aquaculture, waste assimilation and total life support values. Do you know what an acre of marshland is worth in terms of these values? From \$2,000 to \$80,000 an acre per year. Applying the lowest value of \$2,000 to the 50,000 plus acres of marshes to be lost immediately to this project, we get \$102 million annually. This is the environmental value that would be lost to us and, therefore, a cost to the project.

If we incorporate the \$102 million into the Corps' cost-benefit analysis, the heavily favorable ratio of 12.6 to 1 drops to 1.4 to 1; a ratio that is barely favorable. A value of \$3,000 per acre causes the cost-benefit ratio to be unfavorable. No wonder the Corps did not quantify environmental costs for their cost-benefit determination. Should we allow these valuable marshes to be destroyed when they can return so much to us economically and environmentally? We think not.

The Corps could exclude these marshes and swamps from their plans. To do so would require placement of levees adjacent to populated areas and not adjacent to the shorelines of Lakes Pontchartrain and Borgne. The Corps maintains that

this would cost three times as much as the barrier plan. Even if it did, the cost-benefit ratio would still be a favorable one of 4 to 1.

Placing levees around marshes and swamps will increase the value of privately owned land. The Corps estimates this land enhancement value to be about \$5.7 million annually. Guess who is paying for this added value to private landowners? You guessed it--the good old taxpayer.

Why didn't the Corps favor the alternative of protecting populated areas only? We can only conclude that the Corps favors enrichment of a few landowners at the expense of us taxpayers.

(Applause)

Marshes have another very important value. They absorb, slow down, and dissipate hurricane tidal surges. This ability reduces or prevents flood damages to inland areas. This cushioning effect will be lost if levees are placed along shorelines. This can be economically significant for those who live in marshland that has been developed right up to the water's edge. A hurricane like Betsy of 1965 will create tides that will go right over the levees designed for this project.

There will be severe environmental damages from this project. Valuable, productive wetlands will be lost. Development around the perimeters of Lakes Maurepas, Pontchartrain, Catherine and Borgne will be induced. This will cause eventual collapse and death of the MPCB estuary. Tidal flows through the Chef and Rigolets Passes will be obstructed by the barriers hindering flushing actions by the tides. This could make Lake Pontchartrain a 640-square-mile cesspool. We strongly oppose the Chef and Rigolets barriers.

The Seabrook Complex is supposed to control salinity levels in Lake Pontchartrain. How is this going to be possible when the Corps doesn't even know what the proper salinity level should be or how it can be maintained and effectively monitored?

A previous Corps project, the Mississippi Gulf Outlet, caused the present salinity problem. The MR-GO was also

responsible for the flooding of St. Bernard Parish and eastern New Orleans during Hurricane Betsy.

(Applause)

With the Corps' proclivity to create more problems than it solves, we are very skeptical of the benefits attributed to this project.

In March 1974, the voters of Orleans Parish voted a 3-mill increase in property taxes to construct and maintain levees, levee drainage, flood protection, and all purposes thereto. Orleans Levee Board Officials said the money would not be used for the Chef-Rigolets barriers. Now we learn that they propose to use the money for just that purpose. Taxpayers had voted down such use of tax moneys three times previous to the 1974 election. Use of the 3-mill tax moneys for the barriers is not strictly illegal in the eyes of the law. But in the eyes of the taxpayers it is, and we've been had again. I hope the good old taxpayer remembers who his friends are at election time.

In case anyone doubts that a charade is being played here today, we wish to point out that certain portions of this project have been completed or are underway even though the final impact statement has not been approved by the President's Council on Environmental Quality. For example, the bypass channel at Chef Pass has been dredged. The control structures are in place at Bayous Bienvenue and Dupres. Levee construction is underway and dredging in New Orleans East is now in progress. The good old public is being duped again.

Concerning disposal of dredged material, we oppose disposal and ponding of dredged material in the marshes along the Chef and Rigolets Passes, along the MR-GO, and in New Orleans East. The material should be used for construction purposes, to fill borrow areas, or disposed of at approved offshore locations. Also, we object to the proposed borrow area on Apple Pie Ridge along US Highway 90. These disposal and borrow plans by the Corps will destroy valuable marshland that Louisiana cannot afford to lose.

In summary, we feel this project can benefit the people of this area without being harmful to the environment. To do so, however, will require modification of the project to have a high levee system built around populated areas only, and to eliminate the barrier plan.

Thank you.

(Applause)

(Whereupon, the statement of the Orleans Audubon Society was offered into evidence and marked as Exhibit No. 35)

COLONEL HEIBERG:

Thank you, Mr. Danby. Mr. Edgar Veillon, Louisiana Wildlife Federation will be followed by Timothy Terrell.

MR. EDGAR F. VEILLON (LOUISIANA WILDLIFE FEDERATION, INC.):

Colonel Heiberg, distinguished guests, ladies and gentlemen.

My name is Edgar Veillon. I am currently serving as the President of the Louisiana Wildlife Federation, which is a sportsman's organization consisting of 12,500 members throughout the state, with representation in all 64 parishes. Our program is also supported by numerous business firms.

Before I begin reading the Federation statement, I would like to mention at this time that the National Wildlife Federation has selected, "We Care About Wildlife Habitat" as the theme for this year's National Wildlife Week observance which will be held March 16 through the 22d. This theme was selected as a result of realizing that the present rate of destruction of wildlife habitat, both the quantity and quality of future outdoor recreation, is being seriously jeopardized. And, it is with this aspect of this project, that the Federation is primarily concerned.

The Louisiana Wildlife Federation, Incorporated is grateful for the opportunity to express our views on the Lake Pontchartrain, Louisiana and Vicinity hurricane protection project.

Like any upstanding citizen, the Louisiana Wildlife Federation is very interested and concerned in the complete protection of the citizens of this state and especially in this particular instance of those residents of New Orleans proper and surrounding parishes from the ravages, destruction and human misery which is wrought by our age-old nemesis, the hurricane.

The health, welfare and safety of the lives and properties of the individual inhabitants of these areas is always first and foremost in our minds. However, we do have some doubts and questions in our minds as to whether, in effect, rather than actually affording the protection as elucidated by the proponents of the project, the completion of said project might, in fact, lull city and parish residents into a sense of false security while they await in ingenuous confidence the arrival of the elusive standard "project hurricane."

The aggregate project which we are discussing here today has been divided into several component enterprises. We feel that although some aspects of the proposed project may have some merit, redeeming qualities and social benefits, other portions are totally devoid of said benefactions and, in fact, may be construed to be highly deleterious, not only to the citizens involved but especially to the areas affected. It is to those areas which fall into the latter category mentioned, that I would like to address the remainder of my remarks.

The importance of Louisiana's and this Nation's marsh and estuarine systems have recently been receiving much attention and publicity. The value of our coastal and estuarine wetlands as a fishery nursery, and optimum habitat for many wildlife species and as a source of innumerable recreational opportunities has been thoroughly documented through many scholarly and studious scientific research endeavors. However, one need not read volumes of scientific literature to come to the same conclusion as have these knowledgeable scientists. All one need to do is spend but one part of one's day in the hinterland of our coastal marshes to appreciate the prolific abundance of many forms of aquatic and terrestrial wildlife and many forms of lower life forms and to experience the peace and tranquility which only the solitude of a remote swamp or marshland can provide.

It is of extreme concern to us that many thousands of acres of what is now considered prime productive wetlands which support diverse populations of many forms of wildlife species and which provide many hours of outdoor recreational opportunity will be adversely affected by aspects of the project in question. The drainage of these productive wetlands caused by the project will be an encouragement to land speculation and domestic and industrial development

into the areas. Such development can only instigate further encroachment and deterioration of a rapidly dwindling and fragile marsh ecosystem. This is especially true of St. Charles Parish's portion of the project. We are of the understanding that the preponderance of citizens of St. Charles Parish are opposed to the construction of the Lake Pontchartrain hurricane protection levee in their parish. It also seems that the most vociferous of the project's proponents in St. Charles Parish are those who stand to gain huge financial windfalls through land speculation and development after the marshlands are drained.

The citizens of St. Charles Parish have a high regard and a certain reverence for those marshlands, which for many years have provided numerous hours of leisure, solitude and pure enjoyment. These concerned citizens are unwilling to forsake these valuable and natural wonders under the dubious guise of flood protection. They are unwilling to trade the salient benefits of their marshes for the urban sprawl from which many have moved to St. Charles Parish to escape.

The fact that Bayous LaBranche and Trepagnier have recently been incorporated into the Louisiana Natural and Scenic River System is an additional reason why we would like to recommend that the St. Charles Parish portion of the Lake Pontchartrain hurricane protection levee be deauthorized.

Another portion of the proposed Lake Pontchartrain and Vicinity hurricane protection project which causes us much concern relates to those phases of the project referred to as the Rigolets Complex and the Chef Menteur Complex. But, before I continue, I would like to read a resolution which was presented by the Slidell Sportsman's League. This resolution has passed unanimously and adopted by our convention delegates on March 17, 1974.

Colonel, can I read this?

COLONEL HEIBERG:

Go ahead, continue.

MR. VEILLON:

Thank you.

WHEREAS, the proposed Lake Pontchartrain and Vicinity hurricane protection plan, in its present form, threatens ecological disaster in the estuarine area due to substantial changes in tidal flows and water level changes; and

WHEREAS, the project would actually provide little protection to the city of New Orleans and actually increase the possibility of serious flooding in St. Tammany Parish; and

WHEREAS, three times in succession, the people have refused to endorse its construction at the polling booth, yet public money is even now being used and appropriated against the will of the voters with certain phases of construction progress even now;

THEREFORE BE IT RESOLVED that the Louisiana Wildlife Federation, Incorporated, opposes the construction of the project in its present form, particularly the barrier phases across the Rigolets and Chef Menteur Passes and urges congressional and other governmental levels to bring pressure to modify its form toward acceptability.

BE IT FURTHER RESOLVED THAT THE Federation urge reexamination of the project in accordance with the new criteria for judging the worth of public works projects as recommended by the President's Commission with particular attention to the areas of environmental damage and discount rate assumptions and the legality of the state's guarantee of the local funding which was refused by the elected representatives of the people of St. Tammany and St. Bernard Parishes.

We 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 that fine line which constitutes a fresh and a saline marsh ecosystem.

Again, thank you for your attention and the opportunity to express our views.

(Applause)

(Whereupon, the statement presented was offered into evidence and marked as Exhibit No. 103)

COLONEL HEIBERG:

Thank you, Mr. Veillon. Next, Mr. Timothy Terrell, who will be followed by Mr. Crowe. Is Mr. Terrell here?

(No response)

COLONEL HEIBERG:

Mr. Art Crowe? Mr. Crowe will be followed by Mr. Arthur A. Crais.

MR. ARTHUR CROWE:

Ladies and gentlemen. My name is Arthur Crowe. I am speaking today as a resident of south Louisiana. I have a Masters Degree in Marine Science from LSU, and my interests lie in the coastal zone ecology of Louisiana.

I would like to make a couple of comments on the format of this meeting. I tried to obtain a copy of the statement from the LSU Library and was unable to. I subsequently called the East Baton Rouge Parish Library and they only had two copies available. One was in circulation. I think this is inadequate and could be easily improved upon.

Second, I'd like to commend the Colonel on his format of limiting the speakers to 5 or 10 minutes; whatever they chose. I've been to these meetings before and quite often people will speak for sometimes an hour or more, politicians especially. I think it's really a good idea that people have to think out what they have to say before they get up here and are limited to time.

Well, I'm going to speak in general terms today because there was insufficient time for me to gather hard, cold facts.

Lake Pontchartrain does not rank high in productivity of commercial fisheries when you compare it to other areas like Terrebonne or Barataria Bay. However, it ranks close to the top in sports fisheries due to its nearness to New Orleans. Many of the sports fisheries would be directly affected by a loss of habitat and a loss of nutrient supply directly attributed to the construction of levees.

We have the ability to make this lake what we want it. Through the regulation of the Bonnet Carre Spillway we can make it a fresh water or a brackish lake. Therefore, we can regulate or channel the productivity into whichever area is most important or most efficient. Let's not fool ourselves, though. Whichever one we decide to do with this lake, if we put those levees up, it's going to alter the productivity either way, for the worse.

Even worse is the fact in my opinion that the system is inefficient against a very large hurricane and would have the effect of luring a large part of the population into a sense of false security. We have only to remember Camille and speculate what could have happened if it had rolled in on New Orleans and eaten out the levees around a population who thought themselves safe behind hurricane protection.

The Federal Government should not get into subsidizing flood insurance and must not--must not encourage growth within a flood plain. Instead of making the swamps and marshes more suitable for development, let the government subsidize the growth of New Orleans to the north shore of the lake where ground is higher and firmer. Let the new area be linked with high speed water transportation. Let's have government money where it will create jobs and make homes safe; not destroy valuable marsh and give people a false sense of security.

Thank you for letting me talk today.

(Applause)

(Whereupon, the statement presented was offered into evidence and marked as Exhibit No. 33)

COLONEL HEIBERG:

Thank you, Mr. Crowe. Next is Mr. Arthur A. Crais, followed by Wilkes R. Harmon. It's Mr. Arthur A. Crais or Craig-I can't tell if that's a "g" or an "s" on the end of the card. 2400 Filmore Avenue? Is he here?

(No response)

COLONEL HEIBERG:

Okay, Mr. Wilkes R. Harmon, Slidell.

MR. WILKES R. HARMON:

I will write in my statement.

COLONEL HEIBERG:

Okay, sir. Mr. Weston G. Strauch, Lake Oaks Civic Association, will be followed by Mills R. Coleman.

MR. WESTON G. STRAUCH (LAKE OAKS CIVIC ASSOCIATION):

Colonel and distinguished staff. My name is W. G. Strauch. I am the President of the Lake Oaks Civic Association. I live approximately 2 blocks from where we stand right now. I wonder how many in the audience live within a quarter mile of the lakefront. I mean this lakefront over here, not St. Tammany.

(Whereupon, there was a show of hands)

MR. STRAUCH:

Alright. Thank you. That was about five or six. I am also a member of the Orleans Audubon Society and I'm interested in preservation of wildlife and whatever else is involved in the swamps whether close or far from New Orleans.

But we are also, most intimately interested in our homes. Most of us have a very substantial investment in homes built on land which has been reclaimed by the Federal Government and sold to us by the Orleans Levee Board. Now, that's no criticism, now. And we have gathered and discussed this very thoroughly and I represent 125 members whose homes front on this side of the lake and we dread to think what would happen if a wall of water was blown from Lake Pontchartrain onto our homes.

This is one of the highest spots in the city where we are located right now, and if Lake Pontchartrain were dumped onto our homes, I don't know where we'd go.

FROM THE FLOOR

Come to St. Tammany.

MR. STRAUCH:

You'll be there to help us, I know.

I have here a letter that I am submitting. I recognize I'm not a real popular guy here, but I'm saying what my association feels.

We, of the Lake Oaks Civic Association, a subdivision facing onto Lake Pontchartrain, are highly in favor of the proposed hurricane protection system proposed in the Lake Pontchartrain, Louisiana Vicinity hurricane protection project.

The Lake Oaks Subdivision consists of more than 250 homes, all owner occupied, and the price range of these homes, not counting real estate, is from \$50,000 to \$175,000, and we're most interested in this project because we sincerely feel that if Hurricane Camille had hit New Orleans and we, in the Lake Oaks, would have been as devastated as the beach area at Biloxi was--Gulfport and other beach communities after was Camille.

The association that the undersigned represents consists of more than 125 members; we recently met at a special meeting to discuss the pros and cons of this project. After thoroughly making ourselves aware of the project, the association unanimously voted in favor of this project.

To state our position again, we of the Lake Oaks Civic Association do endorse the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project. We urge you to consider it most favorable for our, and our neighbors' protection.

Thank you.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Strauch.

(Whereupon, the statement presented was offered into evidence and marked as Exhibit No. 99)

COLONEL HEIBERG:

Mills R. Coleman will be followed by Dave Martin, Jr., Slidell.

MR. MILLS R. COLEMAN (SLIDELL):

Concerned participants, I would like to present my opinion and summary from the excellence of the previous presentations. I would like to approach it from a little different manner.

I respectfully, but ardently criticize all principals, either individual or collective, for their continued persistence in challenging my rights as a segment of the majority vote which has expressed itself three times by their overwhelming--overwhelming vote against the issue available to vote on concerning this project.

There is nothing I can possibly see in this barrier plan that will provide safety, economy and well-being to me and my fellow residents of St. Tammany Parish.

Thank you.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Coleman. Mr. Dave Martin, Jr., President, Slidell Chamber of Commerce, will be followed by Harry Viosca.

MR. DAVE MARTIN, JR. (SLIDELL CHAMBER OF COMMERCE):

Thank you, Colonel, distinguished guests, ladies and gentlemen. My name is Dave Martin, Jr. I'm President of the Greater Slidell Area Chamber of Commerce.

We have passed resolutions opposing this. We are opposed to it. We feel it's a danger.

Engineering is like any field of endeavor; it's manned by human beings who can and will make mistakes. I have seen

an engineer try to make water run uphill. He can't do it. I've seen them try to push water from an 18-foot ditch through a 14-inch culvert. They can't do it. And I've seen project engineers in two adjoining subdivisions run their streets and they met 20 feet apart. If it sounds like I'm saying that this project is a mistake as presently constituted, I am. Not only is it a mistake, but it is in direct confrontation with the wishes of the voters. In three elections the voters have turned down the funding for the project as presently constituted. No one is against hurricane and/or flood protection, if it is economically feasible and protects all involved.

Here we are looking at a project based upon a hurricane which has never occurred, dreamed out of a computer which has never been in one. It's my understanding that when the project was approved by Congress in 1965 the estimated cost was \$90-odd million. In a public hearing in Slidell in 1972, the estimated cost was then set at \$220 million. Now an estimated cost is \$327 million, plus or minus. It really seems strange that the benefit-cost ratio is still 12 to 1, in 1965 and '72 and now. I wonder if the value of the project is directly tied to the increased value of properties protected. If so, St. Tammany Parish is no better protected at \$90 million than it is at \$327 million, and I wonder why not.

(Applause)

Depending on who you talk to, we're in a recession or a depression. What about a project primarily consisting of materials when 8 percent of our people are out of work? Try and feed them a rock or a Seabrook Bridge.

Recently, the voters of Orleans Parish approved an additional 3-mill tax to improve their levees. This approval came after Levee Board President, Guy LeMeiux, promised that the 3-mill tax would not be used in the project under discussion. Now, there is ample discussion of a rededication of this same 3-mill tax to fund local portions of the hurricane protection plan for Orleans Parish. This is in flagrant violation of public trust, and if you want to know who I'm talking about, read the States-Item or see who challenges my statement.

But what disturbs me most is that we in St. Tammany Parish, part of the Metropolitan Area of New Orleans, when

it's economically feasible to New Orleans, we in St. Tammany Parish are being used to increase the tax base and the population to be saved under the hurricane protection project. They couldn't get enough before.

We must pay in excess of \$1 million to be in a project which will not benefit St. Tammany Parish, but will definitely hurt us. The project goes into St. Tammany Parish just as far as the New Orleans Corps District goes. If this were a good project for St. Tammany, why doesn't the Mobile Corps District help us? Could it be that they do not think their budget should be expended to help an Orleans District project?

Gentlemen, I will ask the Slidell Chamber of Commerce and the Covington Chamber of Commerce to jointly file suit to enjoin the St. Tammany Parish Police Jury from expending any money or calling any election to fund any portion of this project as presently presented.

(Applause)

The third time was the charm. I said in the beginning that engineers--there's that orange light--I said in the beginning that engineers, just like all of us, are human and subject to making mistakes. I trust the Corps will reevaluate this project and its effect on St. Tammany Parish and admit it's human after all.

Thank you.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Martin. Mr. Harry Viosca will be followed by Mr. Lloyd Moreau. Is Mr. Viosca not here?

(No response)

COLONEL HEIBERG:

Captain Moreau. Captain Moreau has asked me for 15 minutes and after he did this several days ago, after some agoinging, I agreed to that.

MR. LLOYD A. MOREAU (NEW ORLEANS SPORTSMAN'S LEAGUE):

I represent the New Orleans Sportsman's League, some 500 members. I've been opposed to this plan since its early conception, and I've done quite a bit of study and work on this thing, and I've expressed my views to the Colonel numerous times.

I don't think this barrier plan will solve our problems of hurricane flood protection for the city of New Orleans. We have a unique problem here, and it's controlled by nature and allowing these vast waters of the gulf coming into our passes into Lake Pontchartrain, spreading over this area, and not creating a terrific rise in the lake, as we are told it will do.

Nature provided this lake to provide access to all this water spreading over Maurepas, the swamps in that area, and Lake Pontchartrain; consequently, we never had our crest. But, if you put this barrier in now, we have created a "V" formed by the Mississippi Gulf Coast and the Mississippi River levees; at the point of this "V" will be our barriers. Water driven into this "V" will rise to phenomenal heights. No one can say just what. Of course, if the projected plan, as this hurricane is supposed to be, is left up to--it will be fine--but do we have this nature to take this one only step to provide this projected hurricane? We don't have that.

So, consequently, water driven into this area will be forced against these existing levees. We know that the levees are supposed to be adequate. But will they protect against the terrific flow that will rise phenomenally along this area?

One of the things that we are opposed to is this overflow of water from these barriers. Now any water over 9 feet elevation, m.s.l., will flow over the barriers into Lake Pontchartrain. Just how much, how long this storm will stay out in the gulf pushing these waters over, no one can say. Consequently, this water flowing into the lake will be impounded by these structures and then we have a wind shift from the southeasterly quadrant to the northwesterly quadrant, it will drive this water that enters into the lake into the southeast end of Lake Pontchartrain creating a problem.

Areas in the area that are normally protected by water flowing out of the Chef and Rigolets will not be able to do so, so this water will rise on the east side, creating a terrific problem.

One of the things that we have been told by the Corps of Engineers is that this is no problem; that there will be only eight-tenths of a foot of water coming over this barrier. That is what their plans with the projected hurricane. But, what will happen with a vast storm that will put more water than that over?

Now, we've been told that the flow of water into the Industrial Canal will be taken care of by a structure in the canal to allow the top of this water to be relieved into Lake Pontchartrain, another source of water for the lake. This will also raise the level of the lake.

Another thing, in case we ever have to use the Bonnet Carre Spillway at the same time that we have one of these huge storms in the gulf, where is this water from the Bonnet Carre Spillway going to go when the wind shifts to the northwest?

We've been told by the Corps of Engineers that for the sportsmen this is going to be a fine thing. Borrow pits will be dredged in the area to protect and build the levees. These borrow pits will be fine fishing areas. We already have these borrow-these holes in the Chef and The Rigolets, and we've got water 80 and 90 feet deep in The Rigolets and 60 feet deep in the Chef. Now, once you put a control structure in here, you're going to stop a normal flow of water, siltage is going to create and cover up these natural holes.

Another thing, we do not take in conception, and I've asked the engineers to state how much siltage will come in from the Bonnet Carre Spillway usage. I was told that the Bonnet Carre Spillway will never have to be used once the Morganza Spillway has been opened. The first year after they said this, we had to use it. Last year, the structure was not opened at Bonnet Carre, but sufficient water flowed through there and almost created the same thing as if it had been opened.

I want to go on record as being against this. The members of our club have said the same thing. We cannot see any

good out of it. In fact, I think--I think we all do--that this will create a greater problem. I think that the New Orleans lakefront could be protected. Ninety percent of our water is from wave action coming over the seawall down Lakeshore Drive and flooding out the bay area before the protection levee. If a barricade of a breakwater of some type were built out in Lake Pontchartrain to stop this wave action from hitting the seawall and bouncing over, we'll eliminate most of our problems on that.

Besides this, it would create a wonderful recreation area for boaters. Also, every time we have a northwestern now we have the Levee Board people out on the lakefront cleaning up Lakeshore Drive. I know last spring it was all resodded with beautiful grass in front of the area right there near the Lakeview Section, and the first week after this grass was planted, we had a northwester and all these grass sods were laying out in Lakeshore Drive.

Another thing is, the construction time of these structures will be approximately 2 years. Well, knowing some things that have been going on here with our Dome Stadium, 2 years may extend to 5 years. What will be done during this time that these structures are being built and these areas are blocked off? They have to build some form of cofferdam to stop this so they can work. What's going to happen then? What is going to happen in the Industrial Canal when they're building this structure out there? They are going to have to make some type of a bypass in order to get the traffic through the Industrial Canal at the Seabrook Complex. This is a problem. If anyone has a boat that's been through this area knows just what we have in navigating this area.

One thing that the Mississippi River-Gulf Outlet has done for Lake Pontchartrain that a lot of the sportsmen have realized, we catching finer fish, we're having a better water in the lake, and we have a terrific problem with pollution in Lake Pontchartrain due to the sewerage coming out of the Jefferson, Orleans and on the other side--the north side of the lake. "MR. GO" has provided outlets, a flushing area. This water circulates through the lake, creates a problem at times we have but most of the time it is good because our flow of water can rise or fall through "MR. GO" and the Chef and Rigolets. At numerous times, with the east winds, the water will be rising in the

Rigolets, Chef and falling through "MR. GO." This is a normal, beautiful flow area and creates a conditions that helps relieve our lake of its pollution. There's a tremendous amount of chlorine--chlorinated water that is dumped into the lake from different areas. The London Avenue Canal is one of the worst, right there at the Prentiss Street Pumping Station. This goes out into Lake Pontchartrain and consequently, instead of having a normal, good, clear water in the lake, we have this polluted water. The whole seawall used to be covered with barnacles. Now we go out there and it's covered with algae.

If this is left alone, and if this structure is built in there to control this flow of water and stop it, we're going to have a further pollution problem.

Taking, for instance, the closing of the barriers prior to a storm; water will flow into the lake from the tributaries on the north side of the lake and just how much of an amount we're going to get in the lake, no one knows. This water will be impounded in the lake due to the barriers. Now, these barriers are going to be put up prior to a storm and they will take at least, if I am right, 48 hours to remove them. We will have a backup in Lake Pontchartrain. Most of the areas to the east will suffer when that wind shifts. It will drive water into the areas back in there.

If you go along the lakefront and see the actual tidal movement in the lake now, and when you put these structures in and restrict it, you put a structure in at the Chef and Rigolets and when that water tends to flow out, during a northwest day, it will not do so.

Ladies and gentlemen, I was going to take 15 minutes on this, but due to the fact that most of the things I have in mind were stated previously--and I think they were well stated--I will close.

Thank you very much.

(Applause)

COLONEL HEIBERG:

I have a couple of people telling me they can't hear what's being said on the mike. Is that true, in the back,

or is that just a problem we're having down front? Okay, let's just take a sit-down break here for a couple of minutes and see if we can't do something with that. Otherwise, I'm afraid we're going to have to work with the acoustics that are given us here. I can't change that.

(Whereupon, there was a short recess.)

MR. VERNON PALMER (ALLIANCE FOR GOOD GOVERNMENT):

I'm Vernon Palmer. I am a member of the Alliance for Good Government, and I was President of the Alliance for Good Government during the year 1974 to 1975. It was during that period of time that a very important election was held in New Orleans in March of that year.

In order to find out what the reason behind the election calling for a real estate tax increase on behalf of the Levee Board, I called Mr. Guy LeMieux to appear before a meeting of the Alliance for Good Government in order for him to explain the necessity of this tax increase.

Before he came to our meeting, Mr. LeMieux had made various appearances in the news media. He had appeared at public gatherings and he had personally stated on these numerous occasions that the revenues from the 3-mill increase, if approved by the voters, would be spent for 35 specific projects at various points in the New Orleans area. Mr. LeMieux repeatedly stated on these occasions that the money would not be spent on the hurricane barrier plan for Lake Pontchartrain.

We asked Mr. LeMieux to appear before our organization. I was there at this meeting before the Alliance for Good Government at which he sought the endorsement of our organization for the Levee Board proposal and he there explained that the project to which the money would be dedicated--and he passed out literature explaining the purposes and the uses for which the money would be put--and stated specifically that the so-called barrier plan was definitely not among these projects because that plan was considered to be controversial and presented many environmental issues and had been voted down on two previous elections--in two previous elections by the voters of Orleans Parish.

I, myself, and others directed questions to Mr. LeMieux and received clear assurances that the Barrier Plan was not involved in any way. Based upon these assurances, I myself, and the other members of our organization decided that his project was noteworthy and merited our endorsement and we formally endorsed the Levee Board proposal and recommended the proposal to the people of Orleans Parish and we advertised our endorsement of it to the people of Orleans Parish. And at the special election, I, myself, personally voted for that. And others in my organization did the same, based upon the previous literature published by Mr. LeMieux's Board, by the official representation made in that literature, by newspaper publicity and legal advertisements published at our expense by the Levee Board and by also Mr. LeMieux's personal reputation made before the Alliance for Good Government. And the majority of voters of Orleans Parish went for it.

This is the most deceitful and wrongful abuse of the public trust. It was a tortuous misapplication of money. It is a wrongful abuse of our right to vote.

(Applause)

Colonel Heiberg, please don't say, after digesting that charge, that these financial matters do not concern the Corps of Engineers. Please don't say that this is beyond the scope of this meeting, or that it's too late to consider these types of matters: this misapplication, this misconstruction, this abuse of the public trust. Because for the Corps to close its eyes to this serious misapplication, misrepresentation and breaches of trust surrounding the mode of finance, would be for the Corps of Engineers to adopt the misrepresentations and the breach of trust as its own. Does the Corps really wish to become a party to such a magnificent deception? I know that I, myself, cannot, and I withheld, personally, my own tax this year, the particular 3 mills, rather than see it go to this nefarious purpose. And I am instituting suit to recover the taxes that others may be paying.

(Applause)

COLONEL HEIBERG:

Mr. Robert H. Merrell, Slidell Sportsmen's League.
Mr. Merrell has been given 10 minutes.

MR. ROBERT H. MERRELL (SLIDELL SPORTSMEN'S LEAGUE):

Colonel Heiberg, ladies and gentlemen.

The members of the Slidell Sportsmen's League wish to thank you and certain members of our congressional delegation for giving us the opportunity to present our opinions on the Lake Pontchartrain and Vicinity hurricane protection plan.

My name is Robert H. Merrell, I serve as President of the Slidell Sportsmen's League, and today I speak for the 161 members of that organization.

Since its organization, the League has had as one of its continuing and major concerns, the well-being of the great natural resource at our doorstep. This estuarine lake area was at that time threatened by this very same project that was known to us as Amendment 6, the title it carried on the ballot, in an attempt to amend the Louisiana Constitution to enable taxes to be levied to finance it. Amendment 6 was defeated. Amendment 6, in one form or another, has been defeated three times by the voters. If anyone wonders why, I'll be glad to tell them. It's because the people don't want to see the thing built.

(Applause)

Now that the final environmental impact statement has been filed with the CEQ, the Corps has complied with its legal obligations under the National Environmental Policy Act. We hold very basic disagreements with the conclusions of that statement; however, the action has now shifted to the arena of public opinion and political means, we must remain hopeful that the will of the people, three times ignored in the ballot booths, may finally be served.

Others here today will tell of the possible ominous effects of these barriers on the people and property of St. Tammany Parish. We share these concerns and believe we will be subjected to increased danger as a result of closed barriers channeling surging waters into our towns and homes that otherwise might have returned through the passes.

Of particular concern is the apparent lack of coordination with the Mobile District on the effects of the closed barriers on inhabited areas near the Pearl River Basin. We expect that blocked waters will seek an outlet into the

Pearl River Basin, flooding riparian property and toward the town of Pearl River.

Since the project is claimed to be good for business interests, let's take a look at what our business interests can expect from it. First, let's speak of the two shipbuilding concerns in the Slidell area. These yards have been building vessels of considerable size and draft. Ocean-going tugs have been constructed here. With the proposed barriers in place and the necessary navigation facilities in operation, the maximum draft available for passage restricts our shipyards to building vessels of less than 16 feet draft. It is revealing that a project alternative involving a lock in the Gulf Intracoastal Waterway was rejected out-of-hand because of inconvenience to navigation. What of this inconvenience to navigation, commercial and private?

We who fish The Rigolets frankly do not believe that the locks will be closed only 2 1/2 hours per day. I believe a figure of 5 hours was mentioned today. Our navigation will be greatly inconvenienced. Obviously, it makes a difference whose navigation is interrupted. We expect major impacts in the commercial fishing, crabbing and shrimping business in our area. The attraction of industry to the area will suffer in reflection of the navigational impediment in the lake.

Now, in addressing ourselves to the direct effects of the project, we find many areas of disagreement with your conclusions. We cannot believe that reducing the cross-sectional areas of the Rigolets and Chef channels will have no appreciable effect on the volume of flow through them. This is not reasonable no matter how cleverly designed the gates are to be. A tabletop model is not going to tell you everything you need to know about flows, currents, velocities, tidal heights, mixing, migration of larval aquatic life, salinity effects, fish movements, pollution control, and a hundred other things that should be known before building something like this.

Five thousand, two hundred and sixty-five acres of productive marshland are to be converted to structures and levees. Thousands of acres in New Orleans East which presently do experience some degree of interchange with the lake will be permanently cut off. This area north of I-10 is apparently not slated for development and will be

kept as open marsh. According to research, it is in very good condition and has the potential to be restored to full estuarine productivity by providing more positive interchanges with the lake. Spoil from the structures at the Chef Menteur is scheduled to be dumped into the marsh. This will permanently convert it from marsh uses.

Reduced organic detritus coming into the lake is an admitted effect of the project. According to the EIS, most of the commercial species of fishes and invertebrates feed heavily on this organic matter and depend heavily on the interchange between the lake and surrounding wetlands. The value of the lake as a marine nursery area is well established. The projects planning has stated this but has not adequately treated the lake system as a part of the whole Louisiana estuarine system and considered the cumulative effects of the project, combined with all the others planned or in progress in the larger system. When the commercial and sportfishing suffers the effects of this project, the economy of the whole area will feel it; just not the fishermen themselves, but the whole range of industries and services which provide support to them, process and distribute their catch, and those who support the supporters.

Turbidities associated with the dredging in this project are to be temporary, according to what we're told. But how temporary is a construction period lasting up to 15 years? The effects of this turbidity over such a long period of time is bound to have severe and prolonged effect on the regimen of bottom growth, plant and animal in the lake. Eelgrass, Widgeongrass, brackish water clams, and other organisms provide important parts of the food chain, both for aquatic life and some 600,000 wintering lesser scaup, that's dosgris, the main fare of local duck hunters. Poul d'Eau or coots graze on the vegetation. Prolonged dredging turbidity will have its effect.

Urban outfall is causing pollution now along the Orleans and Jefferson shorelines. This project will hasten urbanization, increasing this pollution that already renders shellfish unfit to eat and prohibits swimming in some areas.

We object vigorously to the use of public funds for private benefit through land enhancement schemes. This is exactly what we will be getting in the New Orleans East area. The levee along the south shore of the lake from Citrus to

South Point is to protect undeveloped areas to make them suitable for urbanization. It is claimed that this area would be developed anyhow. Without this federally provided flood protection, we doubt very much if this is true.

New flood insurance regulations provide minimum requirements for construction areas that could not be met without this levee. Mortgages for construction cannot be obtained unless these standards are met. Let those who stand to profit so handsomely from the development of this wetland area provide their own flood protection. Then we'll finally see just how economical it is to develop lowlands when our unwilling share to the cost is denied.

The Corps has claimed there is no basis to demand that these landowners participate in the cost of their levee. We challenge them to make that determination and the analysis upon which it is based, public, along with the identity of the landowners and major stockholders of owning corporations.

Alternatives to the project selected would reduce the damage and still protect developed areas from flooding. In particular, the high levee alternative would do the job and not be nearly so costly as claimed, if the New Orleans East levee were omitted. The remaining levees would mostly be existing ones to be heightened and they already have stabilized bases.

So much for our concerns over the project. Now, let's turn to our other concerns that are no less grave. As mentioned before, the people three times defeated proposals that would allow the Orleans Levee Board to levee taxes to cover its share of the cost. The St. Bernard and St. Tammany Police Juries have refused to provide their shares of the local funding. The former Governor stepped in and guaranteed those shares. The present Governor has confirmed his actions. Our congressional delegation has completed this rape of democracy by passage of a special law allowing payments to be extended over a 30-year period. Our funds were not provided because we don't want this thing built as it is now conceived. This was the only way we had to express this opinion. In this government of the people, by the people, and for the bureaucrats, we have been denied even this.

(Applause)

Why do we even vote? No wonder people are disgusted with government and politics. Does anyone expect that the shares guaranteed by the Governor will not come out of the pockets of those who exercised their right to decide to deny them? They are mistaken. They will come out of revenue sharing, highway, school funds, and any other way they can be withheld.

The cost estimates have already proved to be much too low. If you think the Superdome was a boondoggle, just wait. We wonder if the final cost-benefit ratio were known, would the project enjoy such claimed justification? The assumed interest rate on funds to be committed to the project is 3.25 percent. This is ridiculous, yet many such projects are justified on such assumptions as this. Those of us who are to pay our taxes, direct or indirect, to build this thing are not, unfortunately, able to borrow at 3.25 percent to pay them.

Finally, the most important and overriding objection of all must be repeated for emphasis and that is that we have been disenfranchised. Our ballots have been ignored as the project has been moved toward implementation. The people have said their say on the subject, Mr. Hebert, Mr. Long, and Mr. Johnston. Now why don't you quit listening to the bureaucrats and listen to the people? Assuming we don't know what's good for us just isn't going to wash anymore. We hope you are listening. We hope you are listening, too, Mr. Edwards. We are not against hurricane protection; that is a necessity. But there are other ways than the one the Corps has selected. Modify the plan to eliminate the barriers and then come back to us with it at the polls. We hope you are listening because other elections are approaching in the future.

(Applause)

I apologize for having to read this statement at such a rate that it might have been hard to keep up with, but to move things along and to keep within the time limit, it was necessary.

(Applause)

(Whereupon the statement presented
was offered into evidence and marked
for identification as Exhibit No. 68)

COLONEL HEIBERG:

Thank you, Mr. Merrell. Mr. Francis J. Braud, Bonnet Carre Rod and Gun Club. He will be followed by Mr. Milton Cambre.

MR. FRANCIS J. BRAUD (BONNET CARRE ROD AND GUN CLUB):

Colonel Heiberg, members of your staff, elected officials, ladies and gentlemen. I am Francis J. Braud, Chairman of the Environmental Conservation Committee of the Bonnet Carre Rod and Gun Club of Norco in St. Charles Parish. I appear here today in response to your notice of January 22, 1975, regarding this public hearing. I wish to state that our organization is not opposed to hurricane protection projects where it is necessary to protect people, property, especially in already developed areas subject to flooding from storms, hurricanes; however, we are opposed to future development of lowlands or reclamation of wetlands which could destroy our renewable natural resources.

(Applause)

Our organization is opposed to the construction of the so-called hurricane protection levee in St. Charles Parish, due to the conclusions reached by the US Corps of Engineers environmental impact statement that St. Charles Parish project could be classified as a land enhancement project.

This project has been considered for some 18 years, and ever since survey investigations were initiated there have been an increasing public awareness of environmental considerations in the discussions relating to public policy. Also, since the Environmental Protection Agency Act was created, questions can be raised concerning studies that have been made by the US Corps of Engineers that this project will have an adverse effect on the renewable natural resources of the area in question.

Opposition to the construction of this project, this portion of Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project has been expressed to the US Corps of Engineers in written communications from the following organizations: The Louisiana Wildlife Federation; The Orleans Sierra Club; The Orleans Audubon Society; The St. Charles Environmental Council; The St. Tammany Environmental Council; The Department of Marine Science, LSU.

All of these organizations have studied the recommendations and proposal of the Louisiana Advisory Commission on Coastal and Marine Resources and have concluded that such projects in the wetlands area must have an environmental impact statement that the project will not have an adverse effect on the renewable resources such as the fish and wildlife.

Also, and one that is very important, the project will not create a burden on the citizens of the parish to install and maintain the necessary streets, drainage, sanitary sewerage treatment facilities, utilities and so forth, as has happened in other areas and in the Kenner area.

It has been emphatically pointed out by experts that the subject wetlands contain 9 to 12 feet of peat. This very poor soil condition is not conducive to land reclamation for economical habitation. In addition, a moratorium should be placed on these projects at least until all of the Lake Pontchartrain and Vicinity project studies on the Lake Maurepas, Pontchartrain, St. Catherine and Lake Borgne estuaries, to determine the total environmental impact that will be completed and considered as a whole.

The Louisiana Citizens Advisory Board on Environmental Quality approved a motion calling for a moratorium on all wetlands projects in the Maurepas, Pontchartrain, St. Catherine and Lake Borgne until cumulative environmental impact statements are made on all the projects.

We are of the opinion that the US Corps of Engineers have complied with the National Environmental Policy Act, in their decision to stop this St. Charles portion of the hurricane protection project, after concluding that it is a land enhancement instead of a hurricane protection project.

We are in favor of improved drainage for the communities and their citizens living on higher ground such as south of the Airline Highway in East St. Charles Parish. We suggest that a 4-foot or 6-foot levee be constructed on the north side of the Airline Highway paralleling the Airline with a drainage pump at Cross Bayou, which is a Destrehan Canal. This project, after an engineering study prepared by a consulting firm, was part of a multipurpose bond issue recently proposed by the St. Charles Parish Police Jury. This type project would be less expensive

and would protect our people now living south of the Airline Highway in St. Charles, just as well or better than the proposed so-called hurricane protection levee.

The high tide experienced in 1973 in East St. Charles Parish that created flooding in some areas south of the Airline Highway was due, we believe, to the Mississippi River-Gulf Outlet allowing more water than usual to enter Lake Pontchartrain through the Seabrook Pass during an extended period of southerly winds. It is felt that when the proposed dual-purpose lock at Seabrook is completed, it will prevent such high tides in Lake Pontchartrain. In addition, the channels that were dredged from Lake Pontchartrain through the wetlands to construct I-10 were never properly closed. Proper closure would prevent water from high tides entering certain populated areas of east St. Charles Parish since this problem did not exist prior to the construction of I-410 Highway.

It is encouraging to note at this time that the St. Charles project is in a deferred status and that additional studies will be required to adequately assess the environmental impact to determine if the east St. Charles portion of the project is actually a hurricane or land enhancement.

Thank you.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Braud. Leave it with Judy, right there.

(Whereupon, the statement presented was offered into evidence and marked for identification as Exhibit No. 20)

COLONEL HEIBERG:

Mr. Milton Cambre, followed by Robert A. Beter.

MR. MILTON CAMBRE (ST. CHARLES ENVIRONMENTAL COUNCIL):

My name is Milton Cambre, and I am President of the St. Charles Environmental Council. I have a statement to present on their behalf, and I also have a statement to present on behalf of the St. John Environmental Council.

The St. Charles Environmental Council, a group of 200 citizens of the parish, has long been opposed to the construction of the St. Charles portion of the Lake Pontchartrain and Vicinity hurricane protection project as currently proposed.

Prior to this public hearing, on many instances, we met with officials of the Corps of Engineers, New Orleans District, to express our concerns and offer our constructive criticisms. Through our counsel, J. Arthur Smith III, of Baton Rouge, we have corresponded extensively with the Corps of Engineers concerning this matter. For purposes of the record of this public hearing, we would like to submit a paper which had been prepared expressing our views as to the importance of the Lakes Maurepas, Pontchartrain, Catherine, and Borgne estuary and as to the need for proper planning with regard to this estuary.

As this paper indicates, we are very concerned with regard to the entire estuary for we realize its vital importance to the State of Louisiana. We understand that the Corps of Engineers is undertaking with LSU in Baton Rouge, to conduct a study of the estuary and submit that a decision on the overall Lake Pontchartrain and Vicinity hurricane protection project should be deferred until the conclusion of that study.

Although we are concerned about the overall Maurepas, Pontchartrain, Catherine, Borgne estuary, and we are particularly concerned about the wetlands in St. Charles Parish and the fact that the St. Charles levee project, as currently proposed, would cause the complete loss of these vital wetlands.

The levee would cause the loss of the St. Charles wetland because it would in short range, be a barrier to the interflow of detritus between the marsh and the lake, as we now know. Detritus is the life-blood of the estuary. Contrary to what the environmental impact statement says, this would cause major impacts on fish and wildlife resources.

In the long range, the levee would cause the loss of the wetland because it would hasten the commercial, residential and industrial development of the wetland.

As stated in the EIS, the plan will indirectly hasten urbanization and industrialization of valuable marshes and swamps.

As stated by a land developer quoted in the Times-Picayune on April 19, 1974, "This area could be a new Metairie if we could build a levee."

Clearly, this is most contrary to national policy and the public trust as articulated by NEPA, the Coastal Zone Management Act, and regulations of the Corps of Engineers. We would point out that the problems of secondary development and the impacts thereof have not been properly treated in the EIS which the Corps of Engineers has prepared on the overall project.

Moreover, these wetlands are not suited for development because of their soil. These soils are largely peatbog, and after there is construction on these soils, the ground deteriorates to a point where it literally disappears from the foundations of building and sidewalks. In addition, the tax burden on the citizens greatly increases where roads, drainage and other utilities are constructed on this type of terrain.

Moreover, the currently proposed levee project would have adverse flood protection benefits because it would eliminate the St. Charles wetland as a natural storm buffer. It would, therefore, amount to a foolish expenditure of public funds to embark on a project with such negative consequences.

All in all, we strongly believe that the costs of the St. Charles levee project would substantially outweigh any benefits, and therefore, the construction of the levee project is not in the public interest, nor in the interest of the future of our community in St. Charles Parish.

In a letter to our attorney, former District Engineer, Colonel Robert (sic) Hunt stated: "In my review of the total project, I have concluded that the St. Charles levee portion appears to possibly have more adverse environmental impacts than can be reasonably justified by offsetting flood protection benefits."

We would note that this statement becomes even stronger when one considers the EIS of the Corps--considers that

the environmental impact statement of the Corps of Engineers did not even consider environmental costs. Therefore, we would amend Colonel Hunt's statement to say that the project would "definitely have more adverse environmental impact statements than can be reasonably justified by offsetting flood protection benefits."

We, therefore, urge that the Corps of Engineers completely abandon the St. Charles portion of the above project as presently proposed. We urge that the Corps of Engineers exercise their responsibility to take this project as presently proposed off the drawing books and we urge the Corps of Engineers to do this regardless of the status of Bayous La Branche and Trepagnier as scenic rivers.

In urging the abandonment of this project, we would like to make it very clear that we are not opposed to flood protection. Indeed, there is a vital need for flood protection; however, we submit that the dual roles of the flood protection and the wetlands protection can be met by a constructive alternative which we offer. And that alternative is the construction of a levee along 61. It would save our wetlands and provide flood protection benefits at the same time. Moreover, a levee at this location could be built partly on the highway right-of-way already available and would be built on soils which are better suited to support a levee and would not have to be built as high, since the land slopes away from the river to the lake; thus, saving on construction costs.

In addition, maintenance costs would be decreased since the levee at this location would not be subject to the erosion process that occurs on the shores of Lake Pontchartrain.

In conclusion, we would like to say that the people of St. Charles are overwhelmingly opposed to the St. Charles levee project as currently proposed. See the attached article. We stand ready to fight this project with all the strength we can muster, including litigation. However, we hope and trust that this will not be necessary for we believe that the Corps of Engineers will recognize its commitment to the public good and abandon the St. Charles levee project as currently proposed.

I thank you.

(Applause)

(Whereupon, the statement presented on behalf of the St. Charles Environmental Council and the St. John Environmental Council were presented into evidence, in toto, and marked for identification as Exhibit No. 24)

COLONEL HEIBERG:

Thank you, Mr. Cambre. Mr. Robert A. Beter. Is he here?

(No response)

COLONEL HEIBERG:

Mr. John P. Sevenair. Mr. Sevenair will be followed by Mr. Michael Tritico.

MR. SEVENAIR (ECOLOGY CENTER OF LOUISIANA):

My name is John Sevenair, and I am representing here today the Ecology Center of Louisiana. Both the Center and I strongly support the stated purpose of this project, the protection of human life and property from hurricanes. I think it is obvious to everyone here today, by now, that several portions of this product are not designed at all to further this aim and the several that are so designed may not perform their function effectively.

We also have some rather serious reservations about the worth of sitting all day at these so-called public hearings. It appears that that the Corps is trying to sell its project to the public, rather than obtain comments and suggestions from the public. Is this a public hearing or a public meeting? If this is a public meeting to discuss all aspects of the project, then it should be clearly labeled as such. If this is a public hearing under the provisions of Section 404 of the Federal Water Pollution Control Act, then comments should be limited to certain specific issues. The notice of January 22 was anything but clear on this point.

After receiving the final environmental impact statement on this project, we find that the Corps has very baldly omitted what may very well amount to hundreds of millions, or billions of dollars of costs to the consumers and taxpayers. An economic analysis of the project contained everything except for the cost which will result from the

adverse environmental impact associated with this project. This is stated right on the very first page of the final environmental statement. This must be a new accounting procedure that has been devised by the Corps, or perhaps by Lewis Carroll or Donald Duck or someone like that to justify projects.

It appears that this project may increase the possibilities of flooding in some cases. The possibility occurs because the Corps is encouraging development in a known flood plane. This Corps uses the argument that the development is inevitable in these areas and would only occur at a slower pace without the project. Urbanization will not occur in wetlands of this type until they are adequately protected from flooding. The Corps is simply playing the old game of trying to put the chicken before the egg and blaming it on inevitability.

In the case of the St. Charles Parish lakefront levee, the Corps has gotten involved in a politically controversial project and seems to be looking for an easy out. The games which are being played with the scenic rivers in the St. Charles Parish are totally unwarranted and perhaps illegal interferences in state affairs. Blaming the scenic rivers system for delaying a project that is environmentally unacceptable appears to be a deliberate and calculated attack on this state law.

In conclusion, I would like to add a personal note on the St. Charles portion of the project. I have taken part in several canoe trips on Bayous La Branche and Trepagnier and I feel that these are two of the most beautiful streams I have ever seen. Their destruction would accomplish no protection of human life from hurricanes and would be an appalling tragedy.

Thank you.

(Applause)

COLONEL HEIBERG:

Mr. Michael Tritico. He will be followed by Mr. August Perez.

MR. MICHAEL TRITICO (MARINE ENVIRONMENT RESEARCHERS):

Thank you, Colonel Heiberg. My name's Michael Tritico.

I am a citizen and a representative of a group of scientists known as The Marine Environment Researchers.

We are concerned about many ecological aspects of this project. We have an even stronger apprehension that the Corps of Engineers may be afraid to admit to Congress that trying to save New Orleans from floodwaters has become technologically and economically unfeasible.

The Corps should not be timid in telling those of us who have families in the vulnerable regions that we should relocate to higher grounds. I would, personally, rather experience the hassle of moving than the nightmare of being in this city when a levee does not function properly.

I am willing to accept my responsibility to safeguard people who are relying on me for protection, even when it means that I must admit mistakes, abandon the plans I may have worked for years to implement and even when it means that I must sacrifice some respect for principles which may have proved to be impractical because of my own faults or the faults of others.

The Army Corps of Engineers should be similarly willing to reconsider their plans for protection of various citizens. I'm convinced that the present attempts will fail to salvage the original flood works plan. I now propose that the Army adopt an alternative plan for flood control in the Lower Mississippi Valley. Even though I suspect that this alternative plan may also fail eventually as New Orleans subsides deeper and deeper into the mud.

The plan was first proposed by Percy Viosca in 1927, and I have included a copy of the statement he made at that time. I have no additions to make. It was a better plan than the 1927 Army plan, and it is still a better plan than what we have going for us.

In the long haul, New Orleans, as we know it, will have to be abandoned. Such a thing may sound unacceptable, but it will happen whether or not anyone wants to admit it. Not because the Army didn't give their best, but because common sense and natural powers will eventually exert themselves.

I suggest that the people of New Orleans are intelligent and courageous enough to begin considering an orderly plan

for phased relocation of their residences to higher ground; for transformation of their economic structures across a decade rather than in one terrible night than and for assuming a leadership role in demonstrating to the rest of the nation that we are trying to avoid the embarrassing possibility of having to ask Congress for billions of dollars to rebuild a submerged city.

Relocation could be accomplished and would certainly have a cost-benefit ratio far more acceptable than would an immense salvage undertaking.

Concerning ecological ramifications of the hurricane protection project, the Marine Environment Researchers are not fully convinced that an artificial water exchange structure will alleviate the accelerating chemical and biological problems associated with the detritus buildup in Lake Pontchartrain. I won't discuss that any further, but I will call to the attention of the environmental planners, the following reports which are pertinent:

The 1974 Study of the Effects on Dredging on Lake Pontchartrain, which should be available from the Shell Dredgers Association, and a 1928 technical paper by Percy Viosca entitled, "Louisiana Wetlands and the Value of Their Wild Life and Fishery Resources."

The 1974 paper is valuable because it points out a possible failure of larvae forms within the Lake Pontchartrain system. The 1928 paper contains valuable insights into the impact of reclamation and flood control on survival of the natural systems.

I'll close with a direct quote from Mr. Viosca's 1928 paper:

"It seems that the time is ripe for an enormous development of the Louisiana Wetlands along new and intelligent lines. The ideal conditions to be demonstrated by observation and research, and that this development should be included in a broad program of conservation which has for its object, the restoration of those conditions best suited to an abundant marsh and swamp fauna.

It should be considered a state and national problem equal in significance to agricultural development, to the end that the state and Nation may enjoy a more balanced diet, more healthful recreation, and enduring prosperity."

Thank you all for listening to Mr. Viosca in 1928, and I hope somebody's listening today.

(Applause)

(Whereupon the documents referred to in the above presentation were offered into evidence and marked for identification as Exhibit No. 102)

COLONEL HEIBERG:

Thank you, Mr. Tritico. Leave it with Judy, there. Mr. August Perez III will be followed by Mr. C. J. Seit.

MR. AUGUST PEREZ III:

I'm August Perez III, and I reside at 4411 Alvar Road in New Orleans.

Colonel, I want you to know that many, many times I've been on your side of the table at public meetings, and in spite of some of the remarks I'm making, I want you to know that I have great compassion for you and your colleagues.

I oppose the construction of the flood control structures at Chef Menteur and The Rigolets. I have carefully reviewed information submitted by the Department of Army and its document entitled, "Announcement of Public Meeting," dated January 22d; and at the Department's two meetings with the Venetian Isles Civic Association, and its public meeting in the Lakefront Airport. From these, I have concluded that the basic reason for the construction of these structures is to make the now unprotected lowlands located in the Lake Pontchartrain Basin free from hurricane tides so that they can be used for future private development.

The fact that the Lake Pontchartrain is a wide and relatively shallow lake, makes the basin subject to extensive flooding from wind driven rising water. This factor was not taken into consideration when the levee systems were originally designed and built for New Orleans.

The Corps of Engineers has, through studies, now determined that the present New Orleans hurricane protection system design is subject to failure under certain very remote conditions--so remote, that one cannot calculate the chances of this happening.

They have evaluated several programs to insure that the unsafe condition does not happen. Two of these, that the report says will do the job, are worth consideration. The barrier plan and the high level plan.

The recommended barrier plan, conceptually, is to maintain absolute control over Lake Pontchartrain tides through mechanical means of the Chef and Rigolets locks; therefore, preventing the possibility of the lake tide rising high enough so the dangerous, potential failure condition could develop. This plan would cost \$327 million.

The alternate high level plan is in two major sections. The first section simply raises the existing levees to accomplish the same effective protective objective of preventing the lake from overflowing into New Orleans. This portion of the plan would only cost \$100 million, which is \$200 million less than the barrier plan.

But the second section of the high level plan is the one that would cost so much more. It proposes the building of levees around the entire Lake Pontchartrain Basin. I made a little diagram here to explain further what I am saying.

In the Barrier Plan the two major structures at the Chef and The Rigolets will reduce the effect of the hurricane tides in the entire basin. This is Baton Rouge up here (indicating). The entire basin. Three hundred and fortyeight thousand acres of lowland and seventy-six thousand acres of present New Orleans land.

The high level plan was proposed to build a high enough levee along this red line (indicating), which is 57 miles long and it essentially is the New Orleans perimeter exposure on the lake all the way to New Orleans East, down back toward the Gulf Outlet. This portion of the plan here, including enlarging of the pumps and the construction-- additional construction of the levees would cost \$100 million preserving this condition and--insuring this condition not to go into the 76,000 acres of land in the city of New Orleans.

I agree we must protect the people who are now living within the levees. We are committed to do this. But the undeveloped, unprotected, present swamplands in the Lake Pontchartrain Basin should stay in their natural desirable state.

(Applause)

The few people presently living in these lowlands are now and have always been aware of the risks and the exposures to floodwaters. Incidentally, I am one of these. New persons who would be moving into these areas would also be knowledgeable of the same facts. There are certain construction techniques and safety precautions that can be taken to reduce their losses during these very highly unusual times. But, most important, the basin itself would maintain its present natural integrity which is the very reason they are attracted to it in the first place.

In our past society and its progressive engineering and advanced industrialization has implemented two programs which have greatly affected the natural Pontchartrain Basin. One is the construction of the levees on the Mississippi River. This has prevented the river from naturally overflowing into the lake; thereby substantially affecting the lake ecology. Second, is the construction of the gulf outlet. This has removed the natural marsh barriers and the gulf tide flows directly into the lake, greatly affecting its salinity.

These projects were designed and implemented for good reasons; but without consideration to the effects on the Lake Pontchartrain Basin, good or bad, both were rightly done in the name of safety and economics. But, somewhere we must stop. I ask reconsideration of your recommended structure program. Implement a portion of the high level plan at this time, raising the existing levees to protect the people that we have already committed to. Save the \$200 million, but most of all, do not risk destroying the Lake Pontchartrain Basin in the name of--and I quote from the report itself--"Urbanization of the Project Area."

Thank you, sir.

(Applause)

COLONEL HEIBERG

Thank you, Mr. Perez.

Mr. C. J. Seit. Is Mr. Seit not here?

(No response)

Mr. William A. Fontenot, Delta Chapter, Sierra Club. Mr. Fontenot will be followed by W. B. Wallace.

MR. WILLIAM A. FONTENOT (DELTA CHAPTER OF THE SIERRA CLUB):

Colonel Heiberg, elected officials, guests, people, the Delta Chapter of the Sierra Club that I am representing today covers the area of Louisiana and Mississippi, and I am speaking for that organization.

We are alarmed to see the Corps of Engineers attempt to undertake a project that lacks strong local support; a project which is not economically justified in many areas; and which will have adverse economic and environmental impact on Louisiana and other states in the Gulf of Mexico.

Today we have been told how residents and officials within the project area are opposed to many portions of the project. Everyone is in favor of protecting developed areas. This project has run into problems because the Corps insists on basing many of the benefits of the project on land reclamation and future developments in wetlands areas. The theory being that getting new lands on the tax roles would supposedly create new jobs, lower taxes, or at least, make more taxes available for goods and services.

New developments require certain community services such as schools, water, and fire protection and the cost of providing such services in new developments far exceeds the revenue generated by that development.

Virtually all states now recognize 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.

We know that the fishery resources of Louisiana are directly dependent on our wetlands for their food supply. Many important species, such as shrimp, crab and menhaden must spend part of their life cycle in fresh and brackish marsh.

There is some difficulty in assessing the estimated productive value of Lake Pontchartrain and Borgne and their related wetlands.

This is not a static system but one which is alive and changing from day-to-day and month-to-month. In the area of environmental consideration, the Corps of Engineers final environmental statement is little more than a catalog of plants, animals and fish that can be found in the New Orleans area. Unfortunately, the Corps tells us nothing about the estimated numbers, food and range requirements and, most important of all, the Corps of Engineers deliberately failed to tell us how this project and the planned urban industrial development will affect these various resources.

Recent studies of blue crabs along the Gulf Coast of Florida shows that some crabs migrate as much as 140 miles during a year. This startling discovery clearly indicates the destruction of wetlands in Louisiana will very likely have a detrimental impact on the fishing resources of Mississippi, Alabama, and Florida. Is this rather important omission a sign of incompetence on the part of the Corps of Engineers, or merely an oversight on the part of those who limited the scope of the environmental study?

The 73,000 acres of wetlands within the project area presently have an average elevation of 1.5 feet above mean sea level. Studies by the Soil Conservation Service and the Corps of Engineers clearly shows that the soils in these wetland areas are unsuitable and unstable for any type of urban and industrial development. These studies further show that once these areas are drained, the humus soils will compact until they are from 5 to 12 feet below sea level.

Once drained, these areas will have the greatest potential for flooding of anywhere in the New Orleans Metropolitan Area. That is a potential even greater than the areas that are presently developed.

It is also clear that during a hurricane of the force of Camille the levees along the Mississippi River-Gulf Outlet and the Gulf Intracoastal Waterway will very likely be topped or breached.

One of the best ways to avoid excessive loss of life and property is to limit development in flood prone areas. The Corps has chosen the other path by encouraging intensive development in one of the largest flood plains between the Mississippi River and the Gulf of Mexico.

It should be pointed out that the 73,000 acres of wetland that are located within this project are greater than the number of wetlands found in the entire State of Mississippi, and we are affecting a resource that has not really been measured.

Thank you. I'd like to request, aside from this, that the Corps of Engineers consider sending a topographical map to the President's Council on Environmental Quality that will show elevations within the project area and that will also show the elevations that can be expected to occur once these areas are drained. I'm speaking of the wetland areas that will be drained and developed, primarily in New Orleans East and St. Bernard Parish and St. Charles Parish. This will give the CEQ some idea of what sort of area we're talking about and what it might look like after the project is completed.

Thank you.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Fontenot. Mr. W. B. Wallace, who will be followed by Mr. Allen F. Normand. Mr. Wallace has been given 10 minutes.

MR. W. B. WALLACE (WALLACE MENHADEN PRODUCTS, INC.):

My name is Borden Wallace, and I represent a commercial interest in the menhaden industry.

The menhaden, an oily, bony, herring-like fish, was found when settlers first came to this country to be used by American Indians as fertilizer in their corn fields. Commercial ventures in the industry date back more than 100 years; thus, menhaden ranks among the oldest sustainable fisheries in the United States.

Nutrition technology has recognized the value of the fish to be greater than used as fertilizer and menhaden today is processed into three products: meal, condensed solubles, and oil.

Menhaden meal is a high protein feed ingredient for poultry and swine. It provides essential sulfur amino acids for optimum growth for which vegetable protein cannot be

economically substituted. It has a high energy value, is a natural source of phosphorus and selenium, and provides a yet unidentified growth factor.

Solubles, which is a by-product of the wet reduction of fish, is similar to the meal in nutritional value and is also used as a feed ingredient. Menhaden oil, being polyunsaturated, is desirable as a margarine ingredient, and accounts for approximately one-third of all US exports of nonedible fishery products.

Considering the international shortages of proteins and oils, it can well be envisioned that such nutritionally valuable products will be used for human consumption in the United States in the foreseeable future.

Menhaden landings in 1974 totaled almost 2 billion pounds, which represents 44 percent of the total for all species, including shellfish, which are landed annually in the United States. Of this figure, 67 percent of the menhaden were landed in the gulf, and of this 1 1/3 billion pounds, Louisiana alone accounted for 83 percent.

The menhaden landings contributed by Lake Pontchartrain last year was approximately 44 million pounds. In order to relate this catch data to the consideration of the proposed hurricane protection project, it is necessary to examine, somewhat, the life history of the menhaden.

The adult fish spawns from late October to early March offshore at about the 50 to 60 fathom curve. The ensuing larvae actively move inshore in a northerly direction until they enter the estuarine area. It is important to note that the National Marine Fisheries Service indicates this movement is the predominant action with only minor lateral movement along the coast.

Also, in mid-summer and early fall, the juveniles and young adults move out of the estuarines, offshore in a southerly direction. This suggests that the catch in the areas south of Lake Pontchartrain and Chalmette project could serve as an index of the contributions of those estuaries to the fishery.

I will repeat, the landings in 1974 of Lake Pontchartrain fish was 44 million pounds. The ability to support this tonnage verifies that the Lake Pontchartrain area is one of the largest definable nurseries in the state.

Let us now examine the summary of the environmental statement to learn of Lake Pontchartrain's importance in the early life of the menhaden. Darnell is correctly quoted as stating "Most of the remaining abundant species, this includes menhaden, are migratory and spawn elsewhere, invading the lake as seasonal transients."

Consequently, little direct attention is given in the environmental statement to the menhaden. Although the menhaden is a transient in the lake, it is supported for most of its juvenile life by the lake.

Darnell, in his study not included in the environmental statement entitled, "Food Habits of Fishes and Larger Invertebrates of Lake Pontchartrain," also states that, "During field studies menhaden around 100 millimeters in length were frequently captured in great abundance near the south shore of Lake Pontchartrain where wave action was reducing the organic material of the marshy shore to the consistency of coffee grounds. Here a suspension of ground up organic matter was almost always in evidence. The menhaden appeared to be thriving upon this suspended material."

Table 27, in the final environmental statement verifies Darnell's observation by showing that organic detritus comprises 11 percent of the food of the young and 99 percent of the food of the juvenile menhaden. Since "the principle inflow of fresh water into Lake Pontchartrain is from the nutrient-poor acid soils of the pinelands to north," from the environmental statement, this valuable organic detritus must derive from other sources, being outlined in the following statement: "The ecology of Lake Pontchartrain is highly dependent upon an exchange of nutrients, producers and consumers with surrounding marshes, swamps and adjacent bodies of water."

The role of this detritus is so primary that Darnell concluded it serves as an important source of nutrition, directly or indirectly for most of the 35 species which he stated were "the most important species comprising the estuarine area." It is also fundamental that one of the major contributing sources of this detritus is the marsh areas as outlined in table 22 of the environmental statement.

With the previous statements clearly in mind, I would like to quote from the final environmental statement: "All of

the marsh and swampland made available by the project for conversion to urban use will be lost when local interests choose to drain and fill these areas. A decrease in release of detrital materials from the leveed marshes will affect the secondary productivity of the Lake Pontchartrain area. Organisms which use detritus will decrease in numbers, but this loss will not be extensive."

Considering that 44 million pounds of menhaden, which could be directly associated with this estuary was landed last year, and that the menhaden is only one of about 35 of the most important species from this community, the above quote from the final environmental statement is totally false and irresponsible. Loss of marsh will result in a proportionate loss in production.

With respect to the three proposed complexes, a final statement should not be made at this time since sufficient data does not exist on the abilities of the various transient and migratory species of Lake Pontchartrain to swim against the high water velocities to be induced by the complexes. Evidence in the literature regarding the role of tides in the distribution of larvae is contradictory. And other evidence clearly shows the existence of both passive and active seekers of the estuarine areas. To presume that these complexes will have no effect on those active seekers is certainly premature.

In addition, the statement, "these structures will not be closed until a hurricane enters the Gulf of Mexico, threatening the Louisiana coastline," needs to be more clearly outlined. As it presently reads, the gates could be closed for considerable periods, including those times when menhaden leave Lake Pontchartrain. A large number of 1- and 2-year-old menhaden, as well as the juveniles and young, use the lake in the summer for feeding. Retention of these fish could lower landings, but more important, could possibly have a profound adverse effect on spawning.

With respect to the St. Charles project, considering that the possible loss of marsh and consequently, production is extensive and would have a major effect on the ecology of Lake Pontchartrain, I would strongly urge that the status be changed from indefinitely deferred to permanently abandoned.

(Applause)

With respect to the construction of levees along the south and southeastern shores of Lake Pontchartrain; sampling stations in these areas set up by Tarver and Dugas in their study of the Rangian Clam record dissolved and suspended solids levels to be higher than the average for the whole lake. This evidence clearly demonstrates that those areas do indeed contribute to the lake's productivity. Consequently, I urge that no action be taken in these areas which would further reduce the contributions of nutrients.

With respect to the Chalmette Area plan, I will again state that loss of marsh can render direct and proportionate losses in energy exchange. The Chalmette plan would cause marked decreases in productivity of the area and should be abandoned.

(Applause)

I sincerely believe that the reasoning behind the proposed projects should be examined. US Department of Interior statistics indicate that the chance of a major hurricane crossing the New Orleans area is less than 5 percent annually. However, if carried out, proposed loss of marsh and changes in physical features is guaranteed, 100 percent annually. A large segment of the New Orleans and Lake Pontchartrain population has chosen this location for their businesses and homes because it derives income directly or indirectly from the natural products of these wetlands. If we support the present hurricane protection project, we elect to protect these businesses and homes from possible flooding at the expense of the very reason why these businesses and homes are here, the wetlands. This rationale, to me, appears to be quite illogical. I strongly urge the abandonment of the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project as it presently stands.

Thank you.

(Applause)

(Whereupon, the above statement was offered into evidence and marked for identification as Exhibit No. 104)

COLONEL HEIBERG:

Thank you, Mr. Wallace. Mr. Allen F. Normand, Village de l'est Improvement Association. He will be followed by Paul L. Willis.

MR. ALLEN F. NORMAND (VILLAGE DE L'EST IMPROVEMENT ASSOCIATION):

Thank you, Colonel Heiberg. As was stated, I am President of the Village de l'est Improvement Association, and since our position was presented this morning and it was submitted in letter form to the New Orleans Levee Board, I won't repeat it, except to state that we are definitely for the protection plan as it stands. And the only reason why we're really here today is because too many times it's the people who are for a project never show up. That's true. I bet if we had a show of hands of the people who were for the project--they just did not come here today and we were hoping that this just wouldn't happen.

What I should have done was took and asked the association to send at least 15 or 20 people from our area here, but I didn't do that.

I'm only sorry that I can't talk with the emotion of the Mayor from Slidell and make opinions sound like fact, or talk like the speaker this morning, the Honorable Senator Scogin, who, when confronted when a very well planned, I thought, technical presentation, tries to make fun of that presentation with some "woody, homefolk type sarcasm," which is perfectly all right. I'm sorry I can't do that. It's just not in my nature.

I'm just an engineering scientist and I have to sift out the real facts of what this project would do. From the mass, as I consider, mass of misinformation that might be presented in an open forum. I think it's good. I've learned a lot today here. But my job really requires that I sift the facts out.

I have to compare this information with what the Corps of Engineers presented to us this morning and then, also what the Fish and Wildlife presented, and others, and try and determine what will give the greatest good for the greatest number of people and try and determine, maybe, that the engineers who did this study haven't forgotten something that might hurt us later on.

If all of this comes out even and they haven't made any mistakes, and I don't think they have, I hope that after all the emotionalism is put in "File 13" and the misinformation has been discarded, that the true facts will give a green light to this project. It's only a hope. We'll only know after the hearing is over. But that's about all I can say here and I thank the Corps of Engineers and the public forum for this opportunity.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Normand. Mr. Paul L. Willis, who will be followed by Clarke Harper. Mr. Willis. Is Mr. Willis here?

(No response)

COLONEL HEIBERG:

Mr. Clarke Harper. Mr. Harper will be followed by Robert J. Alonzo.

MR. CLARKE HARPER (VENETIAN ISLES CIVIC AND IMPROVEMENT ASSN.):

I'm Clarke Harper, President of the Venetian Isles Civic and Improvement Association.

This association represents 125 residents and property owners in Venetian Isles, which is located in eastern New Orleans at the Chef Menteur Pass.

At a recent meeting of the general membership, it was voted unanimously to oppose the construction of the barriers in The Rigolets and the Chef Menteur Pass because of the overall impact they would have on Lake Pontchartrain and the surrounding area.

Choking of the Chef Pass and The Rigolets will undoubtedly have a serious effect on marine life in Lake Pontchartrain and will aid in trapping water that will top the levees in a hurricane situation. Once the water gets into the lake it will not be able to get out when the wind shifts. This would keep our area under water for days.

This association does endorse the high levee plan in which the existing levees would be raised to provide the protection necessary. It appears that under this plan there would be no change in the ecology of Lake Pontchartrain.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Harper. Mr. Robert J. Alonzo will be followed by Mr. and Mrs. Marion Fannaly, Sierra Club.

MR. ROBERT J. ALONZO (EAST ORLEANS CIVIC COUNCIL):

My name is Robert Alonzo and I'm President of the East Orleans Civic Council.

We have a letter to the Corps of Engineers.

"The East Orleans Civic Council, representing some seven civic improvement associations in New Orleans East has passed a resolution supporting the barrier concept flood protection plan as specified in the US Corps of Engineers Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project. It is our belief that this project is of vital importance for the protection and growth of the entire New Orleans area and we encourage the cooperation of all local, state and Federal governmental agencies to begin the implementation of this project as soon as possible.

Thank you.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Alonzo. Mr. and Mrs. Marion Fannaly. They will be followed by Theo F. Ratliff.

MR. MARION FANNALY (BATON ROUGE SIERRA CLUB):

Good evening, ladies and gentlemen. My name is Marion Fannaly, and I'm representing the Baton Rouge group of the Sierra Club. I would like to present a statement on the plan.

The Lake Pontchartrain and Vicinity hurricane protection project has the laudable objective of preventing or reducing the destruction caused by hurricanes, and certainly no one of us here can argue that this is not desirable. However, there exists grave doubts as to whether the means of this project can be justified by its end. It is the opinion of many of the scientists and concerned citizens of Louisiana that this project will cause more harm to the state than the hurricane it is designed to protect against.

(Applause)

We would like to discuss the project in two separate phases: First, the improvement of existing protection levees around areas of high population and the construction of new levees and other flood control structures, such as the barriers.

The Baton Rouge Group of the Sierra Club has no objection to the proposed improvement of existing levees in Orleans and Jefferson Parishes where they are needed to protect areas of great population density. Indeed, we think that these are necessary and should be raised without delay. These areas are highly developed already and improving the existing levees will not adversely affect the environment.

However, we do object strongly to the construction of new levees and flood control structures. The construction of new levees around the eastern marsh areas will insure their eventual development.

If I can refer you to the map over here on the three areas (indicating). Specifically in the Chalmette area, according to data I gathered from a gentlemen from the US Fish and Wildlife Service, 18,000 acres in that area of undeveloped marshland will be surrounded by the levees.

In the New Orleans East area 14,000 acres of undeveloped marshland will be included in that levee.

And, in the St. Charles area, which is temporarily deferred, there are 25,000 acres of marshlands in which there is nothing to protect more valuable than cypress trees; and, certainly cypress trees seem to thrive on water.

Listening to the testimony and statements here today, one can only come to the conclusion that the primary purpose

of this project is not flood protection per se, but land development.

(Applause)

Furthermore, the construction of levees around these marsh areas and its subsequent development will increase rather than diminish the threat of hurricane damage. This will occur because this will place more areas in the direct path of the hurricane.

Presently, the marsh areas bordering New Orleans serve as a buffer zone against hurricane storm surge and mitigate the effect of this surge on the populated areas. If we remove and develop these marsh areas, this protection is gone and the people that inhabit these areas will then receive the full force of the hurricane surge should the levees fail.

Leveeing of these areas will also destroy the value for fisheries production and recreation. The losses, both potential and immediate, will far outweigh any gain.

The proposed barrier and lock complexes at The Rigolets and Chef Menteur Pass are a monstrous and irresponsible boondoggle comparable to the Mississippi River-Gulf Outlet. Their supposed purpose is to prevent a storm surge from raising the level of Lake Pontchartrain and flooding the city. This sounds nice, but as has already been pointed out today, there's a whole lake full of water, 640 square miles of it out there, which is quite capable of flooding New Orleans if the levees should break.

The lake is large enough to produce a surge within it that would dwarf the effect of any water entering through the passes. And I personally, cannot see where the Corps obtained its projections of 9 to 13 feet of storm surge coming through that pass. These barriers will be only expensive placebos and will not add anything of value to hurricane protection.

Much more in the way of flood protection would be gained by filling in the Mississippi River-Gulf Outlet or placing some sort of flood control barrier across its end. We have already seen the damage that can be caused by a storm

surge coming through this waterway. We don't have to rely on projection. It is doubtful that construction of levees along its banks will do much to prevent flooding from storm surges.

The biological effects of these barriers on the lake will be enormous. They will certainly interfere with the exchange of waters with Lake Borgne, thereby reducing the salinity of the lake. If this effect is severe enough, it would severely restrict the range of many estuarine species in the lake or even eliminate some of them completely. It may also interfere with migration of many valuable species such as the blue crab, penaeid shrimp, speckled trout and menhaden, which move into the lake seasonally and are dependent upon it for a portion of their life cycle. The potential harm that these barriers may cause to the ecology of the lake is tremendous.

In summary, the Baton Rouge Group of the Sierra Club supports the improvement of existing levees in Orleans and Jefferson Parishes. However, we are strongly opposed to the building of new levees which would increase the areas vulnerable to flooding and storms. We are also adamantly opposed to the construction of barriers across the natural passes of the lake as these barriers will provide little or no protection against hurricanes but will radically alter the ecology of Lakes Pontchartrain and Maurepas.

Thank you.

(Applause)

(Whereupon, the above statement was offered into evidence and marked for identification as Exhibit No. 43)

COLONEL HEIBERG:

Thank you, Mr. Fannaly. Theo Ratliff. I believe that's Theodore. To be followed by Joseph W. Smollen III.

MR. THEO RATLIFF:

Colonel Heiberg, distinguished guests, ladies and gentlemen. I'm Theo Ratliff, just a citizen of our fine State of Louisiana and of St. Tammany Parish, Slidell, Louisiana.

I'd like to thank the Colonel for the 5 minutes he's given me so generously to talk. But before I make my remarks, I'd like to address a question to Honorable Scogin.

Representative Scogin, Mr. Guizerix, Colonel Heiberg's engineer, said to me at lunch today, he said this: The barrier project is going on regardless of what we say. So why are we here today? That's a good question. I'd like to know. If it's going on anyway, why are we here today? Wasting our time, wasting his time that's so valuable? Good question.

Colonel, I know my remarks will not be considered, especially after what I heard at lunch. But, I must say them anyway.

I can't give a full report of what I'd like to say because 5 minutes is not near enough, I assure you. Representative Scogin wasn't given the time he needed either. Of course, the Corps had all the time they wanted.

(Applause)

Colonel, you can tell by my waistline, I like to eat. I eat pretty well, too. But I don't like to have something forced down my throat that I don't like--that's not tasty--that I don't want--that's not good for us. I can remember when I used to have castor oil forced down my throat. My mother promised me a cup of sweetened coffee if I'd take it. I did. For years after that I wouldn't taste coffee. That may have been good for me too if I had never learned to drink it, but--

You know, we're talking about the impounding of water and not the lowering of the water levels. The Colonel wants to build the barriers because he says it will lower the water level. I think he forgets about all the water that's going to be coming down from the rivers up above. The waters going to be impounded. The water that's going to flood St. Tammany Parish and going to flood St. Charles Parish and going to flood other areas. Let's build some levees.

(Applause)

Let's build some levees. Some levees that will do some good. Let's follow those signs back over there that are

being held up so high back there that make sense. What are we going to do by building these barriers? We're going to kill shipbuilding on the lake. One man told me today: I'd like to build a shipyard, but if I can't get my ships out and in, why?

We're going to kill new large industries on the lake because they are not going to be able to get out effectively. We talk about wanting industry and then we come along with something like this trying to kill it.

We're going to kill much of the ecostructure of the wetlands. Regardless of what Colonel Heiberg's eco group said in their report, you've heard all of these people today who are ecologists coming up here and standing before us say: It ain't good. Do you like my grammar?

Representative Scogin has proven that the levees will do the job from what he said. Several others have said things about the levees doing the job. Why are we trying to dam up and kill some lakes?

Colonel, don't force us as citizens to swallow your pet project--something that you want done. Something that seems so infeasible. Give us some true, new considerations. Don't force us to swallow something that's not good for us.

You know, we talk about building dry lands to build projects--to build houses and other things on--either that or we've building an empire for the Colonel and the Corps of Engineers and the Department of the Army. Which are we doing? I don't know. Maybe both. But I don't like to see us building empires for anybody. I say this: Let's have a referendum. Let's have a referendum--not on the money this time since that seemed to be what they blamed the other referendums on. Let's have a referendum on whether we want to build this project.

(Applause)

Colonel, there's a lot more that I could say, but I won't. But let's look at the other signs that are being held up over there. I think they are worthy of reading. I think they are worthy of saying. I dared Mrs. Scogin to hold one up behind my head while I was talking a while ago, she

didn't, of course. But it's so true--what some of those signs are saying. Let's think before we go into the barrier project.

Thank you.

(Applause)

COLONEL HEIBERG:

Mr. Ratliff, there's one thing you sure did prove and that's there is nothing wrong with our P. A. system if you work at it.

(Laughter)

Mr. Joseph W. Smollen III will be followed by Mrs. Kenneth Solberger.

MR. JOSEPH W. SMOLLEN (YMBC, NEW ORLEANS):

Gentlemen, I'm Bill Smollen. I'm President of the Young Men's Business Club of Greater New Orleans. We appointed an Ad-Hoc Committee specifically for this public hearing. They had available to them the environmental impact statement, the various statements of the dredging work, this type of thing. The committee, after a number of meetings and a number of debates, brought to the Board of Directors of the Young Men's Business Club, a resolution which we passed on February 20th. I've given copies to your secretary for the record. I would not bore you with the entire details. I would read you the meat paragraph:

"NOW, THEREFORE, BE IT RESOLVED, that the Young Men's Business Club of Greater New Orleans, Incorporated, request the Corps of Engineers to conduct a thorough study of the feasibility and practicality of the alternate proposal, known as the Shaw Plan, and urges without delay or interference the scheduled dredging work and the construction of the other hurricane barriers included in the present proposed Lake Pontchartrain hurricane protection plan."

Thank you.

(Applause)

(Whereupon, the above referred to resolution was offered into evidence and marked for identification as Exhibit No. 105)

COLONEL HEIBERG:

Thank you, Mr. Smollen. Mrs. Kenneth Sollberger will be followed by Edith Eckert.

MRS. KENNETH SOLLBERGER:

Colonel Heiberg, at this time I would like to present a statement on behalf of the St. Tammany Environmental Council and at a later date read the St. Tammany Sportsman's League Statement on behalf of Mr. Henry Ferrer.

Colonel Heiberg, members of the staff, ladies and gentlemen. I'm Martha Sollberger, Secretary of the St. Tammany Environmental Council.

The St. Tammany Environmental Council has studied thoroughly the final environmental impact study of the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection plan. We remain adamantly opposed to this project for the following reasons:

One. The majority of voters who must live with this project have not once, but three times, expressed their opposition at the polls. Contrary to the US Corps of--you--this is a vote against the project, not the source of the revenue. Numerous camouflaged terms are used in dealing with the funding aspect of the hurricane project such as "other state sources of revenue," or the ever popular misnomer "Federal funds." All of the terms should be more expressed as "taxpayers' funds." Should the project come to be, it will be financed by those same voters who opposed it three times at the polls, just as if Colonel Heiberg had personally stuck his hand down the pockets of these voters.

Secondly, as the final EIS states, the project will destroy many thousands of acres of viable marshland. The four-lake system of Maurepas, Pontchartrain, Catherine and Borgne--the MPCB Estuarine System--is one of the two most productive estuaries in the United States.

The inner workings are extremely complex in nature. At present, this estuarine is under severe attack by some 40 projects, either underway or presently proposed, including the Lake Pontchartrain, Louisiana, Vicinity hurricane protection project.

Noted ecological experts have predicted the collapse of the MPCB estuary should the majority of these projects be completed.

In addition, there has not been a study performed and completed to determine how much marsh acreage loss or how many of these projects the MPCB estuary can tolerate before it collapses. When the estuary collapses and we are living around a four-lake cesspool, only then will we know we have gone too far and then it will be too late.

The US Corps' EIS acknowledges the importance of the marsh it proposes to destroy with the hurricane protection project. However, it fails to recognize the cumulative effect on the estuary that this project and the numerous other projects presently underway or proposed may have.

The voters' three oppositions at the polls are saying that they do not want to live around four huge cesspools.

Thirdly, the EIS acknowledges a certain amount of the project as land enhancement; however writes it off because the loss of this marsh is committed to population expansion anyway.

Due to the complexity of the MPCB estuary, who is to say that the speeding up of this expansion created by the hurricane project will not be the straw that breaks the camel's back in bringing about its collapse? Until a comprehensive EIS on the entire four-lake system is conducted regarding the numerous projects, we will not know, will we?

The EIS--fourthly--the EIS appears to build up the protection aspect of this project to the population from a hurricane and plays down the possibility of the project working in reverse. It is a recognized fact that a model 100-year hurricane such as Camille is going to top the levee system and the benefit of the levee system lies in its retarding the tidal surges effect of the storm. This

same levee project is going to retard the runoff of the vast amounts of water that is going to top the levee system, and particularly through the barriers at The Rigolets, Chef, and the Seabrook. In essence, we will have as much water but it will stay with us for a longer period of time.

Five, the barrier and lock system, especially at Seabrook will put an additional strain on the St. Tammany Parish shipbuilding industry. It is almost unknown for a facility to be designed and built which further restricts passage-ways due to widths. This is progress in reverse.

Six, the question salinity alterations for the betterment of the four-lake system is also misleading. While the Seabrook installation may be able to restrict some of the undesirable salt water intrusion created by the Mississippi River-Gulf Outlet, a previous Corps project, the overall salinity problem of the four-lake system is still in question.

In summation, we must all remember that the Corps of Engineers is in business to build levees and dams with taxpayers' dollars. By paying thousands of dollars, taxpayers' dollars, to proponents of the hurricane protection project, such as Dr. Simpson, former Director of the Hurricane Center, as well as extensive press and news coverage and, in general, presenting this project to the people from behind rose colored glasses, it is the strong feeling and belief of the members of the St. Tammany Environmental Council that it would again be defeated at the polls and at public forum.

And in closing, it is the definite opinion of the St. Tammany Environmental Council, the acknowledged and potential adverse environmental and economic impact of the Lake Pontchartrain, Louisiana, Vicinity hurricane protection plan far outweigh the benefits our population may receive in the form of hurricane protection.

Thank you very much.

(Applause)

COLONEL HEIBERG:

Mrs. Sollberger, did I understand you want to make the Sportsman's League presentation this afternoon, too? Mrs. Sollberger, did you want to make the Sportsman's League-- that presentation also this afternoon?

MRS. SOLLBERGER:

Thank you.

COLONEL HEIBERG:

Why don't you go ahead and do that now.

MRS. SOLLBERGER:

Would you like for me to wait until afterwards?

COLONEL HEIBERG:

No, that's all right. We're getting right down to the end. I don't think anyone minds.

MRS. SOLLBERGER:

Thank you. On behalf of Henri Ferrer, who could not make it today, I would like to present the statement for the St. Tammany Sportsman's League.

"Dear Colonel Heiberg: The St. Tammany Sportsman's League has unanimously rejected the Corps of Engineers' plan to build floodgates at The Rigolets.

"This project will destroy the interplay between the lake and the marshes. This interplay supplies 50 percent of all nutrients that feeds the flora and fauna in Lake Pontchartrain. The loss of these nutrients will result in the death of the lake.

"Any man-made project, such as the size of this hurricane barrier, irregardless of ecological studies, good, bad, or indifferent, will have a detrimental effect on the Pontchartrain estuary. This is common sense. Can anyone truthfully say that it will help the estuary? The lake needs all the help it can get and it needs it before we make another Lake Erie out of it.

"This project, if carried out, will certainly change many aspects of our lake, and I say leave it alone. Leave it alone for generations of people unknown to us. Some bordering parishes want to reclaim portions of the lake, developers are draining marshes, increased dredging continues daily. Heck, why don't you just dam it up and let's fill in the whole area with solid waste and forget it ever existed. This would solve the problem and also provide new home sites for the ever increasing population.

"The project as planned will still not protect residents of Orleans, St. Bernard and Jefferson Parishes from a full-fledged hurricane that passes directly over the city. Hurricane Betsy went completely over the existing levees in lower Plaquemines Parish and then there was a problem getting the water out between the levees. You are only making a bigger basin out of the city. Don't do this thing to us. Sincerely, Henri Ferrer."

Thank you, Colonel Heiberg.

(Applause)

(Whereupon, the documents presented were submitted into evidence and marked for identification as Exhibit No. 44)

COLONEL HEIBERG:

Thank you. Edith Eckert, St. Tammany Environmental Council will be followed by Mel Menendez.

MRS. EDITH ECKERT (ST. TAMMANY ENVIRONMENTAL COUNCIL):

Thank you, Colonel Heiberg. I'm Edith Eckert, and believe it or not, it's 4:00 o'clock. And I would--Colonel Heiberg, you know, it would be fun for once, if we all could start talking at 9:00 o'clock in the morning when we're fresh and then have the Corps presentation, or whoever is giving the presentation, start at 1:00 o'clock and then by the time our brains are paralyzed and we're feeling as if we just can't listen, you know, for 5 more minutes, we just get to a point where our attention span is--just has collapsed. Also, wouldn't it be nice if we all could sit on the soft seats for just a few minutes?

(Applause)

I tried it; it helps a little. You see, at this hour you get slap happy, so forgive me. I will get serious in a few minutes, I think.

One advantage of speaking at this hour is that most everything's been said and so you can step back and maybe say a few things that you thought up in the middle of the night, deep down in your soul-searching time and there's a chance to say them. Well, stepping back and looking at the situation, well, the first conclusion that I come to is that Bienville set down at the wrong place. He made a real mistake. After Bienville, just thousands and thousands of people followed him and came in and settled and put their life and property in a place that made them potential victims of a hurricane disaster. And then the Corps of Engineers came and put levees on the Mississippi, which made it more attractive, attracting more thousands to set their lives and property down in this place making themselves vulnerable to a hurricane--potential victims of a hurricane disaster.

And then New Orleans filled out the land toward the lake and this was to protect the city of New Orleans from hurricanes and then on that land was put these \$100,000 homes--and I feel sorry for the owner that's bought a home right there on the lakefront--because they are potential victims of a hurricane disaster.

And now, we are asked to support a barrier plan which will make 50,000 acres of land attractive for many more thousands to set their lives and their property down and become potential victims of a hurricane disaster.

Let us also step back and take a look at what the real forces that are at work pushing for a project like this. We have all, since we are from this locality, lived through the days or the hours when a hurricane is out in the gulf and we're, each of us, in a state of having our soul sincere desire saying: Don't send it in on us, Lord. And it's an anxious and we stand there facing ourselves and thinking of our property and think of the damage that this could be. This is one of the forces that is at work. This potential--that we might be the potential victims of a hurricane disaster.

But there are other forces at work for this particular plan. Whenever Federal funds are being brought in for any

project something happens. The bankers, the businessmen, many, many people think: If it's federally funded, bring that money in. Another pressure for a project. Whether it is for this particular barrier plan, or for any others which involves changing undeveloped swamp, cheap land into profitmaking land, all sorts of pressures from the people who have invested to make money, and it's very logical that they should care to make money for them, these pressures push for the project.

Then there's a third force, which I'd like to speak about. Pressing for this kind of project. Some little boys, as they're growing up are programmed. They are given trucks and little cranes and mechanical shovels and so on, and their life's thinking--their attitudes are such that whatever problems humanity faces can be solved by engineering it, using this kind of tool. I think we all have a little bit of this in us as we stand, as I did in Mariner's Village, across the lake where they had, oh, 20 trucks digging up dirt and taking it to the top of the levee and dumping this dirt down there and then cranes were busy everywhere, moving piles of dirt. It was exciting to me. And I think this--I mean, so--even--I am not a little boy that was programmed this way--but this is in my makeup too. But some little boys are--oh, no, the buzzer--that's impossible. Okay.

Some little boys--and you've heard them--you know, some little boys over in St. Tammany Parish--Ed Scogin was one of them, whose father took him fishing when he was a little boy and he looked at the ducks and he looked at the water and he got caught in the rain and he learned something about nature and the laws of nature and had a respect for them and an awe for them; and those little boys knew that the salvation of the world does not necessarily come through technological means.

Alright, on another fact. We've been told--we've heard today from the marine biologist and so on that estuaries are fragile, that they can collapse. I would go one step further--and now I'm not feeling very slap happy, but I'm feeling very serious. I would say we have been told by some experts that the very oceans of the world can collapse. Captain Jacques Cousteau has given us about 20 years, if we keep on doing the way we are doing, before our oceans collapse. If oceans collapse, atmospheres collapse and we are all gonners.

Now, I'm not trying to sound like doomsday because I am an enthusiastic, optimistic person and I know that we can turn around in our thinking.

(Applause)

We can turn around in our thinking and I say it is as drastic a turn-around as was called upon the people of Copernicus' time when, for centuries, they thought the earth was the center of the solar system and they had to do this turn-around. It was difficult. It led to a difficult time to turn around in their thinking that the earth was not the center of the solar system, but here this divine universe, our part of it, our solar system circled around the sun. That was hard to turn around in our thinking. Just so, I say we are called to turn around in our thinking that we have respect for ecological laws, respect for the laws of nature. I say these laws are as much a part of the divinity of the universe as Copernicus' laws which we accept today.

Okay. So, I've gotten off on this tract and I'm sorry. This came to me in the middle of the night. At the time of the Egyptians, the Pharaoh was called to turn around in his thinking, and various plagues of little bitty things were sent after him. Frogs were in his bed, frogs got in his eating bowls, gnats and locusts and this sort of thing and he didn't turn around. We are called on to turn around, and please don't take this either as a doomsday prophecy because I believe that we're in the exciting time when we can still turn around in our thinking, and so I will quote from Revelations, in the sixteenth chapter, seven angels--the people who have messages from God are given seven bowls, many of them which are ecological disasters. The second bowl which the angel was to pour out, the results of it was, "and everything died that was in the sea."

I think that we, today, are called upon to turn around in our thinking and not rely and put our safety and security in technological engineering but respect the ecological natural laws which are part of the divinity of our universe.

Thank you.

(Applause)

COLONEL HEIBERG:

Thank you. Mr. Mel Menendez, Greater Gentilly Civic Council, Incorporated will be followed by Herbert O'Donnel. Mr. Menendez.

MR. MEL MENENDEZ (GREATER GENTILLY CIVIC COUNCIL):

My name is Mel Menendez with the Greater Gentilly Civic Council, Incorporated.

We are opposed to the barrier plan. We are in favor of the Shaw Plan. Also, we do not believe that the millage which we voted for city projects should be diverted against the will of the people to other plans.

We wrote to the public relations man of the Levee Board who stated that because of the Hebert Bill they could do this. We also wrote to Representative Hebert. The public relations man has not answered our letter or given us a copy of the bill. Representative Hebert said that he knows nothing of this Hebert bill, but he thinks that they are referring to one bill where, oh, about 30 or 40 pages in this bill, they had about a quarter of a page where was a section in it pertaining to Plaquemines Parish.

Now, gentlemen, for a personal remark. All this will be sent to you in detail, with copies of what I've spoken of. But for my personal remarks, now gentlemen, I believe that when appointed officials disregard the will of the people it's time that we get together and have them replaced so we will go along with the democratic process.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Menendez. Mr. Hebert O'Donnel will be followed by Lane A. Carson.

MR. HERBERT O'DONNEL:

Colonel, and ladies and gentlemen. My name is Herbert O'Donnel and I'm a resident of New Orleans all my life. I live in an area lower than the man from Lake Oaks who's worried about the water hurting him.

Like Mr. LeMieux, I'm a civil engineer, a graduate of Tulane and was taught one course by Mr. Baehr. I have no opposition to the levees. I would like to oppose the barriers.

I also would like to state that when you listen to the testimony here you might get the impression that only residents of St. Tammany Parish are here to combat this whole program. This is incorrect. I can name thousands of New Orleans citizens that are opposed to this. The reason they aren't here is because it received very little publicity. There wasn't even mention of it in the morning paper. I think it was a noteworthy event.

I have a very comprehensive report which will be submitted, but just for this purpose, I would read to you a letter that I addressed to the local newspapers, it was not printed. It is too concise, but it will give you a few aspects of the overall program.

"Lest your January 5th editorial go unchallenged, there are more than a handful of organized antis who oppose the so-called barriers. Not the levees. And for many more basic reasons than the obvious damages to the environment. They have not been as vocal because they believe statements in the press and on TV, that these structures have been eliminated from the program. As a civil engineer who lost a home in Waveland to the 1947 hurricane and having spent all my life on Lake Pontchartrain and the Gulf Coast, I oppose these structures on the basis that they pose as much in the way of danger as they ever may in protection and represent 80 percent to 85 percent of the total expenditure of \$300 million, which is a low estimate. The other 15 percent will provide the real protection from wind driven hurricane tides, and this is in the form of the levees which mostly have already been done.

In the US Engineers' own words, and this is in the 1972 environmental statement, and I will have to admit I don't have the current statement, "These barriers will reduce the cross sectional area of the natural passes at The Rigolets and the Chef by 75 percent." This refers to the normal cross sections. Not those when the spillway is opened or when we have flood tides when it spills out of the normal channel. The figure is more like 90 percent reduction of presently available flood evacuation.

Then they state that the operation of the Bonnet Carre Spillway, discharging at design flow, with structures installed, would raise the high water in Lake Pontchartrain to a maximum of 1.4 feet. This is 1.4 feet above what the high tide is outside of The Rigolets and the Chef. Where were around Easter of '73 when an open spillway and a few days of light rain caused tides 4 to 5 feet in the lake? At Mandeville, where I own a home and have for 7 years, we experienced water as high as during two previous hurricanes and this was with no restrictions in these passes. The water was at least 5 feet above normal level.

Now, the same report notes that Lake Pontchartrain covers an area of 640 square miles but drains the watershed of 4,700 square miles. The majority of this water is pumped into by New Orleans and Jefferson Parish, or it runs off via rivers and bayous from the northern parishes into Lake Pontchartrain and then out thorough The Rigolets and the Chef Passes. Is it not unlikely that this superstandard project hurricane would produce rainfall of 10 to 15 inches over a 3-day period? Where does all this go while the gates are closed; or even while they are open for that matter? And don't forget to accomplish anything these gates must be closed 3 to 5 days before the hurricane arrives here; and then how many days will it take to open the gates?

So, we have the lake swollen with rainwater 3 to 4 feet and the tidal surge comes with a hurricane eye. To quote the engineers again, this elevation of 9 feet, which is at The Rigolets on the US 90 Highway, will allow flood surge overtopping for a short period of time during the hurricane. But this overtopping will not significantly affect the water elevation of Lake Pontchartrain. Well, you were told this morning it was at least 1 foot--it could be higher.

With all the unique things that this SPH storm is going to do, it is not likely that it might produce a 20- to 22-foot tidal wave? We have already had them 18 to 20 feet on many occasions and the overtopping just might be significant.

Now, when the northwest wind comes, which is the key to the whole premise of building these things, because otherwise the lake poses no threat to New Orleans at all, we find ourselves with a swollen lake and no way for these waters to be pushed out rapidly as they normally are by a north wind. While they are trying to dynamite the dam

things, flooding of Slidell and New Orleans East will occur. Space will not permit going into other aspects, but I would ask if they are so convinced that everybody is in favor of this, let's vote on whether we want the barriers, not the levees.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. O'Donnell. Next, Lane A. Carson.

(No response)

COLONEL HEIBERG:

Mr. Harry Viosca.

MR. HARRY VIOSCA:

Ladies and gentlemen and members of the press and brother fishermen, if we have any here, I hope to present the fishermen's side of the view on our ecology and how fishing used to be in Lake Pontchartrain and it seems to be getting worse every year.

I've spent a lot of my time when I was a youngster in Mandeville--we had a home on the beach, and the 1915 storm, or rather, the 1908 storm, wiped it out. A couple of years later we rebuilt it and another storm came and did the same thing and it is dangerous to be too close on the water.

Of course, fishing is a big problem and the ecology part of it is something we should consider seriously. We have all sorts of organisms, microscopic forms that come in and larger forms feed on them, shrimp feed on the larger forms and so forth until the biggest fish gets the big meal.

Now around about 1915, the lake was really loaded with fish. We could go almost anywhere and get fish. I don't know how many people here could remember that. I just passed my 78th year young, and I can remember way back just what was what.

I'll give you an idea. For instance, I went crabbing with my brother at the London Avenue Canal, right in the lake,

and we had about 8 or 10 crab nets and in no time, probably a half hour, we filled three or four sacks of very large crabs and we put them all in the boat and then we jumped in the boat and the boat sunk. So, what we did, we got back on the wharf and caught them all over again, but we didn't take as many because we didn't want the same thing to happen. But those things were common in those days and there's no reason why it shouldn't be the same today.

Our ecology has been seriously affected and we ought to try to find a way of getting things back to the way they used to be.

At Northshore, around 1915, at that time we could go out and catch all the sheephead and redbfish you could bring home, right on the bridge, in a skiff. I used to travel Mandeville on a train and on numerous occasions, I guess they'd be 200 boats and every one of them had their poles bent with fish on them and we caught more redbfish in those days than sheephead. Sheephead is a tough fish to catch. It's the only fish that I know of that you have to hook them before you feel the bite. It sounds silly, but it's true and only in Lake Pontchartrain. All you feel is a little knock--like that--(indicating)--no movement, just that knock and--well, it's too late, the fish is off. Evidently he spits the hook out after he eats the bait, so the only way you can catch him is to keep moving your line up and down and it takes a lot of skill to catch them and there are not many people left--it's almost a lost art today to catch sheephead at that bridge. It's different in other parts of the lake.

You could go out in the lake and get croakers. They used to school up in tremendous schools. There would be red water, oh, maybe about a block wide and several miles long and all summer long you could go in those places and catch big, full croakers. But things are different now. They have a lot of muddy water. The lake is pretty well polluted and the people can't go swimming on this side of the lake.

Well, I might say this while I'm in that area. I'm not opposed to this Industrial Canal Lock on Lake Pontchartrain there--the lake end of the Industrial Canal. I think that's almost a necessity. We have to protect those levees. But I don't think that would affect the environment at all. Well, not much anyhow. I am opposed, though to not making the locks at The Rigolets or any

other stream wide enough so that we could have a full flow of water at least equivalent to what it is now, no less. It would be a big job, I know, but we ought to try to find out a way of doing that if we're going to have to do that. Personally, I like to see things the way they were years ago and if it's possible through our ecologists and the people in our fisheries to bring it back, or at least try. We need certain kinds of food, fresh water-->Brackish water grasses and plenty clams in the lake because the clams purify the water. They feed on sediment and so forth and they could clear up the lake in a short time in the summertime.

Well, I just made these notes. I don't think you could compare the storms in Lake Pontchartrain compared to the hurricane on the Mississippi Gulf Coast. The Gulf Coast has, maybe, as much as a hundred miles of water pushing into the Gulf Coast and when the wind changes, after the storm center passes, you have such a tremendous amount of water there and Lake Pontchartrain, the biggest part of it has, maybe, 35 miles or something like that. Not like you have on the Gulf Coast.

Well, that's the main thing I wanted to say. The poor fisherman seems to be neglected. I didn't hear much about the fisherman here. Okay, I thank you.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Viosca. Before, Mr. Ron Guth, the City Attorney for the city of Slidell, who had asked to be heard later.

MR. GUTH:

Do you mean now or later?

COLONEL HEIBERG:

Well, this is later.

(Laughter)

MR. RON GUTH (CITY ATTORNEY, SLIDELL):

Colonel. Edith, I thought you had a mental turn around over there; you were sitting among those Corps people. I'm glad to find out you didn't.

(Laughter)

Colonel, we appreciate another opportunity to participate in our government. Your handling of the hearing was, on a whole, very fair and most appropriate under the circumstances.

I compliment most participants in the hearing for an orderly, respectful and very professional presentations.

Now we are left to see whether this exercise, and to quote Mayor Cusimano, "a bone thrown to the voters," or a real exercise in representative government. If the Corps functions like the elected representatives, which you heard today, who must daily face public opinion and react to it, the result of this hearing would be most clear. The barrier plan would not be implemented.

(Applause)

May we summarize, just for a minute, the indisputable principles that we learned here today, six in number.

No. 1, the Corps has not and may never modify the hurricane barrier plan to correct deficiencies pointed out by opponents for over 10 years.

No. 2, three of the five parishes involved in this hurricane barrier plan and protection system oppose today, and have opposed the plan.

No. 3, environmentalists unanimously, across the board, say that the plan is so risky to the environment that it should not sensibly be continued.

No. 4, equally qualified and honest men, professional engineers, have such different opinions as to the same fact concerning the barrier plan that the plan must continue to be reviewed and not implemented.

No. 5, sportsmen unanimously oppose the barrier plan.

No. 6, and maybe the most important, public trust in this area has been violated time and again. Opponents of the present system have spoken for years and years and years. We are here again today. And I'm sure we'll be here tomorrow.

Colonel, a vote in this room would probably indicate to you that the majority oppose the plan. Such a vote, and the results of that, and your deciding to implement or not, would probably be unfair. It's not more unfair, however, than the results of three direct votes against the plan being ignored. Colonel, we ask the Corps of Engineers not to push the opponent into legal action.

Thank you.

(Applause)

COLONEL HEIBERG

Thank you, Mr. Guth. Representative Scogin. Sir, you said that you would like to be heard again at the end.

MR. SCOGIN:

Well, only if everyone is through.

COLONEL HEIBERG:

Yes, everyone has had an opportunity to--that I know of. Is there anybody else that put in a card that we lost? That wants to be heard?

(No response)

MR. C. EDWARD SCOGIN (SLIDELL):

I just have a few comments. Probably won't take more than 8 or 10 minutes. A few statements concerning some of the comments.

First, in defense of Colonel Heiberg, himself, I want you to know that I've been dealing with him for some while. He's a perfect gentlemen.

(Applause)

He came here, I think, into this thing some while back, not too long ago, I believe, as I recall, he's probably the fourth or fifth Colonel that I have negotiated with in the last 10 or 12 years.

A few remarks about some of the comments that I heard, since the first speaker, whose name I don't recall, mentioned tilting in the lake--the tilting effect. I want you to know that tilting can and will occur regardless of the closures with some or less water. The tilting can still occur. The same things can still happen.

I want to also let you know that in Vicksburg I was informed that it's possible that you'll get 3.7 foot of water--and I have those figures from Vicksburg--in the lake, even with the closures; with the overtopping, the possible opening of the salinity control structure at Seabrook and the other--the water that gets in before the closure is affected.

They also said that high cost prevents the building of the higher levee system. Higher costs. And I have, many times, asked for these figures on this particular thing and they said: "We have reviewed it and we have determined that it costs more to do this than it would to build the barriers." I've never seen any figures on this. I don't know if anybody has any, but I have never seen them. I have requested them many times through the years.

The second speaker said that during construction a dry bottom would be necessary. I agree with that. You're going to have to have some closures. Now, I want to point out to you that these structures are not navigable. For you that might think they are--you cannot go through them. Even when they're open, they are not navigable. You may accidentally get sucked into them, but you cannot navigate them. Only the canals, the structures that bypass them, are the navigable portions.

The map indicated a solid structure in St. Tammany Parish to the White Kitchen, which is Apple Pie Ridge. Actually, the only solid construction goes to Prevost Island, which is 2 miles into my parish, and ends exactly where the Mobile District of the Corps of Engineers starts and the New Orleans District stops.

I received a letter several days ago stating that: We don't know why you weren't told this before, but in 1972, we decided we'd put a couple of little things, one over by the White Kitchen, one up to the West Pearl River, and one near the Oak Grove Cemetery. That's where my mother and father and my brother and sister and my grandparents are buried. It's 14 foot above sea level. I don't know the need for one at the Oak Grove Cemetery, which is about 9-- about 3 or 4 miles up Highway 190 east from the White Kitchen.

He pointed out the reason for the abandonment of the St. Charles portion of the levee is the scenic rivers, two rivers placed in the Scenic River System and, of course, they cannot abridge state authority there. Perhaps, each district works a little bit different. The Mobile District doesn't have any reservations about abridging the Louisiana Natural and Scenic Rivers; none at all, they've been in the Pearl River constantly since it was placed in the Natural and Scenic River System--constantly. And will be back in it--I want to let you know--that project is continually authorized. It's in the system. It clearly states that it prohibits the things that they are doing, but they are doing them. So, perhaps one has a different set of standards it follows from the other. I don't know.

I believe that what you are looking at is in theory only. That this is a great experiment. I expect that possibly it would be quite an engineering feat. this project in The Rigolets, if indeed--if indeed, that's where those flood-gates are--in The Rigolets. There's a possibility they may not be there. I'll get to that a little later.

The second speaker also stated that the locks at Seabrook would be in operation 7 hours out of every 24. That remains to be seen.

The sill at The Rigolets is 13.2 foot unless that's been changed. I was told that 5 hours per day for 15 days, and for 15 days there would be no need for the locks at all there. I was told by another colonel, prior to Colonel Heiberg, that they would be in operation 12 out of every 24 hours and not--he did not give me anything about only being in use for 15 days out of 30. So, apparently that's been changed.

The environmental speaker talked about lake salinities. I think possibly the alteration that you'll get from the structures, whether it be 15 percent of 20 percent as the '72 environmental impact statement stated that it would be, may not be of great significance because the alteration there, as I pointed out earlier, has already occurred. The lake is--the salinity there has already increased, and I'm using their figures again, given to me in Vicksburg, 200 percent each year in the low inflow years and 400 percent in the high inflow year. This has killed the estuaries behind the sand spit that surrounds the lake that at one time had saw grass, needle grass, et cetera, many duck pines. These have become open water because of the putrefaction of the vegetation there.

The fourth speaker talked of spoil disposal. We heard little comment from people on spoil disposal today. We're hoping we won't have to have spoil disposal in that particular area and that may be the reason.

The Department of Public Works, Mr. Theis, read a letter to Heiberg stating the Department of public works--public works--public works, is in favor--although I do know two members of the Department of Public Works who are decidedly not in favor whose names I am not at liberty to mention.

Mr. John Lambert, a very dear friend of mine and a member of the City Council in New Orleans, said he believes that it would be no great harm; that he thinks these are competent people, and perhaps they are. The St. Bernard people were told the same thing about the Mississippi River-Gulf Outlet. This was going to be the greatest thing that ever happened to St. Bernard Parish. Industry, thousands of jobs, millions of dollars, brought into the parish. It brought a great deal of water, a tremendous amount of mud, did away with a tremendous trapping industry in the area and lessened the shrimp and oyster industry. Many people had to get out of that business because of it. It brought about a condition in 1965, with Betsy, that may be the reason for some of the things you're seeing here today. You're trying to correct something where a mistake was made.

It is my understanding that the lower half of the Mississippi River-Gulf Outlet, for all intents and purposes, will be abandoned if and when the Violet cut is completed. This is the cut that Mr. Earl Colomb mentioned to you that

will connect the Mississippi River-Gulf Outlet with the Mississippi River. Ships will come up the Mississippi River, go through this set of locks, that makes two pieces out of St. Bernard Parish, with a bridge or two connecting them--I hope it's not as bad as St. Claude Avenue--and the lower half, for all intents and purposes, maintenance dredging will be abandoned. It will be the upper half that will be then--the Mississippi River-Gulf Outlet was designed to alleviate a situation that occurs in flood years at the mouth of the Mississippi River wherein you get a tremendous silt buildup and ships of certain draft or depth that cannot get in the Mississippi River.

I flew over it in '73. I counted 71 ships anchored off the mouth of the Mississippi River. I found one in the MR-GO--he was aground. This is a great engineering feat.

Mr. LeMieux read a letter from Village de l'est endorsing, and I know that he spoke to those people and gave a resume' of his many qualifications, his expert testimony concerning hurricanes, et cetera. I served as head of Civil Defense in my parish for 2 years also. I have also given that same testimony. Other than the reading of the letter I don't know that there was much of any real consequence in what he said. I would like to say that Village de l'est is presently behind an existing high levee.

Mr. Lannes, Chairman of the Regional Planning Commission touched lightly on some of the--and endorsed the thing. St. Bernard--he did not touch on what they plan for his parish or what has been done to his parish because of prior--prior work. I was amazed. I thought at least he would mention the Violet cut.

Mr. Earl Colomb mentioned his opposition to Seabrook and I agree with him 100 percent. I just want to let you know, Earl, that the funnel effect created by the barrier system will cause even greater buildup if none of that water is allowed to get through the passes before it's funneled into the Intracoastal Waterway. The buildup at Seabrook is going to be greater than it would if they were open. Greater than it was before. You are totally justified.

He talked about another plan, one that I hadn't heard about before. I understood him to say the Shaw Plan.

There is an alternate plan for the structure at The Rigolets and I think it--this would be wise to mention it now, particularly for you people who may still be here who live between the Chef and Fort Pike. The original plan of the Corps was to dam The Rigolets solid and to cut through the peninsula of land between Chef Menteur and Fort Pike and put a Rigolets there but only one with control or gated structures. This would enable them to work on a dry bottom, complete the work, and then open the two ends of it. It's my understanding that the model that was dismantled in 1961 and is not being reassembled, possibly completed, is being put back up to see now that maybe that might not have been the best idea after all. So, that if it is changed, you're going to get this peninsula of land cut in two pieces between Fort Pike and the Chef. The Rigolets will be dammed solid with only the navigation canal on the St. Tammany side.

Cliff Danby spoke of the loss of value of estuaries not considered in the impact statement. It continues to amaze me why this is never considered on a cost-benefit ratio. He also mentioned that the project is going ahead in spite of no final approval of any impact statement. I might mention also that Mr. Soileau of the Corps of Engineers stated in Vicksburg that the maximum closure time, Mr. O'Donnell, would be 2 weeks. That there is a possibility that it may be closed for 2 weeks periods of time.

Mr. Dave Martin, Slidell Chamber of Commerce, mentioned payments. The St. Tammany Parish Police Jury operates on a budget of a little over \$2 million per year. Their share, initial share, will be \$1 million--right at \$1 million. That's not all; they must assume maintenance of that portion of the system that lies in St. Tammany Parish, annual maintenance. I don't believe that they would, of course, operate the locks. There are usually reserved--government locks are usually operated by the government; I assume by the Corps, I don't know. Although it is in St. Tammany Parish they will have to assume, though, the maintenance of the levees in St. Tammany Parish whatever they be. They stated that they couldn't come up with this money. A prior governor said: We'll see that they pay their share. We're working under revenue sharing. You'll get your money back from the state government. All they do, it's a very simple matter, just deduct it. You just don't get that portion back each year. You, therefore, have to preclude, giving certain services to people. If you don't have the money, that's what happens.

It's just not right that a government, a governing body that opposes something must be forced to pay for it. That's just not right.

Mr. Vernon Palmer mentioned the 3 mills and how the general public was taken. I believe I put the editorial from the Times-Picayune in the record. I assume that it will be there.

I just want to point out that this is the same gentlemen who said, if you think he always tells you like it is, that we could have a series of 30-foot waves in a 12-foot deep lake. Well, I think that most high school children in the St. Tammany Parish schools know that a wave, under ordinary circumstances, would be half the depth of the water, or 6 foot. We're not talking about the tilting of the lake, we're talking about waves.

Bob Merrèll talked about deeper draft vessels. We're building vessels in St. Tammany Parish that draw as much as 24 feet of water, I'm told. Many more than the depths of the lake, some 18, some 16. The way they get them across the lake to deep water is pontooning them across. Lift them up to where they won't be dragging the bottom and then when they get them to the deep water, release the pontoons on the sides of the boats, and this is how they get them into the Seabrook area. That's why I mentioned to you in the Southern Shipbuilding's statement that they have asked for a greater sill depth at Seabrook in order that they can continue to build the type of vessels that they have under contract.

Mr. Wallace, from the menhaden industry, and I assume that's the Wallace Menhaden Company, has an operation that spots them, I think, in my parish, an airplane operation, totally contradicted the environmental statement with some very, very good information. I would like to point out to you that the menhaden industry is by far the largest fishing industry in the State of Louisiana.

Now, Mr. A. F. Normand, and I don't know if Mr. Normand is still here or not. He spoke of my "homespun approach" and the very fact, or he indicated that I had made fun of whomever it may be that he was indicating and then turned around and made fun of me. I'm sorry that I don't have a college education; as a matter of fact, I was lucky to get

out of the third grade, Mr. Normand, if you're still here. I was out chasing crabs and shrimp for us to survive, my family. He presented no data. Just says: I looked at this and I think it's good. I presented solid engineering data prepared by engineers, one a former employee of the levee board and the other a former employee of the Corps of Engineers, that I think is very pertinent.

Mr. Normand is an engineer for Bell-Aerospace Corporation, a systems engineer. I understand that probably what Bell is doing in this area is testing or building hydrofoil boats. I know that's a government contract that they have, but I don't think that it has anything to do with his position.

Venetian Isles is opposed. Mr. LeMieux spoke to Village de l'est and got their endorsement. He also spoke to Venetial Isles. At this particular meeting he referred to me as a kook, to Mayor Cusimano as a kook, and to the people of St. Tammany Parish not being very knowledgeable about the whole thing. Fortunately, a very dear friend of ours, who has quite extensive commercial properties in New Orleans Parish, Mr. Al Labiche--I think most of you have heard of Labiche's--was there and contested this type of rhetoric. As a consequence, Venetial Isles did not endorse. The Orleans Civic Council did, presented no data.

Mr. Normand said that all of the info from us, who are up here presenting emotional things, should go into "File 13." We assure you, Mr. Normand, if you are still here, that although it will become a matter of a printed public record, it will go in "File 13." I'll guarantee you that.

(Applause)

Mr. Bill Smollen, from the YMBC, is another group before which Mr. LeMieux derided myself and the people of St. Tammany Parish.

Speaking of engineers, you heard Mr. Herb O'Donnell say that he is a civil engineer and that "Red" Baehr, Mr. Baehr, rather, was one of his teachers at Tulane. You heard his objection. You heard him say that there are literally thousands of people who feel the same way that he does concerning the barrier phases of this project.

Just to let you know, Mr. Normand, that all of us are not kooks, as we are quite often referred to.

I want to commend Mr. Viosca, who stated that he was 78 years old. He mentioned the fact, and it's nearly all gone now, and that he would at least like to see some of it restored or at least what we have today retained. Let me assure you, Mr. Viosca, that this thing if it's built in its entirety, including the barrier phases, you'll see it all go.

Thank you very much, Colonel Heiberg, for allowing me, again, I want to reiterate that I certainly—I certainly have no hard feelings as far as you are concerned and the members of your staff. I know the duty that you are charged with and I hope that you are in a position to appreciate the position that we are in.

Thank you, sir.

(Applause)

COLONEL HEIBERG:

Thank you, Mr. Scogin. Are there any other people here that would like to make additional statements? I would like to make the microphone available to you if you would want to make a rebuttal or make further remarks at this time.

MR. HENRY CASSERLEIGH:

Colonel, I would like to make a brief statement, if I may.

COLONEL HEIBERG:

Mr. Casserliegh. State your name for the record, sir.

MR. HENRY G. CASSERLEIGH:

Henry Casserleigh. I'm retired from this organization now about 15 years. And we have heard here a very eloquent discussion, pro and con. I think, I think—I think that Colonel Heiberg, if he was converted by any of the things that he heard in arguments against this thing, there's

nothing this man can do to stop it. There's nothing. He is ordered by Congress to do the work and you people that are here and the many that left earlier should get down and write the Louisiana Delegation in Washington. They are the ones only that can stop it.

I thank you.

(Applause)

COLONEL HEIBERG:

Thank you, sir. Any further statements?

(No response)

COLONEL HEIBERG:

I'd like to acknowledge several things in closing this meeting; particularly those of the UNO who made the facilities here available to us. Mr. Hitt, the Chancellor; Louis J. Brendt, the Director of the University Center here; Ms. Darlene Berggren, the Services Coordinator for the University Center; and I would particularly like to acknowledge our stenographer, Josemary Diliberto, she's done a hard job today and I think you can all appreciate, and Judy Zavala, here; and the members of my staff.

I would also like to thank Mr. Cresap and Mr. Baehr for helping me up here with the job at hand.

I do want to say that I want to thank each and every one of you for what, in a very heartening way, has been general courtesy toward everybody regardless of their views, who had to make their views and who wanted to make their views known. I think this has been a good example of this.

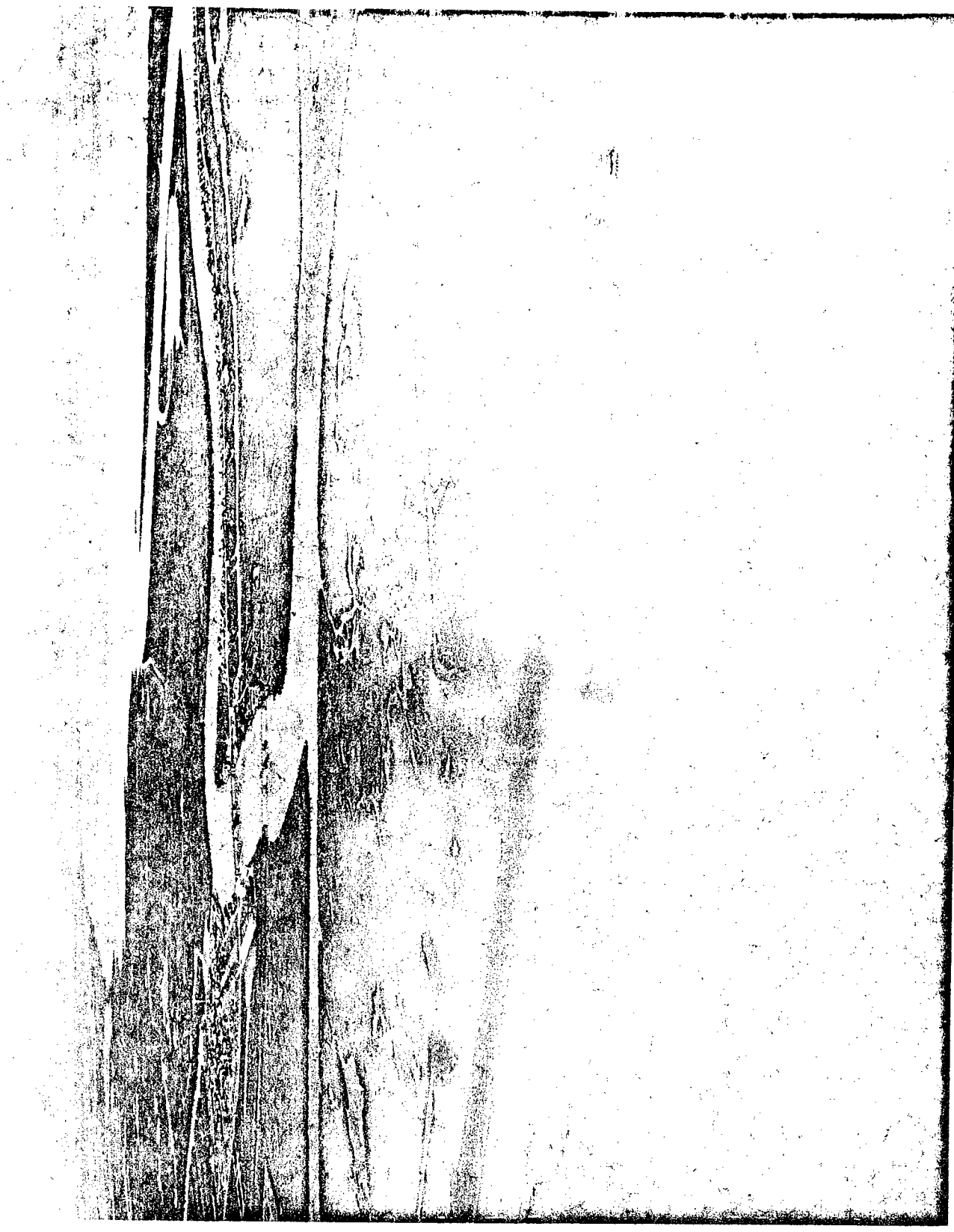
My staff is going to stay here, as they did at the break before, to answer specific questions. We have the various specialists in the area to answer questions that you feel were brought up that are not answered in your minds.

It will be about 2 months before the record of this meeting will be ready, perhaps sooner. If you write to us at the District, we can make a copy of this available to you, personally, at the cost of publication.

I will review all of the inputs, not just those today and those that we've already received, and I will not address my recommendation until 30 days to allow everybody who wants to, those here and those elsewhere, until the 24th of March to have their written inputs into the record to my office. My recommendation will then be coordinated with the other interested Federal agencies, prior to my making a recommendation.

Thank you very much. This meeting is now adjourned.

...Whereupon, at 4:45 o'clock p.m. the public hearing conducted by the US Army, Corps of Engineers, New Orleans District, regarding the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project was concluded....

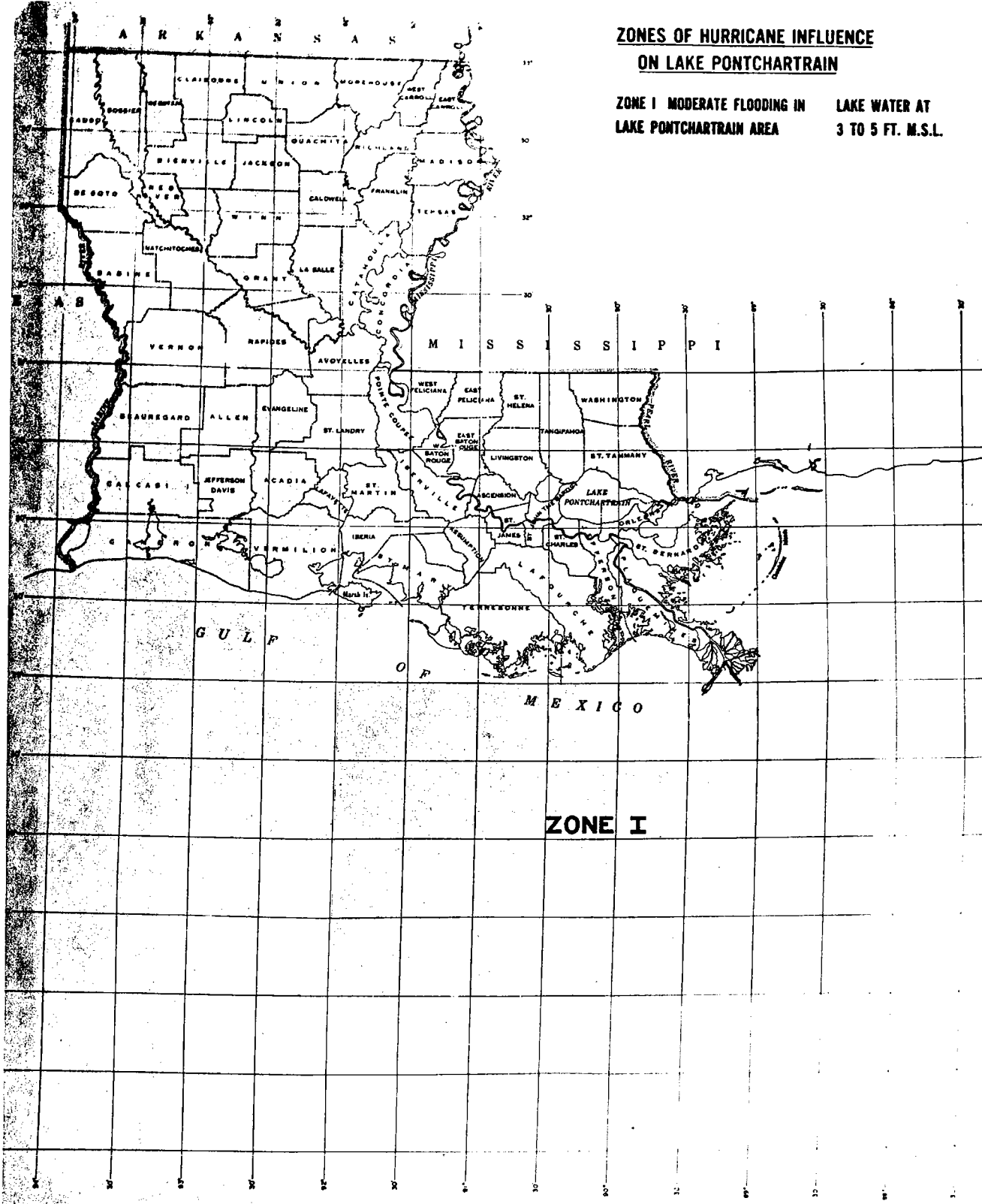


SLIDE 1

SLIDE 2



SLIDE 3

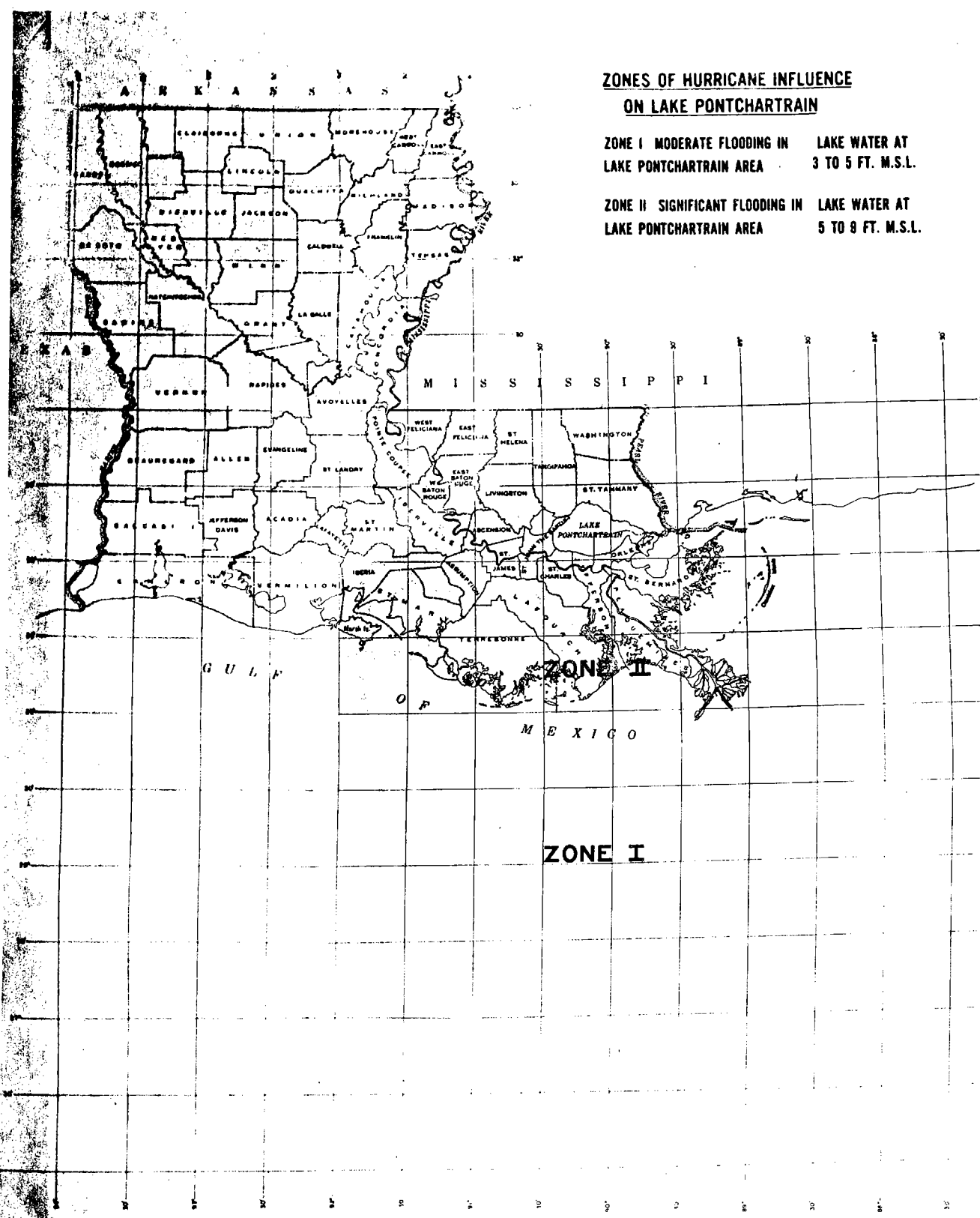


**ZONES OF HURRICANE INFLUENCE
ON LAKE PONTCHARTRAIN**

**ZONE I MODERATE FLOODING IN LAKE WATER AT
LAKE PONTCHARTRAIN AREA 3 TO 5 FT. M.S.L.**

ZONE I

SLIDE 4

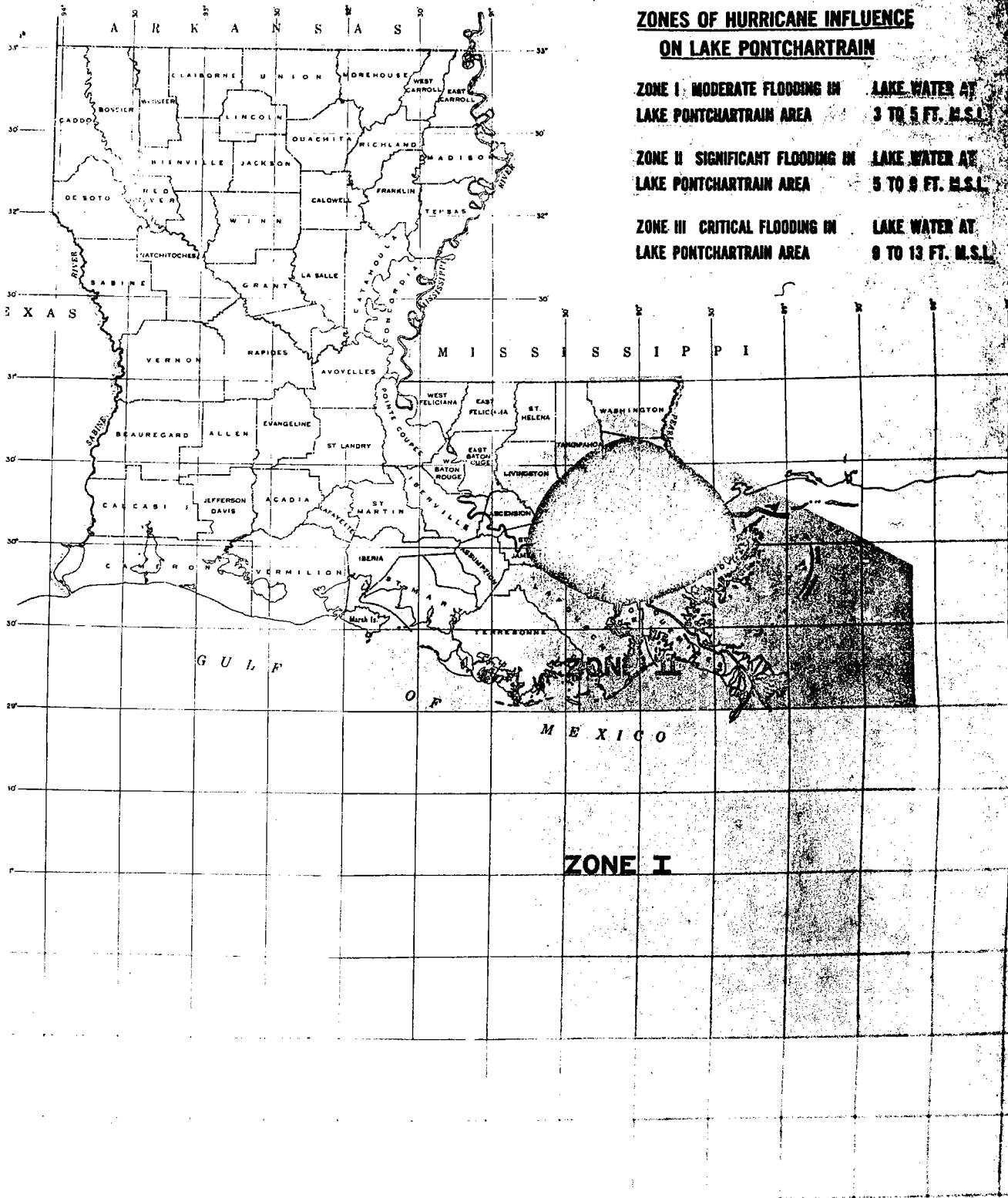


**ZONES OF HURRICANE INFLUENCE
ON LAKE PONTCHARTRAIN**

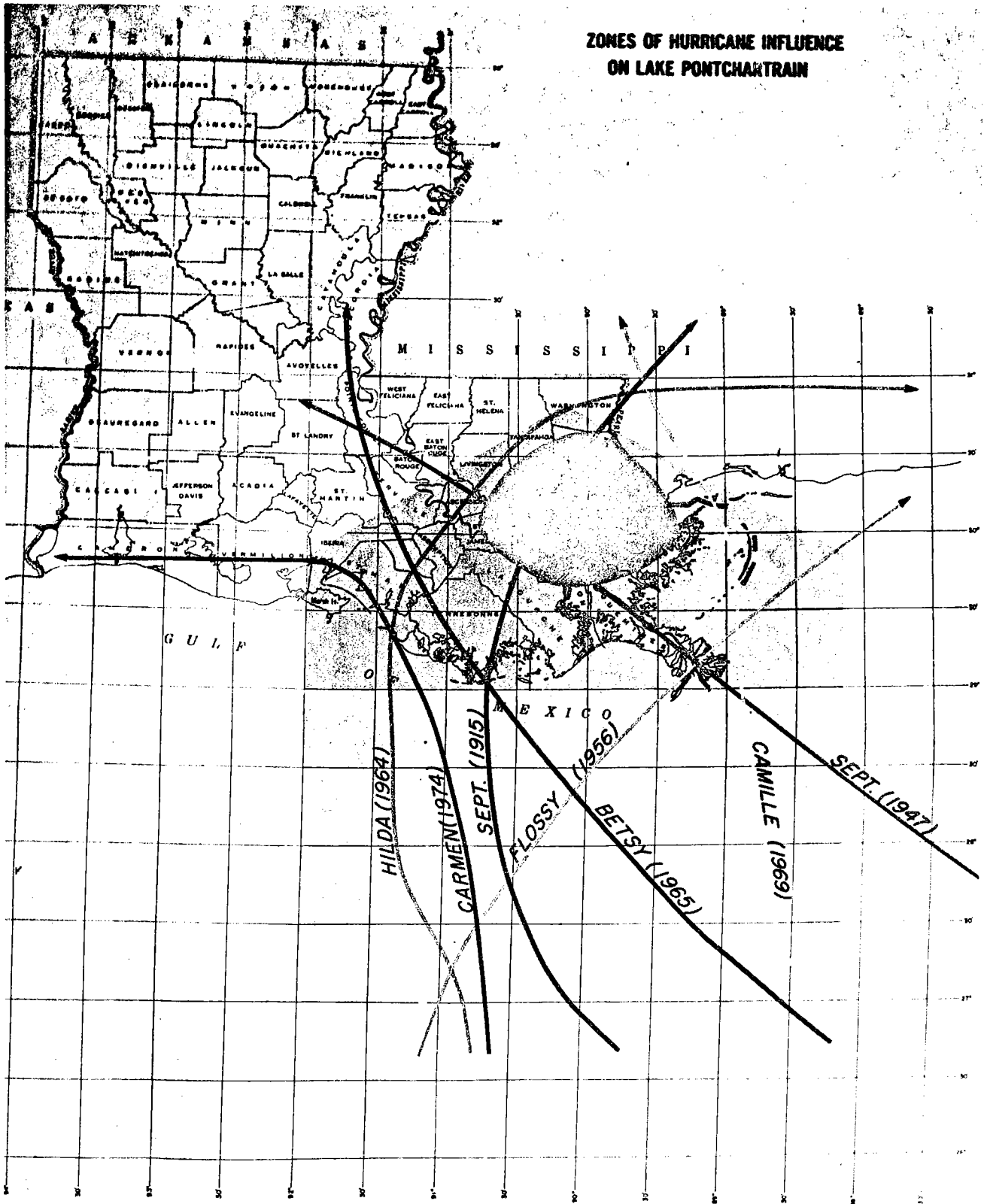
**ZONE I MODERATE FLOODING IN LAKE WATER AT
LAKE PONTCHARTRAIN AREA 3 TO 5 FT. M.S.L.**

**ZONE II SIGNIFICANT FLOODING IN LAKE WATER AT
LAKE PONTCHARTRAIN AREA 5 TO 9 FT. M.S.L.**

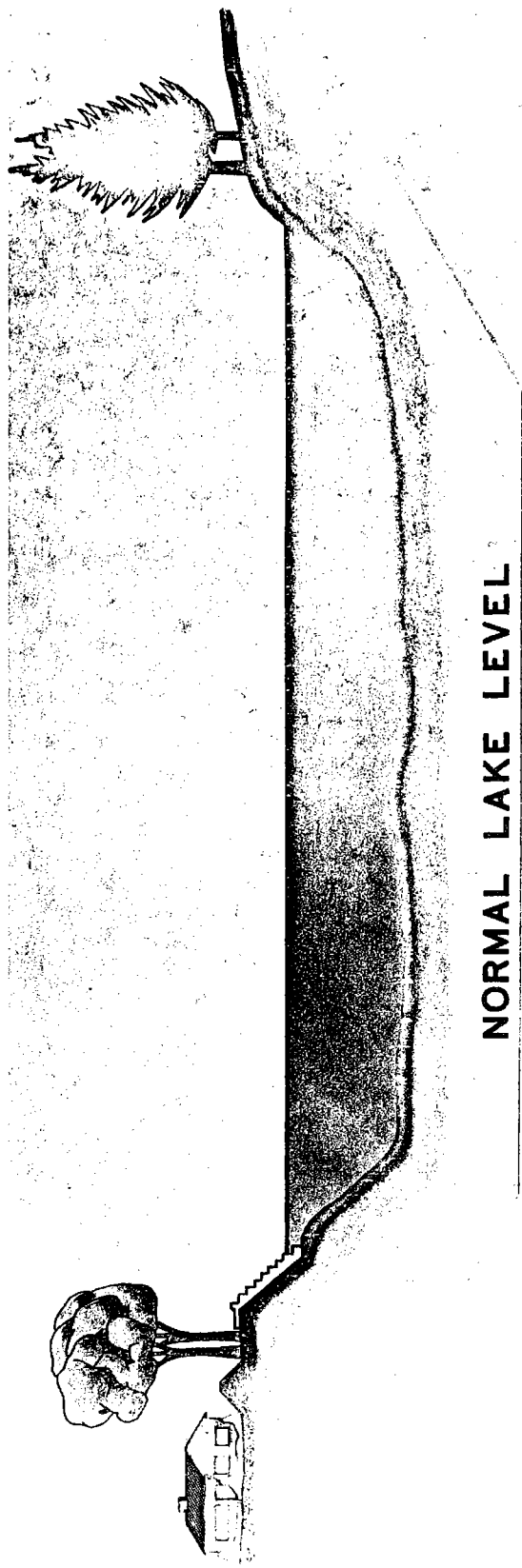
SLIDE 5



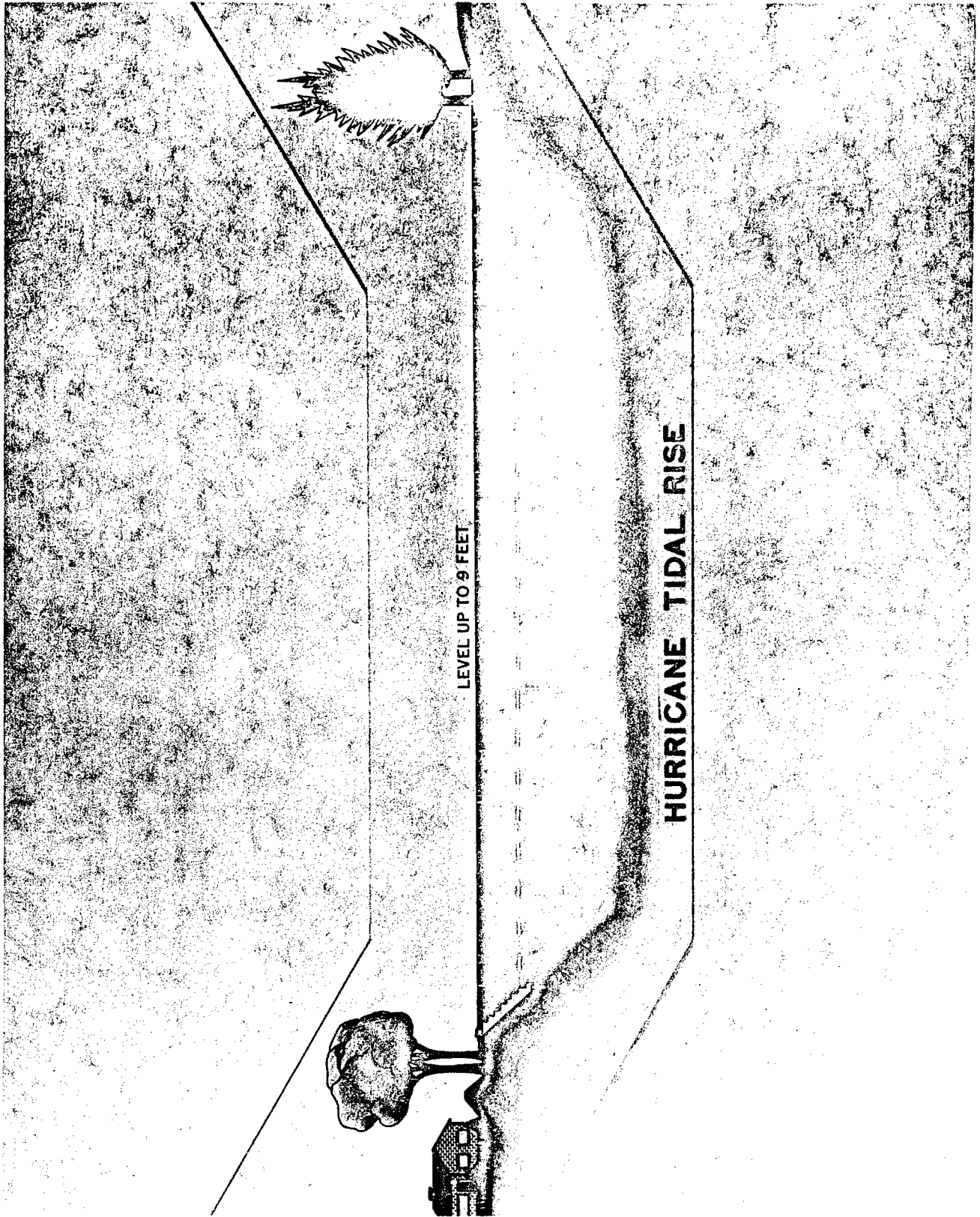
**ZONES OF HURRICANE INFLUENCE
ON LAKE PONTCHARTRAIN**



SLIDE 7

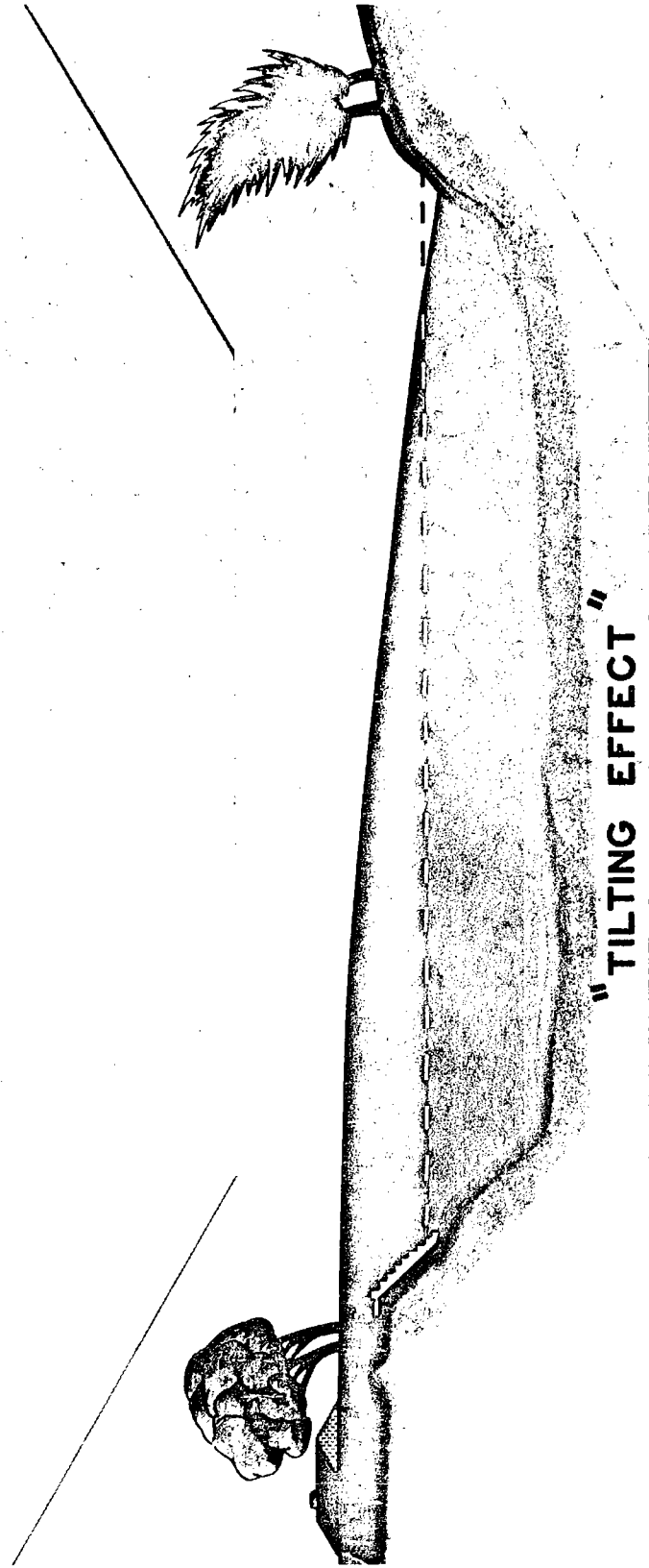


NORMAL LAKE LEVEL

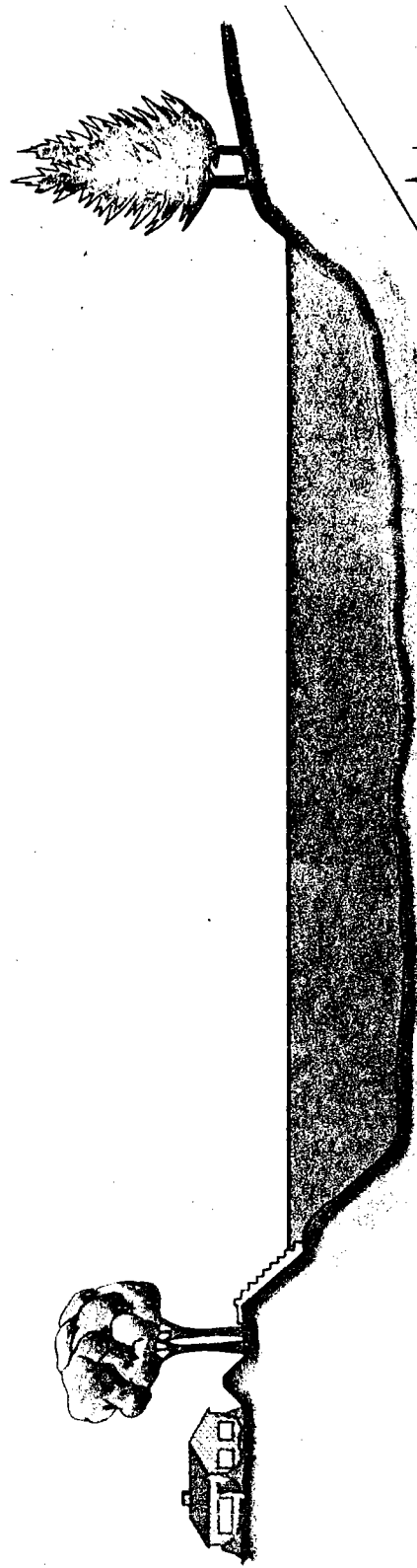


LEVEL UP TO 9 FEET

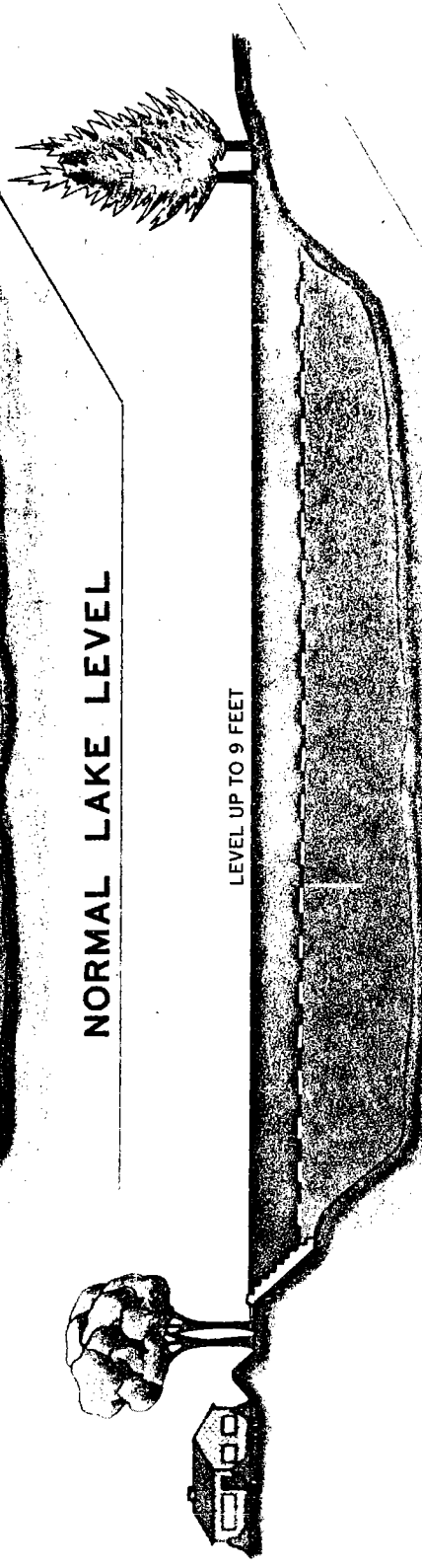
HURRICANE TIDAL RISE



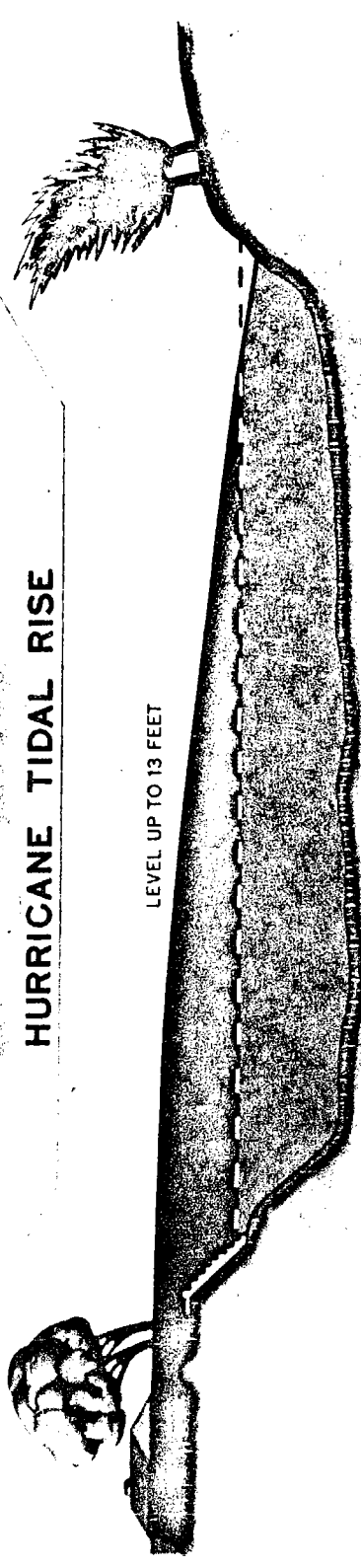
"TILTING EFFECT"



NORMAL LAKE LEVEL



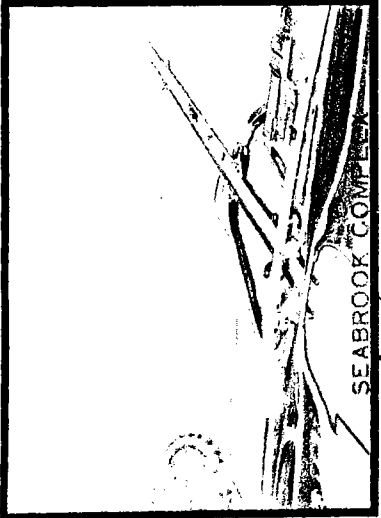
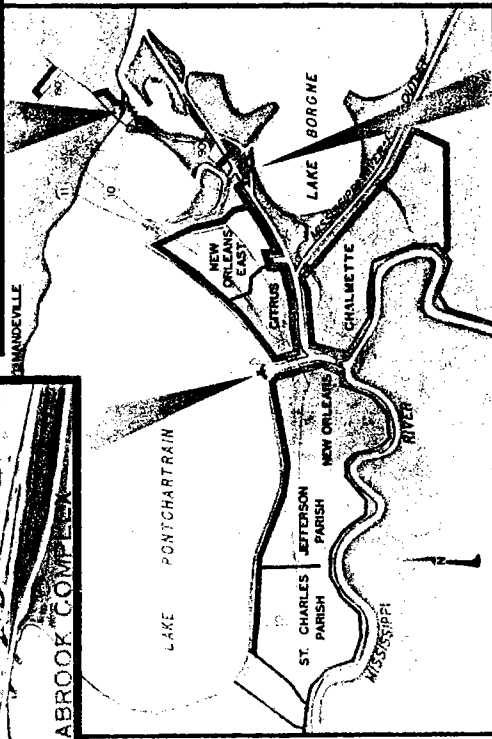
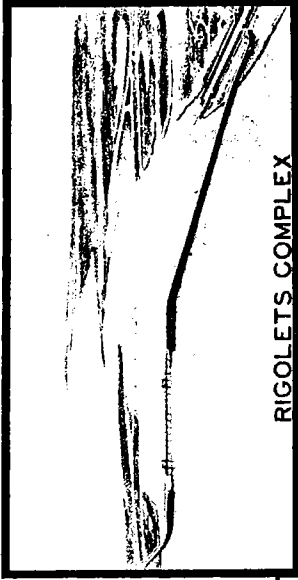
LEVEL UP TO 9 FEET



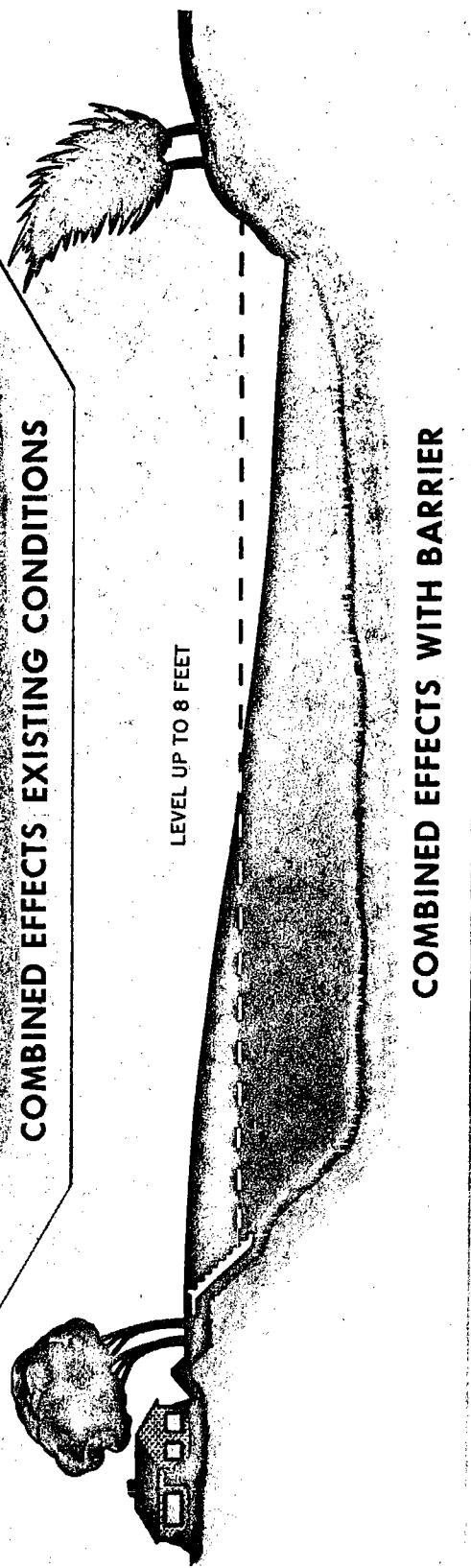
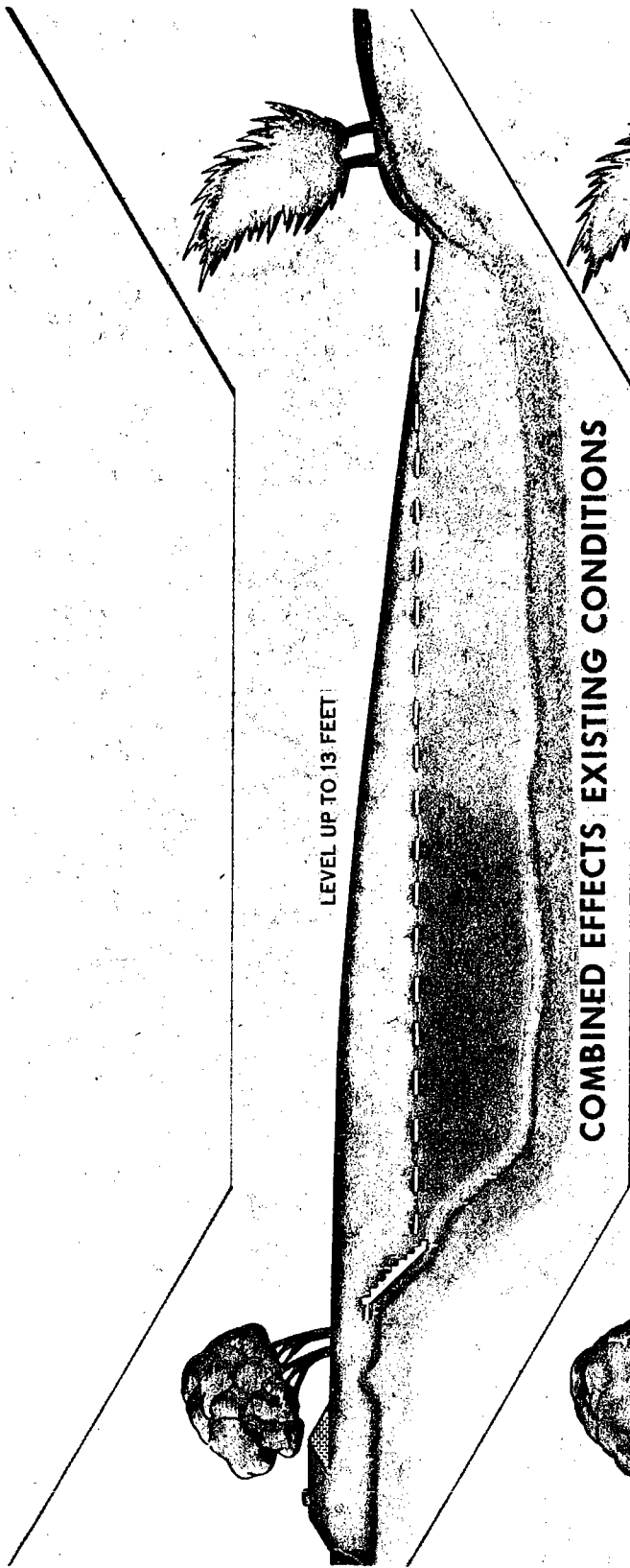
LEVEL UP TO 13 FEET

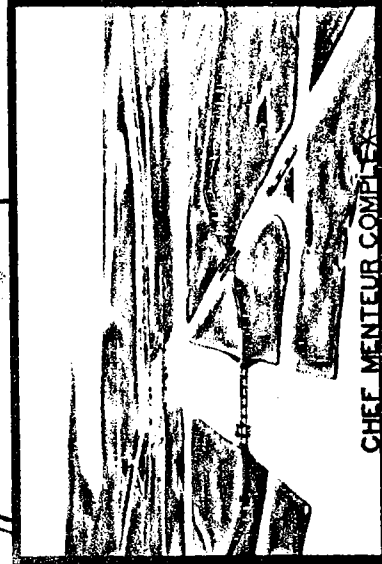
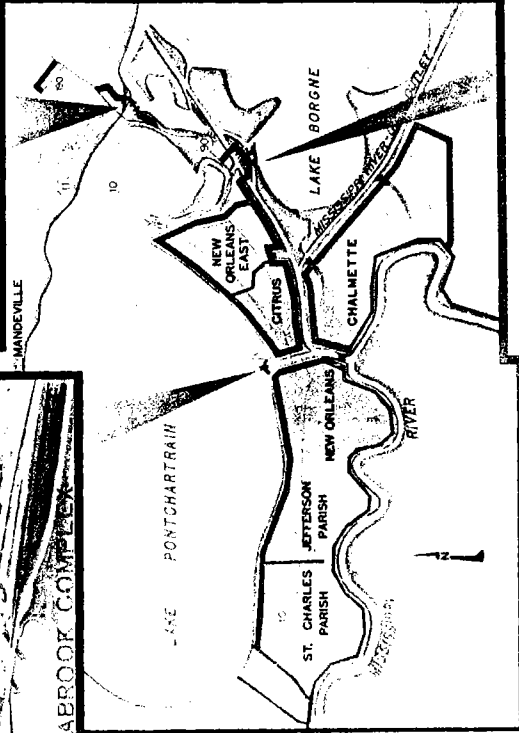
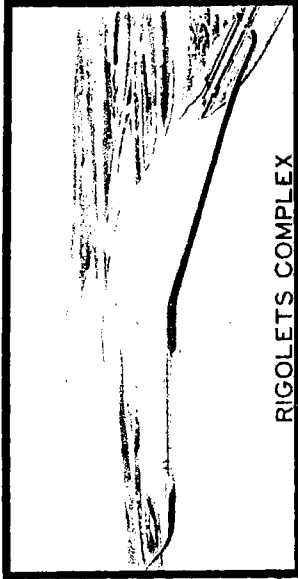
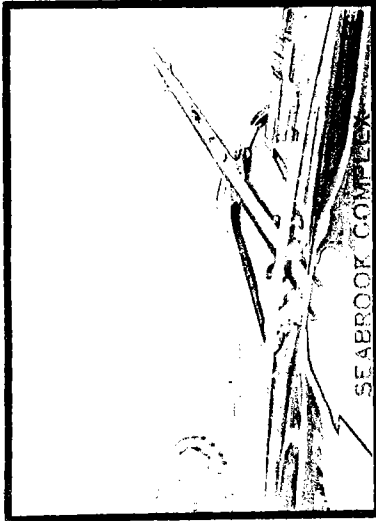
COMBINED EFFECTS EXISTING CONDITIONS

SLIDE 11

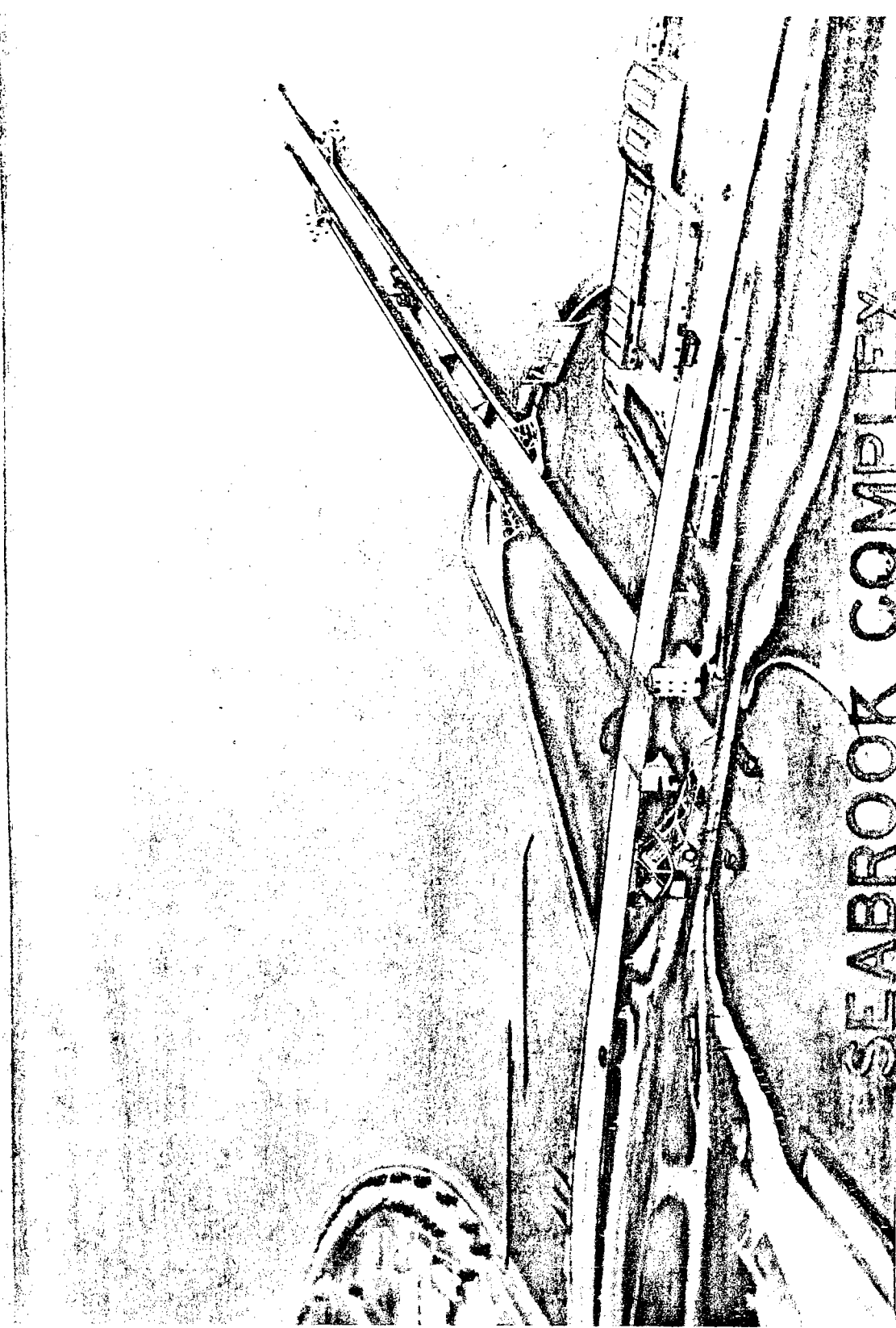


LAKE PONTCHARTRAIN HURRICANE PROTECTION PLAN



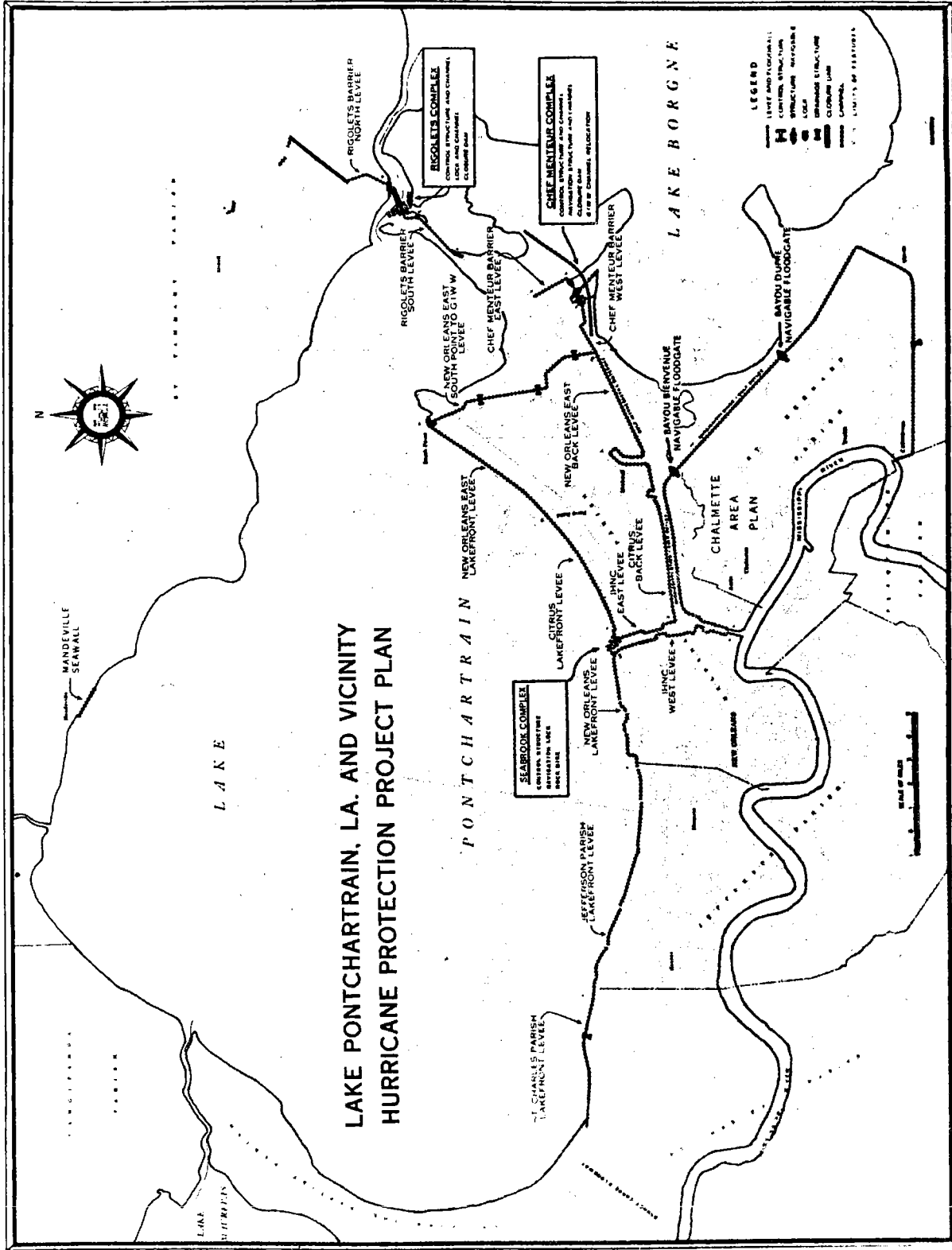


LAKE PONTCHARTRAIN HURRICANE PROTECTION PLAN

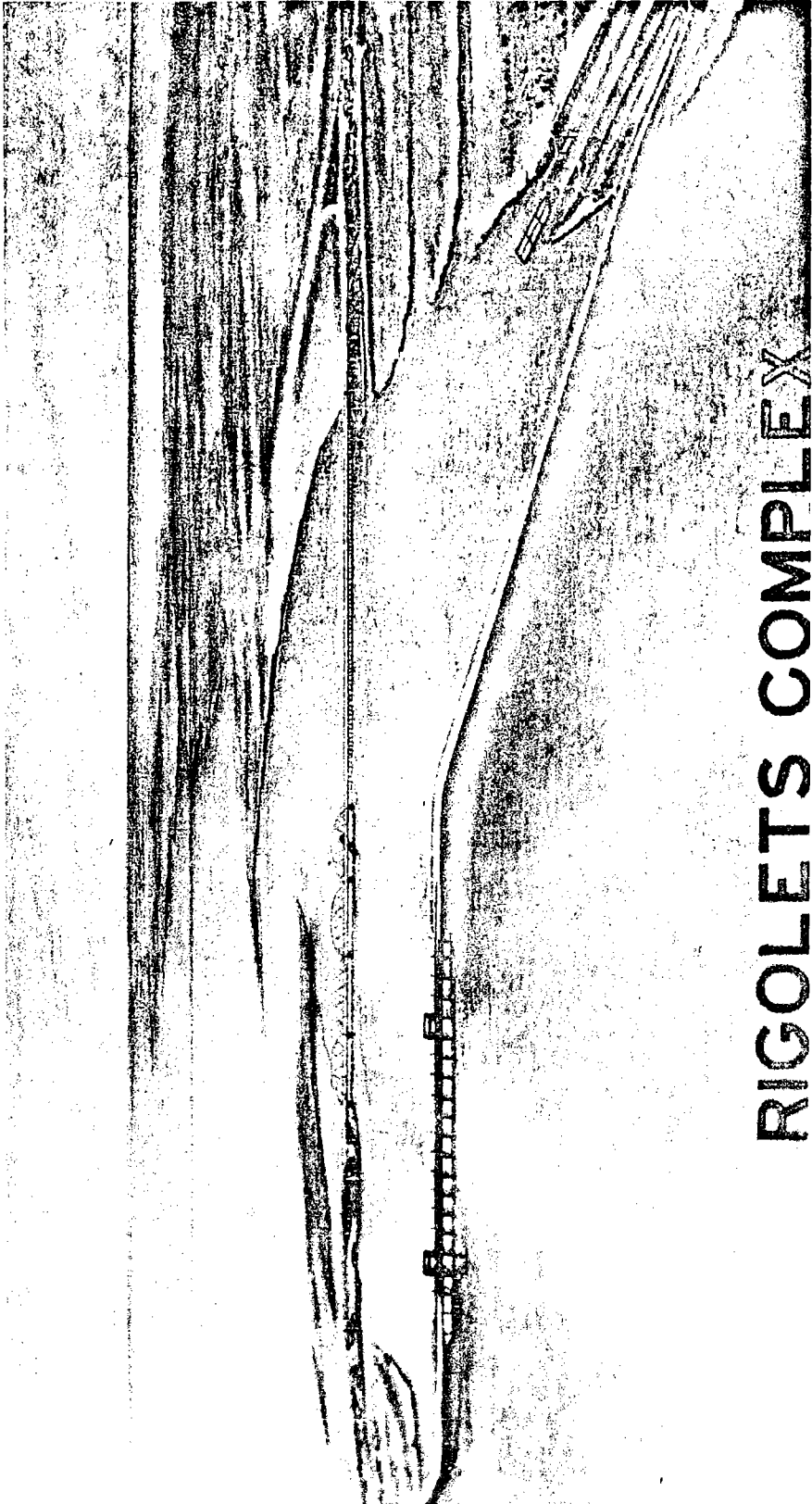


SEABROOK COMPLEX

SLIDE 15

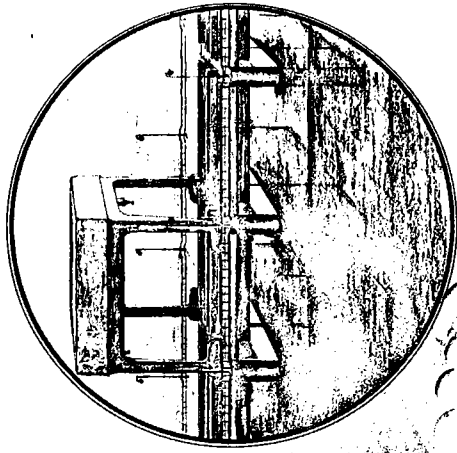


**LAKE PONTCHARTRAIN, LA. AND VICINITY
HURRICANE PROTECTION PROJECT PLAN**



RIGOLETS COMPLEX

RIGOLETS CONTROL STRUCTURE

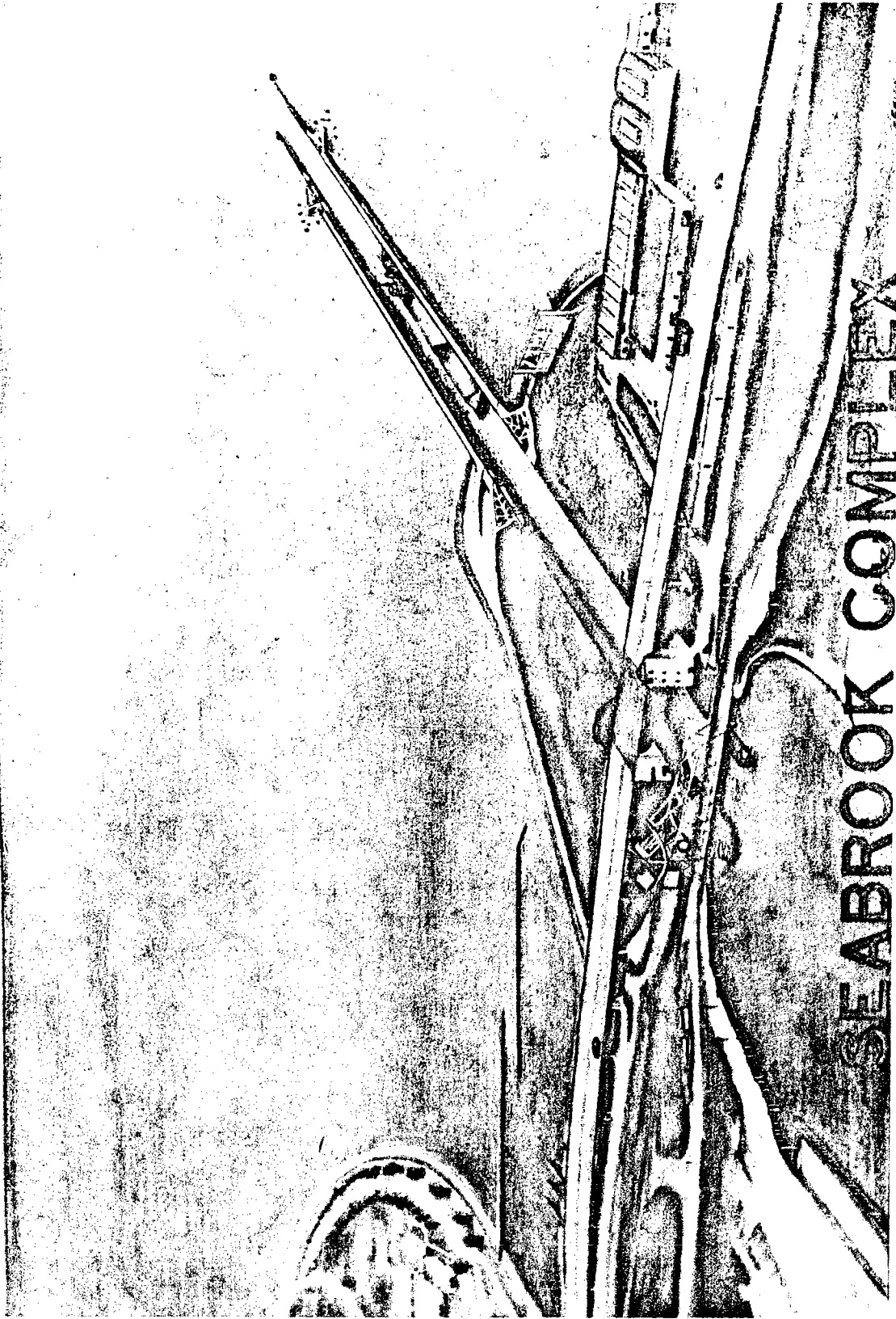


LAKE PONTCHARTRAIN

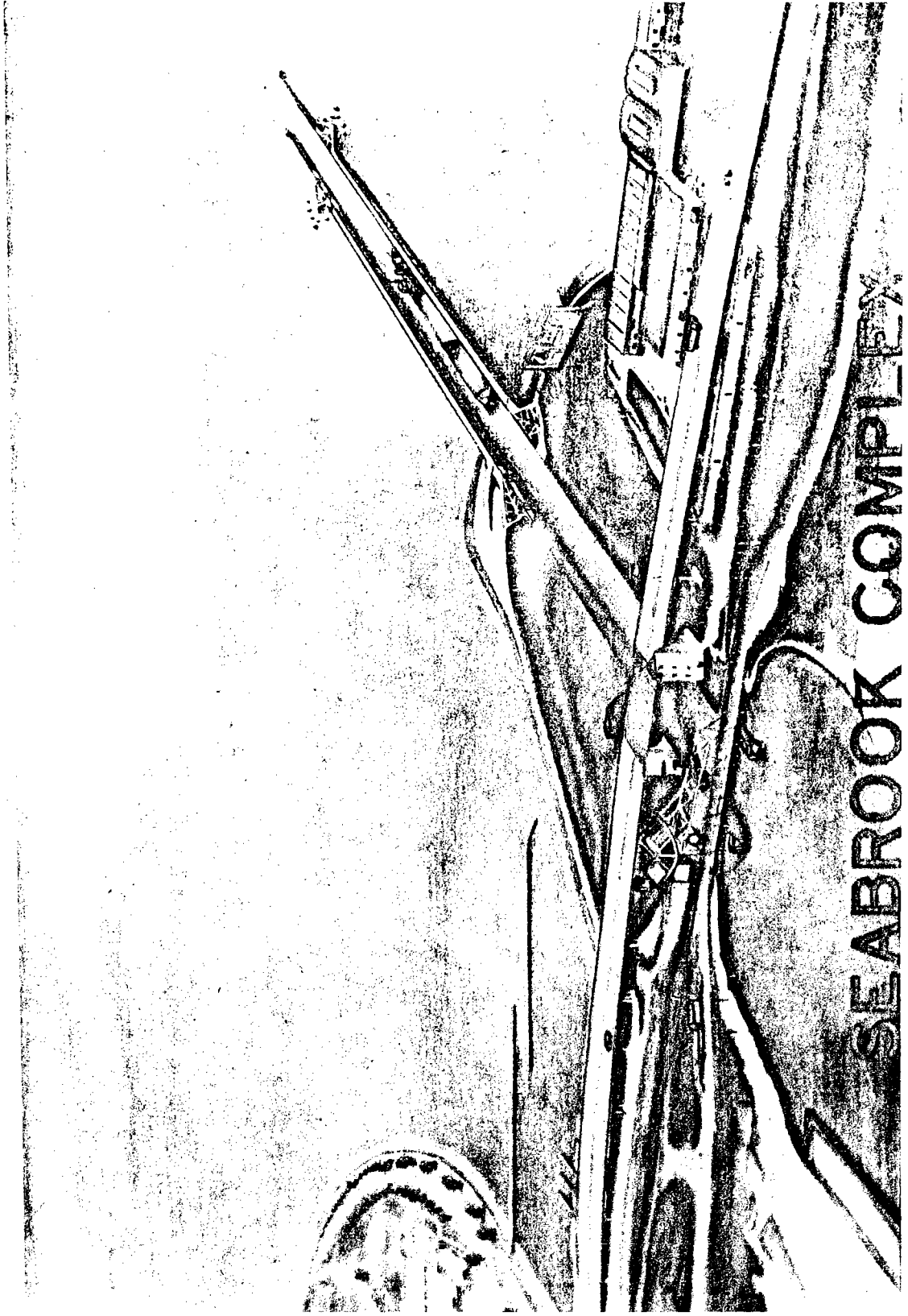




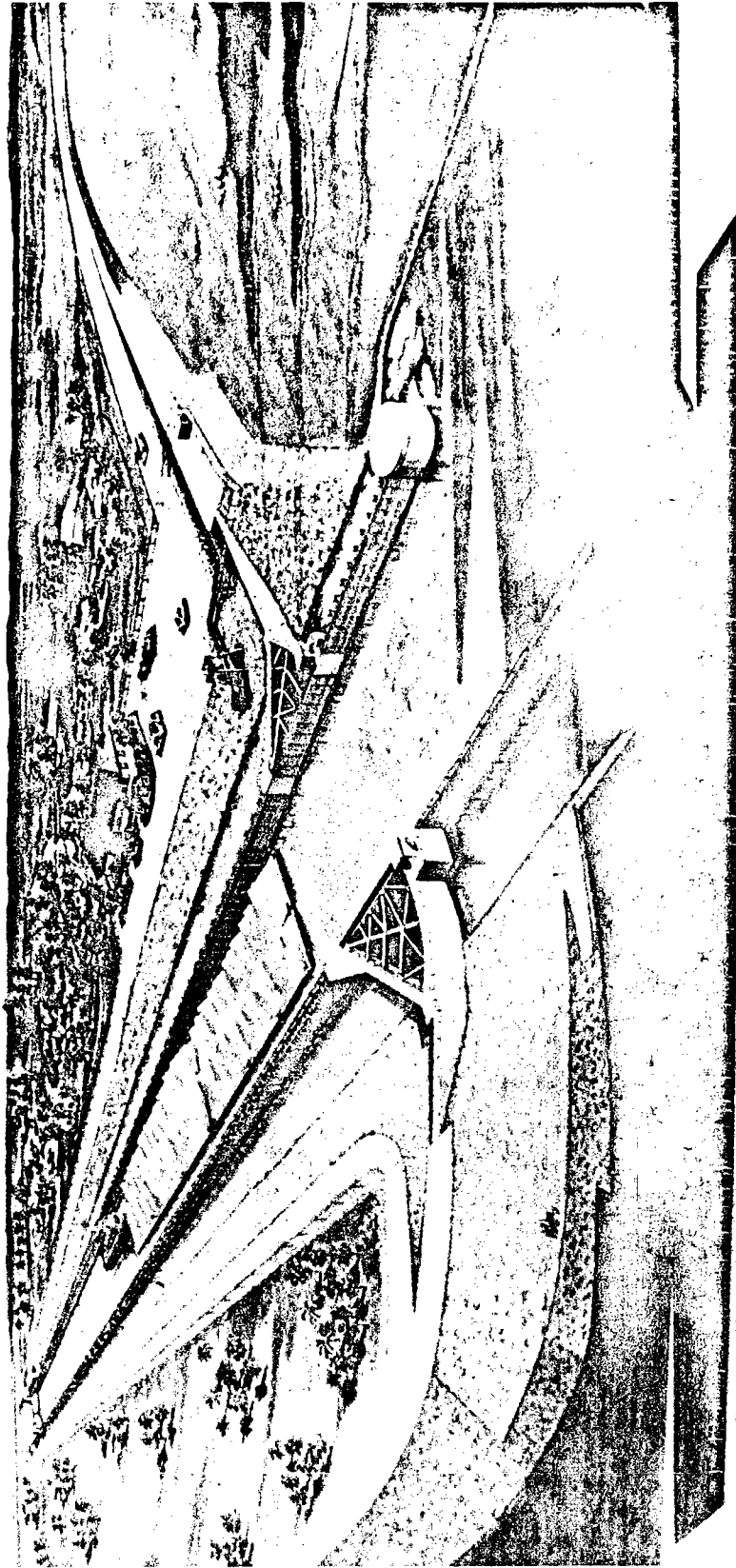
CHEF MENTEUR COMPLEX



SLIDE 21



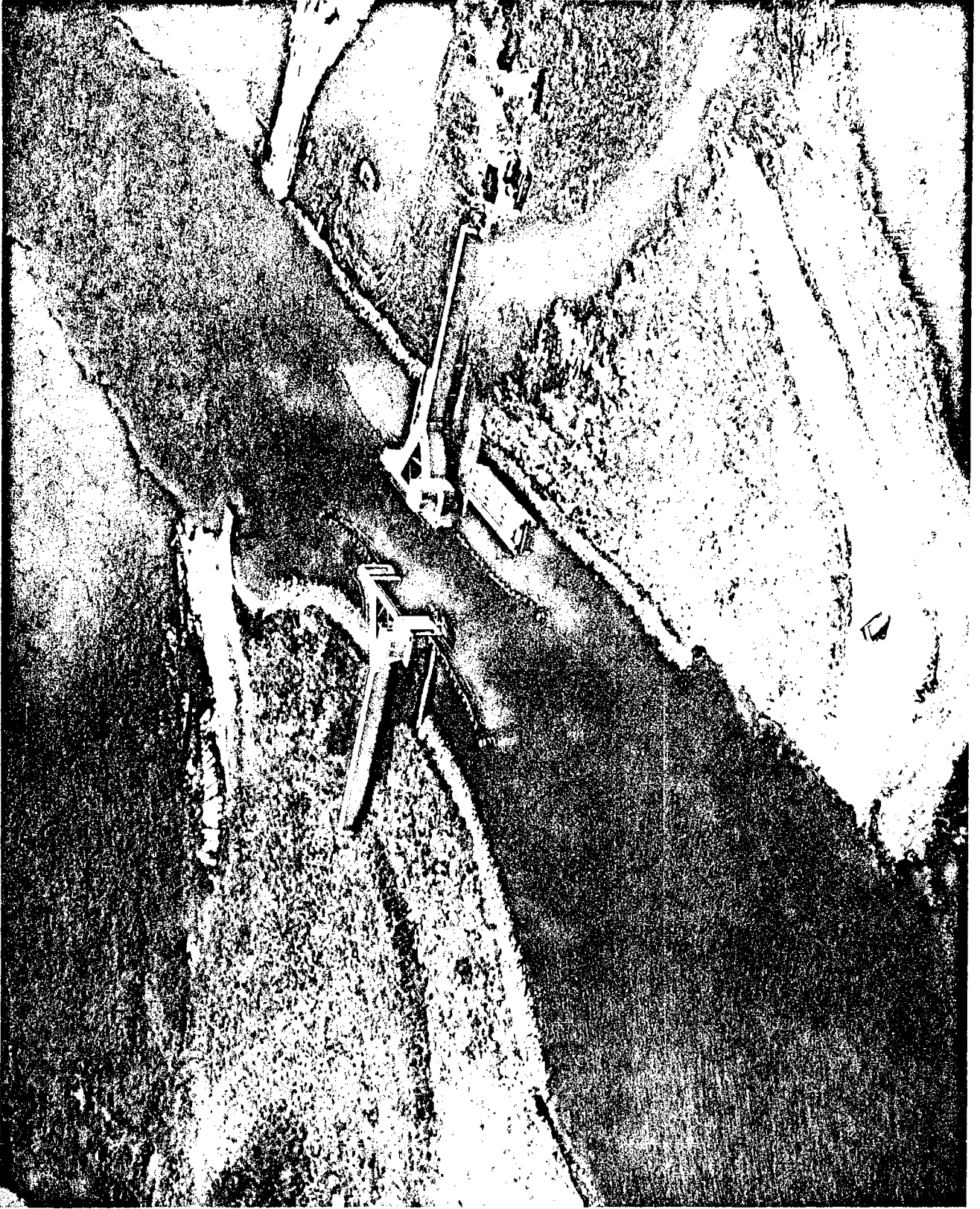
SLIDE 23



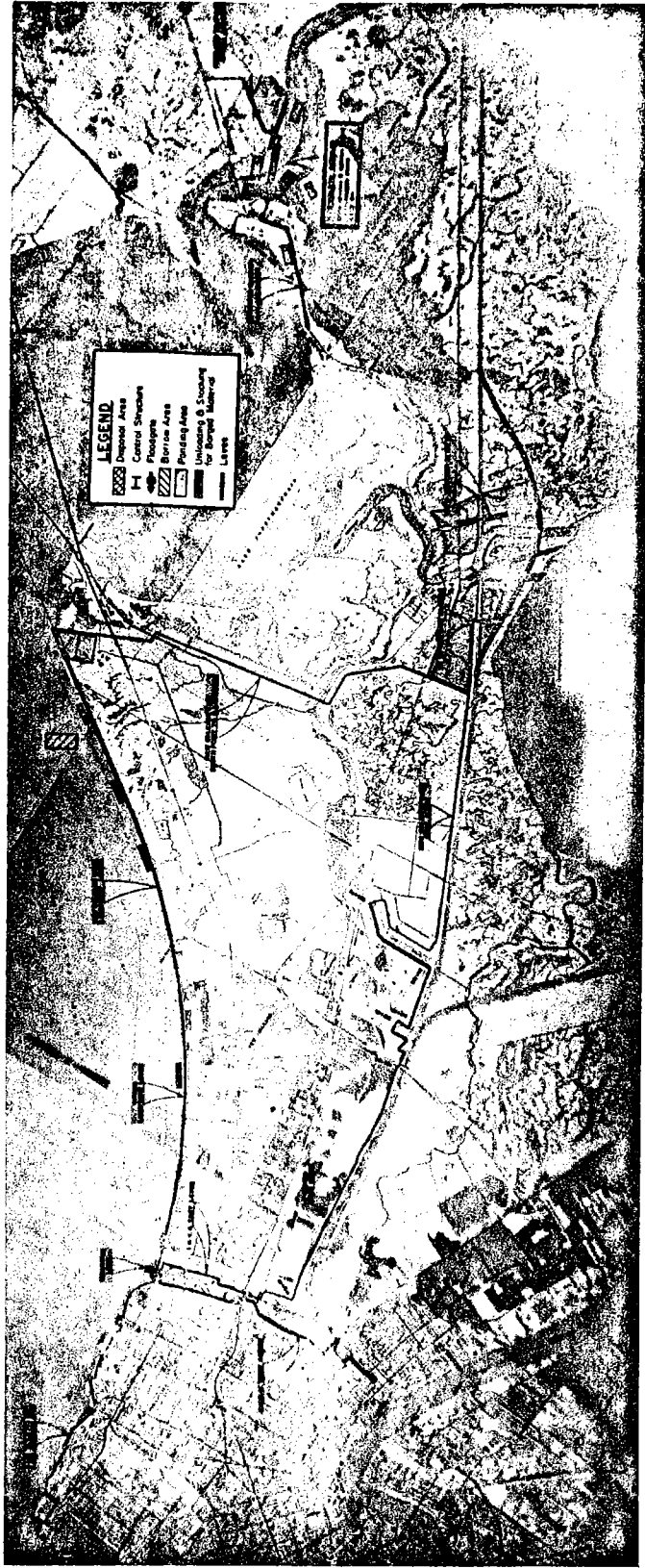
SLIDE 24



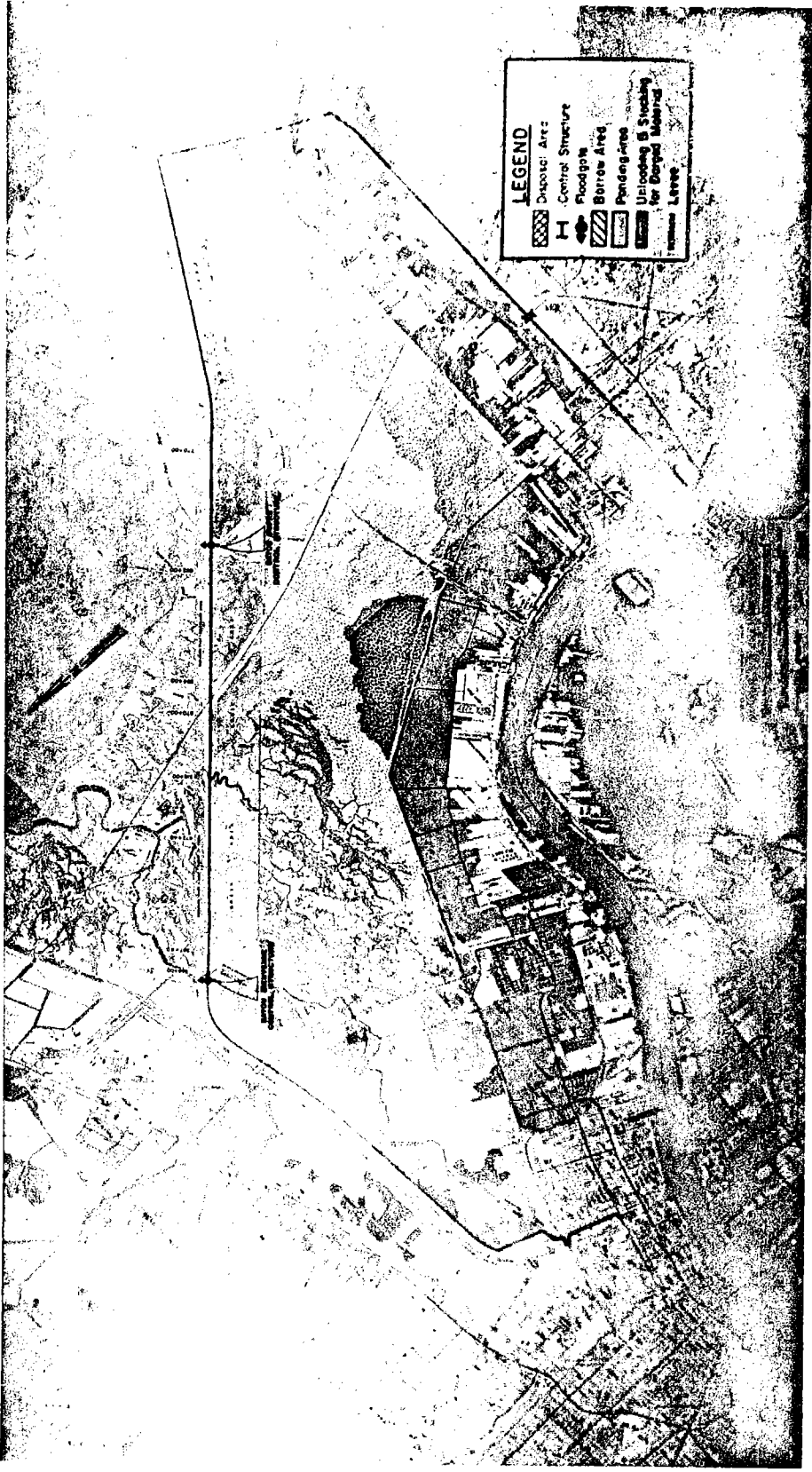
SLIDE 25



SLIDE 26

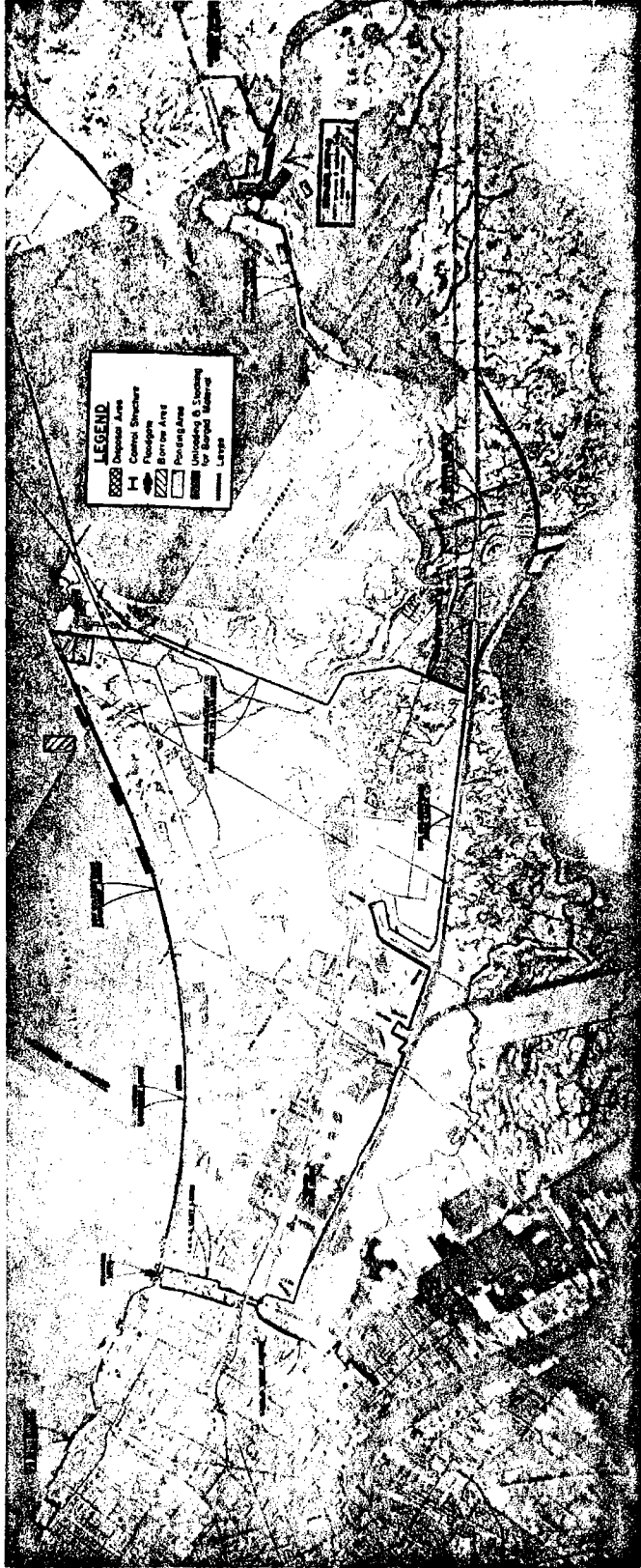


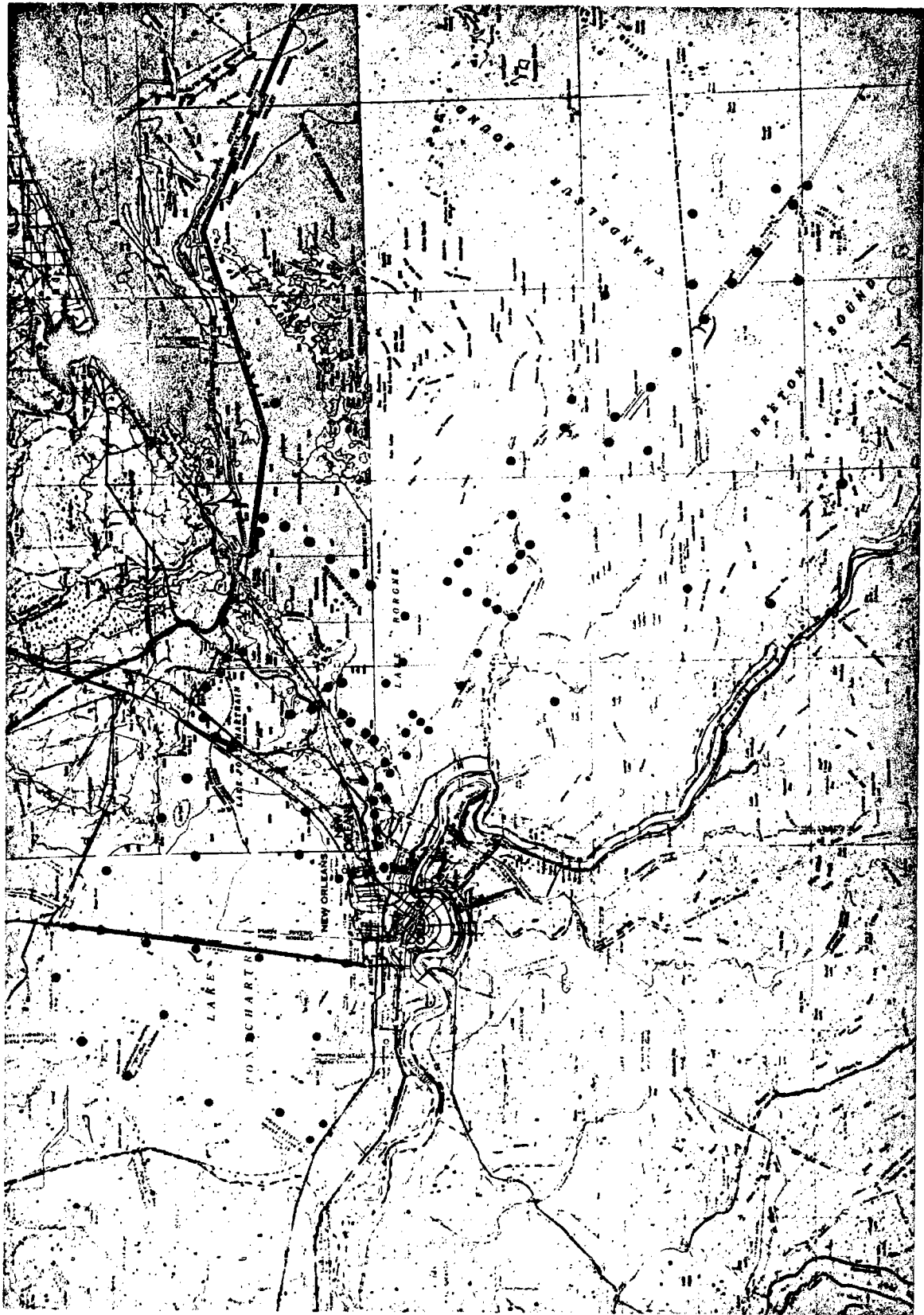
SLIDE 28



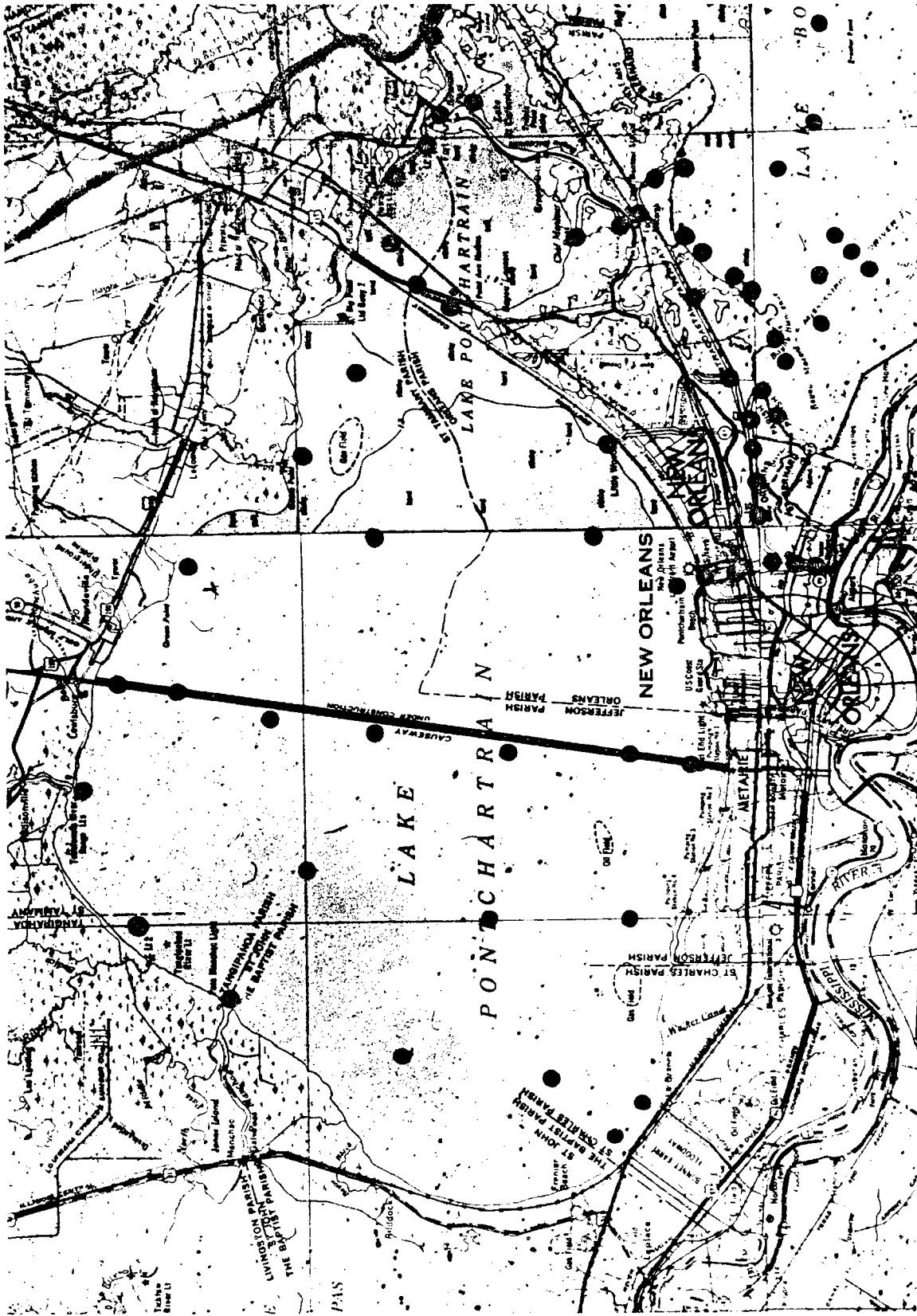
LEGEND

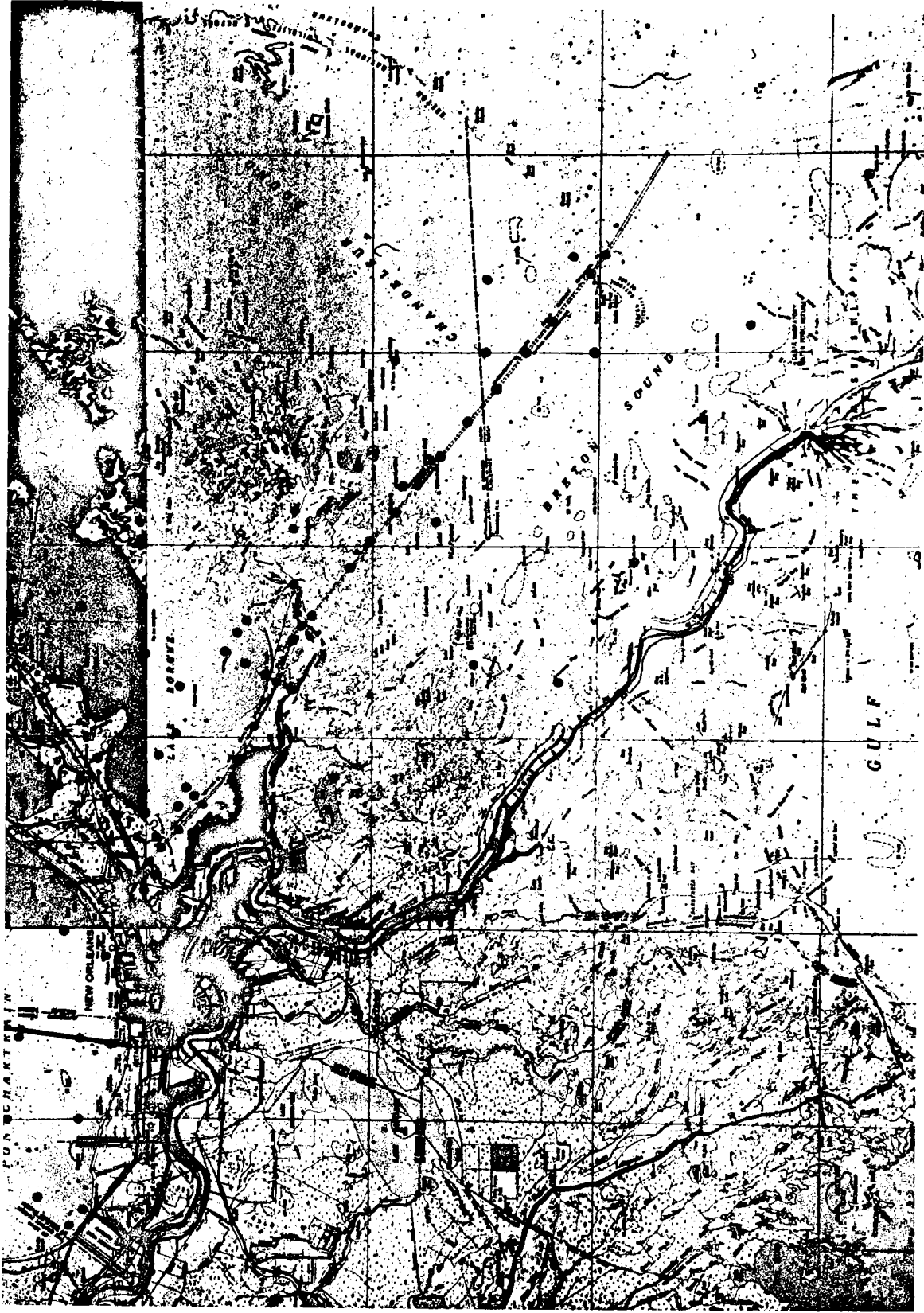
- Depote Area
- Central Structure
- Floodgates
- Borrow Area
- Pending Area
- Unloading & Stacking for Dumped Material
- Levee



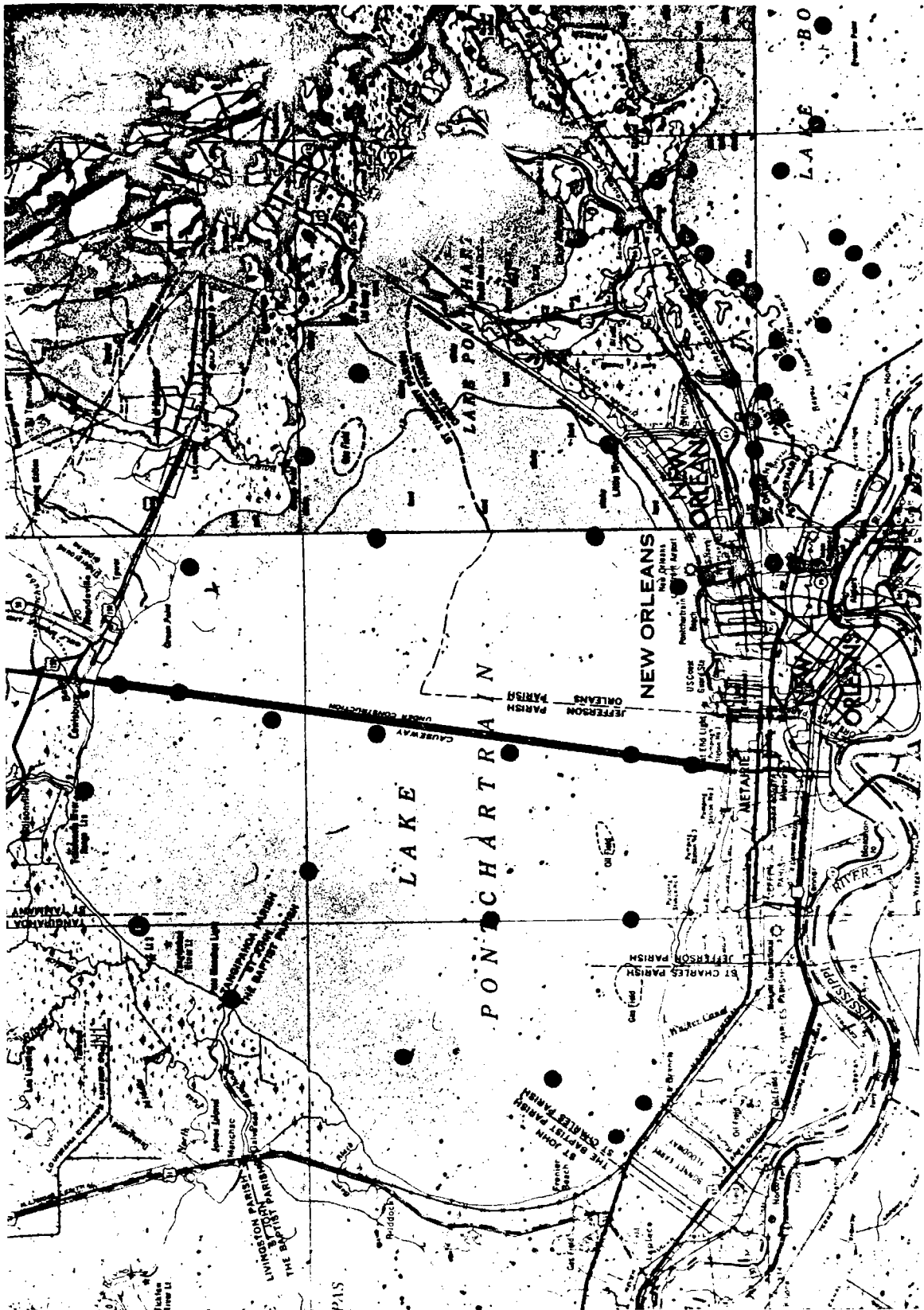


SLIDE 31





SLIDE 33



SLIDE 34

EXHIBIT LIST

Exhibit
No.

- 1 Public Notice dated 29 November 1974
- 2 Announcement of Public Meeting dated 22 January 1975
- 3 News Release by US Army Corps of Engineers dated
23 January 1975
- 4 News Release by US Army Corps of Engineers dated
19 February 1975
- 5 News Release by US Army Corps of Engineers dated
26 March 1975

The following exhibits were submitted for the public record
and were acknowledged by the Corps of Engineers District Office

- | | | |
|----|--|---|
| 6 | Representative Joseph Accardo, Jr.
Louisiana House of Representatives | LaPlace, LA
Letter dtd 19 Mar 75 |
| 7 | Roy Aguiard
Louisiana Dept. of Public Works | Baton Rouge, LA
Letter dtd 20 Feb 75 |
| 8 | Mrs. Jane Alford | Letter dtd 24 Mar 75 |
| 9 | Neil Alford | Slidell, LA
Statement dtd 22 Feb 75 |
| 10 | Robert J. Alonzo
East Orleans Civic Council | New Orleans, LA
Resolution dtd 21 Feb 75 |
| 11 | Claire I. Amos | New Orleans, LA
Letter dtd 23 Feb 75 |
| 12 | Tom Anderson | Hammond, LA
Letter undtd |
| 13 | J. Burton Angelle
Louisiana Wild Life & Fisheries Comm. | New Orleans, LA
Statement for
22 Feb 75 meeting |
| 14 | Roy F. Baas
New Orleans East Business Assn. | New Orleans, LA
Letter dtd 21 Mar 75 |
| 15 | J. G. Baudier
The Sertoma Club of New Orleans | New Orleans, LA
Letter dtd 4 Apr 75 |

Exhibit
No.

16	Thompson F. Bechtel Kiwanis Club of New Orleans	New Orleans, LA Letter dtd 20 Feb 75
17	Kenneth E. Black US Fish & Wildlife Service	Atlanta, GA Letter and statement dtd 17 Mar 75
18	Representative Edward H. Booker Louisiana House of Representatives	New Orleans, LA Letter and statement dtd 21 & 22 Feb 75 Article dtd 21 Apr 74
19	Representative A. Charles Borrello Louisiana House of Representatives	New Orleans, LA Letter dtd 21 Mar 75
20	Francis J. Braud Bonnet Carre' Rod and Gun Club	Norco, LA Letter and statement dtd 25 Feb 75 w/reply dtd 23 May 75
21	Frank Brock Tulagi Enterprises, Ltd.	New Orleans, LA Letter dtd 21 Feb 75
22	W. J. Brogan	Slidell, LA Letter dtd 18 Feb 75
23	M. L. Cambre St. Charles Environmental Council	Norco, LA Letter dtd 1 Mar 75 w/reply dtd 11 Jun 75
24	Milton Cambre St. Charles Environmental Council	Testimony, statement, newspaper clipping; 19 Apr 74
25	H. R. Carson, Jr. Lake Vista Property Owners Assn., Inc.	New Orleans, LA Letter dtd 22 Feb 75 w/reply dtd 21 Apr 75
26	Elizabeth W. Chalk	Hammond, LA Letter dtd 8 Mar 75
27	Angelo Chetta St. Bernard Parish Planning Comm.	Chalmette, LA Letter dtd 21 Feb 75
28	Scott Chotin Scott Chotin, Inc.	New Orleans, LA Letter dtd 20 Mar 75
29	Mills R. Coleman	Slidell, LA Letter dtd 22 Feb 75

E xhibit
No.

30	William G. Collins	New Orleans, LA Undtd Letter
31	C. Earl Colomb	Chalmette, LA Statement dtd 19 Feb 75
32	C. E. Corry	St. Tammany, LA Petition
33	Arthur Crowe	Statement undtd
34	Mayor Frank N. Cusimano City of Slidell	Four Resolutions
34-A	Slidell, City of	Resolution dtd 12 Dec 72
34-B	Slidell, City of	Resolution dtd 12 Sep 72
34-C	St. Tammany Municipal Assn.	Resolution dtd 10 Nov 71
34-D	Slidell, City of	Resolution dtd 9 Nov 71
35	Cliff Danby Orleans Audubon Society	New Orleans, LA Letter dtd 22 Feb 75
36	Frank J. Deemer Jefferson Parish Council	Gretna, LA Letter and resolution dtd 7 Apr 75
37	Mrs. Margaret Dendinger St. Tammany Parish Commission for Prevention of Death and Destruction	Slidell, LA Letter and petition dtd 18 Mar 75
38	Miss Joyce DeRossett	New Orleans, LA Letter dtd 17 Feb 75
39	A. B. Dunham Derricks, Incorporated	Slidell, LA Letter dtd 19 Feb 75
40	Margaret M. Duplantier	New Orleans, LA Letter dtd 20 Feb 75
41	Mrs. Edith Eckart St. Tammany Environmental Council	Mandeville, LA Letter dtd 22 Feb 75

Exhibit
No.

42	Governor Edwin Edwards State of Louisiana	Baton Rouge, LA Letter dtd 17 Mar 75
43	Marion Fannaly Sierra Club	Statement dtd 22 Feb 75
44	Henry F. Ferrer St. Tammany Sportsman's League	Covington, LA Letter dtd 21 Feb 75
45	Beverly Fritz	New Orleans, LA Letter dtd 22 Feb 75
46	Newman F. Gaines	Slidell, LA Letter dtd 19 Feb 75
47	A. L. Goodwin	Slidell, LA Letter dtd 22 Feb 75
48	Paul G. Gosselink SMU Environmental Law Clinic	Dallas, TX Letter dtd 17 Feb 75 w/reply dtd 7 May 75
49	L. C. Grunsmann, Jr. Louisiana Engineering Society, New Orleans Chapter	New Orleans, LA Letter dtd 17 Feb 75
50	Linda Haas	Slidell, LA Letter dtd 22 Feb 75
51	Clarke Harper Venetian Isles Civic & Imp. Assn.	New Orleans, LA Letter dtd 22 Feb 75
52	A. E. Hingle A. E. Hingle, Inc.	Lacombe, LA Letter dtd 17 Feb 75
53	Father Howard Hotard	Slidell, LA Letter dtd 18 Feb 75
54	John L. Kidd, Jr.	Slidell, LA Letter dtd 22 Feb 75
55	Mrs. John L. Kidd, Jr.	Slidell, LA Letter dtd 22 Feb 75
56	Nat G. Kiefer Louisiana State Senator	New Orleans, LA Letter dtd 21 Mar 75
57	Mayor Moon Landrieu New Orleans, City of	New Orleans, LA Letter dtd 21 Mar 75

Exhibit
No.

58	William J. Langly	Slidell, LA Letter dtd 22 Feb 75
59	Greg J. Lannes Regional Planning Commission	Statement undated
60	Guy LeMieux The Board of Levee Commissioners of the New Orleans Levee District	New Orleans, LA Letter dtd 21 Mar 75 with five documents
60-A	Mary Martin Lake Terrace Woman's Club	Letter dtd 5 Mar 75
60-B	A. F. Normand Village De L'Est Improvement Assn.	New Orleans, LA Letter dtd 8 Feb 75
60-C	Robert J. Alonzo East Orleans Civic Council	New Orleans, LA Letter dtd 21 Feb 75
60-D	Carl M. Werling, Jr. Young Men's Business Club of Greater New Orleans, Inc.	New Orleans, LA Resolution dtd 20 Feb 75
60-E	L. C. Grundmann, Jr. Louisiana Engineering Society, New Orleans Chapter	New Orleans, LA Letter dtd 17 Feb 75
61	David P. Levy David P. Levy Enterprises	Slidell, LA Letter dtd 18 Feb 75
62	Penny Luck	Metairie, LA Letter dtd 22 Feb 75
63	Carlos R. Lynch	Slidell, LA Letter dtd 17 Feb 75
64	Mrs. Noel M. Mansfield	Slidell, LA Letter dtd 18 Feb 75
65	Representative Theodore J. Marchand Louisiana House of Representatives	New Orleans, LA Letter dtd 21 Mar 75
66	A. F. Martinez, Jr. Kenilworth Civic & Improvement Assn.	New Orleans, LA Letter dtd 21 Feb 75
67	Glenn Mercadel Clio Sportsman's League	Kenner, LA Letter dtd 22 Feb 75

Exhibit
No.

68	Robert H. Merrell Slidell Sportsmen's League	Slidell, LA Letter dtd 22 Feb 75
69	Evelyn L. Merz	College Station, TX Letter dtd 11 Mar 75
70	John S. Miller	Slidell, LA Letter dtd 7 Mar 75
71	Wilson Miramon	Slidell, LA Letter dtd 22 Feb 75 See exhibit 72
72	Wilson Miramon	Slidell, LA Letter dtd 2 Apr 75 w/reply dtd 6 Jun 75
73	R. M. Mirandona, Jr.	Metairie, LA Letter dtd 22 Feb 75
74	Raymond A. Mix Little Woods Lakeside Property Owners Assn.	New Orleans, LA Letter dtd 10 Mar 75 w/reply dtd 6 May 75
75	John D. McCubbin Louisiana Shipbuilding & Repair Assn.	New Orleans, LA Letter and statement dtd 21 and 22 Feb 75
76	Edward J. McNamara	New Orleans, LA Letter dtd 25 Feb 75
77	Doris McWilliams	Shreveport, LA Letter dtd 17 Feb 75
78	Thelma M. Ouder St. Tammany Parish Commission for Prevention of Death and Destruction	Slidell, LA Letter and petition dtd 20 Mar 75
79	Thelma M. Ouder St. Tammany Parish Commission for Prevention of Death and Destruction	Slidell, LA Petition dtd 31 Mar 75
80	E. B. Oulliber General Lumber & Supply Co., Inc.	Slidell, LA Letter dtd 18 Mar 75
81	W. L. Oulliber	Slidell, LA Letter dtd 18 Mar 75

Exhibit
No.

82	Allen Parker	New Orleans, LA Letter dtd 13 Mar 75
83	August Perez III	New Orleans, LA Letter dtd 3 Mar 75
84	Calvin L. Perilloux	LaPlace, LA Letter and statement dtd 19 Mar 75
85	Joseph C. Peterson New Orleans City Council	New Orleans, LA Resolution dtd 27 Feb 75
86	Stuart I. Phillips Sierra Club, Delta Chapter	New Orleans, LA Letter and statement dtd 24 Feb 75 w/reply dtd 14 Apr 75
87	Manuel T. Pinto	New Orleans, LA Letter dtd 19 Feb 75
88	Mrs. Alvin A. Plaeger	Slidell, LA Letter dtd 27 Feb 75
89	Jack W. Powell	Slidell, LA Letter dtd 18 Mar 75
90	Leon H. Richmond	Slidell, LA Letter dtd 22 Feb 75
91	Leonard M. Rohrbough	Mandeville, LA Letter dtd 2 Apr 75
92	John St. Paul III Moore Steel, Inc.	New Orleans, LA Letter dtd 10 Mar 75
93	Douglas Scogin, Jr.	Slidell, LA Letter dtd 28 Feb 75
94	Representative Edward Scogin Louisiana House of Representatives	Slidell, LA Group of documents
94-A	W. J. Brogan	Slidell, LA Letter dtd 18 Feb 75
94-B	Henry G. Casserleigh, Sr.	Statement undtd
94-C	Michael Haas	Slidell, LA Letter dtd 21 Feb 75

Exhibit
No.

94-D	Steve Haas	Slidell, LA Letter dtd 22 Feb 75
94-E	Mrs. Noel M. Mansfield	Slidell, LA Letter dtd 14 Feb 75
94-F	Alain R. Seligman Southern Shipbuilding	New Orleans, LA Letter and statement dtd 19 and 22 Feb 75
94-G	J. E. Throop	Slidell, LA Letter dtd 20 Feb 75
94-H	Not Identified	Slidell, LA Petition dtd 18 Jan 75
94-I	Not Identified	Statement undtd
94-J	Not Identified	Statement undtd
94-K	Not Identified	Statement undtd
94-L	Representative Edward Scogin	Newspaper article undtd
94-M	Representative Edward Scogin	Newspaper article dtd 6 Feb 75
94-N	Representative Edward Scogin	Newspaper article undtd
94-O	Representative Edward Scogin	Newspaper article undtd
95	Walter L. Sentenn, Jr. New Orleans City Planning Comm.	Meeting proceedings dtd 5 Feb 75
96	Ivan O. Shank	Slidell, LA Letter dtd 18 Mar 75
97	G. Kent Stearn	New Orleans, LA Letter dtd 25 Feb 75
98	William H. Stevenson National Oceanic and Atmospheric Administration	St. Petersburg, FL Letter dtd 21 Mar 75

Exhibit
No.

99	Weston G. Strauch Lake Oaks Civic Association	New Orleans, LA Letter dtd 21 Feb 75
100	J. E. Throop	Slidell, LA Letter dtd 20 Feb 75
101	Barry J. Triche St. John Environmental Council	Statement dtd 20 Feb 75
102	Michael Tritico Marine Environment Researchers	Letter undtd
103	Edgar F. Veillon Louisiana Wildlife Federation, Inc.	Statement and resolution, undtd
104	Borden Wallace Wallace Menhaden Products, Inc.	Statement undtd
105	Carl M. Werling, Jr. Young Men's Business Club of Greater New Orleans, Inc.	Resolution dtd 20 Feb 75
106	John B. Wilkinson	New Orleans, LA Letter dtd 5 Mar 75
107	Numerous	Form letter dtd 31 Mar 75
108	Numerous	Form letter dtd 31 Mar 75
109	Numerous	Form letter dtd 3 Apr 75
110	Numerous	Form letter dtd 31 Mar 75
111	Numerous	Form letter dtd 31 Mar 75
112	Not Identified	Petition undtd
113	Illegible	Letter dtd 22 Feb 75
114	Joseph C. Peterson New Orleans City Council	Resolution dtd 6 Mar 75
115	Not Identified	Newspaper clippings, various dates



DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160

29 November 1974

LMNED-DL (Levee Construction, Lake Pontchartrain,
Louisiana and Vicinity Hurricane Protec-
tion Project)

PUBLIC NOTICE

This public notice is issued in accordance with provisions of established Federal regulations, Title 33 CFR 209.145, concerning the policy, practice, and procedures to be followed by the Corps of Engineers in connection with the disposal of dredged material in navigable waters or the transportation of dredged material for the purpose of dumping it in ocean waters associated with Federal projects.

This notice is being distributed to all interested state and Federal agencies and known interested persons in order to assist in developing facts and recommendations concerning the proposed continuation of levee construction by hydraulic dredging operations. Comments must be submitted to the District Engineer at the above address on or before 30 December 1974.

Laws under which the proposed dredging is to be reviewed:

Federal Water Pollution Control Act
Coastal Zone Management Act of 1972
National Environmental Policy Act of 1969
Fish and Wildlife Act of 1956
Migratory Marine Game-Fish Act
Fish and Wildlife Coordination Act
Endangered Species Act of 1973
National Historic Preservation Act of 1966

Project. Lake Pontchartrain, Louisiana and vicinity, hurricane protection.

Project location. The project is located in Southeastern Louisiana in the vicinity of Lake Pontchartrain and includes the city of New Orleans and surrounding areas.

Project description. The project is divided into five units. They are as follows:

- a. Barrier unit
- b. New Orleans east unit
- c. Chalmette unit

d. New Orleans west unit

e. Mandeville unit

This public notice will cover the barrier, the New Orleans east, and the Chalmette units. The dredging work within these units consists of constructing new levees, enlarging existing non-Federal levees, and constructing navigation and approach channels to the flood control structures within the barrier unit.

The purpose of the project is to provide improved protection from hurricane tides.

New levees will be constructed and existing non-Federal levees will be enlarged by first pumping dredged material to the levee fill areas and then shaping this material at a later date into a levee section.

Navigation and approach channels will be constructed by dredging these areas and pumping this material to the levee fill areas and/or ponding areas.

Disposal areas. The disposal areas for the subject units are as follows:

a. Barrier unit. The disposal areas are located in the vicinity of Chef Menteur Pass, Lake Borgne and the Gulf Intracoastal Waterway, and in the vicinity of the Rigolets, Lake St. Catherine, and Stump Lagoon. (See the attached drawing for specific locations.)

b. New Orleans east unit. The disposal areas are located on the north bank of the Gulf Intracoastal Canal from the Inner Harbor Navigation Canal to approximately Bayou Thomas, and along the landside of the railroad tracks along the south shore of Lake Pontchartrain from Paris Road to South Point. Unloading and stockpile sites for barged levee material and riprap are located along the south shore of Lake Pontchartrain. (See attached drawing for specific locations.)

c. Chalmette unit. The disposal areas are located on the south bank of the Mississippi River-Gulf Outlet from the Inner Harbor Navigation Canal to a point opposite Verret, Louisiana, and from there to Verret, Louisiana.

Method of dredging. Pipeline and bucket dredges will be utilized in the three subject units.

Quantity of Material to be removed.

a. Barrier unit. Approximately 35,500,000 cubic yards.

b. New Orleans east unit. Approximately 13,870,000 cubic yards.

c. Chalmette unit. Approximately 20,000,000 cubic yards.

Composition of material to be removed. The material to be removed from the clay borrow areas consists of very soft clay with peat and organic matter, very soft to fat clays with layers of silt, sandy silt, sand, and Pleistocene clays.

The material to be removed from the sand borrow areas consists of sand, silt, and silty sand.

Proposed time schedule for dredging.

a. Barrier unit.

(1) Chef Menteur area. Dredging is presently scheduled to begin July 1975 and will be completed December 1990. The dredging will not be continuous within this time frame.

(2) Rigolets area. Dredging is presently scheduled to begin July 1976 and will be completed July 1977. The dredging will not be continuous within this time frame.

b. New Orleans east unit.

(1) Along north bank Gulf Intracoastal Canal. Dredging is presently scheduled to begin August 1975 and will be completed October 1980. This dredging will not be continuous.

(2) Along south shore of Lake Pontchartrain. Dredging is presently scheduled to begin March 1975 and will be completed June 1977. This dredging will be continuous.

c. Chalmette unit.

(1) Orleans Parish. Dredging is presently scheduled to begin November 1975 and will be completed January 1977. This dredging will be continuous.

(2) St. Bernard Parish. Dredging is presently scheduled to begin February 1975 and will be completed September 1981. This dredging will not be continuous.

Properties adjacent to disposal areas.

a. Barrier unit. The land adjacent to the disposal areas is mainly marsh lands used for hunting and trapping. Camps and commercial businesses are located on the protected side of the proposed new levees.

b. New Orleans east unit. The land adjacent to the disposal area between the Inner Harbor Navigation Canal and Michoud Canal on the protected side is commercial, industrial, and residential; on the flood

side of the disposal area is the Gulf Intracoastal Waterway. Between Michoud Canal and Bayou Thomas, the land on the protected side of the disposal area is partially drained marsh land subject to commercial, industrial, and residential development; on the flood side of the disposal area is the Gulf Intracoastal Waterway. The land adjacent to the disposal between Paris Road and South Point on the protected side is partially drained marsh land subject to commercial, industrial, and residential development; on the flood side of the disposal area is Lake Pontchartrain.

c. Chalmette unit. The land adjacent to the disposal areas (described above for this unit) on the protected side is marsh land used for hunting and trapping; on the flood side of the disposal areas is the Mississippi River-Gulf Outlet.

Related dredging by others. There is no related dredging to be performed by others in the project area.

Designation of disposal sites. The disposal sites have not been designated by the Administrator, Environmental Protection Agency.

Coordination. A copy of this Public Notice is being sent to the following Federal, state, and local agencies for coordination purposes:

Environmental Protection Agency
Fish and Wildlife Service, U. S. Department of the Interior
Federal Water Pollution Control Administration, U. S. Department
of the Interior
Louisiana Wild Life and Fisheries Commission
The Stream Control Commission of Louisiana
State of Louisiana, Department of Public Works
State of Louisiana, Department of Health
Orleans Levee District
Lake Borgne Basin Levee District
St. Bernard Parish Police Jury
St. Tammany Parish Police Jury

Environmental impact statement (EIS). The draft EIS was submitted to the President's Council on Environmental Quality (CEQ) in August 1972. The final statement is presently scheduled to be submitted to CEQ in November 1974.

General information. Details for the disposal of the dredged material are now on file in the office of the District Engineer, U. S. Army Engineer District, Foot of Prytania Street, New Orleans, Louisiana, and may be seen by anyone having interest in the matter. Protests to the disposal plan, suggestions for modification thereof or objections to it, stating reasons therefor, will be received in writing up to and including 30 December 1974.

Any person who has a demonstrated interest which may be affected by the disposal of the dredged material may request a public hearing. The request must be submitted in writing to the District Engineer not later than 30 December 1974 and must clearly set forth the interest which may be affected and the manner in which the interest may be affected by the activity.

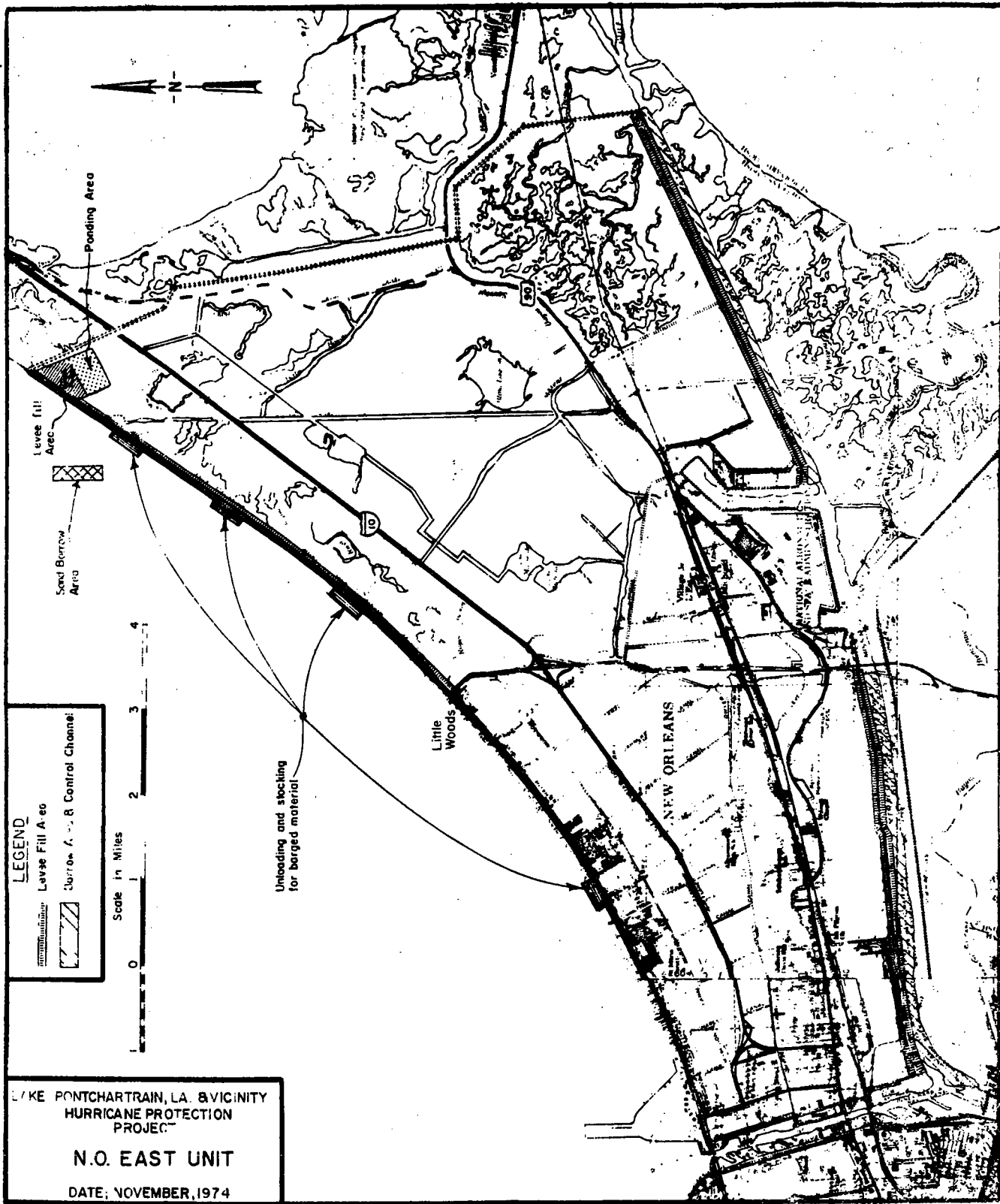
Designation of the disposal site for dredged material associated with this Federal project shall be made through the application of guidelines promulgated by the Administrator, EPA in conjunction with the Secretary of the Army. If their guidelines alone prohibit the designation of these disposal sites, the potential economic impact on flooding of the project area will also be considered.

You are requested to communicate the information contained in this public notice to any other parties whom you deem likely to have interest in the matter.



E. R. HEIBERG III
Colonel, CE
District Engineer

- 3 Incl
1. Plan dwg of
Barrier Unit
 2. Plan dwg of
New Orleans east unit
 3. Plan dwg of
Chalmette unit







LAKE PONTCHARTRAIN, LA. & VICINITY
 HURRICANE PROTECTION
 PROJECT
 N.O. EAST UNIT
 DATE: NOVEMBER, 1974

EXHIBIT I-7

LAKE PONTCHARTRAIN, L.A. & VICINITY
 HURRICANE PROTECTION
 PROJECT
CHALMETTE UNIT
 DATE NOVEMBER, 1974

LEGEND

-  Levee Fill Area
-  Fonding Area
-  Control Structure
-  Borrow Area and/or Control Channel

LAKE PONTCHARTRAIN

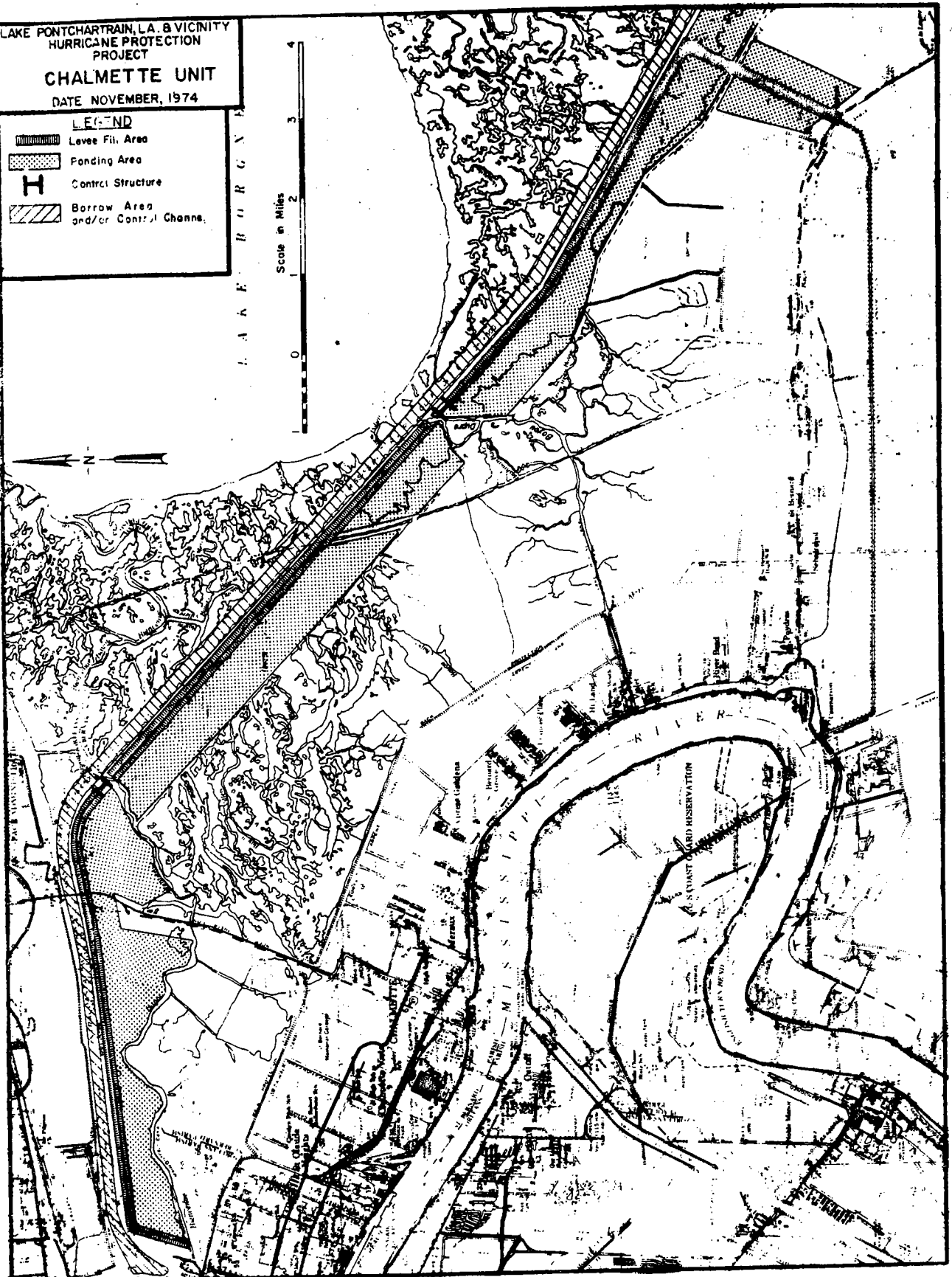
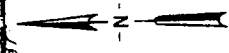
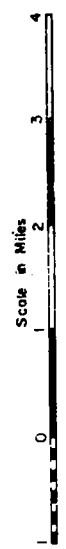


EXHIBIT I-8



DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160

LMNED-MP

JANUARY 22, 1975

ANNOUNCEMENT OF PUBLIC MEETING

WHAT FOR?

- A. To discuss all aspects of the LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY HURRICANE PROTECTION PROJECT including the environmental effects of the project.
- B. Provide a HEARING on planned or alternative PROCEDURES FOR THE DISPOSAL OF DREDGED MATERIALS occasioned by the construction of certain project features, as required by SECTION 404 of the FEDERAL WATER POLLUTION CONTROL ACT of 1972.

WHERE?

In the University Center Ballroom (Room 203) at
the University of New Orleans, New Orleans, Louisiana

WHEN?

On Saturday, 22 February 1975 at 9 A.M.

ALL INTERESTED PARTIES ARE INVITED

SEE ATTACHED SHEETS FOR ADDITIONAL INFORMATION AND MAP OF
THE PROJECT PLAN

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160

22 January 1975

ANNOUNCEMENT OF PUBLIC MEETING
TO DISCUSS
THE LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
AND
PLANS FOR DISPOSAL OF DREDGED MATERIALS
(IN COMPLIANCE WITH SECTION 404 OF
THE FEDERAL WATER POLLUTION CONTROL ACT OF 1972)

MEETING TO BE HELD AT 9:00 A.M., SATURDAY
22 FEBRUARY 1975 IN THE UNIVERSITY CENTER BALLROOM
UNIVERSITY OF NEW ORLEANS, NEW ORLEANS, LOUISIANA

PURPOSE OF MEETING

The purpose of this meeting will be twofold.

Part A: To discuss all aspects of the Lake Pontchartrain, La., and Vicinity hurricane protection project including its environmental effects.

Part B: To provide a hearing on planned or alternative procedures for the disposal of dredged materials occasioned by the construction of certain project features, as required by Section 404 of the Federal Water Pollution Control Act of 1972. This section of the meeting relates to an earlier public notice of the disposal plans, dated 29 November 1974.

BACKGROUND

The Lake Pontchartrain, La., and Vicinity project was authorized by the Flood Control Act of 1965, approved 27 October 1965. The purpose of the project is to provide hurricane protection to the Greater New Orleans Metropolitan Area which includes portions of Orleans, Jefferson, St. Bernard, St. Tammany, and St. Charles Parishes.

Southeastern Louisiana is frequently exposed to the devastating effects of hurricanes which enter the Gulf of Mexico. Because of the physical characteristics of coastal Louisiana, our Metropolitan area is particularly vulnerable to hurricane forces consisting of high winds, high water and heavy rainfall. Since nature has not provided us with natural means to combat hurricane forces, we must rely on artificial means to protect ourselves from this annual hurricane threat. This hurricane protection project is designed to provide that protection.

In order to understand how the project is being designed and how it will function, it is important to understand how a hurricane affects the areas in the vicinity of Lake Pontchartrain, and also to be aware of certain hurricane characteristics which affect our project designs.

A hurricane is one of the most unpredictable forces in nature. It is impossible to predetermine either the magnitude or path of a hurricane. For this reason, any hurricane which enters the Gulf of Mexico is regarded as a potential threat to our metropolitan area. As a hurricane approaches the Louisiana coastline, certain effects are predictable. Initially, the hurricane generated tides along the coastline rise far above normal elevations. The range of these tides varies according to the characteristics of each particular storm. For instance, the tidal rise which accompanied "Hurricane Betsy" in September 1965 ranged from about 8 feet above mean sea level at Grand Isle, Louisiana and Biloxi, Mississippi, to better than 14 feet above mean sea level east of the Mississippi River at Pointe a la Hache, Louisiana.

As the hurricane moves inshore, its high winds and heavy rainfall further aggravate the areas previously subjected to the high tides. Sustained hurricane winds cause waves to be set up on open bodies of water, thereby creating a greater flood exposure to areas adjacent to those bodies of water. Heavy rainfalls may cause flooding in areas otherwise protected from the high hurricane tides and wave action.

The general pattern of hurricane effects described above may be narrowed for a discussion of hurricane effects on the metropolitan area. The area of this concern is essentially that which is adjacent to Lake Pontchartrain and Lake Borgne. A hurricane flood threat to the New Orleans Metropolitan Area will be generated from one or both of these lakes.

Under existing conditions, as a hurricane approaches the city from the Gulf of Mexico, the tides in advance of the hurricane would be elevated to above-normal heights as described above. The rate of this rise varies depending on the storm, but it is generally rather gradual. Due to the natural connections with the Gulf waters at Chef Menteur Pass, The Rigolets, and at Seabrook (junction of IHNC at Lake Pontchartrain), water levels in Lake Pontchartrain would rise above normal elevations. Levels in Lake Borgne would also be well above normal elevations. Low-lying unprotected areas adjacent to the lakes would be inundated. Greater New Orleans would be virtually surrounded by high waters. If the center of the storm passed in close proximity to the city, the high winds of the storm would produce large waves on top of the already elevated water levels in the lakes thereby worsening the flood threat. Since the storm drainage systems of adjacent communities discharge into Lake Pontchartrain, high water levels in the lake would deny adequate pumping and prevent relief against flooding from heavy rainfalls.

Although Lake Pontchartrain is a very large lake (surface area of about 640 square miles) it is relatively shallow. In a sense, it can be likened to a large saucer full of water. The large yet shallow nature of the lake causes it to respond very quickly to high winds; therefore, waves may develop very rapidly on the lake surface. Under sustained high winds, the lake also experiences a very unusual effect. This is termed the "tilting" effect because under sustained high winds the water surface in the lake tilts against the windward shore. The combined effects of high tides, waves, and the tilting phenomenon create a severe threat of flooding to shoreline areas.

The information presented above describes the problem of hurricane flooding that must be dealt with in order to prevent widespread property damage and possible loss of lives. *How can this problem best be solved? What type of protective plan will best serve the needs of this metropolitan area?*

DEVELOPING A PLAN OF PROTECTION

During engineering studies prior to project authorization in 1965, the New Orleans District of the Corps of Engineers was challenged with the task of formulating a suitable plan for hurricane protection. Recognizing the potential for severe flooding was rather simple; preventing such flooding was very complex.

One plan studied was termed the "high level" plan. On the surface, the plan was simple; just raise all of the existing hurricane protection levees, and, where necessary, construct new high level levees to a height that would prevent flooding in the developed areas. Detailed studies, however, revealed that such a plan had many serious drawbacks. Because we live in the Louisiana delta, the foundation soils in our area are not conducive to certain types of construction. A commonly experienced problem in levee construction is settlement, and due to poor foundation conditions, building levees to the high levels required for such a plan would require long periods of time, extending our exposure to more hurricane seasons without complete protection. In order to construct levees to high levels, it would be necessary to widen the base of each levee, thus requiring more land for rights-of-way. In an urban setting, a demand for more land means higher cost and additional displacement of homes

and persons where land areas are congested. Another shortcoming of the high-level plan involves the problem of drainage. Due to the nature of our pumping system, a high level plan would prevent adequate drainage of the area during a hurricane unless all of the pumping stations which discharge into Lake Pontchartrain were extensively modified. Each of these problems may be translated into cost, and at the time comparative plans were being evaluated, the "high level" plan was estimated to cost approximately 50% more than the plan now recommended.

Another problem related to the "high level" concept would be the flooding of facilities along the IHNC. Since the industries along that waterway require direct access to the canal, many of the industrial facilities are outside of the protective system. With the "high level" plan there would be no feasible means to effect flood stage reductions in the IHNC with the result that many industries would suffer severe flooding. These industries play a very important role in our regional economy and any prolonged disruption of production from these concerns would severely impact the commerce of our area.

In recognition of the inherent drawbacks of a high level plan, the New Orleans District developed the "barrier concept." *What is the barrier? How does it function?*

THE BARRIER CONCEPT

The "barrier concept" is indeed the most distinguishing element of the recommended hurricane protection plan. The barrier consists of three basic features: namely, the Rigolets Complex, the Chef Menteur Complex and the Seabrook Complex. Each of these complexes includes a gated flood control structure, a navigation structure, and a closure embankment. A more detailed discussion of these complexes is presented later in this announcement.

The purpose of these structures is to control water level increases in Lake Pontchartrain when a hurricane threat is imminent. As described above, when a hurricane approaches the Louisiana coastline, the area in advance of the storm experiences a gradual rise in sea level generated by the storm. For the design hurricane, under natural conditions, this rise would elevate Lake Pontchartrain by 5 to 7 feet above normal lake levels. This rise, combined with the "tilting effect", could produce lake levels from 10 to 13 feet above normal elevations at any location adjacent to the lake. This phenomenon occurred during Hurricane Betsy in 1965.

The barrier structures are designed to prevent the lake from attaining such high levels. As a hurricane moves toward the city, the gated flood control structures at Chef Menteur Pass, The Rigolets and at Seabrook would be closed, thereby preventing the hurricane produced tides from entering and raising the lake to extreme heights. To the greatest extent possible, this closure would maintain the lake at near normal levels just prior to the passage of the storm.

The barrier concept has many important advantages over the high level plan. Firstly, it affords a higher degree of protection to all land areas adjacent to Lake Pontchartrain since the water level of the lake would be as much as 6 feet lower with the barrier plan than with the high level plan. This factor produces collateral benefits in several ways. Storm drainage pumped into the lake may be discharged more efficiently when lake levels are lower, thus benefiting interior drainage. Present and future levee systems adjacent to the lake can be built to lower elevations under the barrier concept with attendant benefits of smaller rights-of-way requirements, less costly construction, and fewer and less costly relocations of utilities, property and persons.

Secondly, the Seabrook Complex feature of the barrier plan will provide a means for regulating the salinity level of the lake. Since the construction of the MR-GO, salinity levels in Lake Pontchartrain have risen. The MR-GO provides a direct connection between Breton Sound and Lake Pontchartrain via the IHNC at Seabrook, transporting the highly saline Gulf waters with little dilution. If the rise in the salinity level of the lake were allowed to continue without adequate controls, the environment of the lake could be detrimentally altered, and its value as an important nursery area for many aquatic species would be lost. The gated control structure at Seabrook Complex will allow the salinities in the lake to be regulated to beneficial levels.

Thirdly, the barrier complexes will afford a means of flood relief for the industries along the IHNC. In this respect, the Seabrook Complex functions as a safety valve to reduce high flood levels in the IHNC. When the IHNC water levels reach the top of the canal banks the gated flood control structure at Seabrook would be fully opened permitting flood relief to the industries along the IHNC. This relief would only be available with the lower water level in Lake Pontchartrain made possible by the barrier complexes. A high level plan would not prevent tidal rises in the lake, and such flood relief would not be available. Since the lake is very large with respect to the inlet at Seabrook, the flows which would be permitted into the lake at Seabrook under the recommended plan of operation would not appreciably affect the elevation of the lake and would not violate the concept of the barrier plan.

Fourthly, the barrier plan will require a shorter period for construction and will therefore reduce the number of years that the area is exposed to hurricane threats without adequate protection.

Lastly, and of great importance, is that the barrier plan will cost less than the high level plan. Comparative design estimates revealed that the high level plan would cost about 50% more than the barrier plan.

Now that the reasons for selecting the barrier plan are known, the next important question to be answered is *"Will the barrier plan work?"*

Realizing that the barrier concept could be more advantageous than a high level type of protection, the New Orleans District had to be certain that it would work. During early project planning, the New Orleans District engaged the services of the Waterways Experiment Station in Vicksburg, Mississippi to construct the entire hurricane protection project in model form. The major purpose of the model was to determine the effect of the barrier complexes on the salinity and flow characteristics of the lake and to develop structural designs for the complexes that would retain the existing ecological character of the lake. The barrier structures have been designed in conformance with the data from that model study and they have been planned to have negligible effect on the lake.

Detailed designs completed after early project studies showed that the structural complex at The Rigolets could be relocated to a more economical site. In order to be certain that this redesign did not affect the flow characteristics required for its function as part of the barrier, the services of the Waterways Experiment Station were again utilized. A hydraulic model of The Rigolets was recently constructed, and studies are now underway to assure the performance of the redesigned complex.

Today there is an urgent need for environmental awareness. In order for the barrier structures to be responsive to our needs, they must perform well not only during hurricane conditions, but also during normal weather conditions. They must be environmentally sound. We must be certain that they do not harm the natural ecological balance in the lake. For this reason, much time and effort has been devoted in planning the barrier portion of the project and the Corps of Engineers has required the detailed model studies, the services of environmental consultants and professional design consultants, and has performed, and is presently performing, the many detailed hydraulic design studies relating to the barrier complexes.

During all normal weather conditions, the gated flood control structures at the Chef Menteur Pass and at The Rigolets will remain fully opened. In this opened position, these structures are designed to preserve normal tidal exchanges. These structures will not be closed until a hurricane enters the Gulf of Mexico, threatening the Louisiana coastline. Only in this event will the structures function as a barrier to prevent flow into Lake Pontchartrain, remaining at all other times an artificial equivalent of the natural passes.

A more detailed discussion of the environmental effects of the project is included in the "Summary of Environmental Considerations" appended to this announcement as Attachment No. 1.

THE RECOMMENDED PLAN

The recommended project consists of two major protective systems - the Lake Pontchartrain Barrier Plan and the Chalmette Area Plan. Please refer to the map of the project plan appended to this announcement.

The Lake Pontchartrain Barrier Plan consists of the following features:

- a. The Rigolets Complex. This complex includes a gated flood control structure with approach channels, a navigation lock with approach channels, and a closure dam to link the control structure and lock across a portion of the natural pass. These structures are connected to the US Highway 90 embankment north and south of The Rigolets by earthen levees.
- b. The Chef Menteur Complex. This complex includes a gated flood control structure with approach channels, a navigation structure with approach channels, and a closure dam to close the natural pass. These structures are connected to the US Highway 90 embankment east of the complex and with the New Orleans East levee system west of the complex. A realignment of the Gulf Intracoastal Waterway (GIWW) at this location is required to provide uninterrupted navigation along that waterway.
- c. The Seabrook Complex. This complex includes a gated flood control structure to pass flows as desired, a navigation lock, and a connecting rock dike.
- d. Improvement of existing levees along the lakeshore of Jefferson Parish and New Orleans from the St. Charles - Jefferson Parish line to the IHNC.
- e. Construction of new levees along the lakeshore of Citrus and New Orleans East from the IHNC to South Point, La.
- f. Improvement of existing levees from South Point to the GIWW, continuing along the northern bank of the GIWW and the MR-GO in Citrus and New Orleans East to the IHNC.
- g. Construction of levees and floodwalls along both banks of the IHNC.
- h. Strengthening and repair of the existing floodwall in Mandeville, La. (Planning on this feature is currently inactive due to the lack of financial participation in the project by St. Tammany Parish sponsors.)
- i. Extension of the barrier to the east side of the junction of US Highways 90 and 190 and then northerly along US Highway 190.
- j. The barrier plan as initially authorized by Congress provided for construction of a new earthen levee along the St. Charles Parish lakeshore from the Bonnet Carre Floodway to the St. Charles-Jefferson Parish line. The inclusion of Bayous Trepagnier and La Branche in the Louisiana Natural and Scenic Rivers System currently forecloses the possibility of proceeding with the levee without contravening State law. Should the impediment imposed by the Natural and Scenic Rivers System be removed in the future, additional studies will be needed to fully evaluate the relationship of the marsh to the surrounding ecosystem, and provide a basis for a decision on whether the levee should be built. Accordingly, construction of the feature of the project has been indefinitely deferred.

The Chalmette Area Plan is a wholly independent protective system included in the overall hurricane protection project, since the Chalmette area is outside of the influence of the barrier complexes. This plan consists of the following features:

- a. Construction of a levee and floodwall system from the Mississippi River levee in New Orleans along the east bank of the IHNC and the south banks of the GIWW and MR-GO to the vicinity of Verret, La., with a return levee from Verret to the Mississippi River levee at Caernarvon, La.
- b. Construction of navigable floodgates on Bayous Bienvenue and Dupre near their junctions with the MR-GO.

NAVIGATION ACCESS

An integral part of the barrier system is navigation access for Lake Pontchartrain. With the barrier structures in place, adequate provisions for marine access must be incorporated into the overall project plan. Three avenues of marine access for Lake Pontchartrain will be included in the project. They are the Seabrook Lock, the Rigolets Lock, and the Chef Menteur Complex Navigation structure.

The currently approved dimensions for the Seabrook Lock are 800-foot usable chamber length, 84-foot chamber width with a sill depth of -15.0 mean low gulf (m.l.g.). This lock will serve navigation by reducing adverse current velocities and eddies in the IHNC. Such currents jeopardize marine safety, erode channel banks and undermine wharves and bridge foundations along that canal.

The normal daily operating procedure for this structure provides for the lock gates to remain in the opened position allowing unimpaired vessel transit through the chamber, until the current velocity through the structure exceeds 3 feet per second (ft/s). The lock gates would then be closed and vessels would require lockage. Studies show that lockage would be required for about 7 hours over each 24-hour period. The vessels which currently utilize the IHNC, and the future prime users of Seabrook Lock, are in vast majority industrially related. The lock will benefit these users by alleviating the adverse currents now causing hazardous conditions along the IHNC.

In advance of a hurricane, and throughout the storm, the lock gates will be closed. Locking operations will continue until safe lockages can no longer be accomplished. During such periods the flood control structure adjacent to the lock will provide flood relief to industrial concerns in the canal.

The currently planned dimensions for The Rigolets Lock are 800-foot usable chamber length, 110-foot chamber width, and a sill depth of -13.2 m.l.g. Like the Seabrook Lock, this structure will remain open during all normal conditions allowing free navigational transit, until the current velocities through the lock chamber become prohibitive for safe passage. Only then would vessels have to be locked through. Study reveals that locking would be required only for about 5 hours per day for 15 days of each month. During hurricane periods, the lock gates will be closed; however, lockages will be permitted until such operations can no longer be safely accomplished.

The dimensions planned for the Chef Menteur navigation structure are 84-foot width and a sill depth of -16.0 feet m.l.g. This structure will provide continuous uninterrupted access to the lake at Chef Menteur Pass. This structure will remain open at all times except when a serious storm or hurricane threatens from the Gulf. Under hurricane conditions, the structure would be closed coincident with the closure of the other barrier structures. Navigation would then be diverted through either the Seabrook Lock or the Rigolets Lock.

It is important that the dimensions of these structures adequately accommodate present and future requirements for marine craft. In order to assure their adequacy, the Corps of Engineers performed navigation studies assessing the anticipated uses of the structures with respect to the Gulf Intracoastal Waterway system, local shipbuilding and marine related concerns, controlling depths of adjacent waterways, and with the existing clearances of bridges and appurtenant facilities. The studies were thoroughly coordinated with local shipbuilding interests. The data compiled resulted in substantial increases in the original dimensions of the Chef Menteur Navigation Structure and the Rigolets Lock. The dimensions now planned are considered to be consistent with all present and future navigation needs of the area throughout the life of the structures.

In addition to the structures described above, two navigable floodgates have been incorporated into the Chalmette Area Plan portion of the project. These structures are located on Bayous Bienvenue and Dupre. Each of these structures is 56 feet wide with a sill depth of -10.0 feet m.l.g.

ENVIRONMENTAL CONSIDERATIONS

The final environmental statement has been filed with the President's Council on Environmental Quality as required by the National Environmental Policies Act of 1969. Interested persons may obtain a copy by request to the following address:

Environmental Resources Branch
ATTN: LMNPL-RE
New Orleans District, Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160

A summary of the contents of the environmental statement is contained in the "Summary of Environmental Considerations" appended hereto as Attachment No. 1.

DISPOSAL OF DREDGED MATERIAL ("SECTION 404")

The "Section 404" portion of the meeting will be conducted in accordance with provisions of established Federal regulations, Title 33 CFR 209.145, concerning the policy, practice, and procedures to be followed by the Corps of Engineers in connection with the disposal of dredged material in navigable waters or the transportation of dredged material for the purpose of dumping it in ocean waters, associated with Federal projects.

A public notice concerning the procedures for this project was distributed on 29 November 1974 to all interested state and Federal agencies and known interested persons in order to assist in developing facts and recommendations concerning the proposed continuation of project construction by hydraulic dredging operations.

The following are the laws under which the proposed dredging is to be reviewed:

Federal Water Pollution Control Act of 1972
Coastal Zone Management Act of 1972
National Environmental Policy Act of 1969
Fish and Wildlife Act of 1956
Migratory Marine Game-Fish Act
Fish and Wildlife Coordination Act
Endangered Species Act of 1973
National Historic Preservation Act of 1966
Marine Protection, Research, and Sanctuaries Act of 1972

The "Section 404" portion of the meeting will discuss plans and procedures for dredging operations associated with the construction of various project features. The proposed dredging work consists of constructing new levees and closure dams, enlarging existing levees, and constructing approach channels to the flood control and navigation structures included in the project. See Attachment No. 2 for details.

Comments regarding this portion of the meeting may be submitted to the District Engineer at the meeting or forwarded to the address at the beginning of this announcement before 24 March 1975.

LOCAL COOPERATION

The Governor of the State of Louisiana has designated the Louisiana Department of Public Works (DPW) as the local cooperating agency for the project. The DPW must coordinate the local responsibility for participation in the project.

COST OF THE PROJECT

The total cost of the project as of July 1974 is \$327,000,000 of which \$224,000,000 are Federal costs and \$103,000,000 are non-Federal costs. The benefit to cost ratio of the project is 12.6 to 1. This means that for every dollar spent to implement the project, about \$12.60 of flood protection or related benefits will be produced by the project after its completion.

GENERAL INFORMATION

All interested parties are invited to be present or be represented at the above time and place, including representatives of Federal, state, parish and municipal agencies, and those of commercial, industrial, civic, highway, railroad, water transportation, ecological, and environmental interests, as well as concerned property owners and other individuals. All will be afforded full opportunity to express their views concerning any and all aspects of the project, including the environmental statement.

Advocates of the project are urged to present pertinent factual material in support of their positions. Opposing interests are likewise urged to submit specific information backing their positions.

Oral statements will be heard, but for accuracy of the record, important facts and arguments should be submitted in writing, in five copies if possible, as the record of this meeting will be forwarded for consideration by the Department of the Army. Written statements may be handed to the undersigned at the meeting or mailed beforehand to the undersigned at the address at the beginning of this announcement.

An agenda of the proceedings is included with this announcement as Attachment No. 3.

It is requested that the foregoing be brought to the attention of persons known to be interested in the matter. Newspapers, periodicals, and radio and television stations are urged to use this announcement as a news item. Postmasters and other officials are requested to display this notice prominently.



Inclosures as follows:
Project map
Attachment No. 1 - Summary
of Environmental Considerations
Attachment No. 2 - Disposal
of Dredged Material
Attachment No. 3 - Agenda

E. R. HEIBERG III
Colonel, CE
District Engineer

SUMMARY OF ENVIRONMENTAL CONSIDERATIONS
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT

1. INTRODUCTION

The project is located in southeastern Louisiana in the general vicinity of the city of New Orleans, and its inherent function is to prevent or reduce loss of lives and property damage due to hurricane flooding. The project area includes the lowland and water areas between the natural levee deposits of the Mississippi River and the Pleistocene escarpment to the north and west. The main topographic feature of the project area is Lake Pontchartrain which covers approximately 640 square miles in area and averages 12 feet in depth. Lake Pontchartrain is connected to Lake Maurepas to the northwest and to Lake Borgne, the Mississippi Sound, and the Gulf of Mexico to the south and east. Approximately 4,700 square miles of tributary area drain into the lake. The project area consists of about 780 square miles of land area. The project is divided into two separate protective plans - the Lake Pontchartrain Barrier Plan and the Chalmette Area Plan. The benefit-cost ratio of the project is 12.6 to 1 as of July 1974.

2. DESCRIPTION OF ACTION

This project provides for the construction of a barrier along the east side of Lake Pontchartrain, a levee along the St. Charles Parish lakefront, a new levee along the Citrus and New Orleans East lakeshores, the improvement and enlargement of existing protective works on the south and north shores of the lake, along the Gulf Intracoastal Waterway (GIWW) and the Inner Harbor Navigation Canal (IHNC) including a dual-purpose lock at Seabrook and necessary modifications to roads, pipelines, pumping stations, and drainage facilities. In view of the inclusion of Bayous LaBranche and Trepagnier in the Louisiana Natural and Scenic Rivers System, the construction of the St. Charles Parish levee has been deferred. The Chalmette Area Plan provides for construction of a new levee along the south shore of the Mississippi River-Gulf Outlet (MR-GO) from the IHNC to the vicinity of Verret and thence to the Mississippi River at Caernarvon. Control structures at Bayous Bienvenue and Dupre and a drainage structure at Creedmore Canal are provided. The purpose of this project is to provide for protection of life and property for existing development and future improvement against flooding caused by hurricane waves and surges.

3. GEOLOGICAL ELEMENTS

The project area, known as the Pontchartrain Basin, is situated along the northeastern flank of the Mississippi River Deltaic Plain and is located within the Central Gulf Coastal Plain. The basin is a shallow depression which lies between the alluvial ridge of the Mississippi River and the gulfward-sloping uplands on the north and west. Except for short stretches along the northern shore of Lake Pontchartrain in the vicinity of Mandeville where the uplands border the lake, and behind the seawall along the south shore at New Orleans where sandfill has been placed, the lake is separated from the uplands and alluvial ridges by marsh and swamplands. The area is of extremely low relief. Dominant physiographic features are the swamps, marshes, natural levees, and abandoned distributaries.

ATTACHMENT NO. 1

4. HYDROLOGICAL ELEMENTS

Lake Pontchartrain is an oval-shaped low salinity estuary. It was formed from a remnant of an arm of the Gulf of Mexico which was impounded by deltaic deposits of the Mississippi River and gradually freshened. It is about 25 miles wide along its north-south axis and 40 miles long along its east-west axis. Lake Pontchartrain lies adjacent to and just north of the city of New Orleans, Louisiana, and is connected with Lake Maurepas on the west by Pass Manchac, with Lake Borgne on the east by Chef Menteur and Rigolets Passes, and with the MR-GO channel by the IHNC and Intracoastal Waterway.

The salinity in Lake Pontchartrain usually averages below 5 parts per thousand (p.p.t.) but considerable variation occurs in different areas of the lake and during different seasons of the year. Salinities below p.p.t. occur in the northwestern areas near freshwater inflow, and values as high as 18 p.p.t. have been reported after storms from eastern areas near the Chef Menteur and Rigolets Passes.

Generally, the salinity gradient in the lake is fairly uniform, increasing from near-fresh waters in Lake Maurepas progressively through Lake Pontchartrain to more saline conditions at the lake connection with Lake Borgne. Discharge of freshwater from the Pearl River acts to dilute Lake Borgne water; however, since the MR-GO opened in 1963, salinities have increased in Lake Pontchartrain and Lake Borgne due to the inflow of more saline waters from the gulf. Mean annual chlorides in samples from eastern Lake Pontchartrain for a 5-year period after the opening of the MR-GO average two to three times higher for a similar period before the opening of the outlet.

Tides are diurnal in Lake Pontchartrain and adjoining lakes. The mean tide range at Long Point, near the eastern end of Rigolets, is 1.0 foot. In Lake Pontchartrain the range decreases to about 0.6 foot and further decreases to about 0.3 foot in Pass Manchac and Lake Maurepas for conditions of mean freshwater discharge. The mean freshwater discharge into the lake system is about 18,000 cubic feet per second (c.f.s.) of which 60 percent is from the Pearl River and its branches. The main total prism at Rigolets is about 9 billion cubic feet. The approximate mean maximum current velocity in Rigolets is 1.9 feet per second (f.p.s.), in Chef Menteur 2.8 f.p.s., and in Pass Manchac 2.0 f.p.s., while current velocities in Lake Pontchartrain are of the order of 0.5 f.p.s. or less. The maximum velocities are about the same for both flood and ebb currents but the duration of the ebb currents is slightly longer.

Salinity in Lake Pontchartrain and connected lakes does not occur in stratified form, as is the case in many estuaries. Rather the lake system is in the category of well mixed estuaries in which salinities from surface to bottom are essentially uniform.

5. BOTANICAL ELEMENTS

Vegetation of the project area is very diverse, including pinelands on the terraces north of Lake Pontchartrain and second-growth swamp and marshland south of the lake. Swamps have an overstory of baldcypress, tupelogum, Drummond red maple, and pumpkin ash and an understory of palmetto, virginia willow, and buttonbush. Herbs and vines include shield fern, smartweed, water hyacinth, alligatorweed, duckweeds, blackberry, rattan vine, and poison ivy.

Marshes vary from fresh to brackish in the project area. Bulltongue, alligatorweed, and sedges dominate the fresh marshes, while wiregrass, three-cornered grass, and coco dominate the brackish marshes. Frontwoods near the river are covered with hackberry, sweetgum, American elm, willows, boxelder, oaks, and waxmyrtle.

Aquatic vegetation of Lake Pontchartrain was surveyed and approximately 2,000 acres of the lake bottom are vegetated with eelgrass (wild celery), widgeongrass, and southern naiad. The greatest concentration of these submerged aquatics exists from Green Point, just east of Fontainebleau State Park, to Big Point, just west of Louisiana Highway 11. In the deeper waters of the interior of the lake, the vegetation consists primarily of phytoplankton.

Chabreck, Palmisano, and Joanen (1968) prepared a vegetative type map of marsh types in coastal Louisiana. Brown (1973) prepared a map of all vegetative types in Louisiana. These maps show the extent of habitat in the project area.

6. ZOOLOGICAL ELEMENTS

The forested swamp areas are used primarily by the raccoon, opossum, white-tailed deer, squirrels, and swamp rabbits. Portions of the wooded swamp are useful to waterfowl, primarily wood ducks and mallards. The American alligator occurs in the swamps and marshes and is listed by the US Department of the Interior, US Fish and Wildlife Service, as a rare and endangered species.

The marsh areas are used by rabbits, nutria, muskrat, mink, and migratory waterfowl. Migratory waterfowl using the area include the gadwall, widgeon, blue-winged and green-winged teal, lesser scaup, redhead, pintail, canvasback, mallard, shoveler, and a few blue and snow geese. Mottled ducks nest in the marshes and inhabit them year-round. Other birds present include the snipe, rails, gallinules, dowitches, egrets, herons, and hawks.

Freshwater commercial fishing is almost nonexistent in the project area. Commercial harvesting of brackish water fishery resources, including the brackish water clam, oyster, blue crab, brown and white shrimp, and sport fish, occurs in Lakes Borgne and Pontchartrain. The most important brackish water species of sport fish include the spotted seatrout, flounder, sheepshead, drum, Atlantic croaker, and gafftopsail catfish.

The aquatic fauna of Lake Pontchartrain is composed of typical brackish water species; however, the relatively low salinities allow the invasion of freshwater species. This factor, in turn, excludes many of the typically high salinity forms. Since most of the commercial species of fish and invertebrates are omnivorous, with organic detritus prominent in their diet, these species are dependent upon primary production which occurs in surrounding marshes and swamplands. The principal inflow of freshwater into Lake Pontchartrain is from the nutrient-poor acid soils of the pinelands to the north. Because of this, Lake Pontchartrain does not support the biomass and commercial fishery of other low salinity Louisiana estuaries which receive drainage from richer land areas; although it is an important fish and shellfish nursery area.

Darnell (1962) noted that only four organisms maintain large resident populations in Lake Pontchartrain. These include brackish water clams, a mud crab, and a calanoid copepod; and one vertebrate, the anchovy. According to Darnell, most of the remaining abundant species are migratory and spawn elsewhere, invading the lake as seasonal transients.

7. ARCHEOLOGICAL AND HISTORICAL ELEMENTS

Archeological evidence indicates that Indians were present in the Pontchartrain Basin by approximately 1800 B.C. (Saucier, 1963). Rangia cuneata have matured, spawned, and died for the past 9,000 years in Lakes Pontchartrain and Maurepas (Saucier, 1963). Numerous shell heaps in the area testify that mollusks were a basic part of their diet. The most widely utilized mollusks were a freshwater clam (Unio), a brackish-water clam (Rangia cuneata), and the oyster (Crassostrea virginica). At least 30 sites are known to have been destroyed and many others severely damaged in recent years, most of these in the New Orleans area. Residential and commercial establishments have damaged or destroyed these sites by construction on or near them.

Archeological sites on the south shore in St. Charles Parish and New Orleans East have been severely damaged by tidal action. Those sites which are directly on the lakeshore have been exposed to wave action and exhibit damage or truncation. In some cases, sites have been completely destroyed, but usually the shell and the more durable artifacts remain, concentrated by wave action along the nearby shore. Sites of this type, where none of the materials remain in their original location, are referred to as beach deposits. Since the collections from such an area include materials from all parts of the site and possibly several sites, there is a complete loss of stratigraphy.

In March, 1970, the Louisiana Archeological Survey, Department of Geography and Anthropology, Louisiana State University, Baton Rouge, contracted with the National Park Service in a concerted effort to determine, by way of a field survey, if any archeological remains exist along the paths of the hurricane protection project, one of several in Louisiana being directed by the Department of the Army, New Orleans District, Corps of Engineers. The archeological survey for sites in the proposed construction area of the hurricane protection project was conducted intermittently over a period of 7 days between June 8 and June 18, 1972 and resulted in a report (Neuman, 1970). The participants consisted of one archeologist and an assistant. Most of the survey was conducted by boat, but the areas in and around New Orleans and south of Bayou Terre aux Boeufs, in St. Bernard Parish, were surveyed by automobile and on foot. During the survey, two previously unrecorded sites were visited. Both sites are manifested as low-rise shell middens along the shore of Lake Pontchartrain, at the mouth of Bayou Piquant, in St. Charles Parish. Investigations at both sites would contribute substantial data to the relatively meager archeological record of this region.

8. ANTICIPATED ADVERSE ENVIRONMENTAL IMPACTS OF THE PLAN

Implementation of the project would involve the following types of adverse environmental impacts: (1) utilization and commitment of lands and water bottoms for project features, (2) conversion of natural habitats, including marshes, swamps, and woods to urban type uses, (3) loss of detrital input to the surrounding ecosystem and attendant loss in natural productivity of that ecosystem, (4) reduction of recreation opportunities, (5) loss of esthetic values (6) loss of, or damage to, archeological resources, and (7) deleterious alterations in water quality.

Adverse environmental impacts associated with the project are described, on a feature-by-feature basis, in the following paragraphs:

a. Lake Pontchartrain barrier. Construction, operation, and maintenance of the barrier will require the commitment of 2,056

acres of land in construction rights-of-way and spoil and borrow areas. The lands committed, which are predominantly marsh, will be permanently altered and the alteration will imply a loss of habitat and detrital impact to the associated estuarine ecosystem and a minor loss in the overall productivity of that system. Since the Seabrook complex may be operated to establish a fresher salinity regimen in Lake Pontchartrain than that which currently exists, there may be a reduction in those species of euryhaline fishes more tolerant of the higher salinities. Construction and maintenance operations will induce temporary increases in turbidity in surrounding water areas, with minor impact on water quality and flora and fauna. The imposition of structures, in particular the locks and control structures on the existing landscape will alter natural vistas.

Except for infrequent brief periods when approach and/or passage of a hurricane requires closure of the barrier structures, the only significant change in flow patterns in The Rigolets and Chef Menteur Passes which will be induced by the structures will be in the immediate vicinity of the structures and their associated transition channels, where flow velocities will be increased over those obtaining generally in the passes proper. Conditions elsewhere will remain the same and the cyclical reversals in flow induced by tidal action will continue to occur as they do now.

In the larval or very young stage, migrating species move with the flow, hence, the impact of the barrier structures on such organisms will be limited to increasing the rate at which they traverse a very small reach of the passes involved. Neither this effect, nor the interruption of flow occasioned by operation of the structures to prevent ingress of tidal surges will have any appreciable effect on the life patterns of larvae and very young migrating specimens.

More mature specimens will be subject to having their transits of the passes interrupted during periods of closure, and for the less mobile of these, during periods when velocities through the structures are too high for them to swim against, as well. Given the cyclical reversals of flow which will continue to occur, the delays involved have no significant implications insofar as these specimens are concerned.

b. St. Charles Parish levee. As previously explained, this feature is currently in a deferred status and additional studies would be required to adequately assess the environmental impacts. However, the following partial evaluation of adverse impacts associated with its construction are presented herein for information. The major adverse impacts resulting from this feature would derive from the alteration of 24,770 acres of marsh, swamp, and open-water bodies, inclusive of a total of 916 acres of rights-of-way which would be required for construction and maintenance of the levee. The levee would interdict tidal interchange in this area and establish the base conditions necessary for conversion of the area to urban-type uses. The loss of habitat, coupled with the drastic reduction in detrital input to Lake Pontchartrain, implies a significant loss in the natural productivity of the estuarine complex associated with Lake Pontchartrain. The natural esthetics of this large area would be permanently altered. Increased turbidity during construction and maintenance of the levee and associated drainage structure would disrupt the aquatic habitat and have temporary and minor effects on flora and fauna. Existing recreational opportunities in the area landward of the levee would be reduced. The area is extensively used for private hunting with 15 clubs having 250 members engaged in hunting ducks, deer, and squirrels. Annually, 18,000 ducks and coots are bagged. The area is extensively fished and crabbed. About 220,000 pelts of nutria, raccoon, mink, and otter are taken in the area each year. These activities would

decline rapidly after completion of the levee. Three Indian middens would be affected and require salvage. Two streams in the project area are included in the Natural and Scenic Rivers System of Louisiana - Bayous LaBranche and Trepagnier. Construction of the levee would necessitate closure of Bayou LaBranche near its mouth and rerouting of drainage flows therein to the outlet structures at Bayou Piquant, substantially altering the flow regimen in both Bayous LaBranche and Trepagnier. The project will result in development in the area and conversion to urban-type use. This, in turn, will cause a corresponding increase in environmental stresses associated with such use.

c. Orleans Parish - West of IHNC. Levee and floodwall construction will require the commitment of 75 acres of developed land to project use.

d. Orleans Parish - Citrus area. Levee and floodwall construction and maintenance will require the commitment of 370 acres of developed land to project use. Construction and maintenance activities will induce temporary increases in turbidity in Lake Pontchartrain, the MR-GO, and the GIWW, with attendant minor disruption to sport and commercial fishing and crabbing.

e. Orleans Parish - New Orleans East. Construction of levees and floodwalls will require the commitment of about 600 acres of leveed marsh for project use. Because tidal interchange in the area has already been interdicted by the existing system of embankments, the implications of this commitment to the overall natural productivity will be nominal. Excavation of borrow material from Lake Pontchartrain and the GIWW will result in temporary increases in turbidity in these water bodies with attendant minor disruption to sport and commercial fishing and crabbing. Provisions of higher degree of hurricane protection, as a result of the project, will tend to increase the rate of development in this area, engendering a corresponding increase in those environmental stresses associated with urban-type development.

f. Chalmette area. Construction, operation, and maintenance of the various features of the Chalmette Area Plan will require the commitment of 1,865 acres of lands for project use. Construction of the project will alter the condition of 16,312 acres of swamp and 2,322 acres of open water within the area to be protected. Initially, tidal interchange will be maintained. Conversion to urban-type uses will occur, however, and as it does, habitat will be lost as will detrital input to the associated estuarine ecosystem. These losses will impact adversely on the natural productivity of the estuarine complex. Construction and maintenance activities will induce temporary increases in turbidity in the MR-GO with minor impact on the commercial and sport fishery. Loss in recreational opportunity will result from the loss in natural productivity previously referred to. One Indian midden located south of the junction of the MR-GO and the GIWW already covered with spoil deposits, will be covered with additional spoil. The midden has been studied previously by archeologists.

Should the anticipated increase in rate of development in the protected areas occur, an increase in the quantities of solid and liquid wastes cannot be avoided. Disposal of these wastes will be accompanied by corresponding environmental stresses.

9. ANTICIPATED BENEFICIAL IMPACTS

The areas surrounding Lake Pontchartrain are susceptible to serious flooding from wind-driven hurricane tides from the lake.

This condition is aggravated by increases in lake level resulting from the influx of hurricane surges from Lake Borgne and the Gulf of Mexico. Overtopping of existing protective works along the south shore of the lake and flooding of developed areas have occurred several times in the past. Stages in Lake Pontchartrain resulting from a Standard Project Hurricane (SPH) would cause overtopping of all existing protective works by several feet resulting in ponding in developed areas, and the pumping system on which removal of all floodwaters is dependent, would be inoperable for an extended period of time.

The barrier levee, along with the barrier structures, when closed, will substantially reduce the inflow of hurricane tides into Lake Pontchartrain providing varying degrees of flood protection to 700 square miles of land. The Jefferson Parish area contains 21,500 acres which are subject to hurricane flooding from Lake Pontchartrain. The existing levee will be adequate after construction of the barrier structures. The New Orleans area consists of 16,800 acres located between the IHNC and the Jefferson Parish line. The area is protected on the east and west by levees and on the north by a seawall and adjacent back levee. The Citrus area consists of 14,800 acres bounded by New Orleans East, the IHNC, the MR-GO, and Lake Pontchartrain. This area has been drained for about 40 years and is protected from normal flooding by levees on the west, south, and east, and by a railroad embankment and levee along Lake Pontchartrain on the north. In New Orleans East 22,375 acres are partially drained marsh protected from normal flooding on the south, east, and west by levees along the GIWW and across the marsh and on the north by the Southern Railroad embankment.

About 348,000 acres of remaining land around Lake Pontchartrain, subject to flooding from hurricane tides, will have a reduction of flood stages as a result of construction of the barrier structures at The Rigolets and Chef Menteur Pass.

The Chalmette area consists of 49,050 acres subject to hurricane tidal overflow from the IHNC on the west and from Lake Borgne on the east. It is located in Orleans and St. Bernard Parishes along the left descending bank of the Mississippi River. Approximately 17,150 acres are partially protected at present.

The Seabrook control structure has the capacity to be variably regulated, allowing the management of a beneficial salinity regimen. The structure will be operated to provide a desirable salinity regimen in Lake Pontchartrain to the end that deleterious alterations in lake ecology will be avoided. This complex will allow salinities in Lake Pontchartrain to be adjusted as may be necessary for the maintenance of fish and wildlife resources. Since the outlet gates are of the vertical lift type and since the available flow area far exceeds the flow area needed for riparian users and for salinity control, the gates could be regulated to satisfy any flow requirements as would be necessary to satisfy these purposes.

The plan will provide for maintenance of the brackish water circulatory system. The openings in the Chef Menteur and Rigolets will not impede the movements of organisms between the Lake Pontchartrain-Lake Borgne complex. The hurricane protection project will not affect fish and wildlife resources to any major degree and sport

and commercial fish species will not experience extensive losses. The operation of the barrier at Seabrook will enhance long-term productivity in Lake Pontchartrain by increasing its viability as a nursery area in the form of improved nursery area. This enhancement will be accompanied by some reduction in harvest in the lake but, on balance, will substantially augment the productivity of the total estuarine complex in southeast Louisiana and Mississippi Sound.

Beneficial aspects of The Rigolets and Chef Menteur construction on and near the construction area are the formation of ponds for duck hunting and fishing in land area borrow excavations and the formation of deep fishing holes by removing borrow materials from the bottom of Lake Pontchartrain and other waterways. Spoil deposit results in higher ground elevations necessary for construction in this area. Higher elevations in spoil areas will lead to the invasion of these areas by trees, shrubs, and other upland plants. This increased elevation with associated vegetation will provide habitat in the form of food, shelter, and breeding sites for upland wildlife, including game species. The removing of bottom materials with the formation of deep holes creates desirable fishing spots for croakers, drum, and speckled trout.

10. ALTERNATIVES TO THE PROPOSED PLAN

Alternatives to the proposed action fall into three broad classes as follows:

- a. Fully responsive alternatives or those which would meet all major objectives of the proposed action.
- b. Partially responsive alternatives or those which would meet some, but not all, major objectives of the proposed action.
- c. No-action.

The available alternatives to the proposed action are discussed in the following paragraphs:

a. Lake Pontchartrain Barrier Plan - fully responsive alternatives

(1) Combine the Lake Pontchartrain Barrier Plan and the Chalmette Area Plan. Under such a plan, a controlling system of embankments and structures would be provided between Caernarvon and the Lake Pontchartrain barrier west of Chef Menteur Pass. This system would include a navigation gate in the MR-GO and a navigation lock in the GIWW. The navigation gate in the MR-GO would be operated in conjunction with the Lake Pontchartrain barrier, i.e., it would be closed only when it was necessary to close the barrier. The plan would permit reduced grades on the existing levee system along the MR-GO and the IHNC since these levees would no longer be required to confine hurricane surges, but only nonhurricane generated high tides. The plan would impede shallow-draft traffic in the GIWW during those periods when currents in the open lock would make passage hazardous or impossible. In addition, the restricted width of the lock would result in some delay to all traffic, even when the lock remained open, since it would be necessary to proceed slowly and with caution when transiting the open lock. Seagoing traffic in the MR-GO would be interrupted during periods when the barrier was closed. The plan would alter a 8,100-acre tract of prime estuarine marsh located between the western shore of Lake Borgne and the intersection of the MR-GO and the GIWW. Because of its severe impact on navigation, the plan would produce little incremental economic benefit over the proposed action, while the additional costs involved would be substantial - about four times

as great as the additional benefits. Beyond this, the plan would have negated any credit to local interests for the substantial expenses incurred by them in improving existing levee systems along the IHNC, MR-GO, and GIWW.

(2) Eliminate the Lake Pontchartrain barrier and modify the levee system to retain the same extent and degree of protection provided by the proposed action. Under this plan, the barrier system would not be constructed and Lake Pontchartrain would remain open to the ingress of tidal surges. The grades of the levees included in the proposed action would be increased and new levee systems along the shores of Lake Pontchartrain would be included to provide protection to unleveed areas equivalent to that which they would receive from the reduction in hurricane stages in Lake Pontchartrain which the barrier would produce. Such a plan would cost on the order of three times as much as the proposed plan without any increase in economic benefits. The environmental disruption attendant to providing the additional levee systems along the shores of Lake Pontchartrain would be of major proportions.

b. Lake Pontchartrain Barrier Plan - partially responsive alternatives. The following partial alternatives are available:

(1) High level plan. Under this plan, the barrier would be eliminated and the grades of the levees included in the proposed plan raised sufficiently to accommodate the higher surge heights in Lake Pontchartrain which would result therefrom. Because of the extreme height of levees required and generally adverse foundation conditions, construction would have to be extended over a very long period of time to prevent failure by excessive subsidence. The high-level plan would be more costly than the recommended barrier plan and, in addition, was strongly opposed by local interests due to esthetic reasons. In addition, the recommended plan would lower the flood stages for all areas around the lake, thus providing some protection to many unleveed areas around the lakeshore.

(2) Eliminate St. Charles Parish levee. Under this alternative, all of the features of the proposed action other than the St. Charles Parish levee would be constructed. The environmental disruption attendant to construction of the levee and alteration of 23,770 acres of marsh and swamp habitat would be avoided. Conversely, the opportunity to develop that marsh and swamp for urban-type uses would be foregone. All impacts on those streams included in the Louisiana Natural and Scenic Rivers System, Bayous Trepagnier and LaBranche, would be avoided. As indicated elsewhere herein, the present state of knowledge will not permit definitive determination of the overall impact of the alteration of the large area of marsh and swamp on the associated ecosystem.

(3) Relocate St. Charles Parish levee to vicinity of Airline Highway (US Highway 61). Under this alternative, the proposed action would be modified by locating the St. Charles levee from the lakefront to near the Airline Highway. This action would provide protection from tidal flooding to presently developed areas. It would approach the effectiveness of the alternative discussed previously in avoiding adverse environmental impacts. It would greatly reduce the opportunities for additional urban-type development as compared with the proposed action, and would, as a result, lack economic justification. It would eliminate any direct impact on Trepagnier and LaBranche.

(4) Eliminate New Orleans East levees. Unlike St. Charles Parish, the New Orleans East area currently has a substantial degree of protection from tidal flooding, hence the environmental impact of the proposed action in this area would be minor. Elimination of these features of the proposed action intended

to increase the protection extant - the New Orleans East lakefront levee, improvements to the New Orleans East back levee, and the South Point to GIWW levee - would avoid the commitments of land necessary for providing those features. It would probably lead to some reduction in the rate of development of the area. It would leave the area subject to massive overflow by major hurricane occurrences and the development now located therein subject to major hurricane damage.

(5) Eliminate all features of the proposed action except the Lake Pontchartrain barrier. Under this alternative, areas now protected by levees would have increased degrees of protection. Areas not protected by levees would have increased degrees of protection, since they would sustain a reduction of the incidence of hurricane overflow. The existing protected areas would remain under a substantial threat of massive overflow by major tidal storms which would cause major damage and probable loss of life. This alternative would, since the barrier involves only minor adverse impacts, approach the alternative of no action in this regard.

c. Chalmette Area Plan - fully responsive alternatives.

Other than the combined Lake Pontchartrain Barrier-Chalmette Area Plan previously described, there are no practicable alternatives which would meet all of the major objectives of the proposed action.

d. Chalmette Area Plan - partially responsive alternatives

(1) Locate the levees to follow alignments of existing levees wherever practicable. This alternative would involve essentially the improvement of existing levee systems from the IHNC to near Caernarvon. It would avoid the potential alteration of 31,000 acres of swamp and estuarine marsh inherent in the proposed action and preserve the contribution that the area makes to the productivity of the associated estuarine ecosystem. Conversely, it would forego the opportunity for converting the area to urban-type use.

e. No action. The alternative of no action would preserve, for a time, the existing environmental dynamics of the area. It would leave the area subject to massive overflow from hurricanes, with attendant major economic loss, social disruption, and a potential for extensive loss of life.

The project area has experienced many severe hurricanes and lesser storms which have caused loss of life and damage to property. Official National Weather Service meteorological records are not available prior to 1893 and most accounts of storms prior to 1893 are obtained from newspapers and historical documents. Because a large portion of the area was relatively uninhabited, it can be assumed that some historical flooding went unobserved.

The project area surrounding Lake Pontchartrain is susceptible to flooding from wind-driven hurricane tides from the lake. This condition is aggravated by increases in lake level resulting from the influx of surges from Lake Borgne and the Gulf of Mexico that accompany hurricanes from the southeast, south, and southwest. Historical hurricanes have produced recorded stages up to 13 feet on the southwest shore of the lake, 6.2 feet on the south shore, 7.1 feet at the southeast shore, and 7.7 feet at the north shore. Overtopping of protective works and flooding of developed areas have occurred several times during recent hurricanes. On several occasions, the marsh area between Lake Pontchartrain and Lake Borgne has been flooded by stages up to 11 feet. Much of the developed area in Orleans and Jefferson Parishes is below lake

level, some land being as low as -7 feet, with a considerable portion lower than -2 feet. In some areas, flooding as deep as 16 feet above ground level could result from severe overtopping. Stages attending an SPH would cause overtopping of all existing areas. The pumping system on which removal of all flood waters is dependent would be inoperable for an extended period of time. This prolonged inundation would cause enormous damage to private and public property, create serious hazards to life and health, disrupt business and community life, and require immense expenditure of public and private funds for evacuation and subsequent rehabilitation of local residents. The potential for damage and disruption was well demonstrated in September 1965 when Hurricane Betsy passed west of New Orleans. Although this is not the most critical path for a project design hurricane, 18,260 homes and 837 commercial establishments were flooded in the project area, and some 80 persons lost their lives.

Urbanization of the project area would proceed at a reduced pace if the hurricane protection plan were not implemented. The no-action alternative would retard the environmental changes that would, under the proposed action, convert marsh-swamp ecosystems in St. Charles Parish and New Orleans East to urbanization. While the role of New Orleans East area as an important contributor to the associated ecosystem has been effectively negated by existing protective works and development, the St. Charles Parish area remains an important part of the large estuarine ecosystem of the Lake Pontchartrain Basin. The marsh-swamp complex which would be irretrievably lost to urbanization through the project, would likely be lost at a lesser rate in any event from expansion of the metropolitan New Orleans area in the future. This will slowly occur in the less densely populated areas, regardless of implementation of the hurricane protection project. Landfill through garbage disposal is presently occurring in the St. Charles Parish swamp north of the Airline Highway (US Highway 61). Construction of Interstate 10 through New Orleans East has greatly enhanced the potentials for land development in that area. The increasing population of the New Orleans area is restricted in expansion to the north by Lake Pontchartrain and to the south by the Mississippi River. The inevitable expansion will be to the east and west; namely, New Orleans East and St. Charles Parish.

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DISPOSAL OF DREDGED MATERIAL

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT

The "Section 404" portion of this meeting is being conducted in accordance with provisions of established Federal regulations, Title 33 CFR 209.145, concerning the policy, practice, and procedures to be followed by the Corps of Engineers in connection with the disposal of dredged material in navigable waters or the transportation of dredged material for the purpose of dumping it in ocean waters, associated with Federal projects.

A public notice was distributed on 29 November 1974 to all interested state and Federal agencies and known interested persons in order to assist in developing facts and recommendations concerning the proposed continuation of project construction by hydraulic dredging operations. Comments regarding this portion of the meeting should be submitted to the District Engineer at the meeting or forwarded to the address at the beginning of this announcement before 24 March 1975.

Laws under which the proposed dredging is to be reviewed:

- Federal Water Pollution Control Act of 1972
- Coastal Zone Management Act of 1972
- Fish and Wildlife Act of 1956
- Migratory Marine Game-Fish Act
- Fish and Wildlife Coordination Act
- Endangered Species Act of 1973
- National Historic Preservation Act of 1966
- Marine Protection, Research and Sanctuaries Act of 1972

Project. Lake Pontchartrain, Louisiana and Vicinity hurricane protection.

Project location. The project is located in Southeastern Louisiana in the vicinity of Lake Pontchartrain and includes the City of New Orleans and surrounding areas.

Project description. The project is divided into five units. They are as follows:

- a. Barrier unit.
 - (1) Chef Menteur Complex
 - (2) Rigolets Complex
 - (3) Seabrook Complex
- b. New Orleans East unit.
 - (1) Citrus Back Levee
 - (2) New Orleans East Back Levee
 - (3) New Orleans East South Point to GIWW Levee
 - (4) New Orleans East Lakefront Levee
 - (5) Citrus Lakefront Levee
 - (6) IHNC East Levee and Floodwalls
 - (7) IHNC West Levee and Floodwalls
 - (8) New Orleans Lakefront Levee
- c. Chalmette unit - Chalmette Area Plan
- d. New Orleans West unit
 - (1) Jefferson Parish Lakefront Levee

(2) St. Charles Parish Lakefront Levee (Deferred)

e. Mandeville unit - Mandeville Seawall

"Section 404" will cover the Barrier, the New Orleans East, and the Chalmette units.

The dredging work within these units consists of constructing new levees and closure dams, enlarging existing non-Federal levees, and constructing flood control structures, navigation structures and connecting navigation and approach channels.

New levees will be constructed and existing non-Federal levees will be enlarged by first pumping dredged material to the levee fill areas and then shaping this material at a later date into a levee section.

Navigation and approaching channels will be constructed by dredging these areas and pumping this material to the levee fill areas and/or ponding areas.

The Chef Menteur closure dam will be constructed in the existing Chef Menteur Pass by means of hydraulic fill. This fill material will be obtained from the borrow area within the channel of the pass.

The Rigolets closure dam will be constructed of a cellular sheetpile wall topped with hydraulic sand fill from borrow areas in the Rigolets.

Disposal areas. The disposal areas for the subject units are as follows:

a. Barrier unit. The disposal areas are located in the vicinity of Chef Menteur Pass, Lake Borgne and the Gulf Intracoastal Waterway, and in the vicinity of the Rigolets, Lake St. Catherine, and Stump Lagoon. (See attached drawing for specific locations.)

b. New Orleans East unit. The disposal areas are located on the north bank of the Gulf Intracoastal Waterway from the Inner Harbor Navigation Canal to approximately Bayou Thomas, and along the landside of the railroad tracks along the south shore of Lake Pontchartrain from Paris Road to South Point. Unloading and stockpile sites for barged levee material and riprap are located along the south shore of Lake Pontchartrain. (See attached drawing for specific locations.)

c. Chalmette unit. The disposal areas are located on the south bank of the Mississippi River-Gulf Outlet from the Inner Harbor Navigation Canal to a point opposite Verret, Louisiana, and from there to Caernarvon Louisiana.

Method of dredging. Pipeline and bucket dredges will be utilized in the three subject units.

Quantities of material to be removed.

- a. Barrier unit. Approximately 36,000,000 cubic yards.
- b. New Orleans East unit. Approximately 14,000,000 cubic yards.
- c. Chalmette unit. Approximately 20,000,000 cubic yards.

Composition of material to be removed. The material to be removed from the clay borrow areas consists of very soft clay with peat and organic matter, very soft to fat clays with layers of silt, sandy silt, sand, and Pleistocene clays.

The material to be removed from the sand borrow areas consists of sand, silt, and silty sand.

Proposed time schedule for dredging.

a. Barrier unit.

(1) Chef Menteur Complex. Dredging is presently scheduled to begin in September 1975 and will be completed in 1990. The dredging will not be continuous within this time frame.

Aquatic vegetation of Lake Pontchartrain was surveyed and approximately 2,000 acres of the lake bottom are vegetated with eelgrass (wild celery), widgeongrass, and southern naiad. The greatest concentration of these submerged aquatics exists from Green Point, just east of Fontainebleau State Park, to Big Point, just west of Louisiana Highway 11. In the deeper waters of the interior of the lake, the vegetation consists primarily of phytoplankton.

Chabreck, Palmisano, and Joanen (1968) prepared a vegetative type map of marsh types in coastal Louisiana. Brown (1973) prepared a map of all vegetative types in Louisiana. These maps show the extent of habitat in the project area.

6. ZOOLOGICAL ELEMENTS

The forested swamp areas are used primarily by the raccoon, opossum, white-tailed deer, squirrels, and swamp rabbits. Portions of the wooded swamp are useful to waterfowl, primarily wood ducks and mallards. The American alligator occurs in the swamps and marshes and is listed by the US Department of the Interior, US Fish and Wildlife Service, as a rare and endangered species.

The marsh areas are used by rabbits, nutria, muskrat, mink, and migratory waterfowl. Migratory waterfowl using the area include the gadwall, widgeon, blue-winged and green-winged teal, lesser scaup, redhead, pintail, canvasback, mallard, shoveler, and a few blue and snow geese. Mottled ducks nest in the marshes and inhabit them year-round. Other birds present include the snipe, rails, gallinules, dowitches, egrets, herons, and hawks.

Freshwater commercial fishing is almost nonexistent in the project area. Commercial harvesting of brackish water fishery resources, including the brackish water clam, oyster, blue crab, brown and white shrimp, and sport fish, occurs in Lakes Borgne and Pontchartrain. The most important brackish water species of sport fish include the spotted seatrout, flounder, sheepshead, drum, Atlantic croaker, and gafftopsail catfish.

The aquatic fauna of Lake Pontchartrain is composed of typical brackish water species; however, the relatively low salinities allow the invasion of freshwater species. This factor, in turn, excludes many of the typically high salinity forms. Since most of the commercial species of fish and invertebrates are omnivorous, with organic detritus prominent in their diet, these species are dependent upon primary production which occurs in surrounding marshes and swamplands. The principal inflow of freshwater into Lake Pontchartrain is from the nutrient-poor acid soils of the pinelands to the north. Because of this, Lake Pontchartrain does not support the biomass and commercial fishery of other low salinity Louisiana estuaries which receive drainage from richer land areas; although it is an important fish and shellfish nursery area.

Darnell (1962) noted that only four organisms maintain large resident populations in Lake Pontchartrain. These include brackish water clams, a mud crab, and a calanoid copepod; and one vertebrate, the anchovy. According to Darnell, most of the remaining abundant species are migratory and spawn elsewhere, invading the lake as seasonal transients.

7. ARCHEOLOGICAL AND HISTORICAL ELEMENTS

Archeological evidence indicates that Indians were present in the Pontchartrain Basin by approximately 1800 B.C. (Saucier, 1963). Rangia cuneata have matured, spawned, and died for the past 9,000 years in Lakes Pontchartrain and Maurepas (Saucier, 1963). Numerous shell heaps in the area testify that mollusks were a basic part of their diet. The most widely utilized mollusks were a freshwater clam (Unio), a brackish-water clam (Rangia cuneata), and the oyster (Crassostrea virginica). At least 30 sites are known to have been destroyed and many others severely damaged in recent years, most of these in the New Orleans area. Residential and commercial establishments have damaged or destroyed these sites by construction on or near them.

Archeological sites on the south shore in St. Charles Parish and New Orleans East have been severely damaged by tidal action. Those sites which are directly on the lakeshore have been exposed to wave action and exhibit damage or truncation. In some cases, sites have been completely destroyed, but usually the shell and the more durable artifacts remain, concentrated by wave action along the nearby shore. Sites of this type, where none of the materials remain in their original location, are referred to as beach deposits. Since the collections from such an area include materials from all parts of the site and possibly several sites, there is a complete loss of stratigraphy.

In March, 1970, the Louisiana Archeological Survey, Department of Geography and Anthropology, Louisiana State University, Baton Rouge, contracted with the National Park Service in a concerted effort to determine, by way of a field survey, if any archeological remains exist along the paths of the hurricane protection project, one of several in Louisiana being directed by the Department of the Army, New Orleans District, Corps of Engineers. The archeological survey for sites in the proposed construction area of the hurricane protection project was conducted intermittently over a period of 7 days between June 8 and June 18, 1972 and resulted in a report (Neuman, 1970). The participants consisted of one archeologist and an assistant. Most of the survey was conducted by boat, but the areas in and around New Orleans and south of Bayou Terre aux Boeufs, in St. Bernard Parish, were surveyed by automobile and on foot. During the survey, two previously unrecorded sites were visited. Both sites are manifested as low-rise shell middens along the shore of Lake Pontchartrain, at the mouth of Bayou Piquant, in St. Charles Parish. Investigations at both sites would contribute substantial data to the relatively meager archeological record of this region.

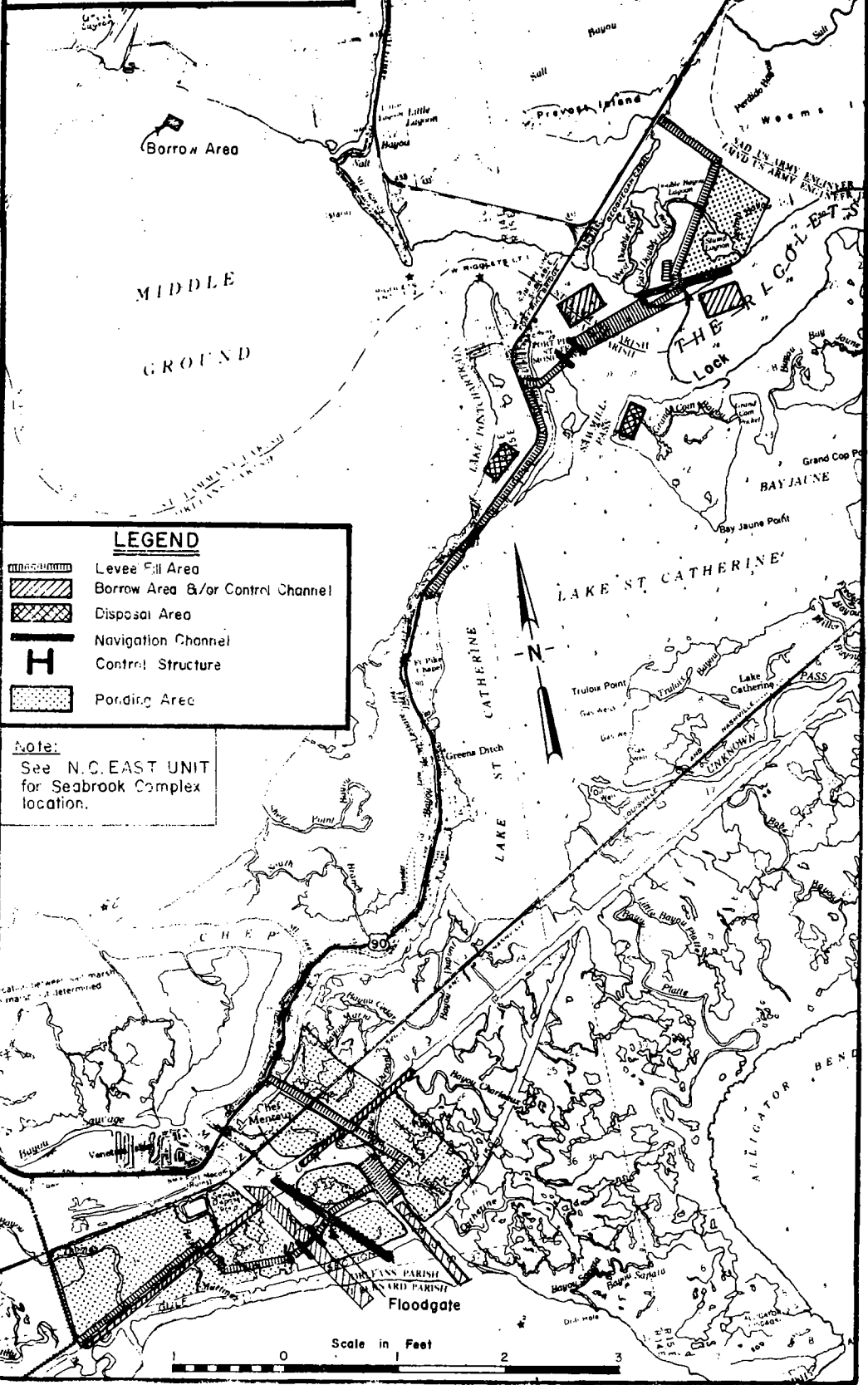
8. ANTICIPATED ADVERSE ENVIRONMENTAL IMPACTS OF THE PLAN

Implementation of the project would involve the following types of adverse environmental impacts: (1) utilization and commitment of lands and water bottoms for project features, (2) conversion of natural habitats, including marshes, swamps, and woods to urban type uses, (3) loss of detrital input to the surrounding ecosystem and attendant loss in natural productivity of that ecosystem, (4) reduction of recreation opportunities, (5) loss of esthetic values (6) loss of, or damage to, archeological resources, and (7) deleterious alterations in water quality.

Adverse environmental impacts associated with the project are described, on a feature-by-feature basis, in the following paragraphs:

a. Lake Pontchartrain barrier. Construction, operation, and maintenance of the barrier will require the commitment of 2,056

LAKE PONTCHARTRAIN, L.A. & VICINITY
 HURRICANE PROTECTION
 PROJECT
BARRIER UNIT
 DATE: NOVEMBER, 1974

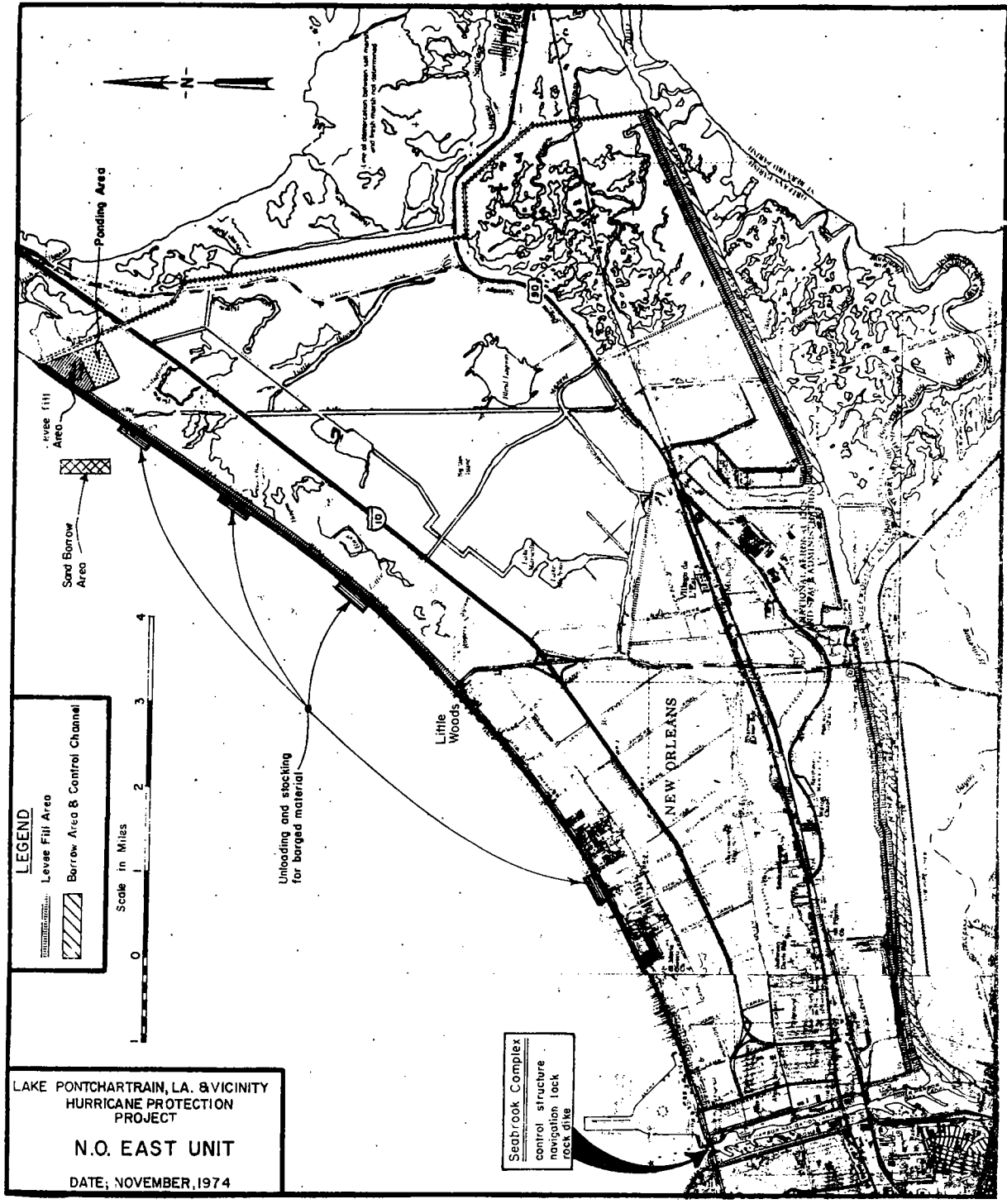


LEGEND

	Levee Fill Area
	Borrow Area &/or Control Channel
	Disposal Area
	Navigation Channel
	Control Structure
	Ponding Area

Note:
 See N.C. EAST UNIT
 for Seabrook Complex
 location.

EXHIBIT 2-26



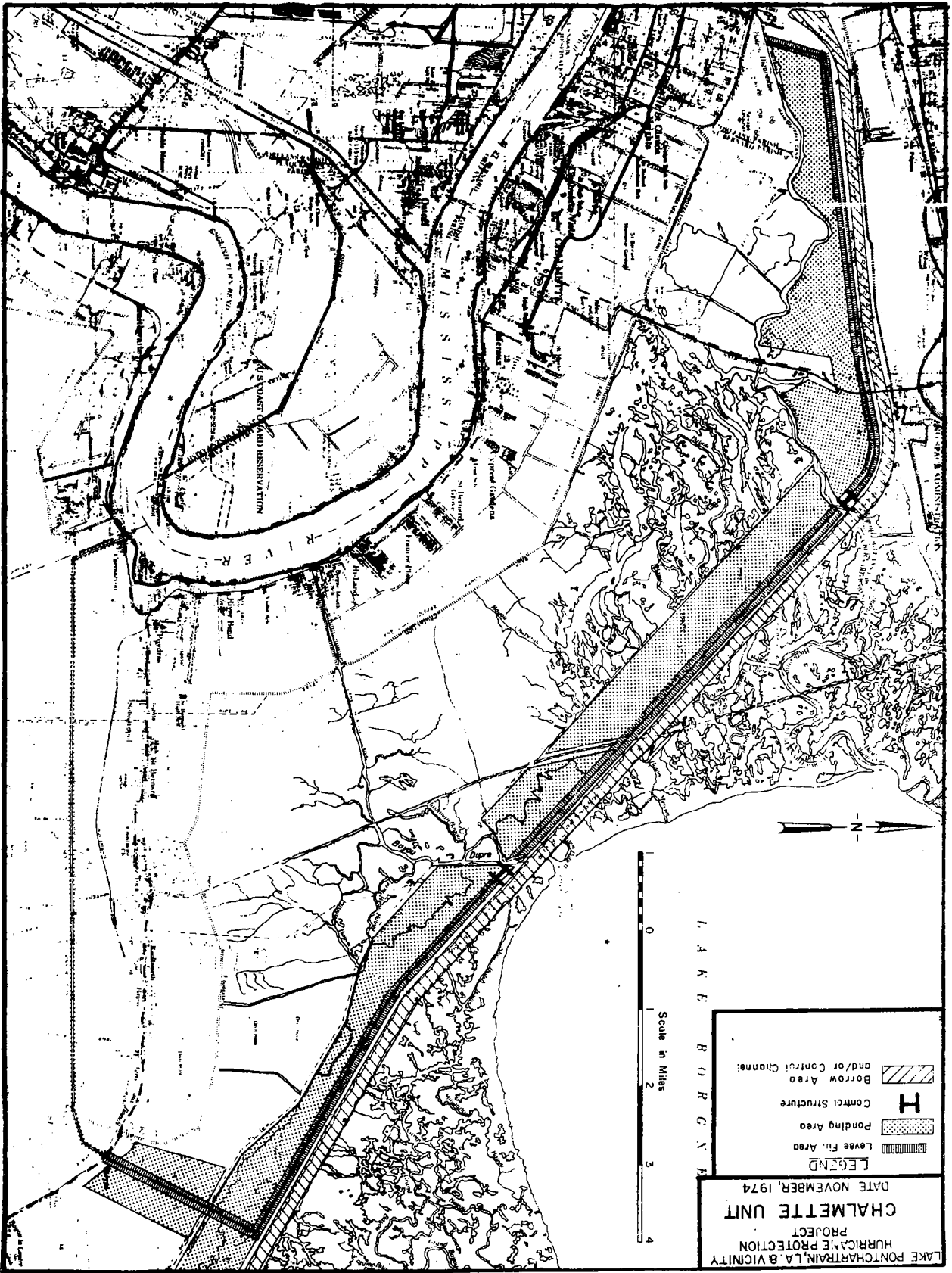


EXHIBIT 2-29

AGENDA

PUBLIC MEETING TO DISCUSS
THE LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
AND
PLANS FOR DISPOSAL OF DREDGED MATERIALS
(IN COMPLIANCE WITH SECTION 404 OF
THE FEDERAL WATER POLLUTION CONTROL ACT OF 1972)

University Center Ballroom
University of New Orleans
New Orleans, Louisiana

Saturday, 22 February 1975
9 a.m.

Expected Time
Schedule

REGISTRATION 8:30-9:00 a.m.

INTRODUCTORY REMARKS 9:00 a.m.

Mr. Daniel V. Cresap, P.E., Chief Engineer
State of Louisiana Department of Public Works

Col. E. R. Heiberg III, District Engineer
US Army Engineer District, New Orleans

BACKGROUND INFORMATION AND DESCRIPTION OF PROJECT PLAN 9:15 a.m.

Mr. Richard P. Richter, Project Engineer
Mr. Stanley C. Shelton, Project Engineer
Design Memo Branch
US Army Engineer District, New Orleans

PRESENTATION OF ENVIRONMENTAL CONSIDERATIONS 9:45 a.m.

Glen N. Montz, Ph.D.
Environmental Resources Branch
US Army Engineer District, New Orleans

DISCUSSION OF THE DISPOSAL OF DREDGED MATERIALS (SECTION 404 10:00 a.m.
OF THE FEDERAL WATER POLLUTION CONTROL ACT OF 1972)

Mr. C. Harold Hart, Chief of Levees Section
Design Branch
Mr. Billy J. Garrett, Chief of Hydrologic Engineering Section
Hydraulics and Hydrologic Branch
US Army Engineer District, New Orleans

*PRESENTATION OF STATEMENTS BY PUBLIC OFFICIALS 10:15 a.m.

LUNCH BREAK 12:00 noon

*PRESENTATION OF STATEMENTS BY ORGANIZATIONS AND INDIVIDUALS 1:00 p.m.

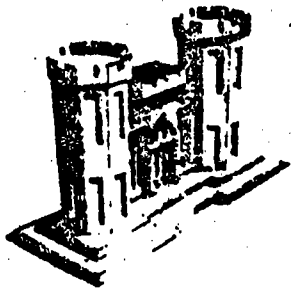
Anyone desiring to make an oral presentation

SUMMARY AND CLOSE After
presentation
of all
statements

Colonel Heiberg

*NOTE: There is expected to be a large amount of public interest in this meeting/
hearing. In order to be fair to all who desire to make oral presentations,
and in view of the fact that all written presentations will be considered
and made part of the official record, the presiding officer will limit
individual oral presentations to five minutes maximum. Elected officials,
officials representating bodies, and prominent groups with comprehensive
statements may, by prior arrangement, make longer statements orally.

ATTACHMENT NO. 3



NEWS RELEASE

NEW ORLEANS DISTRICT, U. S. ARMY CORPS OF ENGINEERS
FOOT OF PRYTANIA STREET, POST OFFICE BOX 60267
NEW ORLEANS, LOUISIANA 70160

FOR IMMEDIATE RELEASE

January 23, 1975

A public meeting to discuss all aspects of the Lake Pontchartrain and Vicinity hurricane protection project, and a hearing on procedures for the disposal of project-related dredged materials, as required by Section 404 of the Federal Water Pollution Control Act of 1972, will be held in New Orleans on Saturday, February 22. It will be held at the University of New Orleans in the University Center Ballroom (room 203) beginning at 9 a.m., according to Colonel E. R. "Vald" Heiberg III, New Orleans District Engineer, who will conduct the combined meeting.

The hurricane protection project was authorized by Congress in 1965, following the extensive loss of life and property damage of over \$100 million in the Greater New Orleans area from hurricane Betsy.

The project is designed to provide flood protection against the forces of hurricanes of a size and intensity that have occurred in the area or that US Weather Service data

MORE

EXHIBIT 3-1

add 1

indicates can occur. A variety of possible hurricane tracks are considered in the plan.

There are two major independent systems in the project; the Lake Pontchartrain Barrier Plan and the Chalmette Area Plan.

The elements of the basin plan include:

1. Improvement of existing levees along the lakeshore of Jefferson Parish and New Orleans from the St. Charles-Jefferson Parish line to the Inner Harbor Navigation Canal (IHNC).
2. Construction of new levees along the lakeshore of Lake Forest and New Orleans East from the IHNC to South Point.
3. Improvement of existing levees from South Point to the Gulf Intracoastal Waterway (GIWW), continuing along the northern bank of the GIWW and the Mississippi River-Gulf Outlet (MR-GO) from a point near Chef Menteur Pass to the IHNC.
4. Construction of levees and floodwalls along both banks of the IHNC.
5. The Rigolets Complex. This complex includes a gated flood control structure with approach channels, a navigation lock with approach channels, and a closure dam to link the control structure and lock across a portion of the natural

MORE

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pass. These structures are connected to the US Highway 90 embankment north and south of the Rigolets by earthen levees.

6. The Chef Menteur Complex. This complex includes a gated flood control structure with approach channels, a navigation structure with approach channels, and a closure dam to close the natural pass. These structures are connected to the US Highway 90 embankment east of the complex and with the New Orleans East levee system west of the complex. A realignment of the Gulf Intracoastal Waterway at this location is required to provide uninterrupted navigation along that waterway.

7. The Seabrook Complex. This complex includes a gated flood control structure to pass flows as desired, a navigation lock, and a connecting rock dike.

8. Strengthening and repair of the existing floodwall in Mandeville, La. (Planning on this feature is currently inactive due to the lack of financial participation in the project by St. Tammany Parish sponsors.)

9. Extension of the barrier to the east side of the junction of US Highways 90 and 190 and then northerly along US Highway 190.

10. The barrier plan as initially authorized by Congress provided for construction of a new earthen levee along the St. Charles Parish lakeshore from the Bonnet Carre Floodway to

MORE

add 3

the St. Charles-Jefferson Parish line. The inclusion of Bayous Trepagnier and La Branche in the Louisiana Natural and Scenic Rivers System currently forecloses the possibility of proceeding with the levee without contravening State law. Should the impediment imposed by the Natural and Scenic Rivers System be removed in the future, additional studies will be needed to fully evaluate the relationship of the marsh to the surrounding ecosystem, and provide a basis for a decision on whether the levee should be built. Accordingly, construction of the feature of the project has been indefinitely deferred.

The Chalmette Area Plan is a wholly independent protective system included in the overall hurricane protection project, since the Chalmette area is outside of the influence of the barrier complexes. This plan consists of the following features:

1. Construction of a levee and floodwall system from the Mississippi River levee in New Orleans along the east bank of the IHNC and the south banks of the GIWW and MR-GO to the vicinity of Verret, La., with a return levee from Verret to the Mississippi River levee at Caernarvon, La.

2. Construction of navigable floodgates on Bayous Bienvenue and Dupre near their junctions with the MR-GO.

Colonel Heiberg noted that he considered a combined meeting and hearing to be clearly in the public interest. This dual

MORE

EXHIBIT 3-4

add 4

meeting will allow citizens interested in both larger project issues, and who also desire to provide comments on the narrower issue of dredged material disposal, to come one time. After listening to a general discussion, they may provide comments, if desired, on either the overall project or on the narrower issue of dredged material.

The "Section 404" portion of the meeting will be conducted in accordance with provisions of established Federal regulations, Title 33 CFR 209.145, concerning the policy, practice, and procedures to be followed by the US Army Corps of Engineers in connection with the disposal of dredged material in navigable waters or the transportation of dredged material for the purpose of dumping it in ocean waters, associated with Federal projects.

Also, the "Section 404" portion of the meeting will discuss plans and procedures for dredging operations associated with the construction of various project features. The proposed dredging work consists of constructing new levees and closure dams, enlarging existing levees, and constructing approach channels to the flood control and navigation structures included in the project.

All interested parties are invited to be present or be represented at the meeting. All will be afforded full opportunity to express their views concerning any and all

MORE

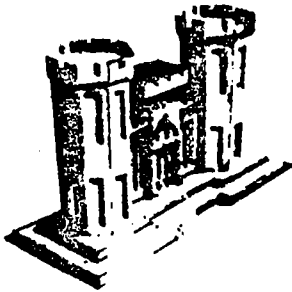
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aspects of the project, including the environmental statement which is now on file with the President's Council on Environmental Quality as required by the National Environmental Policies Act of 1969. Interested persons may obtain a copy by written request to the Corps of Engineers.

-30-

Released by BRUCE A. SOSSAMAN, Public Affairs Office,
865-1121, Ext. 201.

EXHIBIT 3-6



NEWS RELEASE

NEW ORLEANS DISTRICT, U. S. ARMY CORPS OF ENGINEERS
FOOT OF PRYANIA STREET, POST OFFICE BOX 60267
NEW ORLEANS, LOUISIANA 70160

FOR IMMEDIATE RELEASE

February 19, 1975

REMINDER: LAKE PONTCHARTRAIN PUBLIC MEETING

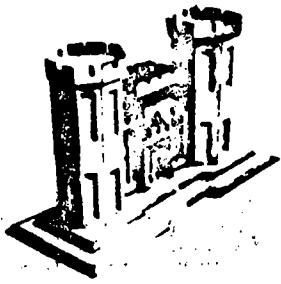
A public meeting to discuss the Lake Pontchartrain and Vicinity hurricane protection project, and a hearing on procedures for the disposal of project-related dredged materials, as required by Section 404 of the Federal Water Pollution Control Act of 1972, will be held in New Orleans this Saturday, February 22. The meeting will begin at 9 a.m. at the University of New Orleans in the University Center Ballroom (Room 203). Col. E.R. "Vald" Heiberg III, New Orleans District Engineer for the U.S. Army Corps of Engineers, will conduct the combined meeting.

Registration will begin at 8:30 a.m. The meeting will begin at 9 a.m. with a Corps presentation of background information, environmental considerations, a description of the project plan, and the purpose of the meeting. Elected officials and representatives of Governmental agencies will also make presentations prior to the luncheon break. Presentations by the public will begin at 1 p.m.

-30-

Released by BRUCE A. SOSSAMAN, Public Affairs Office, 865-1121, Ext. 201.

EXHIBIT 4



NEWS RELEASE

NEW ORLEANS DISTRICT, U. S. ARMY CORPS OF ENGINEERS
FOOT OF PRYTANIA STREET, POST OFFICE BOX 60267
NEW ORLEANS, LOUISIANA 70160

FOR IMMEDIATE RELEASE

March 26, 1975

The time period for submitting written testimony to be included in the record of the Lake Pontchartrain and Vicinity Hurricane Protection Project public meeting held on February 22, 1975 has been extended to Monday, April 7, 1975.

New Orleans District Engineer Colonel E. R. "Vald" Heiberg III, U.S. Army Corps of Engineers, said the two-week extension, based on a request by the State of Louisiana, is being made to allow all possible testimony to be included in the public record of the meeting. "This will help in the decision-making process, particularly in a project of the significance and impact of the Lake Pontchartrain project," he said.

The meeting, held at the University of New Orleans, combined discussions on both the hurricane protection project, and procedures for the disposal of project-related dredged materials, as required by the Federal Water Pollution Control Act of 1972.

Written statements may be mailed to the Office of the District Engineer, U.S. Army Engineer District, New Orleans, P.O. Box 60267, New Orleans, La. 70160.

- 30 -

Released by BRUCE A. SOSSAMAN, Public Affairs Office, 865-1121, ES

EXHIBIT 5



JOSEPH ACCARDO, JR.
DISTRICT 57

STATE OF LOUISIANA
HOUSE OF REPRESENTATIVES
BATON ROUGE

Phone Office 652-6323
Phone Home 652-9278
P. O. DRAWER F
LA PLACE, LA. 70068

COMMITTEES:
JUDICIARY B
WAYS & MEANS

March 19, 1975

Mr. E. R. Heiberg, III
District Engineer
Department of the Army
P. O. Box 60267
New Orleans, Louisiana 70160

RE: Lake Pontchartrain and Vicinity
Hurricane Protection Project

Dear Mr. Heiberg:

On February 22, 1975, I appeared at the public hearing relative to the Lake Pontchartrain and Vicinity Hurricane Protection Project. The following should be incorporated into the records of that hearing:

This statement is not to advocate draining or leveeing swamps or marshes, on the contrary its purpose is to secure adequate protection for those areas that have been farmed and inhabited for centuries.

The proposed plan for hurricane protection does not provide for levee protection in the Parishes of St. John the Baptist and St. James. Those parishes boarder the Lake Pontchartrain and Lake Maurepas system of lakes and rivers. The Lake Maurepas and Pontchartrain basin serve to collect water from all of Southeast Louisiana North of the Mississippi River and a large portion of the State of Mississippi.

The Corps of Engineers has previously requested authority to study the problem of hurricane protection for the western shore of Lake Pontchartrain. (St. John the Baptist Parish) Congress has approved the study, but has failed to fund the study.

It is essential that a complete study of the effects of the Lake Pontchartrain and Vicinity Hurricane Protection Project be made as it relates to those parishes not protected by levees prior to the construction of the Hurricane Protection system.

EXHIBIT 6-1

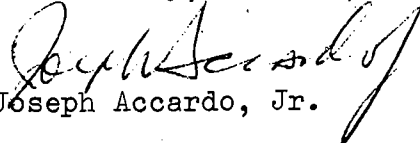
Mr. E. R. Heiberg, III
March 18, 1975
Page 2

It is essential that we know whether or not there will be an aggravation of flooding in the Maurepas and Pontchartrain basin if the system is completed with levees built in St. Charles Parish. What will be the effect of hurricane caused rains draining into the lakes while the proposed dams are closed?

The Corps of Engineers indicates that even with the barrier systems completed, there would still be flooding at LaPlace to the eight (8') foot level, apparently because there are no levees planned. There are now many people living in LaPlace subdivisions at or below that elevation. There are many areas which the proposed plan seeks to protect that are substantially below that level and are uninhabited. What is the justification for this discrepancy? It cannot be flood protection, nor can it be economic.

Since the Corps of Engineers has previously requested authority to study flood protection for the western shore of Lake Pontchartrain, it must believe that this study is needed. I would urge that the construction of the proposed flood protection system not proceed until the Corps of Engineers has completed a study of the entire drainage basin that is made up of the Lakes Maurepas and Pontchartrain and its river system.

Yours truly,


Joseph Accardo, Jr.

JA:pat

cc: Congressman Gillis Long
Senator Russell Long
Senator Bennett Johnston



ROY AGUILLARD
DIRECTOR

State of Louisiana

DEPARTMENT OF PUBLIC WORKS

P. O. BOX 44155, CAPITOL STATION
BATON ROUGE, LOUISIANA 70804

BOARD OF PUBLIC WORKS

GEORGE CHANEY, CHAIRMAN
EMMETT A. EYMARD
P. P. VERRETT, SR.
RICHARD P. GIBSON
ROLAND CARTER

February 20, 1975

Colonel Elvin R. Heiberg, III
New Orleans District Engineer
Corps of Engineers, U. S. Army
Post Office Box 60267
New Orleans, Louisiana 70160

Dear Colonel Heiberg:

This is in response to your announcement dated January 22, 1975, of a public meeting to discuss the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project and plans for disposal of dredged materials as required by the Federal Water Pollution Control Act of 1972.

The Louisiana Department of Public Works has been designated as the state agency responsible for the coordination of all Federal projects in Louisiana related to the control, navigation, hurricane protection, and related water resources projects. In addition, the Governor of Louisiana has also designated this Department as the coordinator for the Lake Pontchartrain and Vicinity Hurricane Protection Project. In this role, we are responsible for coordinating the Federal Project with the affected State and local interest to insure the best possible protection system for this area of the State of Louisiana. It is in this position, that we present these comments today for your consideration on this project.

The Lake Pontchartrain and Vicinity Project was authorized by the Flood Control Act of 1965. The purpose of this project is to provide adequate hurricane protection to the Greater New Orleans Metropolitan Area including all or portions of some ten (10) parishes, the principal beneficiaries being Jefferson, Orleans, St. Bernard, and St. Tammany Parishes. The project as you have outlined today consists of a series of levees, flood walls, control structures and locks to provide protection of this area against hurricane generated tides.

The need for this type project in this area has been dramatically indicated in the passage of several major hurricanes, such as Betsy in 1965, and Carmen in 1969. A considerable portion of the

Colonel Elvin R. Heiberg, III

February 20, 1975

Page 2

damages suffered by this area could have been alleviated had the project been completed at this time. The New Orleans Metropolitan Area is the major urban area of Louisiana and in fact, this entire region of the United States. This highly populated and industrialized section deserves the best available protection that can be devised in order to insure the continued and orderly development of our economy, as well as, protecting the lives and properties of its citizens. We believe the proposed plan of development provides this protection and the completion of this project at the earliest possible date is urgently needed. The existing protective facilities are inadequate to insure the protection of this area.

The environmental aspects of this project have already been thoroughly documented and commented on by interested local, state, and national agencies, as well as, the general public. The Environmental Impact Statement for this project has been filed with the President's Council on Environmental Quality as required by the NEPA Act of 1969. Therefore, no further comments are considered necessary as pertains to this statement.

Section 404 of the Federal Water Pollution Act of 1972, requires public meetings, when appropriate, to consider the dredging and disposal of material in navigable waters as associated with Federal projects. The term "spoil disposal" is inappropriate in regard to this project since we are discussing the construction of earth embankments for hurricane protection to this area. The dredging is, of course, necessary in order to obtain material to construct the embankments required.

The areas designated as spoil disposal areas are coincidental with and pertain directly to the embankment location. These areas are adequately defined on the project plans and also indicated on drawings furnished with your hearing notice. In most cases, these areas have already been utilized in the construction of the hurricane levees, and land use will not be changed from that already established. Primary consideration, in regard to spoil disposal, dredging operations and effluent discharges, should be directed toward the establishment of locations which will provide the least disturbance to the existing ecological balance of this area. Since this area of our State is a highly productive shell fish and sea food area, care should be exercised in all operations near existing oyster levees and other productive sites. We will work very closely with your District and with other appropriate state and local agencies in the development of satisfactory plans to accommodate these features.

DEPARTMENT OF PUBLIC WORKS


Colonel Elvin R. Heiberg, III

February 20, 1975

Page 3

It is hoped that today's meeting will provide additional impetus to proceeding with this project as rapidly as funding will permit. We appreciate the opportunity to participate and comment on these features of the project and look forward to a continued and early completion of this project.

Sincerely yours,


ROY AGUILARD
DIRECTOR

ART:sls

EXHIBIT 7-3

MARCH 24, 1975

COL. E. R. HEIBERG
CORPS OF ENGINEERS
DISTRICT ENGINEER
NEW ORLEANS, LOUISIANA 70160

DEAR COL. HEIBERG:

THIS IS TO INFORM THAT I, AS A PRIVATE AND INTERESTED CITIZEN, AM OPPOSED TO THE LAKE PONTCHARTRAIN & VICINITY HURRICANE PROTECTION PROJECT; IN PARTICULAR, THE BARRIER PHASES OF THE PROJECT.

I FEEL THAT THIS PROJECT WILL BE DETRIMENTAL TO THE LIVES AND PROPERTY OF THE RESIDENTS OF ST. TAMMANY PARISH, AS WELL AS THOSE LIVING IN ORLEANS, ST. BERNARD AND JEFFERSON PARISHES. THE PLAN AS DESIGNED DOES NOT PROVIDE FOR ADEQUATE FLOOD PROTECTION FOR THESE PARISHES AND THE BARRIERS, DURING CONSTRUCTION AND WHEN COMPLETED AND IN PLACE, WILL BRING UNTOLD ENVIRONMENTAL HARM TO THE ESTUARIES, MARSHES, AND LAKE PONTCHARTRAIN AND LAKE MAUREPAS.

PLEASE FILE THIS OBJECTION AS PART OF THE OFFICIAL RECORD AS A PART OF THE HEARING PROCEEDINGS OF FEBRUARY 22, 1975.

CONCERNED,

MRS. JANE ALFORD

EXHIBIT 8

22 FEB '75

STATEMENT by

NEIL AFFORD

PO Box 7
Slidell, La 70458

"CITIZEN of St TAMMANY PARISH LA"

TELEPHONE 643-0555

I am "opposed" to the Lake
fontchartrain hurricane barrier project
two fold.

1st I believe if the project is
carried forth there will be
harm to the lives of our
citizens and our natural animals along
with damage to the natural resources &
environment. Although there will be harmful
effects especially to the citizens of
St Tammany parish it is not the primary
reason. The primary reason is that our
our "lives" are truly endangered. This
project makes the lake nothing more than
a bath tub with the barrier project being
the "stopper". Should there be hurricanes
outside of the critical path causing
as well as animals & wildlife will
drown readily because of their entrapment.

2ND

It is my basic understanding that in all phases of our govt we have a "republic form of government" - From the undertaking by certain agencies of our govt, local as well as national, this is very much questionable - From previous acts ~~that~~ and action presently being taken it would seem that we have a "dictator type of govt" - As example even tho the "people" have "voted" against the project not once but three times but the "corp" continues to forge ahead because it needs the project the Orleans levee board has even spent public money and misled the people they say they are trying to protect. Further two of Louisiana's have even guaranteed funds that the people that elected them had voted against supplying the project - no matter how many public meetings & court hearings because the corp. is trying to sell something not obtain opinions) it seems the only way the people are going to be hear is in a "court of law" -

Willford



EAST ORLEANS CIVIC COUNCIL

NEW ORLEANS, LOUISIANA

Castle Manor Improvement Assn.
Coronado Heights-Merlie Manor Improvement Assn.
Dona Villa Improvement Assn.
Front Nine Civic Assn.
Hayne-Lakeshore Improvement Assn.
Irish Bayou Improvement Assn.
Kenilworth Civic and Improvement Assn.
Spring Lake Home Owners Assn.
Sherwood Forest Improvement Assn.

Lakeland Terrace Improvement Assn.
Neighborly Nines Civic and Social Club
Venetian Isles Civic and Improvement Assn.
Village de l'est Improvement Assn.
Villa Sites Improvement Assn.
W.A.T.C.H.E.R.S.
Young Men's Business Club (Gentilly Council)
Del Mar Villas Home Owners Assn.

4683 Galahad Drive
New Orleans, Louisiana 70127
February 21, 1975

Col. E.R. Heiberg III, District Engr.
Department of the Army
New Orleans District, Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160

Dear Colonel Heiberg:

The East Orleans Civic Council representing some eleven civic improvement associations in New Orleans East has passed a resolution supporting the "Barrier Concept" flood protection plan as specified in the U.S. Corps of Engineers Lake Pentchartrain, Louisiana and Vicinity Hurricane Protection Project. It is our belief that this project is of vital importance for the protection and growth of the entire New Orleans area. We therefore encourage the cooperation of all local, state and federal governmental agencies to begin implementation of this project as soon as possible.

Yours very truly,

Robert J. Alonzo, President

cc: Guy F. LeMieux, President
Orleans Levee Board

4114 1/2 State St. Dr.
New Orleans, La. 70125
February 23, 1975

The Honorable Colonel Highburg
The Corps of Engineers
P.O. Box 6026
New Orleans, La. 70160

Dear Colonel Highburg,

I found the public hearing on the projected hurricane plan for New Orleans East very informative. I was quite impressed with number of concerned citizens who attended and spoke their point of view.

When I first moved to New Orleans I could not understand why the voters were rejecting the hurricane protection plan at the polls. Following the hearing, I now adamantly oppose the barrier plan. The most crucial job we citizens have is protecting our natural resources from careless or hasty technological progress at the expense of our environment.

Please concentrate on improving the existing plan for the Levy system and abandon the hurricane barrier protection plan.

Sincerely,

Clairi L. Amos
O.S. P.N.

I HAVE BEEN DISAPPOINTED IN THE TOTAL LACK OF PUBLICITY THIS HEARING HAS RECEIVED IN ALL AREAS AND MUNICIPALITIES ON THE EXTENDED PERIMETERS OF THE LAKE.

I MUST SAY THAT MY PRESENT UNINFORMED POSITION ON THE PROJECT IS NEGATIVE. BECAUSE THE LAKE MUST BE PRESERVED IN ITS NATURAL STATE. HOWEVER I WOULD BE IN FAVOR OF TAKING FEASIBLE STEPS TO ERADICATE ANY TRUE AND VALID THREATS TO LIFE AND PROPERTY DUE TO FLOODING.

THERE ARE MANY MANY PERSONS WHO WILL BE DIRECTLY AND INDIRECTLY AFFECTED BY THIS PROJECT THAT ARE NOT REPRESENTED TODAY. I BELIEVE THIS ON THOSE WHO FAVOR CHANGE DO NOT TO MAKE GREATER ATTEMPTS TO INFORM THE PEOPLE ON THE MORE LOCALIZED LEVEL.

I SINCERELY HOPE TO SEE FURTHER HEARINGS AND MINI-HEARINGS IN ALL AREAS THAT WILL BE AFFECTED BY THE PROPOSED PROJECT! THIS INCLUDES AREAS NORTH, SOUTH EAST & WEST OF THE LAKE, SUCH AS BRIDON MOUNTAIN, SADDLE CHATSOULA, MADISONVILLE, MANDELVILLE, COVINGTON, SLIDELL, GONZALES, SPRINGFIELD, AND MANCHAC, ^{THE LAKE} AND OTHERS.

John Anderson
Hammond

STATEMENT OF THE LOUISIANA WILD LIFE AND FISHERIES COMMISSION

LAKE PONTCHARTRAIN HURRICANE PROTECTION PLAN

PUBLIC MEETING, SATURDAY, FEBRUARY 22, 1975

NEW ORLEANS, LOUISIANA

THE LOUISIANA WILD LIFE AND FISHERIES COMMISSION APPRECIATES THE OPPORTUNITY TO APPEAR AT THIS MEETING AND PROVIDE OUR COMMENTS AS THEY RELATE TO THE FISH AND WILDLIFE INTERESTS WITHIN THE PROJECT AREA.

THE COMMISSION HAS BEEN INTERESTED IN THIS PROJECT SINCE THE DISCUSSIONS OF A PROPOSED HURRICANE PROTECTION SCHEME WHICH PRECEDED THE ACTUAL AUTHORIZATION OF THIS PROJECT BY THE CONGRESS IN 1965. IT WAS OUR INTEREST AND CONCERN, ALONG WITH THAT OF THE U. S. FISH AND WILDLIFE SERVICE, THAT PUSHED FAR AND PARTICIPATED IN A MODEL STUDY OF THE LAKE.

THIS MODEL STUDY ALLAYED SOME OF OUR FEARS REGARDING THE INTERDICTION OF FLOWS BY THE CONSTRUCTION OF THE BARRIER STRUCTURES AT THE RIGOLETS AND AT CHEF MENTEUR PASSES. IF THE DATA PRODUCED BY THE MODEL STUDY PROVES VALID, THE INTERCEPTION OF NUTRIENT WATERS, THE MOVEMENT OF ORGANISMS INTO AND FROM THE LAKE AND THE INTERCHANGE OF SALINE AND FRESH WATERS WILL NOT BE SIGNIFICANTLY ALTERED BY THESE STRUCTURES.

WE DO HAVE SOME SERIOUS CONCERN REGARDING DAMAGES TO PRODUCTIVE OYSTER BEDS, ESPECIALLY IN LAKE BORGNE, NEAR THE CHEF MENTEUR BARRIER STRUCTURE. DREDGING NEAR AND CONSTRUCTION OF THE WING-WALLS HAVE A POTENTIAL FOR CONSIDERABLE HARM TO THE EXISTING HIGHLY VALUABLE OYSTER BEDS.

TWO IMPORTANT FACTORS HERE ARE THE PLANS FOR THE CONTAINMENT OF SEDIMENT WHICH RESULTS FROM PROJECT WORKS, AS WELL AS THE APPARENT LENGTHY DURATION OF THE CONSTRUCTION. WE WOULD LIKE MORE INFORMATION ON EACH OF THESE AND WOULD LIKE AN OPPORTUNITY TO WORK WITH YOU IN PLANNING TO ELIMINATE OR REDUCE, TO THE GREATEST EXTENT POSSIBLE, THE DAMAGES TO THIS OYSTER PRODUCING AREA. WE FEEL THAT OYSTER MORTALITIES AND CLOSURES OF PRIVATELY LEASED BEDDING GROUNDS SHOULD BE FULLY COMPENSATED BY THE PROJECT.

THE PROPOSED SEABROOK STRUCTURE WAS DESIGNED FOR ADDITION TO THE MISSISSIPPI GULF OUTLET TO PARTIALLY CORRECT THE HIGH SALINITIES THAT ARE OCCASIONED IN THE LAKE BY WATERS FROM THAT NAVIGATION CHANNEL. THIS STRUCTURE WILL PROVIDE THE CAPABILITY FOR MANAGING SALINITIES WITHIN THE LAKE. EXCESSIVE SALINITIES IN THE UPPER PART OF THE LAKE, WHICH WERE HISTORICALLY FRESHER, HAVE CAUSED CONSIDERABLE MARSH DETERIORATION AND MORTALITY OF FRESH WATER VEGETATION. THE MOST SPECTACULAR EVIDENCE OF THIS IS THE DEAD CYPRESS TREES VISABLE FROM INTERSTATE 10.

THE DAMAGES DUE TO PRIOR URBAN DEVELOPMENT ARE NOTED IN YOUR ANNOUNCEMENT OF JANUARY 22, 1975. THE INVESTMENT OF VALUABLE WETLANDS THAT FORMERLY SUPPORTED THIS IMPORTANT ECOSYSTEM, FOR PREVIOUS DEVELOPMENTS (AN ESTIMATED 50,000 ACRES SINCE 1900) HAS DOUBTLESSLY

CONTRIBUTED TO A DECLINE IN PRIMARY PRODUCTIVITY.

WE NOTE THE SUSPENSION OF PLANNING FOR THE ST. CHARLES PARISH PORTION OF THE HURRICANE LEVEE. YOU CORRECTLY STATE THAT THE DISRUPTION OF FLOWS FROM THIS WETLAND WOULD HAVE SERIOUS ADVERSE AFFECTS ON THE PRODUCTIVITY OF THE LAKE. YOU FURTHER CONCLUDE THAT IMPLEMENTATION OF THIS PART OF THE ORIGINAL PROTECTION PLAN WOULD LEAD TO URBAN TYPE DEVELOPMENT OF THIS STILL PRODUCTIVE WETLAND. THE REALIGNMENT OF THE HURRICAN LEVEE ALONG U. S. HIGHWAY 61, AS YOU DISCUSS ON PAGE 9, WOULD MINIMIZE DAMAGES TO FISH AND WILDLIFE INTERESTS.

SINCE THE PROPOSED CONSTRUCTION IS FOR THE PERIOD 1975 THROUGH 1990, A PERIODIC REVIEW AND EVALUATION REGARDING THE EFFECTS ON FISH AND WILDLIFE RESOURCES, IN LIGHT OF OTHER PREVAILING FACTORS, SHOULD BE SCHEDULED. IT IS SUGGESTED THAT SUCH A REVIEW INVOLVING APPROPRIATE STATE AND FEDERAL FISH AND WILDLIFE AGENCIES BE HELD AT LEAST EVERY THREE OR FOUR YEARS.

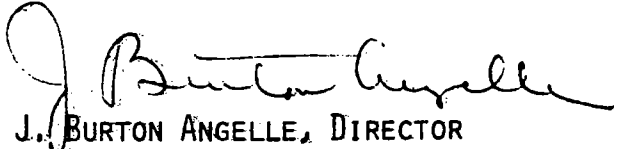
WE WILL CONTINUE TO MAINTAIN A HIGH INTEREST IN LAKE PONTCHARTRAIN BECAUSE OF ITS PRODUCTIVITY AND THE VERY HIGH DEGREE OF UTILIZATION BY THE POPULAS PURSUING WATER RELATED ACTIVITIES. ITS PROXIMITY TO AN URBAN POPULATION IN EXCESS OF 1,000,000 PEOPLE, PROVIDE AMPLE INCENTIVE FOR ALL AGENCIES TO WORK TOGETHER TO ASSURE ITS CONTINUATION AS A VIABLE RECREATION AND COMMERCIAL FACILITY.

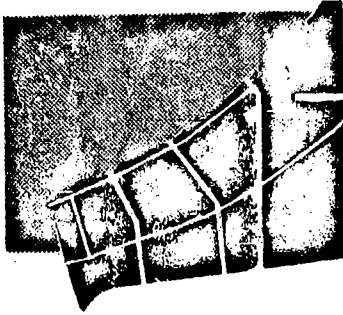
STATEMENT OF LA. WILD LIFE & FISHERIES COMM. - CONT'D.

PAGE 4

THIS STATEMENT SHOULD BE CONSIDERED AS AN INTERIM STATEMENT AND MAY BE AMENDED AFTER A CAREFUL REVIEW OF THE PROPOSED PROJECT WORKS BY THE BOARD OF THE LOUISIANA WILD LIFE AND FISHERIES COMMISSION. THE NEXT REGULAR MEETING OF THIS BOARD IS TUESDAY, FEBRUARY 25, 1975.

OUR COMMENTS ON THE SPOIL DISPOSAL PORTION OF THE MEETING WILL BE FORWARDED DURING THE PERIOD THAT THE RECORD IS KEPT OPEN FOR COMMENTS. WE WILL BE SOLICITING MORE INFORMATION FROM YOUR STAFF IN ORDER TO PROPERLY EVALUATE THE PLACEMENT OF SPOILS.


J. BURTON ANGELLE, DIRECTOR
LA. WILD LIFE & FISHERIES COMMISSION



**NEW ORLEANS
EAST →
BUSINESS
ASSOCIATION**

P. O. BOX 26594 • NEW ORLEANS, LA. 70186

March 21, 1975

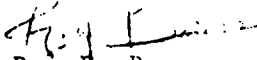
Col. E. R. Heiberg, III
District Engineer
Corps of Engineers
P. O. Box 60267
New Orleans, La. 70160

Dear Col. Heiberg:

Our association, which is comprised of over 160 business-people in New Orleans East, considered the "Barrier Plan" and alternative plans at our March general membership meeting. After hearing both sides of the argument, it was decided that the New Orleans East Business Association would fully endorse the concepts of the "Barrier Plan" as being the most advantageous for our area.

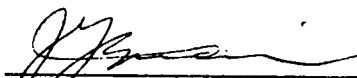
My thanks to your staff for presenting the issue to our March meeting. We would appreciate your keeping us posted of any developments concerning our area.

Sincerely,


Roy F. Baas
President

Colonel E. R. Heiberg, III
April 4, 1975
page 2

Be it resolved that The Sertoma Club of New Orleans go on record as approving and recommending completion of the Project at the earliest possible time.



J. G. Baudier
Secretary Treasurer

JGB/cl



Kiwaniis Club Of New Orleans

MRS. MARY LYNN TASSIN
ADMINISTRATIVE SECRETARY
482-5151

6477 General Diaz Street
NEW ORLEANS, LOUISIANA 70124

OFFICERS

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ROBERT M. JEMISON, Jr.

WILLIAM D. O'REGAN

OLIN B. QUINN

EDWARD W. RIEDL

February 20, 1975

Department of the Army
Corps of Engineers
New Orleans District
P. O. Box 60267
New Orleans, La. 70160

Gentlemen:

Re: Hurricane Protection Plan

By motion adopted by the Board of Directors of the Kiwanis Club of New Orleans, this organization wishes to state its support of the proposed project to control the effects of hurricane flooding from Lake Pontchartrain. It is felt that sufficient safeguards have been built into the plan to keep to a minimum the adverse impact on ecology in the area. On the other hand, the benefits of the project for protecting lives and property are manifest and long overdue.

Thus, this organization of eighty-five business and professional community leaders desires to have its support registered.

Yours very truly,

Thompson F. Bechtel
President

mlt



United States Department of the Interior

FISH AND WILDLIFE SERVICE

17 EXECUTIVE PARK DRIVE, N. E.
ATLANTA, GEORGIA 30329

Colonel E. R. Heiberg, III
District Engineer
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160

Dear Colonel Heiberg:

Enclosed are five copies of the public hearing statement concerning the Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection project which was presented by Mr. Joseph E. Burgess at the February 22, 1975, public meeting in New Orleans, Louisiana.

As you are aware, projects of this magnitude can and frequently do result in significant adverse impacts on fish and wildlife resources. While we appreciate the numerous and sometime difficult problems encountered by your agency in having to weigh all facets of a project and determine what is, in fact, in the best public interest, we feel that public fish and wildlife resources are an essential part of this consideration. It was within this context that our recommendations were made to alleviate project impacts on fish and wildlife resources and at the same time provide hurricane protection for the developed areas of metropolitan New Orleans. If in your opinion further discussion concerning this project is warranted, we will be pleased to participate.

I feel that our February 26 meeting was helpful in reaching a better understanding of our respective problems associated with water-resource development projects and would welcome any future meetings of this type that you deem appropriate.

If you have any questions, please contact me at your convenience.

Sincerely yours,

Regional Director

Enclosures 5

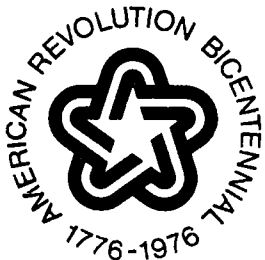


EXHIBIT 17-1



United States Department of the Interior

FISH AND WILDLIFE SERVICE

17 EXECUTIVE PARK DRIVE, N. E.
ATLANTA, GEORGIA 30329

PUBLIC HEARING STATEMENT
OF
FISH AND WILDLIFE SERVICE AND DEPARTMENT OF THE INTERIOR
REGARDING
LAKE PONTCHARTRAIN, LOUISIANA, AND VICINITY HURRICANE PROTECTION PROJECT

SATURDAY, FEBRUARY 22, 1975

Colonel Heiberg, distinguished guests, ladies and gentlemen, my name is Joseph E. Burgess, Jr., and I am presenting this statement on behalf of Regional Director Kenneth E. Black of the U.S. Fish and Wildlife Service. This statement represents the official position of the Fish and Wildlife Service on the Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection project.

Four major project features of the proposed hurricane protection plan are of particular concern to the Fish and Wildlife Service. These are: Chalmette Area Plan, the New Orleans East Area, the barrier structures to be located in Chef Menteur and Rigolets Passes, and the St. Charles Levee.

Completion of the Chalmette Area Plan will enclose approximately 18,000 acres of swamp, intermediate to brackish marsh, and open water. The open tidal ponds and creeks and the adjacent intertidal marsh located within this project segment constitute important nursery habitat for numerous sport and commercial fishes and shellfishes such as Atlantic croaker, spot, spotted seatrout, red drum, black drum, silver perch, southern flounder, gulf menhaden, striped mullet, blue crab, white and brown shrimp. This area also provides suitable habitat for migratory waterfowl including lesser scaup, merganser, American wigeon, gadwall and coots, and other wildlife species including egrets, herons, bitterns, rails, muskrat, white-tailed deer, swamp rabbit, raccoon, and nutria. This area supplies nutrient and detritus material valuable to the continued high levels of productivity of adjacent estuarine areas.



EXHIBIT 17-2

The New Orleans East portion of the project, which encompasses approximately 21,000 acres, has an estimated 14,000 acres of marshes and associated water bodies which have not been drained or developed. Although these wetlands have been separated from tidal influence, they still provide important habitat for numerous wetland wildlife species including waterfowl, furbearers, and game and nongame mammals.

The final environmental impact statement (EIS) contains a response by the District Engineer to a comment on the draft EIS by New Orleans East, Inc. He noted that there is an exchange of water between the marsh and the lake at South Point, and that this exchange would tend to preserve the estuarine nursery by providing for the release of detritus and the ingress and egress of juvenile and larval forms of marine species.

We wholeheartedly concur and strongly recommend that the four drainage structures which are part of the New Orleans East, South Point to Gulf Intracoastal Waterway (GIWW) Levee be modified to allow the restoration of the estuarine character of the approximately 14,000 acres of undeveloped and essentially unaltered wetlands located within the New Orleans East segment.

Another area of concern to the Service is the barrier structures to be located in Chef Menteur and Rigolets Passes. Lake Pontchartrain is an integral part of a vast estuarine complex in southeastern Louisiana. The value of the area has been well documented in the final EIS and previous Fish and Wildlife Service reports. The Fish and Wildlife Service is concerned that there is an insufficient amount of biological information available to accurately predict the effects of the barrier structures on the movement of organisms into and out of the lake. Contingency plans related to modification of the barrier structures should be developed if it becomes apparent that salinity regimens and/or movement of organisms are adversely affected by the structures. This determination could be made utilizing data obtained during a preconstruction and postconstruction study of the movement of marine and estuarine organisms through Chef Menteur and Rigolets Passes. In the event that adverse effects exist, the causes could be identified and the barriers modified to eliminate these problems.

The final major area of concern relates to the St. Charles Parish Levee portion of the proposed project. Prior Fish and Wildlife Service comments and the final EIS document the value of the area and the project-induced effects of the proposed work on the approximately 25,000 acres of marsh, swamp, and open water areas in St. Charles Parish.

According to the final EIS, "Two streams in the St. Charles Parish areas have recently been added to the Natural and Scenic River System of Louisiana. Construction of the St. Charles Parish Levee, as currently

planned, would involve alteration of either or both of these bayous. Because this would contravene State law, this feature of the project is currently in a deferred status." We support this decision but wish to point out that this action should not be based on the alteration of scenic streams alone. Recently published research regarding the extraordinary fish and wildlife productivity of wetlands, coupled with public concern for losses of these vital resources, has compelled many natural resource agencies to establish policies of wetland preservation. The Fish and Wildlife Service is opposed to needless destruction of wetland areas associated with the proposed St. Charles Parish Levee feature.

In view of the above considerations, the Fish and Wildlife Service recommends that the following items be accomplished:

1. The St. Charles Parish segment of the project not be constructed as currently proposed.
2. The navigable floodgates located at Bayous Bienvenue and Dupre continue to be operated to allow maximum tidal exchange of waters on either side of the Chalmette Area Levees except immediately prior to and during hurricanes.
3. The drainage structures associated with the New Orleans East segment be modified and operated to allow maximum tidal interchange between waters located on either side of the protection levees. This action would restore the estuarine character of the enclosed marshes, and would help mitigate the project-induced losses of valuable fish and wildlife habitat.
4. Ponding dikes associated with the New Orleans East Barrier Plan be segmented following revegetation of the ponded areas in order to restore tidal interchange. The timing and extent of this action should be determined through consultation with representatives of the Fish and Wildlife Service, National Marine Fisheries Service, and the Louisiana Wild Life and Fisheries Commission.
5. The planned spoil disposal areas near the Rigolets Pass be moved to previously utilized sites located on the north side of this pass between U.S. Highway 90 and Rigolets Entrance Light No. 2 or to upland sites north of Lake Pontchartrain.
6. Studies be initiated to determine the effects of the barrier structures on salinity regimes, and on ingress and egress of marine and estuarine organisms through the Chef Menteur and the Rigolets Passes. If these studies indicate that the structures are detrimental to this estuarine ecosystem, the structures should be modified to

rectify this problem. This study should consist of at least 1 year of preconstruction inventories, extend throughout the construction period, and include 2 years of postconstruction inventories. It should be designed in consultation with the Fish and Wildlife Service, the National Marine Fisheries Service, and the Louisiana Wild Life and Fisheries Commission. This would permit verification of the results of the model studies conducted at the Corps' Waterways Experiment Station at Vicksburg, Mississippi.

We note references in the Announcement of Public Meeting to losses in benefits if the wetlands within the protective levees are not converted to urban development. The structures proposed for hurricane protection obviously make possible the conversion and development of wetlands that would be left in the natural state without the project. The Fish and Wildlife Service does not object to the project features designed to protect the developed areas of metropolitan New Orleans from damaging hurricanes. However, we cannot concur with the construction and operation of those features which will cause or accelerate the development of valuable wetlands. We believe that the intent of Congress regarding the conversion of wetland areas into urban development was clearly established in House Report No. 91-917 (page 3) when it said, "The Corps' obligation to consider all facets of the public interest in protecting estuaries, rivers, lakes, and other navigable waters also arises from the national policy and directives expressed in many other statutes and Executive orders designed to minimize pollution, maximize recreation, protect aesthetics, preserve natural resources, and promote the comprehensive planning and use of water bodies to enhance the public interest rather than private gain."

We must also strive to preserve these highly productive ecosystems for future generations and strongly urge the Corps of Engineers to adopt our previously discussed recommendations, so that the destructive features of the Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection project can be minimized.

Thank you.



EDWARD H. BOOKER
DISTRICT 91

STATE OF LOUISIANA
HOUSE OF REPRESENTATIVES
BATON ROUGE

February 21, 1975

Phone Office ~~891-4477~~ 891-4414
Phone Home 891-4414
2833 GENERAL PERSHING
NEW ORLEANS, LA. 70115

COMMITTEES:
VICE CHAIRMAN - WAYS & MEANS
JUDICIARY B
Health & Welfare

Army Corps of Engineers
New Orleans District
E. R. Heiberg, III
Colonel, CE
District Engineer

BY HAND DELIVERY

Re: Public Meeting
Pontchartrain Lake Area
Hurricane Protection Project
February 22, 1975

Gentlemen:

Enclosed are five copies of a statement which I would like incorporated into the record of the above-described meeting.

Thank you.

Sincerely yours,


Edward H. Booker

EHB/mab
Enclosures

EXHIBIT 18-1



EDWARD H. BOOKER
DISTRICT 91

STATE OF LOUISIANA
HOUSE OF REPRESENTATIVES
BATON ROUGE

Phone Office 891-4414
Phone Home 891-4414
2833 GENERAL PERSHING
NEW ORLEANS, LA. 70115

COMMITTEES:
VICE CHAIRMAN - WAYS & MEANS
JUDICIARY 3
Health & Welfare

WRITTEN STATEMENT ON THE LAKE PONTCHARTRAIN
AND VICINITY HURRICANE PROTECTION PLAN

PRESENTED TO THE ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

FEBRUARY 22, 1975

As a public official of New Orleans, I am compelled to express publicly my deep scepticism of the Pontchartrain Lake Area Hurricane Protection Plan which is open to public comment this Saturday, February 22, 1975. Frankly, I am more inclined to say my "opposition" to the entire project. Were it not for the courageous persistence of State Representative Ed Scogin from St. Tammany Parish and his well-reasoned opposition to the Barrier project, my sentiments on the issue would best be described as confusion. I stand at this point with the words "deep scepticism," however, in deference to my presumption that the many proponents of the project act in good faith and that the Corps will be objective.

The following are my personal observations on the project:

(1) The objective of the Hurricane Protection Plan--the saving of human life and property from catastrophic disaster--cannot be argued against. Ridding the world of sin likewise cannot be argued against. But in both projects, myriad complexities stand before the laudable, ideal objectives and the journey thereto.

(2) The fear of a Super Hurricane has been the strong pitch used for this protection project. After Hurricane Betsy in 1965, people asked the question, what could be worse? Thus was born the general public fear of a Super Hurricane.

Very correctly the experts quickly answered the question. A hurricane comparable in force to Betsy, that would roar up through the Mississippi Sound, Lake Borgne, and the Rigolets, and approach New Orleans from the east, would be the worst hurricane possible, the Super Hurricane.

Coincidentally, Betsy occurred around the era when New Orleans was constantly belittled as being "provincial," for not "progressing" like Dallas, Atlanta, Houston, etc., etc. Ever since then the word "super" has come to such common usage in New Orleans that it is perhaps too mild a word now to describe the "Project Storm," the Corps' name for a hurricane greater than we've ever experienced.

All of this suggests point three:

(3) Can anything be constructed that would significantly harness the fury of "The Super Hurricane" and significantly prevent the loss of human life and property?

A barrier across the Rigolets would theoretically prevent the mammoth tides that precede a hurricane from spilling into Lake Pontchartrain and thus attacking the "Isle of Orleans" at its soft underbelly, that is, the lakefront and of course New Orleans East, until recently a natural marshland.

If such a barrier could be built, another important issue, one can only ask, where then will the water go? Without the personalities we ascribe to hurricanes, the waters would not be bluffed--they would simply go around, over, under, perhaps even through our best-laid plans.

Will the dikes and back-up levees on either side of the Barrier save us? Consider Hurricane Camille. When its eye first crossed land at Pass Christian, Mississippi, in 1969, the estimated 200 mile-per-hour winds bullied massive tides all the way to and farther than the L & N railroad tracks--tracks located more than a mile from the coast line, tracks placed on a natural ridge some 20 to 25 feet above sea level, tracks built on top of a man-made railroad bed approximately 10 feet high.

All of this adds up to a well-tested 30 to 35 foot levee being overwhelmed by tides estimated at 20 to 22 feet. There was significant destruction on the north side of these railroad tracks during Camille.

A so-called Super Hurricane across the Mississippi Sound, Lake Borgne, and headed dead-eye toward the Rigolets would channel and concentrate waters through a natural strait and could create tides higher than the estimated 20 to 22 feet experienced on the Gulf Coast in Camille.

Point four:

(4) Can such a barrier even be constructed? If so, Orleans Parish will be distinguished for having within its boundaries the eighth and ninth super-wonders of the world.

The only comparable project that I can think of in the world is the Aswan Dam which dams the River Nile. The project was mammoth. It was successful. The dam's length from shore to shore is 1 1/2 miles.

The length of the proposed Rigolets Barrier is over 5 miles, the depth of the Rigolets is 45 to 100 feet. The currents of the two waters are comparable in swiftness and force, as are the depths of the two projects.

The Soviet Union, which engineered the project, claims to spent one billion dollars to complete it by 1970.

The Corps, however, has anticipated the "technical problems" of constructing such a mammoth, unprecedented experimental project, which brings us to point five.

(5) The Corps has anticipated the "technical" problems of building a five-mile barrier across the Rigolets. It has under consideration an alternate system which would put the Barrier at the narrower and shallower strait--the Chef Menteur Pass.

The Rigolets would be dammed with coffer dams and other more practical methods of subduing it. The natural, deep channel would be filled in. Dammed completely.

All boats, even a pirogue, would have to go through locks to pass. Tidal flow would stop. Lake Pontchartrain would suddenly be transformed into a giant freshwater reservoir. Unlike successful freshwater reservoirs such as Toledo Bend (constructed by the states of Louisiana and Texas with no federal money, by the way), the New Lake Pontchartrain would have nowhere to flow. It would silt. Phosphates would create algae.

In crossing the "Red Sea" we end up with a "Dead Sea."

But when the engineers are gone and the waters are still parted--temporarily--what happens when the dreaded "project storm" finally comes? Will it be vanquished like Pharaoh's chariots?

(6) The alternate plan developed by the Corps calls for levees that would completely surround Orleans and Jefferson Parishes. New levees would be built around New Orleans East. Existing levees around Fort Pike and Lake Catherine would be built up. How high? Seven to 10 feet above sea level? Fifteen feet above sea level? However high the levees are built is not the point. The point is that Orleans and Jefferson Parishes would be completely surrounded by levees.

What then if the "project storm" capriciously decides it will approach from the southeast? What if it looks at the "Gulf Outlet Canal" and takes a bulls-eye on this Corps-constructed path of least resistance?

The 200 mile-an-hour Camille-like winds would push 20 to 22-foot tides against the 10 to 15-foot levees located one inch from the entry point of the storm. New Orleans East and the lower ninth ward, the upper ninth ward, and God only knows what other wards would be inundated.

As the 20 to 22-foot tides sweep all the way across town, they will gradually lose force and finally come to another Barrier--the 700 square miles of water already in Lake Pontchartrain, "safely" sequestered there as the Corps envisioned.

But will this water be safely sequestered there? No--the lake, swelled with rain, will be coming at Orleans and Jefferson Parishes from a different direction, for by now the northeast quadrant winds of the storm are making another tidal wave out of Lake Pontchartrain. The two tidal waves would probably then clash and stop.

Before and after every storm there is a calm. When the "Super Hurricane" is somewhere hundreds of miles away and losing steam, all will be calm in the Isle of Orleans.

People will be thrilled that the worst is over. Some people may even be thrilled over another surprise. New Orleans will have just achieved its third and the tenth wonder of the world. We will have the biggest swimming pool on earth.

Gentlemen, I have deep scepticism about this project.

ATTACHED IS A COPY OF AN ARTICLE WHICH APPEARED IN THE APRIL 21, 1974, EDITION OF DIXIE ROTO MAGAZINE AND WHICH INCORPORATES MY ENVIRONMENTAL CONCERNS ABOUT LOUISIANA ESTUARIES AND THE DANGERS THERETO CONSTITUTED BY THIS PROJECT. I ATTACH IT AS AN EXHIBIT.


EDWARD H. BOOKER



Manchac



EXHIBIT 18-6

DIXIE, April 21, 1974



Text and Photos
By
ED BOOKER
La. State Representative, District 91

& Man

LOUISIANA's vast Manchac Swamp stretches from Laplace to Ponchatoula, from the lowlands to the piney woods. It teems with wildlife and often presents vistas of indescribable beauty. But by no means all of the time.

Into the swamp slowly moves a pickup truck, its rear end sagging under a burden of old washing machines, bedsprings, splintered boards and other junk and trash. The truck crests the bridge spanning a bayou, and then a flick, a flash, and a beer can hits the asphalt, and from then on is no longer just a beer can but a part of the Manchac Swamp.

The truck moves on and then makes a right turn towards an open trash dump that stretches into the distance as far as the eye can see.

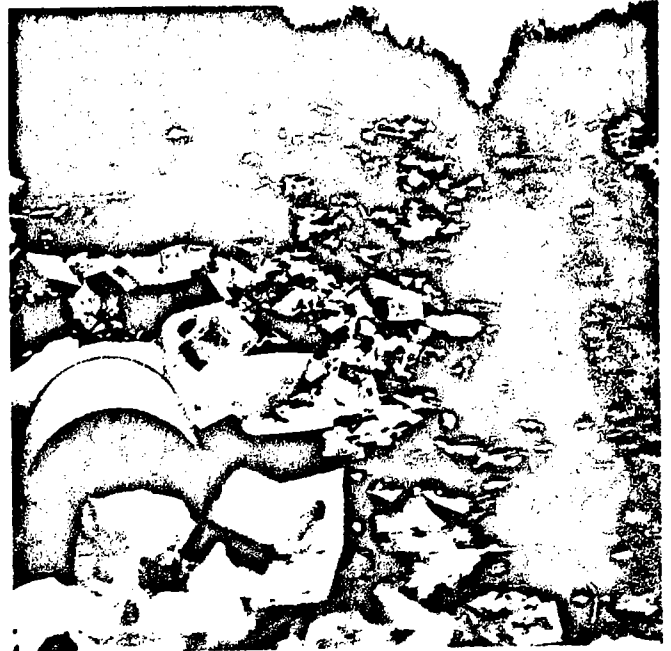
The driver is there to wed his trash

to a universal dump, a convention of garbage vacationing perhaps forever on the edge of the Manchac Swamp and the southwestern shore of Lake Pontchartrain.

The beer can almost made it to the dump; but the driver, for some reason, could not wait the few seconds that separated dump from road. On the other hand, perhaps the beer can is like a colonizer: perhaps from its humble beginnings on the side of the road will start a new strip, a new subdivision of man's refuse.

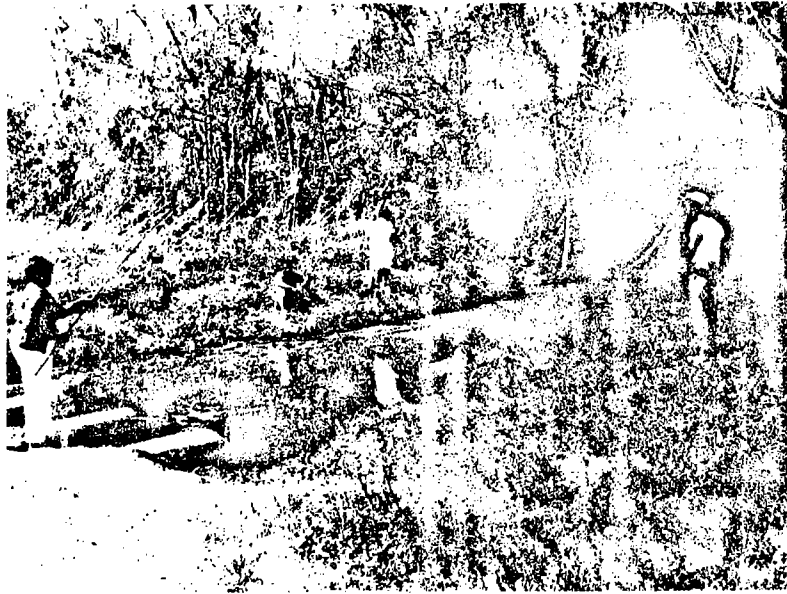
Other than such defacement Manchac is very close to its natural state. Few changes have occurred in it since the French-Canadian explorer Iberville first viewed it in 1699. The channelization and drainage that threaten the great Atchafalaya Basin have not occurred in Manchac; indus-

Continued on page 56



DIXIE, April 21, 1974

EXHIBIT 18-7



Manchac &

Continued from page 55

trial pollution has not touched it; and natural disasters, such as flood or fire have not altered its character, and, in fact, are powerless to do so.

THE beauty of a swamp is subtle. It is like modern art, or a fugue that has many rhythms, best experienced from the shell of a pirogue that silently slips past turn after turn of a twisting bayou. It is a beauty men must learn to appreciate. Some never do.

Sportsmen know Manchac well. The hunter finds deer, rabbit, duck;

the fisherman, huge catfish, bass, bream; both see alligator, egret, wildcat, and just about every form of wildlife that exists in Louisiana.

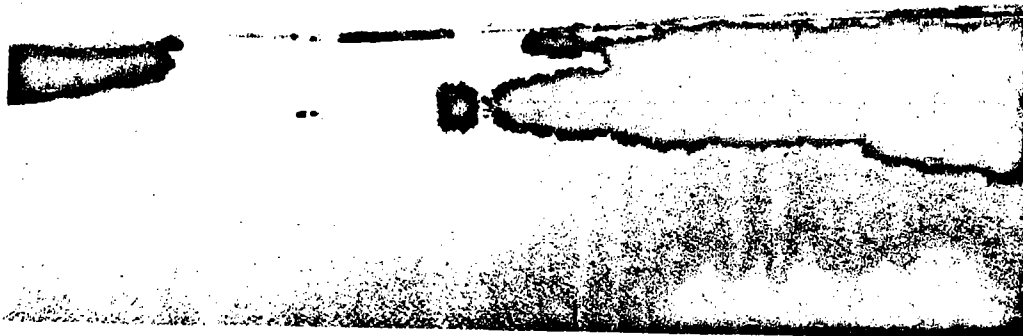
Lake Maurepas is the heart of Manchac Swamp. Three rivers feed it. The Tickfaw and the Amite come from southwest Mississippi through the Florida Parish Watershed, and the Blind River branches off the Amite. Most people see the swamp from Highway 51, the Manchac Road, which runs north from Laplace, going side by side with the Illinois Central

Continued on page 58



EXHIBIT 18-8

DIXIE, April 21, 1974



Manchac &

Continued from page 56

Railroad as it passes between Lake Pontchartrain and Lake Maurepas.

If there is one panoramic view of Manchac, it is from the bridge over Pass Manchac, a five-mile stretch of water that joins Lakes Maurepas and Pontchartrain. On the north side of the pass is the community of Akers — a name seldom used; most people simply refer to it as Manchac.

MANCHAC Swamp is alive and well, but do not believe it is not threatened. The key word is "wasteland." Wasteland. This is the way swamps have been traditionally viewed. The high ground has been easier to convert to commerce, and the

"wasteland" ignored and left to thrive, preserved in a left-handed way by commercial disdain. But the wasteland syndrome is beginning to take its toll.

THE Manchac Road is a 20-mile trail of indifference: a trail of trashing, junking, beer-can throwing, high-speed animal smashing. There's no pollution attributable to a giant industry belching smoke or poisoned water. There is only the pollution left in his trail by the ordinary man.

However, the trash by itself cannot kill Manchac, a swamp that has survived the worst of hurricanes. But it does bespeak an attitude that could prove its deadly enemy, that could leave Manchac indeed a wasteland.

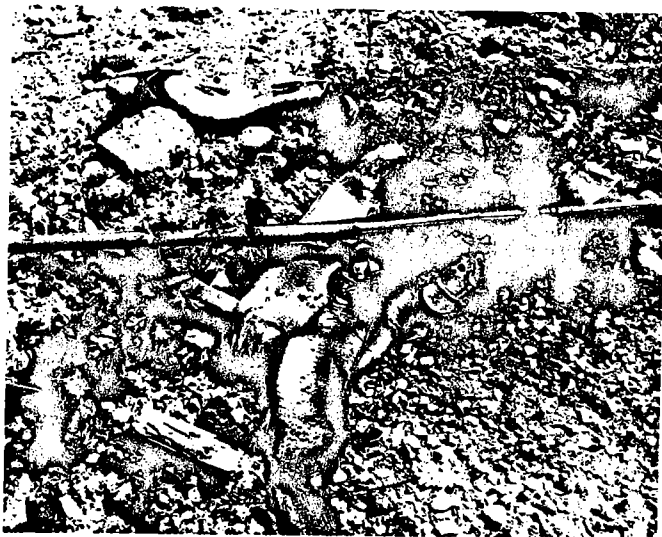


EXHIBIT. 18-9

IN the white man's history, Manchac and Lake Maurepas have been places of passage. Iberville's first exploration of the lower Mississippi consisted of a great circle that started from his base at Biloxi, Miss. and ended with his passage through Lakes Maurepas and Pontchartrain.

It was in April of 1699 that he left Biloxi, on a voyage in which he found the mouth of the Mississippi, camped where his brother, Bienville, was eventually to found the city of New Orleans, and viewed the huge, red-topped marker (Baton Rouge) that separated the territories of the Bayagoulas and the Oumas.

Iberville learned from the chief of the Bayagoulas of a stream that led from the Mississippi to the sea through some lakes. He navigated that stream, now called both Bayou Iberville and Bayou Manchac, into the Amite River and finally reached Lake Maurepas, thereby discovering an invaluable short cut to the sea and his base at Biloxi.

When he reached the lake, Iberville, demonstrating a political acumen uncommon in an explorer, named it after the Count de Maurepas, newly appointed minister of marine by King Louis XIV. Louis, the most important monarch in Europe, was to live another 15 years, but the best of his time was gone.

Louisiana represented to Louis the last important alternative for the kind of domination binge he hungered for. In Europe he was beaten. But Louisiana was a new front, a potential new tool for old ambitions.

Continued on page 60



Manchac &

Continued from page 58

Even in the wilderness, Iberville was aware of all this and knew how to jerk the threads of influence that led back across the ocean. Thus the name, Lake Maurepas.

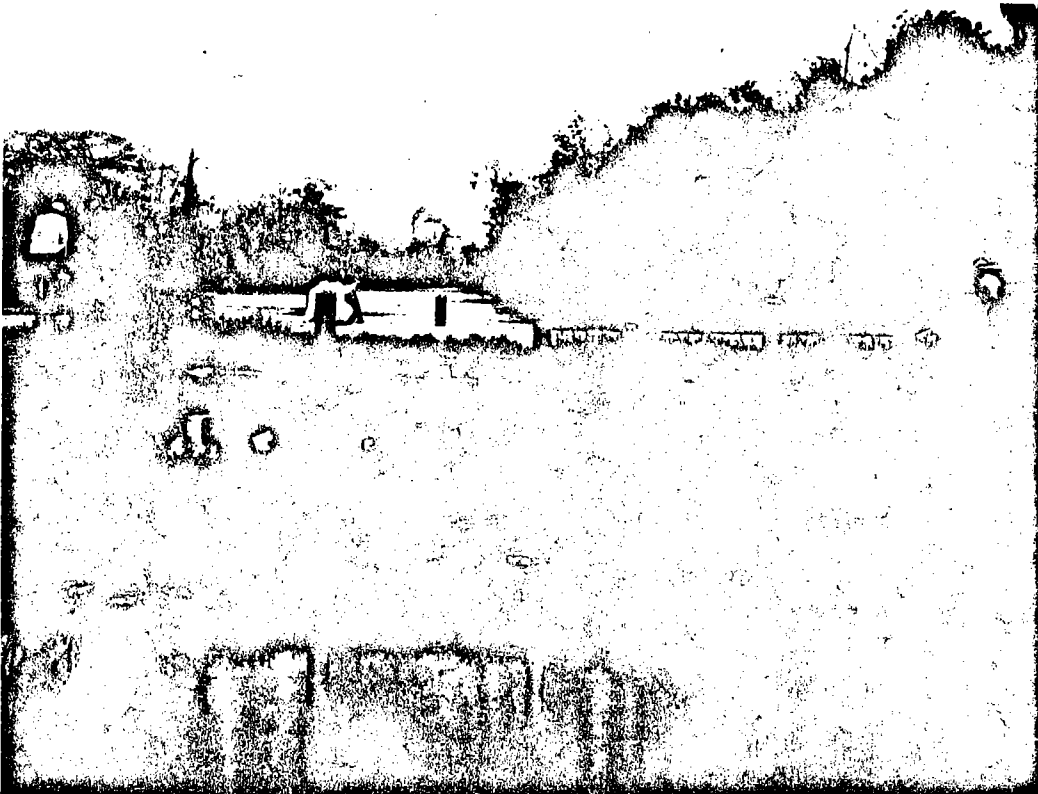
But Bayou Manchac and Lake Maurepas would remain simply waters of passage, Indian water into a European lake (Pontchartrain), the one place where the old still flowed into the new without great alteration.

Beyond this passage lay the real booty that Louis XIV and later the Duke of Orleans had in mind — a power base in the New World to rival England's and a ready cash crop of furs and whatever else could be cranked out of the Indians and the land.

SO, Manchac and Maurepas themselves were left behind by Iberville and left relatively unchanged and bypassed by history. But now Manchac's future is in grave doubt.

Urban sprawl shoots out from Greater New Orleans like the colonies of garbage that already litter parts of Manchac. It stops now at the beginning of the Interstate 10 span which crosses one of the most beauti-

Continued on page 62



EXHIBIT, 18-10

DIXIE, April 21, 1974



Manchac &

Continued from page 60

ful areas of the swamp, the marshy southwest shore of Lake Pontchartrain.

As far as Manchac is concerned, however, urban sprawl awaits still another development, the erection of a levee planned by the US Corps of Engineers as part of a controversial hurricane protection system.

If placed on the shore of Lake Pontchartrain — between the lake and the Manchac wetlands that stretch toward the Mississippi — this levee would immediately cut off the

water that feeds the significant southwest portion of the swamp and make the area a prime candidate for urban sprawl.

Thus, galloping, urban sprawl is the basic threat to Manchac on its southwest front. And today, landfill projects along Airline Highway between New Orleans and Baton Rouge groove in perfectly with the urban advance. Corporations and towns have bought cheap Manchac Swamp land on the north side of the highway and are utilizing it to dump and gingerly cover tons of refuse burgeoning communities in the New Orleans area

cannot handle. This landfill enables new sprawl to leapfrog to the garbage of slightly older sprawl.

Hurricane protection, urban sprawl, landfill — they are basically the same as far as Manchac's future is concerned. All threaten the future of the swamp on the southwest front of the Battle of Manchac.

Meanwhile, on the northwest front, there is the Amite River Reservoir Project, in which the Amite would be dammed to create a gigantic reservoir. The Amite is, of course, the main river feeding into Lake Maurepas.

SPRING transforms a swamp mightily. Small fillgrees of green bud suddenly burst from cypress trees that in winter looked like the gnarled walking sticks of old bearded men. Bass and bream snap at insects and make sudden swirls in water freshed by spring rain. 'Gators slide out of winter mudholes, and crawfish swarm everywhere. People come with poles and nets, picnic tables and cameras. And the swamp is big enough for all.

But whether Manchac is big enough for human incursions that do not simply take from the land but take the land itself is the issue in the Battle of Manchac, a battle in which the unknowns include plans the swamp and nature have for man and the ability of man to learn. Whether man and this wilderness are locked in mortal combat, whether there is no turning back in what seems today a great struggle and disaster remains to be seen.





A. CHARLES BORRELLO
DISTRICT 100

STATE OF LOUISIANA
HOUSE OF REPRESENTATIVES
BATON ROUGE

Phone Office 524-3752 - 522-0747
Phone Home 242-7298
4767 EUNICE DR.
NEW ORLEANS, LA. 70127

March 21, 1975

COMMITTEES:
JUDICIARY A
MUNICIPAL & PAROCHIAL AFFAIRS

Col. E. R. Heiberg, III
District Engineer
U. S. Army Corps of Engineers
P. O. Box 60267
New Orleans, Louisiana 70160

Re: Lake Pontchartrain and
Vicinity Hurricane
Protection Plan

Dear Col. Heiberg:

The hurricane protection plan as submitted by the Corps is one that I feel must be implemented as soon as possible.

The catastrophic effects that hurricanes have caused our city certainly lives within the minds of each and everyone of us who have lost property and loved ones.

As the State Representative of District 100, which comprises the New Orleans East area, I wish to go on record supporting your plan, in addition to commending the Orleans Parish Levee Board in its efforts to implement flood control in my district and surrounding areas.

With best wishes, I am

Yours truly,

A. Charles Borrello
A. Charles Borrello

cc: Mr. Guy LeMieux
% Orleans Parish Levee Board

EXHIBIT 19

BONNET CARRE' ROD AND GUN CLUB

A LOUISIANA WILDLIFE FEDERATION AFFILIATE

NORCO, LOUISIANA 70079

Lake Pontchartrain,
Louisiana, and Vicinity
Hurricane Protection
Project

112 Goodhope Street
Norco, LA 70079

February 25, 1975

Colonel Elvin R. Heiberg III, CE
District Engineer
U. S. Army Corps of Engineers
P. O. Box 60267
New Orleans, Louisiana 70160

Dear Colonel Heiberg:

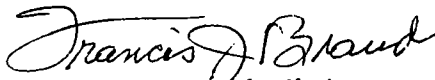
Enclosed are four copies of my statement on LMNED-MP "Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection Project" that should be attached to my statement presented during the public hearing on February 22, 1975. We thank you for the opportunity to have had a part in this hearing and meeting with members of your staff. It was indeed a well conducted hearing.

We request that your staff compile all the statements that were opposed to the building of the St. Charles Parish levee for our information and use. Also, we should appreciate that this information be mailed to all of Louisiana's Senators and Congressmen in Washington, D. C. for their information and use.

Also Colonel, we would very much like to have the Corps' cost estimate of a 4 or 6 ft. levee just on the north side of the Airline Highway No. 61 and built on the highway's right-of-way. Could funds for the lake shore levee be transferred to this project if the Airline Highway 61 levee is built instead of the lake shore levee? Also, could drainage pumps be installed in conjunction with the levee to provide drainage for the area south of the Airline Highway 61 to the Mississippi River?

Again we thank you for your cooperation and if we can be of any help to you, please call on us.

Sincerely,



Francis J. Braud, Chairman
Environmental Conservation Committee
Bonnet Carre Rod and Gun Club

BONNET CARRE ROD AND GUN CLUB
ENVIRONMENTAL CONSERVATION COMMITTEE

I am Francis J. Braud, Chairman of the Environmental Conservation Committee of the Bonnet Carre Rod and Gun Club. I appear here today in response to your notice of January 22, 1975 regarding this public hearing. I wish to state that our organization is not opposed to hurricane protection projects where it is necessary to protect people and property especially in already developed areas subject to flooding from storms or hurricanes, however, we are opposed to future development of low lands or reclamation of wetlands which could destroy renewable natural resources.

Our organization is opposed to the construction of the so called hurricane protection levee in St. Charles Parish, due to the conclusions reached in the U.S. Corps of Engineers environmental impact statement, that St. Charles Parish project could be classified as a land enhancement project.

This project has been considered for some 18 years and ever since survey investigations were initiated there have been an increasing public awareness of environmental considerations in the discussions relating to public policy. Also since the Environmental Protection Agency Act was created, questions can be raised concerning studies that have been made by the U.S. Corps of Engineers that this project will have an adverse effect on the renewable natural resources of the area in question.

Opposition to construction of this portion of Lake Pontchartrain, Louisiana and vicinity hurricane protection project have been expressed to the U.S. Corps of Engineers in written communications from the following conservation organizations:

1. The Louisiana Wildlife Federation Inc. statement by Richard W. Bryan
2. New Orleans Sierra Club, statement by Donald M. Bradburn
3. Orleans Audubon Society, statement by Barry Kohl
4. St. Charles Environmental Council, statement by J. Arthur Smith

EXHIBIT 20-2

5. St. Tammany Parish Environmental Council, statement by Kenneth Sollberger
6. Department of Marine Sciences, L.S.U. statement by Arthur Crowe

All of these organizations have studied the recommendations and proposals of the Louisiana Advisory Commission on coastal and marine resources and have concluded that such projects in the wetland areas must have an environmental impact statement that the project will not have an adverse effect on the renewable resources such as fish and wildlife - Also, and one that is very important, the project will not create a burden on the citizens of the parish to install and maintain the necessary streets, drainage, sanitary sewage treatment facilities, utilities, etc. as has happened in the Kenner area. It has been emphatically pointed out by experts that the subject wetlands contain 9 to 12 feet of peat. This very poor soil condition is not conducive to land reclamation for economical habitation. In addition a moratorium should be placed on these projects at least until all of the Lake Pontchartrain and vicinity project studies on the Lake Maurepas, Pontchartrain, Catherine and Borgne estuaries, to determine the total environmental impact are completed and considered as a whole.

The Louisiana Citizens Advisory Board on Environmental Quality approved a motion calling for a moratorium on all wetlands projects in the Maurepas, Pontchartrain, St. Catherine and Borgne Lakes until cumulative environmental impact statements are made on all the projects.

We are of the opinion that the U.S. Corps of Engineers have complied with the National Environmental Policy Act, in their decision to stop this portion of the hurricane protection project, after concluding that it is a land enhancement instead of a hurricane protection project.

We are in favor of improved drainage for the communities and their citizens living on higher ground such as south of the Airline Highway in east St. Charles Parish. We suggest that a (6) foot levee be constructed on the north side of the Airline Highway canal paralleling the Airline with a drainage pump at Cross Bayou (Destrehan

Canal). This project, after an engineering study prepared by a consulting firm, was part of a multi-purpose bond issue recently proposed by the St. Charles Parish Police Jury. This type project would be less expensive and would protect our people now living south of the Airline Highway in St. Charles just as well or better than the proposed so called hurricane protection levee.

The high tide experienced, in 1973 in East St. Charles, that created flooding in some areas south of the Airline Highway was due, we believe, to the Mississippi River Gulf outlet allowing more water than usual to enter Lake Pontchartrain through the Seabrook pass during an extended period of southerly winds. It is felt when the proposed dual-purpose lock at Seabrook is completed, it will prevent such high tides in Lake Pontchartrain. In addition the channels that were dredged from Lake Pontchartrain through the wet lands to construct I-410 were never properly closed at the lake. Proper closures would prevent water from high tides entering certain populated areas of East St. Charles parish since this problem did not exist prior to the construction of the highway.

It is encouraging to note at this time that the St. Charles project is in a deferred status and that additional studies would be required to adequately assess the environmental impact to determine if the east St. Charles portion of the project is actually hurricane protection or land enhancement.

Thank you



F A C S I M I L E
DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160

IN REPLY REFER TO
LMNED-MP

23 May 1975

Mr. Francis J. Braud
Bonnet Carre Rod and Gun Club
112 Goodhope Street
Norco, Louisiana 70079

Dear Mr. Braud:

This is in response to your letter of 25 February 1975 concerning the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project.

Several letters and statements concerning the St. Charles portion of the project have been received and will be incorporated into the record of the public meeting on the project held last February. This record will be available to the public for the cost of reproduction, hopefully by the end of this month. You may then obtain a copy of the record and use it as you desire.

The matter of the project features in St. Charles Parish is most complex. As I have stated before, the St. Charles Parish lakefront levee may have more adverse environmental impacts than can be justified by offsetting flood protection benefits. Additional studies are needed to fully evaluate the relationship of the marsh to the surrounding ecosystem, and provide a basis for a decision on whether or not the lakefront levee should be built. A preliminary reanalysis of an Airline Highway (US Highway 61) alignment indicates that further investigation of this alternative is advisable. This investigation, in order to insure that it is comprehensive, must be made in conjunction with the study of the lakefront levee which I previously mentioned. It is premature, at this time, to discuss any benefit or cost figures for an Airline Highway alignment. It is also premature to discuss the actions that might be required to change the St. Charles Parish levee alignment and the funding requirements that might be involved in such a change.

In answer to your question concerning the installation of drainage pumps as part of an Airline Highway levee, the project plan would

F A C S I M I L E

LMNED-MP

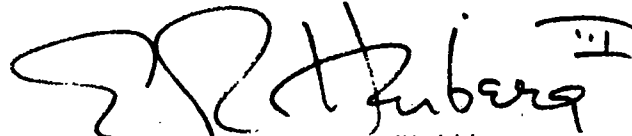
23 May 1975

Mr. Francis J. Braud

incorporate the least expensive facilities that would provide drainage equivalent to that which currently exists. The cost of these least expensive facilities would be incorporated into the project costs. The added cost of providing any drainage facilities of capability in excess of the least expensive facilities must be borne by local interests. This would pertain to the provision of drainage pumps as part of an Airline Highway levee.

I hope this has served to help clarify the hurricane protection situation in St. Charles Parish. If I may be of further assistance, please call on me.

Sincerely yours,

A handwritten signature in black ink, appearing to read "E. R. Nieberg III". The signature is stylized and cursive, with a horizontal line above the "III".

E. R. NIEBERG III
Colonel, CE
District Engineer

TULAGI ENTERPRISES LTD.

February 21, 1975

Department of the Army
New Orleans District
Corp of Engineers
P. O. Box 60267
New Orleans, La. 70160

Gentlemen:

Please record this communication in the records of the February 22, 1975 hearing in reference to the Lake Pontchartrain and Vicinity Hurricane Project.

This concern supported the March 5, 1974 3-mill election, sponsored by the Orleans Levee Board. We feel we have been deceived because the Orleans Levee Board gave us the impression that the BARRIER PLAN would not be implimented, and now it appears that our tax dollars will free other monies to be used for the barriers.

We have an interest in a marine facility in St. Tammany Parish, which would be prevented from ever expanding if a 110 foot lock were built in the Rigolets. Also, the 12.3 foot sill would prevent a future, deeper draft channel from ever being dug.

New Orleans is not particularly exposed to hurricane flooding from Lake Pontchartrain, it having never experienced hurricane flooding since 1715 when it was established. It has, however, been flooded numerous times from the Mississippi River and once from the Industrial Canal (in 1965).

The BARRIER PLAN is injurious because it increases the exposure of flooding from the River, by reducing the effectiveness of the Bonnet Carrie Spillway, and raising the level of the Mississippi River Gulf Outlet and the Industrial Canal because of the additional restriction imposed at Seabrook during a hurricane such as Betsy.

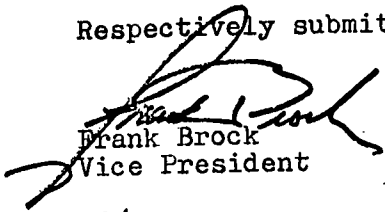
This concern has a vital interest in pleasure boating, and if locks were built at Seabrook and the Rigolets and a flood gate at the Chef Menteur, yachts (particularly sailboats) would find it so difficult to negotiate the locks, that they would locate elsewhere.

The funds projected for the barriers could be better used to:
1) Update the pumping facilities of the Sewerage & Water Board, 2) Relieve the restriction presented by the Southern Railroad Bridge at Seabrook and, 3) Raise low lakefront levees in Orleans and Jefferson Parishes.

TULAGI ENTERPRISES LTD.

We would support a plan whereby the BARRIERS would not be built, and the money used to raise whatever levees were low in Orleans and Jefferson Parishes. Since the people of St. Tammany Parish neither want nor need hurricane protection, that Parish should be removed from the Project. Additionally, the Seabrook restriction should be corrected and the pumping system in Orleans and Jefferson Parishes should be modernized.

Respectively submitted,



Frank Brock
Vice President

FB/ss

February 18, 1975

Col. E. R. Heiberg
District Engineer
Corps of Engineers
P. O. Box 60267
New Orleans, Louisiana 70160

Dear Col. Heiberg:

I read again in the Daily Sentry News about the so-called Hurricane Protection Plan that keeps popping up in the papers.

I am really confused. I don't know if we are living in a democratic country or not. If we are, then why in the name of justice doesn't the U. S. Army Corps of Engineers just go home, or at least do as they are asked to do. I think the people have expressed their opinion on this so-called Must by the Corps, as far as the people are concerned. I would have Col. Heiberg understand that we voted on this issue three times before and we still have it with us. It seems to me that Col. Heiberg is the one that is "not very well informed", or else he chooses to ignore the wishes of the people who voted against this same project before.

We, the people, may be right or wrong in our vote against this project, but the record stands that it was voted down each time. So why not let it be. I think the voters have answered this question enough. I say we need more men like Representative Ed Scogin and Mr. Ron Guth, but most of all, we desperately need men in public office, either elected or appointed, who will listen to and carry out the wishes of the people. I think the stand that the Corps is taking will be well remembered by the people who care. Time will tell, Col. Heiberg.

Very truly yours,

W. J. Brogan
Rt. 4, Box 310
Slidell, Louisiana 70458

ST. CHARLES ENVIRONMENTAL COUNCIL

402 Mantua

Norco, La. 70072

March 1, 1975

Col. F. R. Heiberg III
District Engineer
Corps of Engineers
P.O. Box 60262
New Orleans, La. 70160

Dear Colonel Heiberg,

We would like to take this opportunity to thank you for the presentation on the Lake Pontchartrain Hurricane Protection Project held last Saturday. We found that the meeting was most interesting and very informative. We hope that the Corps, as well as organizations and individuals present, will benefit from the public hearing.

We are interested in getting some pertinent facts about our proposed levee in St. Charles Parish along U.S. 61. In the final environmental impact statement, page V-3 (3) it states that a levee along US 61 lacks economic justification because it reduces the amount of land for development. Has the Corps made any studies on this alternative? We would like to see some cost estimates because only in this way can we compare cost benefit analysis for both locations. How much right of way would be required for a levee along US 61? Would existing state right of way be sufficient where available? We believe the levee along US 61 could begin at Norco, Next to the Shell property and run to the vicinity of Almedia Road. There it could head North for approximately 1/2 mile and then East until it ties in with the existing levee on the Jefferson - St. Charles Parish line. Soils along the East end of our Parish are more suited for development or under development. We would very much appreciate this information and again offer the Corps our willingness to participate in any future meeting on this levee location.

Yours truly,

M.L. Cambre

M.L. Cambre, President

cc: Dave Treen



F A C S I M I L E
DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160

IN REPLY REFER TO
LMNED-MP

11 June 1975

Mr. M. L. Cambre, President
St. Charles Environmental Council
402 Marino
Norco, LA 70079

Dear Mr. Cambre:

This is in response to your letter of 1 March 1975 concerning the Lake Pontchartrain, Louisiana and Vicinity hurricane protection project.

The matter of the project features in St. Charles Parish is most complex. As I have stated before, the St. Charles Parish Lakefront levee may have more adverse environmental impacts than can be justified by offsetting flood protection benefits. Additional studies are needed to fully evaluate the relationship of the marsh to the surrounding ecosystem, and provide a basis for a decision on whether the lakefront levee should be built. A preliminary reanalysis of an Airline Highway (US Highway 61) alignment indicates that further investigation of this alternative is advisable. This investigation, in order to insure that it is comprehensive, must be made in conjunction with the study of the lakefront levee which I previously mentioned. It is premature, at this time, to discuss any benefit or cost figures or right of way requirements for an Airline Highway alignment.

The inclusion of Bayous Trepagnier and LaBranche in the Louisiana Natural and Scenic Rivers System currently precludes any construction work on the St. Charles Parish Lakefront levee. Accordingly, the studies which had been initiated to provide a basis for a decision on whether or not to proceed with the levee were reoriented to provide an essential base of environmental and technical data for use in the overall Lake Pontchartrain, Louisiana and Vicinity project. No further study on either alignment is currently being conducted; however, I would be happy to meet with you or any other interested party to discuss the matter. Incidentally, State Representative Ralph Miller has expressed an interest in such a meeting.

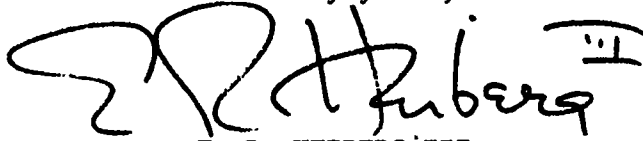
F A C S I M I L E

LMNED-MP
Mr. M. L. Cambre

11 June 1975

I hope this has helped to clarify the hurricane protection situation in St. Charles Parish. If I may be of further assistance, please call on me.

Sincerely yours,

A handwritten signature in black ink, appearing to read "E. R. Heiberg III". The signature is stylized with large, sweeping loops and a distinct "III" at the end.

E. R. HEIBERG III
Colonel, CE
District Engineer

TESTIMONY ADDRESSED TO U.S. ARMY, CORPS OF
ENGINEERS, NEW ORLEANS DISTRICT,
CONCERNING THE LAKE PONTCHARTRAIN AND
VICINITY HURRICANE PROTECTION
PROJECT

BY

ST. CHARLES ENVIRONMENTAL COUNCIL

The St. Charles Environmental Council, a group of almost 200 citizens of the Parish, has long been extremely opposed to the construction of the St. Charles portion of the "Lake Pontchartrain and Vicinity Hurricane Protection" Project as currently proposed. Prior to this public hearing, on many instances, we met with officials of the Corps of Engineers, New Orleans District, to express our concerns and offer our constructive criticisms. Through our counsel, J. Arthur Smith, III of Baton Rouge, Louisiana, we have corresponded extensively with the Corps of Engineers concerning this matter. For purposes of the record of this public hearing, we would like to submit a paper which we had prepared expressing our views as to the importance of the Lakes Maurepas-Pontchartrain-St. Catherine-Borgne estuary (MPCB) and as to the need for proper planning with regard to this estuary.

As this paper indicates, we are very concerned with regard to the entire estuary for we realize its vital importance to the State of Louisiana. We understand that the COE is undertaking with LSU in Baton Rouge to conduct a study of the estuary and submit that a decision on the overall "Lake Pontchartrain and Vicinity Hurricane Protection" Project should be deferred until the conclusion of that study.

Although we are concerned about the overall MPCB Estuary, we are particularly concerned about the wetlands in St. Charles Parish and the

fact that the St. Charles levee project as currently proposed would cause the complete loss of these wetlands.

The levee would cause the loss of the St. Charles wetland because it would, in the short range, be a barrier to the interflow of detritus between the marsh and the lake and as we now know, detritus is the life-blood of the estuary. Contrary to what the Environmental Impact Statement says, this would cause major impacts on fish and wildlife resources.

In the long range, the levee would cause the loss of the wetland because it would hasten the commercial, residential and industrial development of the wetland.

As stated by the Final Environmental Impact Statement, at p. ii,

"The plan will indirectly hasten urbanization and industrialization of valuable marshes and swamps."

As stated by a land developer quoted in The Times-Picayune, April 19, 1974, at p. 23:

"This area (the St. Charles wetland) could be a new Metairie if we could build this levee."

Clearly, this is most contrary to national policy and the public trust as articulated by NEPA, the Coastal Zone Management Act, and regulations of the Corps of Engineers. Parenthetically, we would point out that the problems of secondary development and the impacts thereof have not been properly treated in the Environmental Impact Statement which the COE has prepared on the overall project.

Moreover, these wetlands are not suitable for development because of their soils. The soils are largely peatbog and after there is construction on these soils, the ground deteriorates to a point where it literally disappears from driveways and sidewalks. In addition, the tax burden on the citizens greatly increases when roads, drainage and other

utilities are constructed on this type of terrain. Moreover, the currently proposed levee project would have adverse flood protection benefits because it would eliminate the St. Charles wetland as a natural storm buffer. It would therefore amount to a foolish expenditure of public funds to embark on a project with such negative consequences.

All in all, we strongly believe that the costs of the St. Charles levee project would substantially outweigh any benefits, and therefore the construction of the levee project is not in the public interest, nor in the interest of the future of our community in St. Charles Parish.

In a letter to our attorney, former District Engineer Col. Richard

L. Hunt stated:

"In my review of the total project, I have concluded that the St. Charles levee portion appears to possibly have more adverse environmental impacts than can be reasonably justified by offsetting flood protection benefits."

We would note that this statement becomes even stronger when one considers that in the Environmental Impact Statement, the Corps of Engineers did not even consider environmental costs. Therefore, we would amend Col. Hunt's statement to say that the project would "definitely" have more adverse environmental impacts than can be reasonably justified by offsetting flood protection benefits."

We therefore urge that the Corps of Engineers completely abandon the St. Charles portion of the overall project as presently proposed. We urge the Corps of Engineers to exercise their responsibility to take this project as presently proposed off the drawing-books and we urge the Corps of Engineers to do this regardless of the status of Bayous LaBranche and Trepagnier as scenic rivers.

In urging the abandonment of this project, we would like to make it very clear that we are not opposed to flood protection. Indeed, there is a

a vital need for flood protection. However, we submit that the dual goals of flood protection and wetlands protection can be met by a constructive alternative which we offer. And that alternative is construction of the levee along U.S. 61. This would save our wetland and provide flood protection benefits at the same time. Moreover, a levee at this location could be built partly on the highway right-of-way already available, would be built on soils which are better suited to support a levee and would not have to be built as high since the land slopes away from the river to the lake, thus saving on construction costs. In addition, maintenance costs would be decreased since the levee at this location would not be subject to the erosion process that occurs on the shores of Lake Pontchartrain.

In conclusion, we would like to say that the people of St. Charles Parish are overwhelmingly opposed to the St. Charles levee project, as currently proposed. (See the attached newspaper article) We stand ready to fight this project with all the strength we can muster -- including litigation. However, we hope and trust that this will not be necessary, for we believe that the Corps of Engineers will recognize its commitment to the public good and abandon the St. Charles levee project as currently proposed.

MILTON CAMBRE
President
St. Charles Environmental Council

THE LAKE MAUREPAS, PONTCHARTRAIN, CATHERINE, BORGNE ESTUARY
AND THE NECESSITY FOR CUMULATIVE ENVIRONMENTAL
IMPACT STATEMENTS

The Lake Maurepas, Pontchartrain, Catherine, Borgne (MPCB) estuary is a single living functioning mechanism -- a unit. Every part of the estuary unit is linked to every other part and actions or effects of actions in one part are transmitted throughout the system. Primarily for this reason, comprehensive regional planning and cumulative environmental impact statements which stress the unitary nature of the MPCB system are essential.

An estuary such as the MPCB unit has several recognizable components. The first of these are the fresh water basins and lakes which lie upstream of the estuary. These lakes are essential to the estuary because they provide a reservoir for fresh water and ensure a constant supply to mix with the salt water which is entering the estuary from below. The upstream portion of the estuaries are also important because they provide many of the nutrients which come from the drainage basin to the fresh water streams feeding the estuary. The vegetation and wildlife in this part of the estuary are necessarily those which have adapted to fresh water conditions. Lake Maurepas and its feeder streams provide the fresh water input for the MPCB estuary.

Just downstream of the fresh water lakes or basins are the brackish lakes which provide much of the habitat responsible for the high productivity of the estuaries. Fresh water from the upstream portion mixes with salt water from the Gulf in these lakes and bays and provides the slightly saline conditions which are

necessary for the survival of many important commercial and sport species. It is in these lakes and bays that the brackish water zones are created where shrimp and many species of fish spend part or all of their life cycles. The vegetation and wildlife in these areas are those which have adapted to brackish water conditions. Lakes Pontchartrain, Catherine, and Borgne represent various degrees of salinity, with Lake Pontchartrain being the fresher of the three, in the MPCB estuary.

Downstream of the brackish estuarine lakes lie the Barrier islands and beyond the saline environment of the Gulf or ocean. The Barrier islands are well named; they provide protection to the soft marshy lands of the estuary from wave action. Without these barrier islands erosion would proceed at a much faster rate and the estuary would soon waste away. Barrier islands also limit water exchange so that salt water intrusion does not make the entire estuary saline. The saline environment of the open gulf is necessary for reproduction and for other stages in many species life cycles. It is here that they reproduce and lay their eggs. The eggs are then swept into the estuary by wind or wave action. The Chandelier islands in the Breton Bird Refuge are the barrier islands for the MPCB estuary.

An additional feature of the MPCB estuary which contributes to its inter-related and unitary nature is the detrital based food chain. "Much of the primary organic matter (detritus) by which consumers of the community are nourished apparently originated outside the lake. Enormous quantities of such material enter in the form of humus from wave dissected marshes and as plankton from adjacent

fresh and salt water passes. Within the lake this material undergoes bacterial decomposition and as detritus it is apparently ingested in quantity by most of the important species of invertebrates and fishes which inhabit the lake. In fact, those fishes and invertebrates in which organic detritus makes up a large percentage of the diet are among the most successful species inhabiting the lake." (Darnell, American Midland Naturalist, Vol. 68, No. 2, p. 434).

Other indicators of the importance of the swamps and marshes fringing the lakes in providing the detritus which is the most essential link in the food chain are zooplankton activity and the edge effect. Darnell (1961) found that zooplankton (microscopic food organisms) activity was highest near marshy shores and passes where the restricted flow concentrated detritus. "The zooplankton volume studies suggest that detritus from the passes, bottoms, and marshy shores is an important factor in support of zooplankton populations." (Darnell, Ecology, (1961), Vol. 42, No. 3, pp. 553-68).

The "edge effect" pertains to the fact that many species heavily preyed upon, such as blue crab, prefer the shallow flats and marshy creeks which are near the "edge" of the lakes. These shallow edge areas apparently provide relatively large amounts of food for fish higher in the food chain. Darnell noted that "if the marginal (edge) weeds had been more extensive (as they apparently were in the historical past before man began filling in the shallow areas of the south shore and attempting to stabilize the lake margins), the invertebrate and fish populations inhabiting the lake, no doubt, would have been quantitatively

different with a relative numerical increase in species which are frequently or consistently nourished by marginal vegetation or its inhabitants." (Darnell, 1961, op. cit.)

The above passage clearly illustrates that altering one portion of the estuary can change the ecology of the entire estuary. Elimination of specific habitats results in the extinction of certain species and the emergence of others.

Thus it is apparent that all components of the estuary work together to form a highly productive but easily disturbed ecosystem. The loss of any portion of the estuary may destroy the productivity of the entire estuary.

At the present time there is no recognition of this unitary or interrelated nature of the MPCB estuary. Projects instituted by the Army Corps of Engineers, local levee boards, or private interests treat each project, and thus each section of the system, as a separate entity. There is no recognition that each section of the system must function properly of the estuary is to remain viable.

It is entirely conceivable that one or more projects in the estuary could be acceptable; however, when all projects are viewed together the perspective is different. The cumulative effect of all these projects could have a very detrimental effect on the estuary while the single effect of any one project may not be overly detrimental. An example of the cumulative (and related) impact is well illustrated by the "development syndrome." A public agency proposes to build a flood protection levee across a section of marsh to "protect" the marsh from floodwaters. In anticipation of the levee, local interests through Public Improvement Districts, initiate plans to dredge and fill parts of the marsh which is going to be "protected." Concurrently a third agency plans to build a highway

through the marsh with interchanges provided so that access to the marsh is ensured. Each of the three agencies, federal, local and state work independently of each other in the preparation of studies, impact statements, hearings, etc. as if the other proposed projects do not exist! The net result is an impact on the ecosystem which is much greater than the sum of the three projects and which will synergistically lead to "development" (and destruction) of the marsh.

It is extremely difficult to see how the MPCB estuary can continue to function if all projects presently planned in the estuary are completed. In view of the unitary nature of the estuary and of the projects being planned for the area we strongly urge that a regional study or cumulative environmental impact statement for the entire MPCB estuary be undertaken by the agencies involved, before any of the projects currently planned are constructed. This study should be coordinated between the construction agencies which are planning the various projects in the MPCB estuary (eg. the Corps of Engineers, Port of New Orleans, Jefferson Parish Police Jury, St. Charles Parish Police Jury, Regional Airport Commission, Louisiana Highway Department, Atomic Energy Commission). Funding should be provided by various sources including the Environmental Protection Agency, the Council of Environmental Quality, the Corps of Engineers and other construction agencies, and possibly private interests. It is of utmost importance that meaningful mechanisms for citizen overview and supervision of this study be developed.

Moreover, it is essential that this study be meshed with efforts toward developing a state-level coastal zone management plan. Until the State of

Louisiana develops a strong mechanism with the technical capability to continually review basin wide impacts, there will be intense pressures for development in areas which are not intrinsically suitable for development.

LEGAL ARGUMENT

Section 102 (C) of the National Environmental Policy Act, 42 U.S.C. §4332 (1969) requires a detailed environmental impact statement for every major federal action "significantly affecting the environment." This environmental impact statement must consider in detail a number of parameters, including:

"the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity." (C)(iv)

Thus, the NEPA lays a foundation for cumulative impact statements by requiring appropriate emphasis on "long-term productivity" of environmental systems.

The NEPA also provides that the Council on Environmental Quality shall administer the Act. In carrying out its responsibilities, the CEQ has promulgated Guidelines for the production of environmental impact statements. These Guidelines clearly require cumulative environmental impact statements in situations such as planning for the development of the MPCB estuary. Section 5 (b) provides:

"The statutory clause 'major Federal actions significantly affecting the quality of the human environment' is to be construed by agencies with a view to the overall, cumulative impact of the action proposed (and of further actions contemplated). Such actions may be localized in their impact, but if there is potential that the environment may be significantly affected, the statement is to be prepared.... In considering what constitutes major action significantly affecting the environment, agencies should bear in mind that the effect of many Federal decisions about a project or complex of projects can be individually limited but cumulatively considerable. This can occur when one or more agencies over a period of years puts into a project individually minor but collectively major resources, when one decision involving a limited amount of money is a precedent for action in much larger cases or represents a decision in principle about a future major course of action, or when several Government agencies individually make decisions about partial aspects of a major action. The lead agency should prepare an environmental statement if it is reasonable to anticipate a cumulatively significant impact on the environment from Federal action."

Further, Section 6(a)(v) provides that environmental impact statements are to cover:

"The relationship between local short-term uses of man's environment and the maintenance of long-term productivity. This in essence requires the agency to assess the action for cumulative and long-term effects from the perspective that each generation is trustee of the environment for succeeding generations."

There has been a vast amount of litigation which has resulted in numerous judicial interpretations of NEPA and the CEQ Guidelines. However, perhaps the most pertinent and current case is NRDF v. Morton, 337 F. Supp. 165 (D.C.D.C. 1972) affirmed 458 F. 2d 827 (1972). In this case, the Interior Department was enjoined from leasing approximately 380,000 acres of submerged lands off the Louisiana coast for oil and gas exploration pending the completion of a thorough environmental impact statement. In so holding, the Court of Appeals

made the following statement which very clearly requires cumulative environmental impact statements:

"What NEPA infused into the decision-making process in 1969 was a directive to environmental impact statements that was meant to implement the Congressional objectives of Government coordination, a comprehensive approach to environmental management, and a determination to face problems of pollution 'while they are still of manageable proportions and while alternative solutions are still available' rather than persist in environmental decision-making wherein 'policy is established by default and inaction' and environmental decisions 'continue to be made in small but steady increments' that perpetuate the mistakes of the past without being dealt with until 'they reach crisis proportions.' "

Opponents Overwhelm Revival of Levee Plans

AWA 10

East St. Charles Meeting Held at New Sarpy

residential and industrial development.

By J. DOUGLAS MURPHY
NEW SARPY, La. — St. Charles Parish environmentalists Thursday night over- whelmed a meeting here de- signed to revive plans for a levee along Lake Pontchartrain to protect the parish.

"It is foolah to think the New Orleans area is going to stop growing at the Jefferson-St. Charles line and then jump to LaPlace," one developer said. "This area could be a new Metairie if we could build this levee," he said.

The meeting held at the New Sarpy Elementary School, had been called by the East St. Charles Improvement Association to organize citizens in support of a proposed levee along the lakelakefront. However, few persons in support of that levee showed up at that meeting.

Instead members of the St. Charles Environmental Council and the Bonnet Carre Rod and Gun Club arrived to voice their adamant opposition to the levee plan.

The opponents said the levee should be built to the north of Airline Highway and parallel to it, rather than along the lake- front.

Such a levee, the opponents said, would leave the land be- tween the highway and the wet- lands estuary which they say is a home for wildlife, including some endangered species.

COMPLAIN OF COST

The opponents also com- plained about the rising estimat- ed cost of the proposed Pontch- artrain levee.

Miltons Cambre, president of the St. Charles Environmental Council, said the proposed cost of the lakefront levee has been "skyrocketing every year."

Cambre said the estimat- ed cost now is \$24 million, but he felt the cost would probably go up to as high as \$50 million.

"The people of St. Charles Parish will live to pay 20 per cent of that cost," Cambre said, "and we can't afford it."

GIVES WARNING

George Oubre, who chaired the meeting, told opponents the meeting originally was set up only for proponents of the Pontchartrain levee. He warned the area is in desperate need of a levee for hurricane flood pro- tection, especially in light of re- cent floods in southern Missis- sippi.

Oubre said, "I feel as though a levee is necessary immediate- ly. We are gambling with lives in our parish, and certainly with our property."

Oubre later told opponents of the lakefront levee he would support plans for any levee which protects the people of the parish. However, he said, the only one in the works at this time for the parish is the lake- front levee.

Many opponents at the meet- ing claimed the lakefront levee would only benefit land devel- opers who already own property in the wetland area between Airline highway and the lake.

Land developers at the meeting told The Times-Picayune they hope the lakefront levee can be built and the land drained for

\$850,0

DETR judge t court s firms v 600 to a burned body

Unaware of Any Probe by FBI—

By I SLIDELL termed by account as "ging device" court clerk have been s police stat Chief of

LAKE VISTA PROPERTY OWNERS ASS'N., Inc.

NEW ORLEANS, LOUISIANA 70124

22 FEBRUARY 1975

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COLONEL E. R. HEIBERG III, CE, USA

DISTRICT ENGINEER

(TO BE DELIVERED BY HAND IN ROOM 203,
UNIVERSITY CENTER, UNIVERSITY OF NEW ORLEANS)

TREASURER'S OFFICE
34 Killdeer Street
282-2412

DEAR COLONEL HEIBERG;

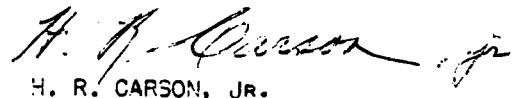
THE LAKE VISTA PROPERTY OWNERS ASSOCIATION, REPRESENTING APPROXIMATELY EIGHT HUNDRED FAMILIES LIVING IN THE LAKE VISTA SUBDIVISION OF NEW ORLEANS, NATURALLY FAVORS HURRICANE PROTECTION. BUT, HAVING BEEN EXPOSED ONLY TO THE ORLEANS LEVEE BOARD PRESENTATION OF THE "LAKE PONTCHARTRAIN AND VICINITY HURRICANE PROTECTION PROJECT," WE WISH TO HEAR CONTRARY OPINIONS BEFORE GIVING OUR ENDORSEMENT TO A PARTICULAR PLAN.

AT OUR LAST BOARD MEETING, HELD ON 29 JANUARY 1975, WE NOTED FIVE OBJECTIONS WHICH WE WOULD LIKE RESOLVED.

- (1) THE EXCESSIVE AMOUNT OF TIME FOR COMPLETION OF THE PROJECT; JUST WHEN IS THAT DATE PROJECTED TO BE?
- (2) THE INDEFINITE FINAL COST.
- (3) EXPECTED CHANGES IN THE LAKE'S SALINITY AND CURRENTS.
- (4) DOES THE PRESENT DESIGN OF THE LOCKS MAKE SUFFICIENT ALLOWANCE FOR FUTURE NEEDS, SAY 25 YEARS HENCE?
- (5) WHAT SPECIFIC CHANGES AND IMPROVEMENTS HAVE BEEN MADE IN THE PROJECT THAT HAS BEEN REPEATEDLY REJECTED BY VOTERS?

WE ARE IN ACCORD WITH RECENT EDITORIALS IN THE TIMES-PICAYUNE AND STATES-ITEM THAT THE PRESENT MEETING SHOULD BE UTILIZED TO EXPLORE FULLY THE MANY ASPECTS OF THIS VITAL PROJECT.

SINCERELY YOURS,


H. R. CARSON, JR.



F A C S I M I L E
DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT CORPS OF ENGINEERS
P. O. BOX 80267
NEW ORLEANS, LOUISIANA 70160

IN REPLY REFER TO
LMNED-MP

21 April 1975

Mr. H. R. Carson, Jr.
Lake Vista Property Owners
Association, Inc.
69 Flamingo Street
New Orleans, LA 70124

Dear Mr. Carson:

This is in response to your letter of 22 February 1975 in which you requested certain information concerning the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project.

Total completion of the project is scheduled for 1991. However, the barrier complexes at The Rigolets, Chef Menteur Pass, and Seabrook will be completed about 10 years earlier (1981) and at that time the project will provide a high degree of protection. See attached map and illustrations (inclosure 1). The final 10 years will be required to bring all of the project levees to the final grade.

The total cost of this project as of July 1974 is \$327 million. Unfortunately, I cannot fix at this time the final cost of the project. In the past costs have increased because of price escalation and design changes. We are attempting to design and implement the most economical project when all factors are considered; e.g., costs, benefits, and environmental matters. I assure you that I am doing and will continue to do all that I can to keep the cost of this project as low as possible. This includes cost-conscious design, commensurate with adequate study features before the construction costs rise even further. It should be noted that local property owners through their levee boards and police juries are paying for only about 30 percent of the project, while taxpayers throughout the rest of the country are helping to protect them against hurricane disasters by paying for about 70 percent of the project.

F A C S I M I L E

LMNED-MP

21 April 1975

Mr. H. R. Carson, Jr.

The other point to remember is that the benefit-cost ratio of the project as of July 1974 is 12.6 to 1. That is, the benefits to be derived from the protection of the area from the ravages of hurricanes would amount to 12.6 times the cost of the project. As the cost of the project has risen since authorization, so have the benefits. This pattern can be expected to continue and the project will continue to be a good investment.

Lake Pontchartrain has already undergone a considerable change in its salinity level due to the effects of the Mississippi River-Gulf Outlet (MR-GO). Another effect of the MR-GO has been an adverse increase in the currents in the Inner Harbor Navigation Canal (IHNC). Two of the purposes of the Seabrook complex, in addition to hurricane protection, are to regulate the salinity level of Lake Pontchartrain and to control the high currents in the IHNC. For this reason, the complex will consist of a lock to be utilized when adverse currents would be hazardous to navigation and a control structure to regulate the flow through the structure. This control structure will be operated in cooperation with the Louisiana Wild Life and Fisheries Commission (LWL&FC) to control salinity. We have at present an extensive monitoring system of 27 well dispersed stations related to water quality in Lake Pontchartrain. Salinity records are being kept and are available to LWL&FC for further study. These records, combined with those of the Commission, will afford the LWL&FC enough input whereby the Commission can advise the Corps of Engineers how to operate the structure to provide salinity control. The structures which are eventually constructed to comprise the Chef Menteur and Rigolets complexes will be hydraulically equivalent to the natural passes and will have an insignificant change on the lake even if a change in the present design is required. We can anticipate no significant change in the currents in the lake.

It is important that the dimensions of all of the navigation structures of the project adequately accommodate present and future requirements for marine craft. In order to assure their adequacy, the US Army Corps of Engineers performed navigation studies assessing the anticipated uses of the structures with respect to the Gulf Intracoastal Waterway system, local shipbuilding and marine related concerns, controlling depths of adjacent waterways, and with the existing clearances of bridges and appurtenant facilities. The studies were thoroughly coordinated with local shipbuilding interests. The data compiled resulted in substantial increases in the original dimensions of the Chef Menteur navigation structure and the Rigolets lock. The dimensions now planned are considered to be consistent with all present and future navigation needs of the area throughout the life of the structures, which is considerably in excess of 25 years.

F A C S I M I L E

LMNED-MP

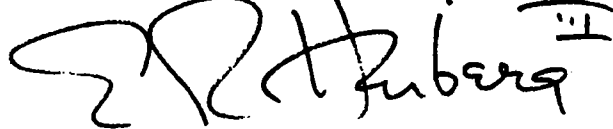
21 April 1975

Mr. H. R. Carson, Jr.

This project and all of its features are specifically authorized by Congress to include levee grades, structure sizes and locations, etc. Certain minor modifications are within the discretionary authority of the Chief of Engineers; however, major changes require congressional action. No changes have been made specifically as a result of any or all of the tax issues voted on by the residents of Orleans Parish and the State of Louisiana. These tax issues were for increased tax millage to support the local interest share of the funding of the project. The failure of these tax issues does not necessarily indicate popular rejection of the project. It may indicate a lack of popular support or it may reflect only the desire of the voter not to impose an added tax upon himself in some economically difficult times. In any event, the tax matter is a state and not a Federal concern. The ballot issues were not issues addressed to the features of the project, and the voting result should not affect the features of the project.

I hope that the above discussion has served to answer your questions. If I may be of any further service, please call on me.

Sincerely yours,

A handwritten signature in black ink, appearing to read "E. R. Heiberg III". The signature is stylized and cursive, with a small "III" written above the end of the name.

E. R. HEIBERG III
Colonel, CE
District Engineer

1 Incl
As stated

610 West Church Street
Hammond, Louisiana 70401
March 8, 1975

Col. E.R. Heiberg III, District Engineer
Foot of Prytania Street
U.S. Army Corps Engineer District Office
New Orleans, Louisiana 70130

Dear Col. Heiberg:

I am a landowner on the north shore of Lake Ponchartrain and thus a taxpayer. After over 50 years experience with the lake, we consider the odds of a hurricane (Project description) very slight.

The cost of the Hurricane Protection Project was enormous at the start, has increased yearly and will be much more than stated. The value of the project is unproven and purely theoretical. No other part of the world is so protected. ALL other areas surrounding New Orleans will be HARMED even if the project did work.

All persons with whom I have talked view this as blatant pork barrel. Vast undeveloped marshland is included inside the levees, and these swamp areas would be destroyed forever by development and commercialization further compounding the problems of pollution and other attendant ills of over-development.

My family members who VOTE in Louisiana are violently opposed and are writing their representatives (?) in Washington, also. I must soon return to South Carolina, but will be kept informed on this project which has already been voted down three times by the concerned and involved citizens.

Yours very truly,

Elizabeth W. Chalk
Elizabeth W. Chalk (Mrs. A. F.)

cc to:

President Gerald Ford
Senator Hollings, Chairman Subcommittee Nat. Oceanic & Geog.
Senator Thurmond, Armed Services Committee
Representative Floyd Spence, House Armed Ser. Com.

ST. BERNARD PARISH PLANNING COMMISSION

ST. BERNARD COURTHOUSE ANNEX

CHALMETTE, LA. 70043

ANTHONY FERNANDEZ, CHAIRMAN ↔ JOSEPH M. MERAUX, VICE-CHAIRMAN ↔ HARRY M. FISHER ↔ HAROLD W. LAGARDE, SR. ↔ TED TEDESCO


February 21, 1975

Colonel E. R. Heiberg, C. E.
U. S. Army Corps of Engineers
LMNED-MP
P. O. Box 60267
New Orleans, Louisiana 70160

Dear Colonel Heiberg:

St. Bernard Parish has diligently carried out its portion of the Chalmette Area Plan. The St. Bernard Parish Police Jury, therefore, supports and urges the expeditious completion of the total Chalmette Area Plan. Specifically, we urge a resolution of the right-of-way problem with certain levee segments within Orleans Parish. The protracted delay in resolving this problem has effectively left the Chalmette area without adequate levee protection in spite of the millions of dollars already spent for such protection within the jurisdictional limits of St. Bernard Parish.

Yours truly,



ANGELO CHETTA
DIRECTOR-SECRETARY

AC/sl

SCOTT CHOTIN INC.

4414 ONE HILL SQUARE • NEW ORLEANS, LA. 70139 • (504) 581-4371

March 20, 1975

Corps of Engineers
New Orleans
P.O. Box 60267
New Orleans, Louisiana 70160

Gentlemen:

Request this letter be made a part of the February 22, hearing regarding the daming of Lake Ponchartrain.

As an enthusiast of commercial waterborne commerce and pleasure boating, I wish to protest the imposition of locks (which are in my opinion too small) will discourage and/or inhibit navigation.

In as much as the hurricane protection aspects are obsolete at this time and unnecessary and since the lake does not threaten the city, I can see no advantage in destroying a viable waterway.

Sincerely,

SCOTT CHOTIN, INC.



Scott Chotin, President

SC:ap

February 22, 1975.

U. S. Army Corps of Engineers
New Orleans, Louisiana

Gentlemen:

Until the U. S. Army Corps of Engineers can modify the present hurricane protection plan to provide equal assurance of safety to the residents of St. Tammany parish, I strongly oppose the implementation of the existing Lake Pontchartrain and Vicinity Hurricane Protection Plan.

Sincerely,

William A. Coleman

216 LEGENDRE DR
(address)
SLIDE 11, LA. 70458

DEAR COLONEL HEIDERG,

I WISH TO MAKE KNOWN MY OBJECTIONS TO THE HURRICANE PROTECTION PLAN FOR LAKE PONCH-ARTRAINAS PRESENTLY CONSTITUTED. THIS PLAN APPEARS TO BE BADLY DESIGNED FROM AN ENVIRONMENTAL POINT OF VIEW AND INTENDED MORE TO ENCOURAGE UNWISE DEVELOPMENT OF THE AREA IN QUESTION. IT ALSO APPEARS THAT THE PLAN MAY ACTUALLY INCREASE THE DANGER OF FLOODING TO SOME POPULATED AREAS BY CHAN-ELLING TIDAL SURGE THROUGH THE MARGO RATHER THAN ALLOWING ITS DISSIPATION OVER LARGE AREAS OF WETLANDS.

I SPECIFICALLY OPPOSE THE BARRIERS FOR THE LAKE PASSES AND THE LEVEEING OF UNDEVELOPED MARSH AREAS. THE PLAN IS ALREADY OUTDATED IN TERMS OF PRESENT TECHNOLOGY AND UNDERSTANDING OF ^{THE} ESTUARINE ENVIRONMENT AND IS IN SERIOUS NEED OF REVISION IN ORDER TO

TO GIVE THESE FACTORS DUE CONSIDERATION AND ALSO TO ALLOW GREATER PLANNING INPUT FROM THE GENERAL PUBLIC RATHER THAN FROM DEVELOPMENT INTERESTS AND THEIR POLITICAL LACKEYS.

ADDITIONALLY MANY CHANGES HAVE TAKEN PLACE IN THE NATIONAL ECONOMIC SITUATION SINCE THE PLAN WAS FORMULATED. THE ENERGY SHORTAGE AND GROWING ECONOMIC DEPRESSION ~~DO NOT~~ DO NOT FAVOR THE TYPE OF DEVELOPMENT THAT RESULTS IN INCREASED URBAN SPRAWL.

I HOPE THAT IN THE FUTURE THE CORPS WILL DEVOTE MORE OF ITS ENERGIES TO ENHANCING RATHER THAN DESTROYING THE NATURAL ENVIRONMENT, AND TO ENCOURAGING DEVELOPMENT PATTERNS THAT ARE HARMONIOUS WITH THE ENVIRONMENT RATHER THAN HARMFUL TO IT.

SINCERELY
William J. Collins
CC TO REP LINDY BOGGS

February 19, 1975

STATEMENT BY C. EARL COLOMB, CHAIRMAN - HURRICANE PROTECTION,
FLOOD & DRAINAGE SPECIAL MEMBERSHIP COMMITTEE
ST. BERNARD COUNCIL, CHAMBER OF COMMERCE

MR. CHAIRMAN, MY NAME IS C. EARL COLOMB. I AM A RESIDENT OF CHALMETTE, ST. BERNARD PARISH, LA. I HAVE BEEN A REALTOR AND BUILDER IN THE METROPOLITAN AREA OF THE CITY OF NEW ORLEANS FOR THE PAST 45 YEARS, DURING WHICH TIME I HAVE BEEN ACTIVELY ENGAGED IN THE CIVIC AND BUSINESS LIFE OF THIS COMMUNITY.

SINCE 1947 I HAVE BEEN ACTIVELY ENGAGED IN LEVEE AND HURRICANE PROTECTION ACTIVITIES, HAVING SERVED ON THE BOARD OF THE CHALMETTE BACK LEVEE DISTRICT, AND FOR 25 YEARS SERVED AS CHAIRMAN OF VARIOUS ORGANIZATIONS IN ST. BERNARD PARISH ENGAGED IN LEVEE AND HURRICANE PROTECTION.

I AM ONE OF THOSE VOLUNTEERS WHO HAS WORKED UP TO MY WAIST IN MUD TO GET OUR PARISH OUT OF WATER AFTER THE 1947 HURRICANE. I WOULD LIKE, AT THIS TIME, TO PROPERLY ACKNOWLEDGE WITH GRATEFUL APPRECIATION THE GREAT ASSISTANCE GIVEN TO US AT THAT TIME AND IN 1965 BY THE NEW ORLEANS DISTRICT CORPS OF ENGINEERS. LIKEWISE, I WANT TO ACKNOWLEDGE WITH APPRECIATION THE COURTESIES EXTENDED ME IN THE PAST AND HAVE A KEEN APPRECIATION OF YOUR GENERAL INTEREST AND OF YOUR HONEST DESIRE TO SERVE THE BEST INTERESTS OF ALL CONCERNED IN THIS MATTER.

AT THE VERY OUTSET, I WANT TO SAY THAT OUR COMMITTEE, LIKE DR. ROBERT H. SIMPSON, THE RENOWNED HURRICANE EXPERT, ENDORSES THE THEORY OF BARRIER CONTROLLED STRUCTURES TO HOLD THE TIDES AT A LOW LEVEL DURING THE PERIODS IMMEDIATELY BEFORE A HURRICANE.

WE NOTED, WITH GREAT INTEREST, THE STATEMENT OF DR. SIMPSON TO THE EFFECT THAT HE COULD NOT SPEAK OF THE QUESTION OF THE LOCATIONS OR THE DESIGNS OF THE STRUCTURES PROPOSED IN THIS PLAN, BUT WE AGREE WITH DR. SIMPSON WHEN HE SAYS, IF BY THE USE OF CONTROLLED STRUCTURES IF THE TIDES ARE HELD DOWN 6', THEN IT IS ONLY NATURAL TO ASSUME THAT AT THE TIME OF THE HURRICANE SURGE, THE WAVES WILL BE 6' LESS IN HEIGHT, AND IT IS FOR THIS VERY LOGICAL REASON THAT WE MUST OPPOSE THE PROPOSED STRUCTURE IN THIS PROJECT TO BE BUILT AT THE INDUSTRIAL CANAL AND LAKE PONTCHARTRAIN.

AND NOW, MR. CHAIRMAN, AS A LAYMAN WITHOUT ANY TECHNICAL KNOWLEDGE, I WOULD LIKE TO GO TO MY MAP AND DEMONSTRATE THE REASONS FOR OUR OPPOSITION.

ALTHOUGH WE TALK OF HURRICANES AND DESIGNS FOR PROTECTION AGAINST THEM IN THE 200 YEAR CYCLE, WE MUST REMEMBER WE HAD HURRICANES IN 1947, 1956, 1965, AND THE WORST OF THEM ALL, CAMILLE, IN 1969 - FOUR IN 25 YEARS - FOUR IN 25 YEARS.

NOW, I WILL GO TO MY MAP AND SHOW YOU OUR BASIC OBJECTIVES.

(ORAL PRESENTATION, WHICH SHOULD BE IN THE RECORD OF THE ENGINEERS' TRANSCRIPT)

AND IT IS FOR THE REASONS STATED EARLIER, PRIMARILY THE ENGINEERS' RECENT DECISION TO LOCATE THE LOCKS IN ST. BERNARD PARISH BETWEEN THE MISSISSIPPI RIVER AND THE M.R.G.O., AND SHOWN TO YOU ON MY MAP, THAT I ASK RECONSIDERATION OF A REVISED PLAN LOCATING PROPER BARRIERS IN THE ^{G. F. Wick} ~~INNER HARBOR NAVIGATION CANAL~~ AND THE MISSISSIPPI RIVER GULF OUTLET,

AS PROPOSED IN THE ALTERNATE PLAN KNOWN AS THE SHAW PLAN, COPIES OF WHICH ARE A PART OF THE ENVIRONMENTAL IMPACT STATEMENT, OR OTHER LOCATIONS IN THE TWO CHANNELS ABOVE REFERRED TO.

THANK YOU, MR. CHAIRMAN, FOR YOUR COURTESIES AND TIME.

C. EARL COLOMB, CHAIRMAN

CEC:mc

PETITION OF PROTEST

We, the undersigned residents and registered voters of the Parish of St. Tammany, Louisiana, hereby register and proclaim our disapproval of the installation of locks in the waterways of the Chef Menteur Pass, the Ripoleta and the Seabrook Bridge, as proposed by the Final Environmental Statement of the Lake Pontchartrain and Vicinity Hurricane Protection plan formulated by the U.S. Army Engineers District, New Orleans, La. dated August, 1974, said study being authorized by Public Law 89-298, Approved 27 Oct. 1965.

B. O. Perry
 Jefferson Parrish
 Fred Johnson
 Guadalupe Lopez
 John E. Braddock
 Nell Braddock
 E. D. Hurlin
 E. P. Hurlin
 Helma Bell
 Thymie Champagne
 Ralph B. Lee
 Alan Hoffman
 Velma Mellinger
 Ed. Mellinger
 J. Edwards
 Margie Kieffer
 W. W. Burke
 Betty L. Burnett
 Betty Wilcox
 W. Henry Wilcox
 J. Ruff / acc'd 40 my wife
 Newell L. Prosch
 Harold R. Kitchin
 Donald Anglin
 E. H. ...
 Gerald Beaujean
 Joseph ...
 ...
 Frank ...
 Rayford M. Mitchell
 ...
 Henry M. ...

John Barber
Wm. Griffin
B. Smith
Joyce Meyer
E. J. Smith
E. J. Smith
A. J. Munn
Tom Sawyer
Russell Workner
Joseph & Lacoste de
Manuel M. J. de
James J. de
Dan Sawyer
John B. de
Ralph C. de
S. de
Ed. de
Emma de
Alton de
C. J. de
Sam D. de
Albert de
Victor de
Julius de
Harry de
J. de
Ed. de
Norman de
Donald de

Arthur J. Chatterling
Richard Birney
Bro Winstanley

Statement on the Lake Pontchartrain Hurricane Protection Project

Gentlemen:

My name is Arthur Crowe. I am speaking today as a resident of South Louisiana. I have a masters degree in marine science from LSU * and my interest lies in the ecology of the coastal zone of Louisiana.

^{PRESENT} I am going to speak in general terms. There was insufficient time to gather hard, cold facts. Lake Pontchartrain does not rank high in productivity of commercial fisheries when you compare it with other areas of our coast like Terrebone or Barataria Bay. However, it ranks close to the top in sports fisheries due to its nearness to New Orleans. Many of the sports fishes would be directly effected by a loss of habitat and a loss of nutrient supply directly attributed to the construction of levees.

We have the ability to make this lake what we want of it. Through the regulation of the Bonne Carre spillway we can make it a fresh water lake or a brackish one. Therefore, we can regulate or channel the productivity into which ever area is considered most important or most efficient. Let's not fool ourselves, the construction of levees will drop the productivity no matter what we decide to do with the lake.

Even worse is the fact, in my opinion, that the system is insufficient against a very large hurricane and would have the effect of luring a large part of the population into a sense of false security. We only have to remember Camile and speculate what could have happened if it had rolled in on New Orleans and eaten out the levees around a population who thought themselves safe behind hurricane protection levees.

* My statement, however, does not reflect the opinions of the university.

EXHIBIT 33-1

The federal government should not get into subsidizing flood insurance and must not encourage growth within a flood plain. Instead of making the swamps and marshes more suitable for development, let the government subsidize the growth of New Orleans to the north shore of the lake where ground is higher and firmer. Let the new area be linked with high speed water transportation. Lets have government money where it will create jobs and make homes safe, not destroy valuable marsh and give people a false sense of security.

Thank you for giving me the opportunity to express my opinions here today.

RESOLUTION

WHEREAS, three times in recent years an amendment seeking taxing authority to erect a dam in Lake Pontchartrain as a means of hurricane protection, has been presented to the voters of Louisiana, and

WHEREAS, the voters of Louisiana have judicially defeated the amendment each time, and

WHEREAS, this Municipal Body has repeatedly gone on record opposing any proposal which would dam up Lake Pontchartrain and thus restrict shipping from the lake into the gulf, and

WHEREAS, engineering studies have not revealed that such an obstruction would be a deterrent to hurricane damage, and

WHEREAS, conversely, not only would such an obstruction fail to give protection to any area, it would render the north side of the lake extremely vulnerable to flooding, and

WHEREAS, ecological damage to the lake and environment from such a project is highly evidenced,

NOW, THEREFORE, the Mayor and City Council of Slidell, again, vigorously oppose any proposal to erect a dam (or dams) in Lake Pontchartrain.

Introduced and adopted December 12, 1972.

Attest:

John Swenson
John Swenson, City Clerk

Frank N. Cusimano
Frank N. Cusimano, Mayor

R E S O L U T I O N

WHEREAS, the citizens of Slidell, and the surrounding area, have in the past decades suffered physical and economical losses due to the devastation of hurricanes, and

WHEREAS, it is the dual duty of the United States Corps of Engineers to plan, design, install and maintain facilities for the convenience and protection of the general public, also protecting the environment for our descendents, and

WHEREAS, the present design proposed by the Corps of Engineers for hurricane protection in Lake Pontchartrain will obstruct the tide flow, thereby upsetting the ecology of the Lake, adding further to its existing pollution problem, and destroying it as a major recreation facility, and

WHEREAS, the design of the proposed locks will not only be detrimental to the present shipbuilding industries, a major economical factor in the area, but would abolish forever any plans for the Lake's future development as a port facility, and

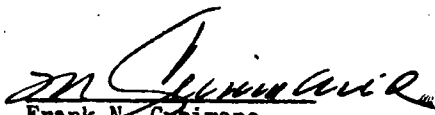
WHEREAS, the present design is not adequate for the protection of the City of Slidell, leaving it vulnerable to flood waters from the northeast, and

WHEREAS, the proposed reduction of the width of the Lake's outlet will add immeasurably to an already dangerous flooding condition due to the regression of water to the Gulf through the existing outlet, and


WHEREAS, locking of the Lake will hinder its enjoyment as a recreational facility by the sportsmen of the area, as well as boating enthusiasts,

NOW, THEREFORE, BE IT RESOLVED, that the Mayor and City Council go on record as not opposing hurricane protection for its citizens, but do vigorously and emphatically oppose the present design plans of the United States Corps of Engineers for hurricane protection in Lake Pontchartrain, and request that they give further study to the detrimental effects of their present plan, and either redesign a new plan which would furnish protection to our area or switch the their alternate plan of high levees.

INTRODUCED AND ADOPTED this 12th day of September, 1972.


Frank N. Casimano
Mayor

Attest:


John Swenson
City Clerk

RESOLUTION

WHEREAS, the citizens of St. Tammany Parish, have in the past decades suffered physical and economical losses due to the devastation of hurricanes, and

WHEREAS, it is the dual duty of the United States Corps of Engineers to plan, design, install and maintain facilities for the convenience and protection of the general public, also protecting the environment for our descendants, and

WHEREAS, the present design proposed by the Corps for hurricane protection in Lake Pontchartrain will obstruct the tide flow, thereby upsetting the ecology of the Lake, adding further to its existing pollution problem, and destroying it as a major recreation facility, and

WHEREAS, the design of the proposed locks will not only be detrimental to the present shipbuilding industries, a major economical factor in the area, but would abolish forever any plans for the Lake's future development as a port facility, and

WHEREAS, the present levee design is not adequate for the protection of the City of Slidell, leaving it vulnerable to flood waters from the Northeast, and

WHEREAS, the proposed reduction of the width of the Lake's outlet will add immeasurably to an already dangerous flooding condition due to the regression of water to the Gulf through the existing outlet, and

WHEREAS, locking of the Lake will hinder its enjoyment as a recreational facility by the sportsmen of the area, as well as boating enthusiasts,

NOW THEREFORE, BE IT RESOLVED, that the St. Tammany Municipal Association go on record as not opposing hurricane protection, but do vigorously and emphatically oppose the present design plans of the United States Corps of Engineers for hurricane protection in Lake Pontchartrain, and request the Corps to give further study to the detrimental effects of their present plan, and redesign a new plan which would furnish protection to our area.

INTRODUCED AND ADOPTED this 10th day of November, 1974.

Dr. C. J. ...
Slidell President
1974

RESOLUTION

WHEREAS, the citizens of Slidell, and the surrounding area, have in the past decades suffered physical and economical losses due to the devastation of hurricanes, and

WHEREAS, it is the dual duty of the United States Corps of Engineers to plan, design, install and maintain facilities for the convenience and protection of the general public, also protecting the environment for our descendants, and

WHEREAS, the present design proposed by the Corps for hurricane protection in Lake Pontchartrain will obstruct the tide flow, thereby upsetting the ecology of the Lake, adding further to its existing pollution problem, and destroying it as a major recreation facility, and

WHEREAS, the design of the proposed locks will not only be detrimental to the present shipbuilding industries, a major economical factor in the area, but would abolish forever any plans for the Lake's future development as a port facility, and

WHEREAS, the present levee design is not adequate for the protection of the City of Slidell, leaving it vulnerable to flood waters from the Northeast, and

WHEREAS, the proposed reduction of the width of the Lake's outlet will add immeasurably to an already dangerous flooding condition due to the regression of water to the Gulf through the existing outlet, and

WHEREAS, locking of the Lake will hinder its enjoyment as a recreational facility by the sportsmen of the area, as well as boating enthusiasts,

NOW THEREFORE, BE IT RESOLVED, that the Mayor and City Council go on record as not opposing hurricane protection for its citizens, but do vigorously and emphatically oppose the present design plans of the United States Corps of Engineers for hurricane protection in Lake Pontchartrain, and request the Corps to give further study to the detrimental effects of their present plan, and redesign a new plan which would furnish protection to our area.

INTRODUCED AND ADOPTED this 9th day of November, 1971.



Orleans Audubon Society

A CHAPTER OF THE NATIONAL AUDUBON SOCIETY

AUDUBON SOCIETY STATEMENT
HEARING ON LAKE FONTCHARTRAIN, LOUISIANA
AND VICINITY HURRICANE PROTECTION PROJECT
February 22, 1975

My name is Cliff Danby. I live in New Orleans, and I am here today to speak for the nearly one thousand members of the Orleans Audubon Society.

The Orleans Audubon Society wants it clearly understood that we favor hurricane protection for areas presently populated.

On the other hand, we completely oppose hurricane protection for unoccupied marshes and swamps. This Corps project proposes to levee or fill in more than 50,000 acres of undeveloped swamps and marshes, excluding the 25,000 acres in St. Charles Parish. To do so would be economically unsound, ecologically disastrous, and a monetary windfall to owners of the land. Furthermore, the Corps can easily avoid placing levees around marshes and swamps while still protecting populated areas.

Let's examine the economics of the Corps plans. Placing levees around swamps and marshes will lead to drainage and urban development of the lands. These lands are essential to fisheries, aquaculture, waste assimilation, and total life support values. Do you know what an acre of marshland is worth in terms of these values? From \$2,000 to \$83,000 an acre per year. Applying the lowest value of \$2,000 to the 50,000 plus acres of marshes to be lost immediately to this project, we get \$102 million annually. This is the environmental value that would be a loss to us and, therefore, a cost to the project.

If we incorporate the \$102 million into the Corps' cost-benefit analysis, the heavily favorable ratio of 12.6 to 1.0 drops to 1.4 to 1.0, a ratio that is barely favorable. A value of \$3,000 per acre causes the cost-benefit ratio to be unfavorable. No wonder the Corps did not quantify environmental costs for their cost-benefit determination!

Should we allow these valuable marshes to be destroyed when they can return so much to us -- economically and environmentally? We think not.

The Corps could exclude these marshes and swamps from their plans. To do so would require placement of levees adjacent to populated areas and not adjacent to the shorelines of Lakes Fontchartrain and Borgne. The Corps maintains that this would cost three times as much as the barrier plan. Even if it did, the cost-benefit ratio would still be a favorable one of 4.0 to 1.0.

Placing levees around marshes and swamps will increase the value of privately owned land. The Corps estimates this land enhancement value to be about \$5.7 million annually. Guess who is paying for this added value to private landowners? You guessed it. The good old taxpayer.

Why didn't the Corps favor the alternative of protecting populated areas only? We can only conclude that the Corps favors enrichment of a few landowners at the expense of us taxpayers.

Marshes have another very important value. They absorb, slow down, and dissipate hurricane tidal surges. This ability reduces or prevents flood damages to inland areas. This cushioning effect will be lost if levees are placed along shorelines. This can be economically significant for those who live in marshland that has been developed right up to the water's edge. A hurricane like Betsy of 1965 will create tides that will go right over the levees designed for this project.

There will be severe environmental damage from this project. Valuable, productive wetlands will be lost. Development around the perimeters of Lakes Maurepas, Fontchartrain, Catherine, and Borgne will be induced. This will cause eventual collapse and death of the MFCB estuary. Tidal flows through the Chef and Rigolets Passes will be obstructed by the barriers hindering flushing actions by the tides. This could make Lake Pontchartrain a 640 square mile cesspool. We strongly oppose the Chef and Rigolets barriers.

The Seabrook Complex is supposed to control salinity levels in Lake Pontchartrain. How is this going to be possible when the Corps doesn't even know what the proper salinity level should be, or how it can be maintained and effectively monitored?

A previous Corps project, the Mississippi River-Gulf Outlet, caused the present salinity problem. The MR-GO was also responsible for the flooding in St. Bernard Parish and in eastern New Orleans during Hurricane Betsy. With the Corps' proclivity to create more problems than it solves, we are very skeptical of the "benefits" attributed to this project.

In March 1974, the voters of Orleans Parish voted a three mill increase in property taxes to construct and maintain levees, levee drainage, flood protection, and all other purposes thereto. Orleans Levee Board officials said the money would not be used for the Chef-Rigolets barriers. Now we learn that they propose to use the money for just that purpose. Taxpayers had voted down such use of tax monies three times previous to the March 1974 election.

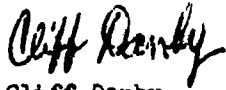
Use of the three mill tax monies for the barriers is not strictly illegal in the eyes of the law. Put in the eyes of us taxpayers it is, and we've been had again. I hope the good old taxpayer remembers who his friends are at election time.

In case anyone doubts that a charade is being played here today, we wish to point out that certain portions of this project have been completed or are underway even though the final impact statement has not been approved by the President's Council on Environmental Quality. For example, the by-pass channel at Chef Pass has been dredged, the control structures are in place at Bayous Bienvenue and Dupre, levee construction is underway, and dredging in New Orleans East is now in progress. The good old public is being duped again.

Concerning disposal of dredged material, we oppose disposal and ponding of dredged material in the marshes along the Chef and Rigolets Passes, along the MR-GO, and in New Orleans East. The material should be used for construction purposes, to fill borrow areas, or disposed of at approved offshore locations. Also, we object to the proposed borrow area on Apple Pie Ridge along U.S. Highway 90. These disposal and borrow plans by the Corps will destroy valuable marshland that Louisiana cannot afford to lose.

In summary, we feel this project can benefit the people of this area without being harmful to the environment. To do so, however, will require modification of the project to have a high levee system built around populated areas only, and to eliminate the barrier plan.

Thank you.



Cliff Danby
Chairman, Conservation Committee

JEFFERSON PARISH

LOUISIANA

387-8811

COUNCIL

CHARLES J. EAGAN, JR. CHAIRMAN
HAROLD L. MOLAISON, VICE CHAIRMAN
BEAUREGARD H. MILLER, JR.
ALLEN W. DUFRENE
LAWRENCE W. HEASLIP, JR.
GEORGE J. ACKEL
ANTON PILNEY

P.O. BOX 9
GRETN, LOUISIANA 70053

April 7, 1975

CLERK
FRANK J. DEEMER

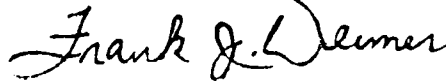
District Engineer
U.S. Army Corp of Engineers
Orleans Levee Board
418 Royal Street
New Orleans, La. 70130

Dear Sir:

Enclosed herewith is a certified copy of Resolution No. 25401 adopted by the Jefferson Parish Council on Thursday, April 3, 1975, which resolution is self-explanatory.

Sesquicentennially yours,

Jefferson Parish Council



Frank J. Deemer, Parish Clerk

FJD:gg
Encl.



On Joint Motion of all Councilmen present, the following resolution was offered:

RESOLUTION NO. 25401

WHEREAS, hurricanes are a frequent occurrence in this part of Louisiana, and

WHEREAS, Jefferson Parish is bounded by bodies of water on several sides and this water is subject to severe tidal surges, and

WHEREAS, all of the protection afforded our area from these tidal surges has been man made and are not sufficient protection, and

WHEREAS, Jefferson Parish and its residents have suffered damages in the past due to high water caused by hurricanes and tidal surges, and

WHEREAS, the federal government, through the U. S. Army Corps of Engineers has developed the Lake Pontchartrain and Vicinity Hurricane Protection Project as a means of affording our area more and better protection,

NOW, THEREFORE, BE IT RESOLVED that the Jefferson Parish Council adopts this resolution supporting the Lake Pontchartrain and Vicinity Hurricane Protection Project as developed by the U. S. Army Corps of Engineers.

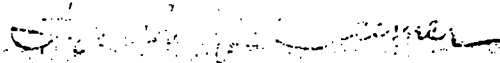
BE IT FURTHER RESOLVED that a copy of this resolution be forwarded to the District Engineer of the U. S. Army Corps of Engineers within ten days to become part of the record on this project.

The foregoing resolution having been submitted to a vote, the vote thereon was as follows:

YEAS: 4 NAYS: None ABSENT: (3) Heaslip, Miller & Ackel

The resolution was declared to be adopted this the 3rd day of April, 1975.

THIS DOCUMENT CONTAINS NEITHER RECOMMENDATIONS NOR
CONCLUSIONS OF THE NATIONAL ARCHIVES AND RECORDS SERVICE.



FRANK J. REGISTER, PARISH CLERK
JEFFERSON PARISH COUNCIL

TO BE FILED IN THE PRINTED PUBLIC
RECORD

COMMITTEE FOR PREVENTION OF DEATH AND DESTRUCTION
IN ST. TAMMANY PARISH

March 18, 1975

Col. E. R. Heiberg
U. S. Army Corps of Engineers
Foot of Prytania Street
New Orleans, Louisiana

Dear Sir:

Enclosed is a petition signed by responsible citizens from this area, petitioning the Corps of Engineers to cease construction of the proposed dams at the Rigolets, Chef and Seabrook Passes. THREE TIMES the people of this State have voted down this proposal, and still the Corps is trying to push it through in the face of almost unanimous opposition throughout the affected area.

In the history of this Nation, the site on which the City of New Orleans lies, has never been inundated by waters from Lake Pontchartrain, nor is it with the present levee barrier system in effect, ever likely to flood from Lake Pontchartrain.

However, St. Tammany Parish, which has suffered only minimal effects from Hurricanes through the years will, after the imposition of the barriers be totally exposed for the first time to disastrous flooding. We believe, Col Heiberg, that with the overwhelming evidence the Corps has been confronted with from outstanding engineers, that you are indeed aware that the entire project, but particularly the barriers, is now and has always been, a special interest, land enhancement, pork barrel project.

When there is a hurricane it is always accompanied with very heavy rain fall. The Lakes, Bayous and Streams are running over in St. Tammany Parish. The natural fall of the land is towards the Lake and Marsh area. With the Barriers closed at the Rigolets, there is no escape for this water. This will cause untold death and destruction in St. Tammany Parish.

We believe that at last there is a Colonel in charge of the New Orleans District Corps of Engineers, who will heed the great amount of opposing documentation, as well as the wishes of the hundreds of thousands of people, who have three times rejected this proposal. If indeed, you are a fair and just man, we believe there is only one decision that you can possibly make.

Please let us hear from you.

Very truly yours,

Mrs Margaret Dendinger

MRS. MARGARET DENDINGER, CHAIRMAN
Route 1, Box 439
Slidell, Louisiana 70458

We the undersigned would like to go on record as being opposed to the Corps of Engineers Mountain Protection Plan for Lake Pontchartrain and Vicinity. We feel the plan can only hurt the Lake and greatly damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME	ADDRESS
Mrs Jerry Saires	Rt 6 Box 34, Hwy 11 Northshore
Jerry Saires	Rt 6, Box 34, Hwy 11 Northshore
Philip Graham	Rt 6, Box 34, Hwy 11 Northshore
Joseph A. Maggo	Rt 6 Box 25 Hwy 11 North Shore
Gary A. Maggo	Rt 6 Box 25 Hwy 11 North Shore
Shirley Maggo	Rt 6, Box 25 Hwy 11 North S.
M. W. Wardel	Rt 6 Box 24 Hwy 11 North S.
W. G. Aldrich	Rt 6 Box 15 Hwy 11 Northshore
Mrs W. A. Cade	Rt. 2 - Box 25 - Pearl River
Susan Cade	

(7)

PLEASE PLACE IN THE PUBLIC RECORD

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartrain and Vicinity. We feel the plan can only hurt the lake and gravely damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME

ADDRESS

Carlyle J. Wood - P.O. Box 356 - Lacombe, Louisiana 70445
 Paulette Rumsing - P.O. Box 591 Lacombe, Louisiana 70445
 Paulette Kloeggel - Rt. 1, Box 272 - Lacombe, La. 70445

- | | |
|---------------------|------------------------|
| 1 - Louise Linder | 21 - Nathan T. Pittman |
| 2 - Mrs. J. H. ... | 22 - L. C. Miller |
| 3 - Stanley C. ... | 23 - ... |
| 4 - Robert ... | 24 - ... |
| 5 - Mrs. ... | 25 - ... |
| 6 - Edwin ... | 26 - Greg Nettles |
| 7 - ... | |
| 8 - Regina ... | |
| 9 - Josephine ... | |
| 10 - Rose ... | |
| 11 - Rhea ... | |
| 12 - Pauline ... | |
| 13 - Elaine ... | |
| 14 - ... | |
| 15 - Mrs. J. C. ... | |
| 16 - Mrs. J. C. ... | |
| 17 - Verla Miller | |
| 18 - Mrs. Allen ... | |
| 19 - Paul C. ... | |
| 20 - Eddie ... | |

PLEASE PLACE ON THE PUBLIC RECORD

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartrain and Vicinity. We feel the plan can only hurt the lake and gravely damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

- James M. [unclear] Slidell La
- Benjamin E. [unclear] 1540 [unclear] St. Slidell La
- Mr & Mrs Robert Beaudry 924 16th St Slidell La
- Howard E. [unclear] [unclear] at [unclear]
- Forrest E. [unclear] St 5 [unclear] 50th
- Charles [unclear] P.O. Box 583 Slidell La
- Mr & Mrs. John [unclear] Rt. 2 Box 137-91 Slidell La
- Walter [unclear] Rt. 3 Box 377 H. I. A.
- Mr & Mrs. [unclear] Rt. 3 Box 307 A Slidell La
- Mr & Mrs. [unclear] Rt. 3 Box 501 V Slidell La
- Frank Hellingworth 1237 Magnolia St, Slidell La
- Oliver J. Keltner Rt. 3 Box 456 Slidell La
- Dorcas Le Fran " " " " " "
- Mr & Mrs J. F. Cariti 110 Howard St Slidell La
- August [unclear] Rt. 2 Box 126-3 Slidell La
- John [unclear] Rt. 2 Box 227 Slidell La
- C. W. [unclear] Rt. 4 Box 1119 Slidell La
- Oliver [unclear]
- John [unclear]
- Abner [unclear]
- Mr & Mrs Henry M. Galloway Rt. 4 Box 35 Slidell La
- Mr & Mrs [unclear] Rt. 3 Box 398 Slidell La
- Benjamin [unclear] Rt. 2 Box 31 Slidell La
- Mr. Peter M. [unclear] Rt. 4 Box 412 Slidell La
- Mr and Mrs [unclear] Rt. 1 Box 321 Slidell La
- James [unclear] Rt. 2 Box 290 P Slidell La
- Mr & Mrs [unclear] Rt. 1 Box 105 Slidell La
- Mr & Mrs C. Clyde [unclear] Rt. 1 Box 307 Slidell La

PLEASE PLACE IN THE PUBLIC RECORD

The undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartrain and Vicinity. We feel the plan can only hurt the Lake and gravely damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME

ADDRESS

1. Christopher Ziegen 212 Maplewood St.
~~3869~~ - 3869 ~~Genève~~ - Sl. Oak, La. Shiloh La.
2. ~~John~~ 384 ORIOLE LANE
3. J. Hoover, Jr. 3519 E. Elizabeth St.
4. Elaine J. Hoover Shiloh, La.
5. Frank O. Merritt 3519 E. Elizabeth St.
Shiloh, La.

PLEASE PLACE IN THE PUBLIC RECORD

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Lloyd Wilcox Rt. 1, Bayou La Batre

Wm. J. Francis

Mr. John Burdick Rt. 3 Box 394 Slidell, La

MR. & MRS. ROBERT PRATTINI Rt. 1 Box 524 SLIDELL, LA

Mr. & Mrs. J. J. Williams Rt. 2 Box 401 Slidell, La

Mr. C. J. Williams 354 Oriole Drive Slidell, La

Mr. & Mrs. Robert L. Hume 241 Front St Slidell La 70458

Joe Corcoran Slidell La

Mr. James James M. Cause Jr. P.O. Box 597

Miss (unintelligible) 620 ... Slidell La

Ken & Thelma Rt 3 Box 492 Slidell La

Burnell LeFevre Rt 2 BOX 37. Slidell La

Mr. Brown 2522 W. M. TOLL ST.

Mr & Mrs Herbert Schmid Rt 4 Box 1888 Slidell La

Jim & Brown & T-Bone Brown 3298 Rama St

Mike Thomas Slidell La

Donald R. Wagon Don. Rt Box 166 Alton Springs, La 70420

Carl ... Slidell La

Chad ... Slidell, La

James ... Slidell, La

Carl ... Slidell, La

Richard ... Rt 1 Box 545A Slidell La 70458

Mr. & Mrs. P. L. ... 215 ... SLIDELL, LA.

Mr. & Mrs. ... Rt 1 Box 19 Slidell, La

Mr. ... Rt 1 Box 333A Slidell La

MR & MRS Jerry A. Knutson SA - 3134 Wm TOLL ST, Slidell, La

Mr & Mrs ... Slidell La

Mrs & Mrs Edward A Strahan 3452 Front St

Mr & Mrs Joe Gickano - 126 Cameron Slidell

Theater ... Slidell

Mr & Mrs ... Slidell La

Mr & Mrs ... Slidell La

Mr & Mrs James B. ... Slidell La

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Since this proposed plan has been defeated at the polls on three separate occasions; we feel the Corps of Engineers should respect the wishes of the voters.

Virginia M. ...

...

Joseph M. ...
Caroline ...

Charles ...

Sarah K. Lynch

Mr. Charles Young Sr.
Mrs Charles Young Sr.
James J. ...

E. Dufour

Q J ...
Mrs Kate G. ...

Mr. & Mrs. Anthony ...

Mrs M. ...

Mrs W. ...

Anthony ...

Edna ...

Susan ...

...

Susan Burch

...

Mrs. ...

...

...

Mrs. J. A. Gettys

Mrs L. ...

Elsie Graf

Margaret ...

Mrs R. E. Stewart

...

Walter C. Balsor Sr.

...

Robert Benson J

Robert ...

Robert ...

...

...

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Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME

ADDRESS

- | | | |
|----|-------------------|--|
| 1 | Ralph E. Stewart | Rt. 4, Box 132 Slidell La |
| 2 | May L. Howard | |
| 3 | Jessie R. deBlanc | El Grande Apt 105
144 Davis Dr. Slidell La. |
| 4 | Arthur Mitchell | Slidell, La. |
| 5 | James Mitchell | Rt 10 Box 335, Pearl River |
| 6 | O Blahy Adams | P.O. Box 913 - Slidell, La. |
| 7 | Joe Bryan | 165 Palm Spring Dr. Slidell, La. |
| 8 | Joe White | 257 Meadow View Dr |
| 9 | Paul Blunier, Jr. | 120 Normandy Dr., Slidell, La. |
| 10 | Gene C. Facione | 3095 Effie Slidell |
| 11 | A. B. James | 162 S. Park Rd. Slidell |
| 12 | Lindsay Smith | 331 Edendale Dr. Slidell |
| 13 | P. Wagner | 437 Country Club Slidell. |
| 14 | Harold Gaudzinski | 3653 Riviera Dr.
Pearl River, La. |
| 15 | Gary Singleton | |
| 16 | Erwin Ober | 236 Palm Spgs Slidell La |
| 17 | C. J. Hodson | 246 New Valley Dr Slidell La |
| 18 | Ed. Johnson | 3639 PONTCHARTRAIN ST. |
| 19 | Christine Morris | Rt 6 Box 386 Slidell, La. |

The plan is to be put on record as being opposed by the Corps of Engineers. The plan is to be put on record as being opposed by the Corps of Engineers. The plan is to be put on record as being opposed by the Corps of Engineers.

Since this proposal has been discussed at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME	ADDRESS
Mrs. Oliver A. Ploeger	Rt. 1 Box 443-R Slidell, La.
Mr. Patricia B. Mc Lee Sr.	Rt 1 Box 363 Slidell La.
Mr. A. A. Mauger	Rt 1 Box 443 R Slidell La. 70447
Robert L. Gardner	1615 Lafayette St N.O. La.
Hal Blaum	Slip 3 - Box 441 Slidell La
Albert F. Jackson Jr	Amoy Park
Erene Vasber	RT. 1 BOX 441-S SLIDELL, LA
Jefferson Vasber	Rt 1 Box 441-S Slidell La
Betty N. Cordy	Rt 1 Box 441-S Slidell La
Jim Foreman	412 Clair Dr Slidell, La.
Alice K. Wingo	2424 Jacob Dr. Chalmette La.
Lo. Rucker	1371 BOX 437 Slidell La
Gary Taylor	1912 First St Slidell, La.
John P. Pitt	Rt 1 Box 440 Slidell, La.
Mary Riche	Rt 2 Box 121 Pearl River, La.
Thomas J. ...	Rt. 2 Box 274 Pearl River, La.
Michael Joseph ...	Rt. 5 Box 454 Slidell, La.
David Jenkins	Rt. 5 Box 454 Slidell, La.
Paul D. ...	R-4 Box 510 Slidell La.
Walter King	Rt 1 - BOX 214 SEA SPRAY DR. SLIDELL, LA
Robert A. ...	Rt. 4 - Box 271, Slidell, Louisiana 643-3137
Paul ...	Rt 5 Box 505 Slidell Louisiana
V. Brock ...	Rt - Box 584 Slidell, La.
Alvin H. ...	2528 Colledge Slidell, La.
Angie ...	Rt 4 Box 336 Slidell La.

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Ponchartrain and vicinity. We feel the plan can only hurt the Lake and gravely damage surrounding rivers and streams.

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Name

Address

- Mrs L. C. Neff, Jr. Rt. 4 - Box 420-M Slidell, La. 70458
- Evelyn Carr 1370 Westwood Dr. Slidell, La. 70458
- ~~1370 Westwood Dr. Slidell, La. 70458~~
- Blanche Mc Grath Rt. 4, Box 268 E Slidell, La. 70458
- Virginia Braddy Rt. 3, Box 338, Slidell, La.
- Helen Dorans 402 Tully Slidell, La.
- Beatrice Clifton 435 Country Club Slidell, La.
- J. J. [unclear] P. O. Box 415 Slidell, La.
- Nina O'Reilly Rt. 2 Box 367 R Slidell, La.
- Kathy Ingram P. O. Box 1055 Slidell, La.
- Lynnda Berbach P. O. Box 795 Slidell, La.
- Pam Lord 805 Murray Beach Rd. Slidell, La.
- Bobby [unclear] 511 West Canal Picayune, Miss.
- Mrs. T. J. Haddrell 701 2nd Ave. Picayune, Miss.
- Danny Drummond Rt. 2, HW 91 Picayune, Miss.
- Bambou [unclear] Rt. 1, Box 451 Slidell, La.

9

The Board for the Flood Control Act on account of being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartraine and Vicinity. We feel the plan can only hurt the lake and severely damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME	ADDRESS
Frank K. Corbett	RT 1 Box 414 Slidell La. 70458
John J. ...	RT 1 Box 414 Slidell La. 70458
John ...	RT 1 Box 414 Slidell La. 70458
Maudie Constance	RT 1 Box 498 Slidell, La. 70458
Clark W. Standi	RT 1 Box 495 B, Slidell, La. 70458
James D. ...	P.O. Box 1355
James ...	
Althea Standi	RT 1 - Box 495 B, Slidell, La. 70458
Ans ...	RT 1 BOX 455 SLIDELL, LA.
Mr. ...	P.O. Box 1355 Slidell, La.
Melba ...	RT 1 Box Slidell La.
Shirley ...	RT 1 Box 490 J Slidell, La.
Willie ...	RT 1 Box 445 Slidell La.
Angela ...	RT 1 Box 467 Slidell La.
Emile ...	211 Shackley Dr. Slidell La.
...	...
Kinda ...	RT 1 Box 4501 Slidell, La.
Abbie ...	304 Sea Spray Dr. Slidell, La.
Mr & Mrs David ...	RT 1 Box 455 H Slidell La.
Mr. Carolyn ...	RT 1 Box 455 A Slidell
Mr. James D. ...	RT 1 Box 300 Slidell La.
DONALD HALL	RT 1 Box 455 J
Kirk ...	James ...
...	...

(11)

R. H. Patey
 Claude W. Egan Jr
 Mrs. Shirley R. Egan
 Mrs. Helen Morgan
 Lellie Morgan
 Carl Brack
 James Lawrence
 Howard R. Taylor
 Mrs. Lee Dow
 Mrs. Louaine Miller
 Vera Herron
 Rose Jassin
 James Dardet
 Constance Hale
 Julius Hale
 Ruth A. Williams
 Judy Brown
 Mrs. Pat Eisenhardt
 Mrs. R. H. Patey
 James P. Patey

402 Heather Mist Dr. Slidell, La.
 Rt. 1 Box 475 Slidell, La.
 102 Shockley Dr. 70458
 412 Arroyo Dr. Slidell, La.
 412 1/2 Arroyo Dr. Slidell, La.
 Rt. 4 Box 147 Slidell, La.
 Rt. 1 Box 497 Slidell, La.
 Rt. 1 - Box 443 Slidell, La.
 Rt. 1 Box 551 A Slidell, La.
 509 Pinetree Dr. Slidell, La.
 Rt. 1 Box 476 Slidell, La.
 Rt. 1 Box 476 A Slidell, La.
 Rt. 1 Box 476 B Slidell, La.
 Rt. 1 Box 455 Y - Slidell, La.
 Rt. 1 Box 455 Z - Slidell, La.
 150 E. Pearl Dr. Slidell, La.
 Rt. 4 Box 153 Slidell, La.
 400 Heather Mist Dr. Slidell
 402 Heather Mist Dr. Slidell, La.
 Rt. 1 Box 455 V Slidell, La.

LETTERS FILED IN THE PUBLIC RECORD

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartrain and Vicinity. We feel the plan can only hurt the lake and gravely damage surrounding rivers and streams.

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NAME

ADDRESS

Judy Smith	Rt 2 Box 49 Pearl River, La.
Mrs W. J. Hickey	519 Richard Dr. Slidell, La.
Mrs. Evana Cokentel	516 Richard Dr. Slidell, La.
Mrs. Irene J. White	Rt 1 Box 377 Slidell La.
John W. Shugart	Rt 1 Box 357 Slidell La.
Louis Massaron	P.O. Box 1355 Slidell, La.
John M. Willems	209 Pine Hazel Slidell La.
M. L. Bendure	215 Pine Hazel Slidell La.
Mrs. M. J. Hickey	215 Penchazel Slidell La.
Bob Massaron	354 Mallard Lane Slidell La.
Regina Pearl	61 Doulton St. Slidell
Arthur T. Vallancourt	208 Penchazel St. Slidell
R. J. Hickey	Rt. Box 610 Slidell La.

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Name	Address
Mr and Mrs Conrad Parsons	741 Florida Ave. Slidell, La.
Mrs Mrs G B Cottman	Rt 2 Box 2017 Slidell La
Mrs Mrs Richard Meyer	Rt Box 830 Slidell La
Mrs Mrs [unclear]	[unclear]
Mr & Mrs Kurt U. Jarmisch	215 Cardinal Slidell, La
Mrs Mrs Arthur D. [unclear]	R.T. 1 Box 877 Farcou, La
Mrs Mrs [unclear]	[unclear]
Mrs Mrs [unclear]	[unclear]
Clifford H. [unclear]	[unclear]
Berry J. [unclear]	[unclear]
[unclear]	[unclear]
Arthur Ligano	Slidell, La
Archie E. [unclear]	Slidell La,
Recombe La	[unclear]
Ed [unclear]	[unclear]
J W Seely	3036 Shell Ave. Slidell, La.
Mr & Mrs Ralph A. [unclear]	787 Third St Slidell, La.
[unclear]	[unclear]
Chris [unclear]	1187 [unclear] Ave.
[unclear]	[unclear]
Mr & Mrs [unclear]	[unclear]
Mrs Mrs Robert [unclear]	Rt 2 Box 264 Slidell La.
[unclear]	Rt 2 Box 201 Slidell La.
Nora B. [unclear]	[unclear]
Rt. 3 Box [unclear]	[unclear]
Slidell, La.	[unclear]

(14)

EMILE B. FARACHON
32 [unclear]

PLEASE PLACE IN THE PUBLIC RECORD

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NAME	ADDRESS	SIGNATURE
Ledwika Taylor	Rt. 1 Box 487-B	Slide
Clifford J. Kennedy	Rt. 1 Box 531-P	Slide
Roland Moray	Rt. 1 Box 521	SLIDE
Frankie Seal	Rt. 1 Box 461	Slide
Ruby S. McKeane	Rt. 1 Box 464	Slide
Felix S. McKeane	Rt. 1 Box 464	Slide
Henry F. Bennett	Rt. 1 Box 467	Slide
Nicholas Sed	"	"
Mr & Mrs J. Wagnersack	Rt 1-211 Cambridge	Slide
Mr & Mrs Vera Morris	P.O. Box 1390	Slide 11A
Mr & Mrs J. Bennett	P.O. Box 645	Slide 1A
Dr. Villars	219 Sheehy St.	Slide, La.
Mr. C. R. Hopton	Rt. 1 Box 474	Slide
Mr. R. S. Kent	131 Morgan St.	Slide, La.
Steve R. Cole Sr.	Rt. 1 Box 479	Slide, La.
Dianna Cole	Rt. 1 Box 479	Slide, La.
Mr. White	Rt. 1 Box 485	Slide, La.
F. K. Jones	1221 Cambridge	Slide, La.
Mr. J. J. Jones	Rt. 1 Box 482	Slide, La.
Michael Black		Slide, La.
Philip G. Guffey		Slide, La.
Olivia Rochelle	Rt. 1, Box 477	Slide, La.
Mr. Alan Strickland	Rt. 4, Box 360	Slide, La.

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NAME

ADDRESS

Yv Alexander	Snug Harbor
Birdie Alexander	Snug Harbor
Louis Hazano - 321 Cousin ST - SLIDELL - LA.	
Jane Turmage 411 N. 7th - Ponchartraine, La.	
John S. Dugan	Manhasset, La.
Chas. J. Meuliet	401 N. 7th St. Ponchartraine, La.
Caroline Turmage	411 N. 7th St. Ponchartraine, La.
Mary Jackson	321 St. New Hampshire Courtyard
Mrs. Frank Brescher & 499 N. 8th St. Ponchartraine, La.	O. M. Arns & 3430 St. Collins Ave N. O. La 70114
Ernie Hagg	Ch. J. Ister 1450 Riverwood St Shidell, La. 70458
W. A. Hagg	P.O. Box 685 Ponchartraine La. 70454
Ed Dubong Metairie La. 70005 1348 POINSETTA DR.	
Chas. J. Kieppel Rt 1 Box 272 Lacombe, La.	Mr. Burton Erminger 3801 Croydon Slidell, La. Pete Miller 6002 Spicewood
Thomas O. Clavin Rt 1 Box 1239 Slidell, LA. 70458	1272 Pine St. Slidell, LA 70458
Donald J. Fortin	
Mrs. Valerie Erminger 3801 Croydon, Slidell, La.	16

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Fortcharlotte and vicinity. We feel this plan will not only hurt the lake and nearby dammed surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME

ADDRESS

Ethel Anselmo

N.O. La.

Sam Brown

11.0. La.

Joe Galuchie

710. La

Jul Anselmo

Metairie La

John C. Romys

1805 Alexander Ave Metairie La 70002

Letter Peralta

Lake Catherine

August Lacroix

Lake Catherine

Roy A. Smith

Slidell

W J Prosperie

Slidell

M R E Bouch

Lake Catherine

Charles J Jaeger

N.O. La

~~E J Freeman~~

11.0. La

N.O. La

J Lombard

70 La.

James Mayer

MO La

Joseph A. Mayer

716 So

J. W. Gray Jr

Jack Farley

Peace J. Frick

B. F. Rich

Pauline Comear

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartrain and Vicinity. We feel the plan can only hurt the lake and gravely damage surrounding rivers and streams.

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NAME	ADDRESS
J. Lewis Conway	N.O. La.
W. H. Conway	N.O. La.
B. J. Rich	N.O. La.
Sherry Hill	N.O. La.
Mrs. Shirley Summing	Slidell, La.
Mrs. Matilda Cochran	Slidell, La.
Joe Prestia	Slidell, La.
Joyce Prestia	" "
Leon Prestia	N.O. La.
John W. Cooke	chef
Estelle Cooke	chef
I. Christians	Metairie
E. Cottrill	Metairie
Pauline Kilgore	N.O.
Jena Mae Prestia	N.O.
John Prestia	N.O.
Thomas Julia	N.O.
Marjorie Vanney	Slidell
Walter A. Bauer	N.O.
Dorothy Jones	N.O.
O. B. Jenright	Lake Charles.

The Board of Engineers would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartrain and vicinity. We feel the plan can only hurt the lake and severely damage surrounding rivers and streams.

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NAME	ADDRESS
John T. Robinson	Rt 6 Box 305 N.A.
Dellaid Guillot	RT 6 Box 215 LA
Michael J. Rasorte	RT-6-Box 212 N.A.
Joseph B. Guillot	RT 6 Box 212 N.A.
Herbert M. Mays	P.O. 405 SLIDELL, LA.
J. S. Thomas	RT 6 Box 189 N.O. LA 70129
Joseph Mann	RT. 6, Box 189 N.O. LA 70129
Gertrude Hession	RT. 6 Box 232-K N.O. La.
Bernard R. Richo	RT 6 Box 205 N.O. La.
Joseph Novak	RT 1 Box 370 D SLIDELL LA
Carl Jones	RT 6 Box 232 K N.O. La
Leo E. Foulon	RT 6, Box 216 N.O. La
B. J. Guillot	RT 6-Box 232-A-N.O. LA-
Walter Miller	RT. 6-Box 159 B N.O. La.
Emily Brauner	RT 6-232 & N.O. La 70129
LOUIS ESTES	RT 6-232 & N.O. La
Eva S. Marques	RT 6 Box 141 N.O. La. 70129
Raoul Rogus	RT 6. BOX 148 G
Don Sander	Ches mentum Hwy. 70126
Roy M. Vinot	RT 6 Box 192 N.O. La. 70129
Louis E. Neal	RT 6 BOX 156 B N.O. La. 70129
Richard Humphreys	2944 B Comellia Dr Slidell
Victor Latta	Rt 6 P.O. 153 N.O. La. 70129

Joyce U. Wilson	Rt. 6, Box 252 W N.O. La.
Peter J. Bantchall Sr.	Rt. 6 - Box - 174 A New O.
Doris Bantchall	Rt. 6 Box 174 New O.
Clayton R. Ricks Sr.	Rt. 6 Box 232 P.M. 70 La.
Juanita Branson	Rt 6 Box 198 70. La.
Bill McCullough	239 Bluebird, Idell

PLEASE PLACE IN THE PUBLIC RECORD

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NAME

ADDRESS

Gilbert L. Gerard	4818 Bundy Rd N.O. La 70127
Mary Lou Gerard	4818 Bundy Rd N.O. La. 70127
Gilbert L. Gerard Jr.	4818 Bundy Rd N.O. La 70127
Diane Gerard	4818 Bundy Rd. N.O. La 70127
Barbara Hawkins	4810 Bundy Rd. N.O. La 70127
R. J. Hawkins	4810 Bundy Rd N.O. La 70127
Francis E. Hunt	606 Tucker Ave. Jeff. Par. 70121
Catherine Hunt	606 Tucker Ave. Jeff. Par. 70121
Howard V. Plaeger	6001 Cameron Blvd. N.O. La. 70122
Mrs. G. Plaeger	6001 Cameron Blvd. N.O. La. 70122
Mrs. Doris Plaeger	6001 Cameron N.O. 70122
Roster Plaeger	6001 Cameron Blvd N.O 70122
W. P. Allen	7900 Palm St No 64
G. Pittman	7900 Palm St No 64
B. F. Plaeger	606 Tucker Ave. Jeff. Par. 70121
Mrs. H. Plaeger	606 Tucker Ave. Jeff. Par. 70121

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NAME

ADDRESS

Name	Address
Malcolm R. Arney	2105 Bayou Lane Slidell La.
W. J. Woodruff	417 COUNTRY CLUB OLIVE - SUDBURY LA
Thomas L. Bradley	8126 Bayou Ave Metairie La
Frank A. Miller	735 Robert Rd. Slidell La
Walter Flynn	411 - Olive Dr. Slidell La.
Mary Flynn	411 Olive Dr Slidell, La
Francis Moore	403. Olive Dr. Slidell, La.
David Moore	411 Olive Dr. Slidell La
Larry Whitbeck	519 Beachwood Slidell La
Ruth Hartman	401 Olive
Mrs. Charles Whitbeck	401 Olive Dr Slidell La
Mr & Mrs Albert H. Lee	418 Olive Dr Slidell La

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Name	Address
<i>Sam Rich</i>	<i>Rt. 2, Box 274 Pearl River, La.</i>
<i>Mark Deering</i>	<i>Rt. 2, Box 228-F-Slidell</i>
<i>Hermand Huff</i>	<i>Rt 4 Box 195 Slidell</i>
<i>Ernest Anthony</i>	<i>Rt. 2 Box 75 Slidell, La.</i>
<i>Wm. Cain</i>	<i>Rt 4 Box 320-C Slidell, La.</i>
<i>Marguerite H. Meales</i>	<i>236 Woodcrest - Slidell, La.</i>
<i>John E. Meales</i>	<i>236 Woodcrest Slidell La.</i>
<i>Edw. Brown</i>	<i>Box 188-A Pearl River La.</i>
<i>Ray J. J.</i>	<i>417 Maine - Slidell, La.</i>
<i>Frank Bennett Beatrice</i>	<i>116 Whitehall Dr.</i>
<i>Thomas Merrill</i>	<i>Rt. 2 Box 181 Slidell, La.</i>
<i>Ricky C. Hall</i>	<i>1579 E. Ridge Dr. Slidell, La.</i>
<i>Jim Bernard</i>	<i>124 So Fish, Waggaman La.</i>
<i>Agnes Allison</i>	<i>1142 ST. Tammany Slidell, La.</i>
<i>Raymond Johnson</i>	<i>1541 Lakewood Dr. Slidell, La.</i>
<i>Robert M. Carter</i>	<i>P.O. Box M Slidell, La.</i>
<i>R. L. Dumas</i>	<i>P.O. Box 174 Slidell, La.</i>
<i>Paul J. ...</i>	<i>213 Cleveland Slidell, La.</i>
<i>Carl ...</i>	<i>3035 - Lake Dr. Slidell, La.</i>
<i>St. ...</i>	<i>1118 ... Slidell, La.</i>

The intelligent world like to go on record as being opposed to the Corps of Engineers' Damages Protection Plan for Lake Donaldson and vicinity. We feel the plan can only hurt the lake and possibly damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

F

NAME	ADDRESS
Otto B. Batten	Box 5 Box 474
Richard T. Houze	Box 306 E. Pearl St. Slidell, La.
Richard T. Houze Jr.	Box 1, Box 461
Justin B. Hill	1172 Camin St Slidell La.
John L. Smith	Rt. 1, Box 638-a
Robert M. Murr	P.O. Box 63 - Slidell, La
James W. Murr	P.O. Box 63 Slidell, La
Howard E. White	1252 9th St
John W. Henton	1059 Belvedere Dr. Slidell, La
Yvonne W. Brent	1440 2nd St. Slidell, La
Leon E. Moore, Jr.	P.O. Box 606 Slidell
Richard D. Murr	P.O. Box 1429 Slidell
Mrs Anita Steiner	680 Dale St., Slidell
Richard D. Murr	Charles Carroll
Richard D. Murr	Ray Livingston
Richard D. Murr	225 Loop Drive, Slidell, La.
V. D. Cantin	139 Dido Dr Slidell, La.
Mrs Sandra Williams	Box 4 Box 406, Slidell, La.
Ralph D. Barron	282 Bluebird Dr. Slidell, La.
Gene B. Landrath	210 Loop Dr. Slidell, La
Richard D. Murr	441 James St. Slidell, La.

We do not believe it would do to go on record as being opposed to the Corps of Engineers in their plans for Lake Pontchartrain and vicinity. We feel the plan can only hurt the Lake and gravely damage surrounding rivers and streams.

Since this proposed plan has been discussed at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME	ADDRESS
Raymond H. Talley	245 Clara St. Slidell, La
Lemuel M. Talley	245 Clara St. Slidell - La
Louise D. White	3702 Arrowhead Dr. Slidell
Cecil J. White	3702 Arrowhead Dr. Slidell
John R. Young	75 CAWTHORN DR SLIDELL, LA.
J. W. Young	P.O. 786 Slidell
Frank Sobel	Route 6. Box 99, Slidell
Wayne A. Roberson	RT 5 Box 117 Slidell
Louise L. Roberson	Route 5 Box 117 Slidell
Mrs. L. Possens	RT 3 Box 353 Slidell
Mrs. Douglas Wacker	PO Box 706 Slidell La -
Mrs. Larry A. Walker	RT 2 Box 312 Slidell
Mrs. Harvey Walther	RT 2 Box 312 Slidell
E. B. Meredith	340 Rhodia St Slidell
Paul R. McLean	3158 Effie St Slidell.
Edith Hoover	Jean Kinner
Barry Beque	Slidell La.
Mark Beque	2859 CAREY ST. SLIDELL LA
Tom Beque	110 Mungy Rd Slidell La
Mrs. Tom Beque	110 Mungy Rd, Slidell, La.
Charles Palao	RT 4 Box 115A Slidell La
Joe Edward Edwards	RT 4 Box 115 Slidell
Ernest Robinson	941 Slidell - Slidell, La
Craig Robinson	Porton Rouge La.
Floyd Robinson	941 Hurling Ave
Jefferson	317 Hurling Ave
Charles J. Pagan	P.O. Box 65 Slidell La
P.C. Gullett	1259 St. Thomas Ave Slidell
Jim Duke	140 Lakewood Slidell

PLEASE PLACE IN THE PUBLIC RECORD

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartrain and Vicinity. We feel the plan can only hurt the lake and gravely damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME	ADDRESS
Frank Anderson	Rt 2 Box 274-F Slidell, La.
Bill Anderson	Rt 2 Box 274-F Slidell, La.
W.R. Wade	121 Du Jon Dr Slidell La.
Michael Sundry	842 Harlow Ave Slidell La.
Floyd Anderson	757 Westway Dr Slidell La.
Herbert P. Buckingham	660 Dale Ct Slidell, La.
Jim Senke	470 Dale Ct Slidell, La.
Robert Woods	110 MATTHEWS DR SLIDELL, LA 70458
Robert S. Hugan	114 Smit Slidell, La. 70458
Bobby McConzelle	118 Lafitte Dr. Slidell La.
Philip Landry	301 Legendre Dr. Slidell, La 70458
Jerry Laiback	Rt 4 Box 127 Slidell, La.
Carlos R. Lynch	107 Du Jon Dr., Slidell, La.
Paul G. Gant	1323 Westway Dr. Slidell, La.
Barbara Lewis	1494 Englewood Slidell, La.
Heather Yeats	215 Mockingbird Slidell, La.

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartrain and Vicinity. We feel the plan can only hurt the Lake and gravely damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

- Alice Cagle - Rt 1 Box 4437 Slidell La
- Kaberta Brady - 418 Olive Dr " "
- Prince E. Brady 416 S " " " "
- George A McEwen Rt 1 Box 386 Slidell La
- Agnes McEwen Rt 1 Box 386 Slidell La
- ~~George A. McEwen - Short cut rd. Slidell La~~
- Jack Montgomery Rt 1 Box 386 Slidell, La
- W. F. Sizer - 2900 river rd Slidell La.
- Steve K. Levee Rt 5 Box 28 Slidell, La.
- Wood D. Leming + 90 Lafitte La
- Harold Jefferson Sr. 112 Medley St. Slidell La.
- Mrs. Wilfred Baillouette 419 Focis St.
- Wilfred Baillouette R 4 19 FOCIST.
- Alfred R. Salzer Jr. 17 Treasure Isle, Slidell
- Gudley E. Parker 1455 Aris Ave, Metairie, La.
- Donald R. Sauer 1536 Eastwood, Slidell La
- Melba Dyer 2512 Verbena St. NOLA
- Bernard [unclear] Route 6 Lake Catherine La.
- Louise M. [unclear] Route 6 Lake Catherine La.
- Thomas A. Stancia - Rt #1 - Box 396. Slidell La.
- Nellie S. Karlgen. Rte 1 - Box 392. Slidell La.
- Harold M. Karlsem Rte 1 Box 392 Slidell La.

continued on opposite side

PLEASE PLACE IN THE PUBLIC RECORD

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartrain and Vicinity. We feel the plan can only hurt the lake and gravely damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME

ADDRESS

- Mary W. Figaro Route 5 Box 125 Slidell La.
- Anthony J. Figaro Route 5 Box 125 Slidell La.
- Mae E. Parkes Route 5 Box 125 Slidell La.
- Mrs G.W. Durning 12 Forest Ave, Metairie La. 70005
- Mr. G.W. Durning 12 Forest Ave, Metairie, La. 70005
- Mr. Francis David Beam Rt 1 Box 450A Slidell, La. 70458
- Jay Bennett 211 Jules Ave Jefferson La. 70121
- George W. Duncan P.O. Box 1167 Slidell La. 70458
- Eliza V. Duncan " " " " " " 70458
- Mr & Mrs Kenneth A. Peters R# 1 Box 443 Slidell, La. 70458
- Shirley (Alexander) R# 1 Box 443 Slidell, La. 70458

Selected by Mrs. Maxine A. McE...

PLEASE PLACE IN THE PUBLIC RECORD

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartrain and Vicinity. We feel the plan can only hurt the Lake and gravely damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

Name

Address

Mr. Robert H. Chadwick Rt. 4 Box 271 Slidell La.
Miss Tracy Allen Chadwick Rt. 4 Box 271 Slidell La.
Robert Charles Thom Rt. 4, Box 285D Slidell, La.

29

EXHIBIT 37-30

2111 St Charles Ave
Apt 705
N O, LA 70130
February 17, 1975

U. S. Army Corps of Engineers
P. O. Box 6026
New Orleans, La. 70160

To Whom It May Concern:

I read an article in the Times stating that a hearing on the Hurricane Protection Plan would be held Saturday, 22 Feb. '75 at U. N. O.

I am not sure that I would be able to attend this hearing; but I am interested in this plan as well as the Achafalaya situation. As far as the Achafalaya area is concerned, I believe it should remain a fishing resource. What I have seen of the Hurricane Protection Plan is an attempt by the news media to frighten the public. The plan for ~~the~~ ^{the} ~~Southshore~~ etc. seems to benefit a few at the expense of many. Of course, I admit my only source of info is the local papers which have not given a great deal of coverage to the Hurricane Protection Plan.

Also, concerning the impending hearing, I am assuming that your organization will be using the same procedures that you have in the past. It is a shame you allow only 5 minutes per person. (I realize there is a time element here.) But the first shot goes to the Corps of Engineers and those who have sympathetic feelings leaning the late hours of the day and even 8:00 - 9:00 and 10:00 PM to "John Doe" interested citizen. The news media is long gone before dissenting views are heard. (This may not occur at all hearings, but it does occur at many). Is this fair? Don't there are more equitable procedures. Thank you for letting me express my thoughts.

Sincerely
(Miss) Joyce M. Rossett

Derricks Inc.

P. O. BOX 1151 / 330 BAYOU LIBERTY RD. / SLIDELL, LOUISIANA 70458

NEW ORLEANS
(504) 522-7115
SLIDELL
(504) 641-2682

February 19, 1975

Department of the Army
Corps of Engineers
P. O. Box 60627
New Orleans, La. 70160

Gentlemen:

It is requested that the following statement be made a part of the hearing to be held in New Orleans on February 22, 1975, in reference to the Lake Pontchartrain and Vicinity Hurricane Project:

This concern is engaged in the fabrication of oilfield derricks and substructures and intends in the future to do platform work. With the present energy shortage these units are vital to the national interest. The history of oil production has shown that these units are becoming larger as technology advances and the need to drill deeper increases. Also, this concern employs over 120 people. Our plant is located on the upstream side of the Bayou Banfouca Bridge at Bayou Liberty Road. A new bridge at this location is to be constructed with 125' horizontal clearance.

A 110' lock in the Rigolets with its 13.2' sill could present a serious limitation to the future expansion plans of this firm.

Respectfully submitted,

DERRICKS, INC.



A. B. Dunham
President

ABD/tw
5 copies

115 Moss Lane
New Orleans, La.
February 20, 1975

E. R. Heiburg III, Colonel, C. E.
District Engineers
P. O. Box 60267
New Orleans, Louisiana

Re: Lake Pontchartrain, La. & Vicinity
Hurricane Protection Project

Dear Colonel Heiberg:

I want to register my opposition to the U. S. Corps of
Engineers' Hurricane Barrier project.

How many more of our marshes and estuaries will have to
give way to "land development and urban expansion" which always seems to
result when the Corps tries to fool Mother Nature?

Frankly, I can't see how the hurricane barrier protection
plan can stop tidal waves of over 25 feet (if the Super Hurricane
predicted by the Corps can top the reported 24.2 feet height of Camille's
tidal waves.

My feeling is that if the Corps tries to control the level
of Lake Pontchartrain, some other area is bound to get the brunt of the
Super Hurricane (presupposing that the plan will work).

I am unalterably opposed to the Corps tampering with any
more of nature's wonders under the aegis of flood control.

Very truly yours,

Margaret M. Duplantier
MARGARET M. DUPLANTIER

ST. TAMMANY
ENVIRONMENTAL
COUNCIL

PO Box 644

Mandeville, Louisiana 70448

FEBRUARY 22, 1975

PRESENTED TO: COL. HEIBERG, III - DISTRICT ENGINEER
U. S. CORP OF ENGINEERS
NEW ORLEANS, LOUISIANA

SUBJECT: LAKE PONTCHARTRAIN, LOUISIANA, AND VICINITY HURRICANE PROTECTION
PROJECT

The ST. TAMMANY ENVIRONMENTAL COUNCIL has studied thoroughly the final Environmental Impact Study of the LAKE PONTCHARTRAIN, LOUISIANA, AND VICINITY HURRICANE PROTECTION PROJECT. We remain adamantly opposed to this project for the following reasons:

1. The majority of voters who must live with this project have, not once, but three times expressed their opposition at the polls. Contrary to the U.S. Corp view, this was a vote against the project - not the source of the revenue. Numerous camouflaged terms are used in dealing with the funding aspect of the Hurricane Project such as "other state sources of revenue", or the ever-popular misnomer "federal funds". All of the terms should be more correctly expressed as taxpayers funds. Should the project come to be, it will be financed by those same voters who opposed it three times at the polls, just as if Col. Heiberg has personally stuck his hand down in these voters pockets.

Secondly, as the final EIS states, this project will destroy many thousands of acres of viable marshland. The four-lake system of Maurepas, Pontchartrain, Catherine, and Borgne - the MPCB Estuarine System - is one of the two most productive estuaries in the United States. The inner workings are extremely complex in nature. At present, this estuarine is under severe attack by some 40 projects, either underway or under consideration - including the LAKE PONTCHARTRAIN, LOUISIANA, AND VICINITY HURRICANE PROTECTION PROJECT.

Noted ecological experts have predicted the collapse of the MPCB estuary should the majority of these projects be completed.

In addition, there has not been a study performed to determine how much marsh acreage loss/ or how many of these projects the MPCB estuary can tolerate before it collapses. When the estuary collapses and we are living around a four-lake cesspool, only then will we know we have gone too far - it will be too late. The U.S. Corp's EIS acknowledges the importance of the marsh it proposes to

destroy with the Hurricane Project. However, it fails to recognize the cumulative effect on the estuary that this project AND the numerous other projects presently underway or proposed may have.

The voters' three oppositions at the polls are saying that they do not want to live around four huge cesspools. If the U.S. Corp allows the MPCB estuary to collapse, there will be a lot smaller population to consider protecting from a hurricane.

3. The EIS acknowledges a certain amount of the project as land enhancement but writes it off because the loss of this marsh is committed to population expansion anyway. Due to the complexity of the MPCB estuary, who is to say that the speeding up of this expansion created by the Hurricane Project, will not be the straw that breaks the camel's back and bring about its' collapse? Until a comprehensive EIS on the entire four-lake system is conducted regarding the numerous projects, we will not know, will we?

4. The EIS appears to build up the "protection" aspect of this project to the population from a hurricane and plays down the possibility of the project working in reverse. It is a recognized fact that a model 100-Year hurricane, such as Camille is going to top the levee system and the benefit of the levee system lies in its retarding the tidal surges effect of the storm. This same levee project is going to retard the run-off of the vast amounts of water that is going to top the levee system, and particularly, through the barriers at the Rigolets, Chef, and Seabrook. In essence, we will have as much water, but it will stay with us for a longer period of time.

5. The barrier and lock system, espically at Seabrook will put an additional strain on the St. Tammany Parish shipbuilding industry. It is almost unknown for a facility to be designed and built which further restricts passage ways

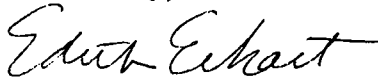
due to widths. This progress in reverse!

6. The question of salinity alterations for the betterment of the four-lake system is also misleading. While the seabrook installation may be able to restrict some of the undesirable saltwater intrusion created by the Mississippi River Gulf Outlet, a U.S. Corp project, the overall salinity problem of the four-lake system is still in question.

In summation, we must all remember that the U.S. Corps of Engineers is in business to build levees and dams with TAXPAYERS DOLLARS. By paying thousands of dollars, taxpayers' dollars, to proponents of the Hurricane Project such as Dr. Simpson, former director of the Hurricane Center, as well as extensive press and news coverage and, in general, presenting this project to the people from behind ROSE COLORED GLASSES; it is the strong feeling and belief of the members of the ST. TAMMANY ENVIRONMENTAL COUNCIL, that it would again be defeated at the polls AND at public forums.

In the definite opinion of ST. TAMMANY ENVIRONMENTAL COUNCIL, the acknowledged and potential adverse environmental and economic impacts of the LAKE PONTCHARTRAIN, LOUISIANA, AND VICINITY HURRICANE PROTECTION PLAN far outweigh the benefits our population may receive in the form of hurricane protection.

Submitted by,



Mrs. Edith Eckart
President



EDWIN EDWARDS
GOVERNOR

State of Louisiana

EXECUTIVE DEPARTMENT

Baton Rouge

March 17, 1975

Colonel Elvin R. Heiberg, III
New Orleans District Engineer
U. S. Army, Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160

Dear Colonel Heiberg:

On February 22, 1975 a public meeting and hearing was held by the U. S. Army, Corps of Engineers and the Louisiana Department of Public Works for the purpose of reviewing the Lake Pontchartrain Hurricane Protection Project and to address specific aspects of the relationship of the project to the Federal Water Pollution Control Act of 1972. Since the budget for construction of the Barrier feature of the project will be in major construction phases next fiscal year, I feel that expression of the State's position is appropriate and necessary.

This project, including the Barrier Plan, has been thoroughly studied and model-tested by the U. S. Army, Corps of Engineers and reviewed by our competent State Department of Public Works engineers and Wild Life and Fisheries Commission personnel. As a result, I believe this project will provide the best protection, at the least cost to local interests, in the shortest possible time, to the vast majority of residents and property in the New Orleans Metropolitan area and the other parishes involved. The results of this study indicate that all the parishes that abut Lake Pontchartrain are affected by the Barrier Plan and will receive benefits once the project is in operation. It is, therefore, imperative that my position be one of assistance in urging and working toward early completion of these facilities.

I further urge acceleration of the program to increase the levee protection afforded the St. Bernard Parish by the Chalmette Loop Levee.

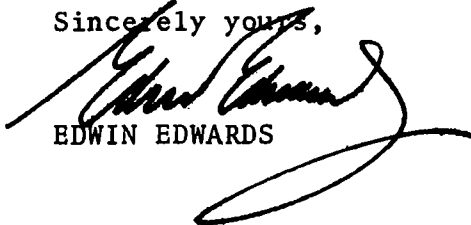
I realize there is concern in some areas about the proposed Barrier Plan; therefore, it is my desire to continue to work

EXHIBIT 42-1

Colonel Elvin R. Heiberg, III
New Orleans District Engineer
U. S. Army, Corps of Engineers
March 17, 1975
Page Two

with you through our appropriate State agencies toward the resolution of certain remaining issues involving local support. I recommend that the U. S. Army, Corps of Engineers continue to work with local governments and environmental interests in an attempt to remove or lessen their objections, particularly those raised with respect to the St. Charles levee, New Orleans East, and the sizing of the water control structures to provide absolute assurance that the environment of Lake Pontchartrain will be unchanged or improved by the project.

Sincerely yours,



EDWIN EDWARDS

Statement of the Baton Rouge Group of the Sierra Club

on the Lake Pontchartrain and Vicinity

Hurricane Protection Project

February 22, 1975

Presented by Marion Fannaly

EXHIBIT 43-1

The Lake Ponchartrain and Vicinity Hurricane Protection Project has the laudable objective of preventing or reducing the destruction caused by hurricanes, and certainly no one can argue that this is not desirable. However, there exist grave doubts as to whether the means of this project can be justified by its end. It is the opinion of many of the scientists and concerned citizens of Louisiana that this ^{project} will cause more harm to the state than the hurricane it is designed to protect against.

We would like to discuss the project in two separate phases, the improvement of existing protection levees around areas of high population and the construction of new levees and other flood control structures. The Baton Rouge Group of the Sierra Club has no objection to the proposed improvement of existing levees in Orleans and Jefferson parishes where they are needed to protect areas of great population density. These areas are highly developed already and improving the existing levees is necessary and will not adversely affect the environment.

However, we do object strongly to the construction of new levees and flood-control structures. The construction of new levees around the eastern marsh areas will insure their eventual development and will increase, rather than diminish, the threat

of flood damage. This statement may at first seem paradoxical, but the remaining areas of marsh on the eastern end of New Orleans provide a valuable buffer zone against the storm surge of a hurricane. If they are leveed and drained, it will be the homes of residents that will absorb the force of a hurricane should the levee fail. Leveeing of these areas will also destroy their value for fisheries production and recreation. The losses, both potential and immediate will far outweigh any gains.

The proposed barrier and lock complexes at the Rigolette and Chef Menteur Pass are a monstrous and irresponsible boondoggle. Their supposed purpose is to prevent a storm surge from raising the level of Lake Pontchartrain and flooding the city. This sounds nice, but there is already more than enough water in the lake to completely flood New Orleans if a levee should break.

Lake Pontchartrain is large enough to produce a surge within it that would dwarf the effect of any water entering through the passes. The barriers will be only expensive placebos. Much more in the way of flood protection would be gained by filling in the Mississippi River Gulf Outlet which provides a direct path from the Gulf for a storm surge. It is doubtful that construction of levees along its banks will be sufficient to protect New Orleans from this possibility.

The biological effects of these barriers on the lake will be enormous. They will certainly interfere with the exchange of waters with Lake Borgne thereby reducing the salinity of the lake. If this effect is severe enough, it would severely restrict the range of many estuarine species in the lake or even eliminate some of them completely. It may also interfere with the migration of many valuable species such as the blue crab, penaeid shrimps, speckled trout, and menhaden which move into the lake seasonally and are dependent upon it for a portion of their life cycle. The potential harm that these barriers may cause to the ecology of the lake is tremendous.

In summary, the Baton Rouge Group of the Sierra Club supports the improvement of existing levees in Orleans and Jefferson parishes. However, we are strongly opposed to the building of new levees which would increase the areas vulnerable to flooding in a storm. We are also adamantly opposed to the construction of barriers across the natural passes of the lake as these barriers will provide little or no protection against hurricanes but will radically alter the ecology of Lakes Fontchartrain and Maurepas.

affiliated with



COVINGTON, LOUISIANA 70433

February 21, 1975

Colonel E. R. Heiberg
New Orleans District Corp of Engineer
P.O. Box 60267
New Orleans, Louisiana 70116.

Dear Colonel Heiberg,

The St. Tammany Sportsman's League has unanimously rejected the Corp of Engineers plan to build flood gates at the Rigolets.

This project will destroy the interplay between the lake and the marshes. This interplay supplies 50% of all nutrients that feeds the flora and fauna in Lake Pontchartrain. The loss of these nutrients will result in the death of the lake.

Any man-made project, such as the size of this hurricane barrier, irregardless of ecological studies, good, bad or indifferent will have a detrimental effect on the Pontchartrain Estuary. This is common sense! Can anyone truthfully say it will have help the estuary? The lake needs all the help it can get and it needs it before we make another Lake Erie out of it.

This project if carried out will certainly change many aspects of our lake and I say leave it alone for generations of people unknown to us. Some bordering parishes want to reclaim portions of the lake, developers are draining marshes, increased dredging continues daily, heck! why don't you just dam it up and let's fill the whole area with solid waste and forget it ever existed. This would solve the problem and also provide a dumping place for solid waste, plus provide new home sites for the ever increasing population.

The project as planned will still not protect residents of Orleans, St. Bernard and Jefferson Parishes from a full-fledged hurricane that passes directly over the city. Hurricane Betsy went completely over the existing levees in lower Plaquemines Parish and then there was a problem getting the water out from between the levees. You are only making a bigger basin out of the city.

Don't do this thing to us.

Sincerely

A handwritten signature in cursive script that reads "Henri F. Ferrer".

Henri (Hank) Ferrer

EXHIBIT 44

February 22, 1975

U. S. Army Corps of Engineers
New Orleans, Louisiana

Gentlemen:

Until the U. S. Army Corps of Engineers can modify the present hurricane protection plan to provide equal assurance of safety to the residents of St. Tammany parish, I strongly oppose the implementation of the existing Lake Pontchartrain and Vicinity Hurricane Protection Plan.

Sincerely,

Beverly Q. Gritz
6802 Pine Lane
(address)
apt 31
n.o., La 70127

Sidell, La.
Feb. 19, 1975

Corps of Engineers
New Orleans, District
P.O. Box 60267 N.O., La.

Sir,

I am writing concerning the Lake Pontchartrain protection barrier. I hardly see how it can be called a protection barrier since it is designed to protect New Orleans only. This is a case of save the rat and drown the cat. This plan has been voted down 3 times. Isn't it about ~~the~~ time you bureaucrats get the message? I enjoy fishing and shrimping in the lake. Since the opening of the Spillway there have been no shrimps and very few crabs & fish. If you go through with this plan it can only ruin the lake & all lakes surrounding it. I suggest you find some worthwhile project to spend the taxpayers money on since this barrier plan is not wanted by a majority of the People. Remember it has been voted down 3 times.

Sincerely

Norman F. Gaines

February 22, 1975

U. S. Army Corps of Engineers
New Orleans, Louisiana

Gentlemen:

Until the U. S. Army Corps of Engineers can modify the present hurricane protection plan to provide equal assurance of safety to the residents of St. Tammany parish, I strongly oppose the implementation of the existing Lake Pontchartrain and Vicinity Hurricane Protection Plan.

Sincerely,

A. L. Doodwin
3522 Meadowdale
(address)
Slidell La. 70458

February 17, 1975

Department of the Army
New Orleans District, Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160

Dear Sirs:

I have read your public notice for the Lake Ponchartrain Hurricane Protection Project. I found it to be procedurally correct and rather thorough for a public notice. Since I will not be able to attend the public hearing, I ask that you read the following comments aloud to the hearing and into the public record and that you provide answers where possible, at the time you read this to the hearing meeting.

It is important that secondary environmental effects be specifically delineated and openly disclosed at this hearing so that an informed decision can be reached by those present.

Your compact phrases on page 6 referring to "corresponding increase in environmental stresses associated with such use" (re St. Charles Parish Levee); "engendering a corresponding increase in these environmental stresses associated with urban development" (re Orleans Parish-New Orleans East); and "Disposal of these wastes will be accompanied by corresponding environmental stresses (re Chalmette area) - are incomplete. The notice does not tell us what these stresses are. It is your duty to fully detail exactly what these environmental stresses are and the extent they will, in fact, harm the environment.

Items that should be considered and discussed (and this list is intended to be merely exemplary and not exhaustive) include:

1. What is the projected population increase resulting from the expected expansion of urban type development engendered by the protection provided by the project? A rough guide should be provided by the benefits estimated in determining the projects benefit/cost ratio.
2. What is the extent of the estimated increase in surface runoff? (due to the increase in hard top surfaces that accompany development.
3. What are the plans for increasing sewage disposal? What type will it be: primary, secondary, tertiary, other? How effective will it be in percentage terms? How much will it cost? Who will pay for it?
4. How many new boats are estimated to result from this projected increased urban type development, i.e., how much more congested will the lake be? What is the projected

EXHIBIT 48-1

increase in pollution from oil and gas? from human waste?
Are there any laws regulating the disposal of wastes
from boats?

These questions are designed to give examples of what secondary effects might affect the environment, specifically the water quality of Lake Ponchartrain. To make the answers to these questions meaningful, they must be translated into the effect they will have on the lake. For example:

1. What are the existent B.O.D. levels in Lake Ponchartrain? What effect will the above-mentioned pollution sources have on the B.O.D. levels? What result will this have on the marine environment?
2. Could any other toxic pollutants be discharged due to this projected increase in urban type development? What environmental effect will these have, if any?
3. What is the projected coliform or other bacteria count? What effect will these have, if any?
4. Will fish die? in any significant numbers? Will recreation be diminished? Will swimming be possible?

Thankyou for your public consideration of these matters.

Yours truly,

Paul G. Gesselink
SMU Environmental Law Clinic



F A C S I M I L E
DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160

IN REPLY REFER TO
LMNED-MP

7 May 1975

Mr. Paul G. Gosselink
SMU Environmental Law Clinic
Southern Methodist University
School of Law
Dallas, Texas 75275

Dear Mr. Gosselink:

This is in reply to your letter of 17 February 1975 in which you questioned some of the aspects of the Summary of Environmental Considerations which appeared in the 22 January 1975 Announcement of Public Meeting for the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project.

That document, as the name implies, is only a summary of the environmental considerations associated with the project as more thoroughly discussed in the final environmental statement, a copy of which is attached. The format of a public announcement does not, unfortunately, lend itself to detailed discussions of any of the aspects of the project. Your letter arrived too late to be read, as you requested, at the public meeting. It will, however, be incorporated into the public record and be considered in the preparation of my statement of findings. I take this opportunity to discuss some of the points you raised.

In evaluating project flood control benefits, two classes of benefits were considered: flood losses prevented and land enhancements. The former category was subdivided into two parts--flood losses prevented on existing development, and flood losses prevented on future development in the absence of the project.

Enhancements were computed for the St. Charles Parish Levee and Chalmette Area portions of the project only, inasmuch as the other areas already enjoyed some measure of flood protection. Enhancement benefits were evaluated on the increased value of the unprotected lands involved, as a

F A C S I M I L E

LMNED-MP

7 May 1975

Mr. Paul G. Gosselink

result of the project, converted to an annual rate of return. Urban growth trends for the metropolitan area were considered as part of the process of deriving the increased land values. To all intents and purposes, future increments of population growth within unprotected areas of the St. Charles Levee and Chalmette areas would be unlikely to occur in the absence of protective works. While the project will doubtless induce some population growth, it is not likely to be a major factor in the growth of total population in the project area, and the benefit/cost ratio, as currently derived, reflects this. A summary of the project costs and benefits is attached.

Plans for increasing sewage disposal are not part of the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project. While some acceleration of population growth in certain areas is likely as a result of the project, the project is not likely to be a major factor insofar as total population growth is concerned. The facilities necessary to serve the increased population must be provided by the political jurisdiction involved. The Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500 requires that all public owned sewage treatment facilities provide secondary treatment by 1977 and best practical waste treatment technology by 1983. Secondary treatment is usually defined as effluents with less than 30 mg/l BOD and 30 mg/l suspended solids or approximately 85 percent removal of pollutants and best practical treatment represents a somewhat higher percentage of pollutants removed depending on exactly what treatment process is ultimately decided. Costs for treatment facilities have not been established. If current laws are still in effect when treatment facilities are constructed, the Federal Government will bear 75 percent of first cost and the local government will pay the other 25 percent of the first cost. All operation and maintenance costs are the responsibility of local governments.

As stated previously, it is not likely that the project will be a major factor in the overall population increase in the project area. Hence, it is unlikely that there will be a significant increase in new boats directly as a result of the project. There are regulations promulgated by the US Coast Guard which prohibit the discharge of human wastes. There are also regulations which prohibit spills or discharges of oil or hazardous substances. There are currently no regulations which govern oil and gasoline pollution from small pleasure and commercial craft such as outboard fishing boats.

Lake Pontchartrain currently sustains pollution from existing sources of stormwater runoff and municipal discharges. The trends that such pollution will follow in the future are conjectural, but those trends are not likely to be markedly influenced by the existence of the project. More

F A C S I M I L E

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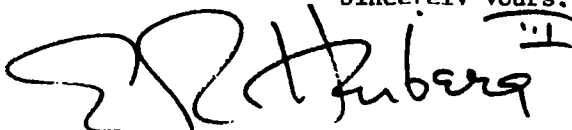
7 May 1975

Mr. Paul G. Gosselink

significant in effect will be the emerging network of statutory constraints relating to pollution. It should also be noted that planning efforts are underway which will analyze existing and projected water quality problems in the project area and formulate plans to alleviate them. At the present time, it is impossible to predict what future public decisions will be in this matter, but there is an obvious national commitment to pollution abatement.

I hope the above discussion has helped to clarify the summary of environmental considerations for the project. If I can be of further assistance, please call on me.

Sincerely yours,

A handwritten signature in black ink, appearing to read "E. R. Heiberg III". The signature is stylized with a large, sweeping initial "E" and "R".

2 Incl
As stated

E. R. HEIBERG III
Colonel, CE
District Engineer

LAKE PONTCHARTRAIN, LOUISIANA, AND VICINITY
(HURRICANE PROTECTION)

BASIC ECONOMIC DATA, EXTRACTED FROM US ARMY CORPS OF ENGINEERS LMV FORM 23 (REV), PREPARED 16 MAY 1974, WHICH REPRESENTS AN UPDATING OF DATA INCLUDED IN HOUSE DOCUMENT NO. 231, 89TH CONGRESS, 1ST SESSION, 1965 AND IN THE US ARMY CORPS OF ENGINEERS INTERIM SURVEY REPORT, 21 NOVEMBER 1962. COMPLETE DOCUMENTS AVAILABLE AT US ARMY ENGINEER DISTRICT, POST OFFICE BOX 60267, NEW ORLEANS, LOUISIANA 70160.

SUMMARY OF ECONOMIC ANALYSES OF THE SELECTED PLAN
IN THOUSANDS OF DOLLARS

First Cost	Average Annual Cost	Average Annual Benefits	Benefit-Cost Ratio
\$327,000.00	\$13,134.00	\$165,678.00	12.6 to 1

ITEMIZED AVERAGE ANNUAL BENEFITS

Flood Damage Prevented		\$157,296,000
Crop	\$ 19,000	
Noncrop	\$157,277,000	
Enhancement		
Land Intensification	5,696,000	5,696,000
Redevelopment	2,686,000	2,686,000
Total		\$165,678,000

NONQUANTIFIABLE ENVIRONMENTAL BENEFITS AND COSTS HAVE NOT BEEN REFLECTED IN BENEFIT TO COST DETERMINATION TO THE FOLLOWING EXTENT:

LOSS OF MARSH AND SHALLOW OPEN WATER AREAS TO PROJECT FEATURES, LOSS OF DETRITAL MATERIALS FROM LEVEED WETLANDS, TURBIDITIES ASSOCIATED WITH CONSTRUCTION OF PROJECT FEATURES, ADJUSTMENT OF SALINITIES IN LAKE PONTCHARTRAIN BY THE SEABROOK COMPLEX, AND IMPACTS ASSOCIATED WITH ENHANCEMENT OF URBANIZATION AND INDUSTRIALIZATION IN LEVEED WETLANDS.

NEW ORLEANS CHAPTER



February 17, 1975

ADDRESS REPLY TO:

System Fuels, Inc.
225 Baronne Street
New Orleans, La. 70161

Colonel E. R. Heiberg III
District Engineer, New Orleans District
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160

SUBJECT: Public Meeting, Feb. 22, 1975
re the Lake Pontchartrain,
Louisiana and Vicinity Hurricane
Protection Project

Gentlemen:

This letter is in reference to subject meeting; it is requested that the comments contained herein be incorporated into the record of said meeting.

On January 21, 1975 the Executive Committee of the New Orleans Chapter of the Louisiana Engineering Society voted to endorse the Corps of Engineers' recommended Lake Pontchartrain and vicinity Hurricane Protection Plan, the so-called "Barrier Concept." This action by the Executive Committee was supported by a vote of general membership present at a Chapter meeting the same night.

In making this endorsement, the Chapter recognizes the detailed data acquisition, thorough engineering studies and designs, and supporting model studies performed by the Corps in making its plan selection. The Chapter is also cognizant of the economic, environmental, and engineering considerations which were evaluated in reaching the recommended plan. The Chapter urges that all public work decisions be made on such a rational basis, with supporting documentation, including benefit-to-cost ratio determinations.

Because of the compelling public necessity of saving lives and protecting property which will be accomplished by this project, it is strongly urged by the Chapter that an early decision be reached in this matter and that construction of the project be accomplished on an expedited basis.

Very truly yours,

A handwritten signature in cursive script, appearing to read "L. C. Grundmann, Jr., P.E.".

L. C. Grundmann, Jr., P.E.
President

469 Hickory Drive
Slidell, Louisiana 70458

February 22, 1975

Department of the Army
New Orleans District,
Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160

Dear Sirs:

Please enter the following statement into the Public Record concerning the proposed Lake Pontchartrain Hurricane Protection Plan:

I AM AGAINST THE LAKE PONTCHARTRAIN HURRICANE BARRIER PROTECTION PLAN, BECAUSE I THINK IT WILL GREATLY ENDANGER LIVES AND PROPERTY BOTH IN ST. TAMMANY AND ORLEANS PARISHES WHILE SEVERELY DISTURBING THE ECOLOGICAL BALANCE IN LAKE PONTCHARTRAIN. I FEEL THAT THE PEOPLE OF THIS AREA HAVE MADE THEIR WISHES KNOWN BY VOTING AGAINST THIS PROJECT THREE TIMES, AND I CAN'T UNDERSTAND WHY IT IS BEING FORCED ON US.

Linda Haas

LINDA HAAS, (Mrs. Steve Haas)

VENETIAN ISLES CIVIC AND IMPROVEMENT ASSOCIATION



NEW ORLEANS, LOUISIANA 70129

22 February 1975

IN REPLY, REFER TO:

4501 Murano Road
New Orleans, La. 70129

Col. E. R. Heiberg
District Engineer
U. S. Corps of Engineers
New Orleans, Louisiana

Dear Col. Heiberg:

This association represents one hundred and twenty five (125) residents and property owners in Venetian Isles which is located in eastern New Orleans at the Chef Menteur Pass.

At a recent meeting of the general membership it was voted unanimously to oppose the construction of barriers in the Rigolets and the Chef Menteur Pass because of the overall impact they would have on Lake Ponchartrain and the surrounding areas.

Choking of the Chef Pass and the Rigolets will undoubtedly have a serious effect on marine life in Lake Ponchartrain and will aid in trapping water that will top the levees in a hurricane situation. Once this water gets into the lake it will not be able to get out when the wind shifts. This would keep our area under water for days.

This association does endorse the HIGH LEVEE PLAN in which the existing levees would be raised to provide the protection necessary. It appears that under this plan there would be no change in the ecology of Lake Ponchartrain.

Yours very truly,

VENETIAN ISLES CIVIC AND
IMPROVEMENT ASSOCIATION

Clarke Harper
President

A. E. HINGLE, INC.

MARINE CONSTRUCTION

LACOMBE 882-5221 — SLIDELL 643-1746

LACOMBE, LA.

MAILING ADDRESS:
P. O. BOX 615
LACOMBE, LA. 70445

A. E. HINGLE
OWNER

February 17, 1975

Department of the Army
N. O. District Corps of Engineers
P. O. Box 60267
New Orleans, La. 70160

Gentlemen,

We wish to submit the following to be made a part of the record of the Public Hearing, to be held on Sat. Feb. 22, 1975, regarding the Lake Pontchartrain and Vicinity Hurricane Project.

We wish to go on record as supporting the Project, but positively oppose the BARRIER PLAN.

The reasons we take this position are as follows:

- (1) We are engaged in shipbuilding in the Lacombe Area and hope, over the years, to expand with the times by constructing larger units. The existing horizontal clearances (assuming the Southern Railroad bridge is widened at some future date) are approximately 150', and the Rigolets Locks are projected at 110'. It is inconceivable that a waterway would be built less than presently exists. In the future it is conceivable that depths could be increased by dredging, but the 13.2' sill at the Rigolets would prevent any greater draft.
- (2) This area has never experienced hurricane flooding and it is felt that no additional protection is necessary here. This is also true of the entire North Shore of the lake.
- (3) Additionally, New Orleans has never in 260 years, flooded from Lake Pontchartrain during a hurricane - even before levees were built. In the past 25 years, levees have been built along the New Orleans and Jefferson Parish lakefront. These levees have withstood four hurricanes - namely - Betsy, Camille, Flossie and Hilda with no exposure. Certainly if it is felt that these levees are inadequate, they can be raised and strengthened for much less money than damming the lake with all its adverse effects to the ecology, marine life, pleasure boating and industrial potential.

We would support the alternative mentioned in Art. 10, Sec. b, No. (1) on page 9 of the announcement - namely - the High Level Plan. This could be augmented by:

- (1) Raising any levees along Lake Pontchartrain to a height not exceeding +14', or the height of the flood walls in the Industrial Canal, whichever is lower.
- (2) Modernizing the pumping system in New Orleans and Jefferson Parish.
- (3) Removing the restriction presented at the Southern Railroad Bridge at Seabrook, which would prevent flooding New Orleans via the L.R.C. and Industrial Canal should a future hurricane take the path of Hurricane Betsy.

EXHIBIT 52-1

A. E. HINGLE, INC.

MARINE CONSTRUCTION

LACOMBE 882-5221 — SLIDELL 643-1746
LACOMBE, LA.

MAILING ADDRESS:
P. O. BOX 615
LACOMBE, LA. 70445

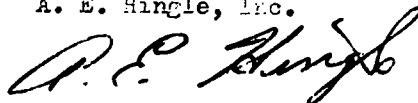
A. E. HINGLE
OWNER

We feel, That with the necessity to prevent needless federal expenditures during this period, that the implementing of the BARRIER PLAN would be wasteful and counter productive.

Respectfully submitted,

AEH/sf

A. E. Hingle - Pres.
A. E. Hingle, Inc.



CHURCH OF OUR LADY OF LOURDES
3924 BERKLEY AVENUE
SLIDELL LOUISIANA 70458

Dear Sir —

Please register my complete
opposition to the proposed
Lake Pontchartrain Hurricane
Protection Project plan.

Father Howard Hotard
pastor

18 February 1975

February 22, 1975

U. S. Army Corps of Engineers
New Orleans, Louisiana

Gentlemen:

Until the U. S. Army Corps of Engineers can modify the present hurricane protection plan to provide equal assurance of safety to the residents of St. Tammany parish, I strongly oppose the implementation of the existing Lake Pontchartrain and Vicinity Hurricane Protection Plan.

Sincerely,

John L. Kidd, Jr.
1513 Legendre Dr.
(address)
Slidell, La. 70458

February 22, 1975

U. S. Army Corps of Engineers
New Orleans, Louisiana

Gentlemen:

Until the U. S. Army Corps of Engineers can modify the present hurricane protection plan to provide equal assurance of safety to the residents of St. Tammany parish, I strongly oppose the implementation of the existing Lake Pontchartrain and Vicinity Hurricane Protection Plan.

Sincerely,

Mr. John D. Killip
513 Levee Drive
(address)
Lidell, La 70458



SENATE
STATE OF LOUISIANA

March 21, 1975

NAT G. KIEFER
State Senator
District 2
Parish of Orleans

225 Baronne Street
25th Floor
New Orleans, Louisiana 70112
Phone: (504) 581-6641

COMMITTEES:
Chairman—Dome Stadium Study Committee
Chairman—Juvenile Study Committee
Vice-Chairman—Judiciary B
Commerce
Fire Code Revision Committee

Colonel E. R. Heiberg, III
District Engineer
U. S. Army Corps of Engineers
P. O. Box 60267
New Orleans, Louisiana 70160

Dear Colonel Heiberg:

I regret that I was unable to be at the public hearing held on February 22, 1975 and speak in favor of the Lake Pontchartrain and Vicinity Hurricane Protection Project.

Since our area of the State is bounded by water on all sides and these waters are subject to severe tidal surges, we need all of the protection possible to prevent flooding and the resulting destruction caused by hurricanes and hurricane driven waters.

As the State Senator from a section of New Orleans, which in the past, has suffered untold damage caused by these tidal surges, I am very interested in seeing this project completed as quickly as possible.

I would like for my endorsement of this plan to be made a matter of public record and enclosed in your report on the public hearing of the Lake Pontchartrain and Vicinity Hurrican Protection Project.

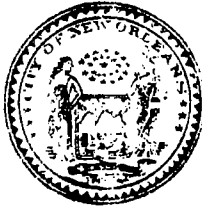
Yours very truly,

Nat G. Kiefer
Nat G. Kiefer

NGK:cm

cc: Hon. Guy F. LeMieux
President
Orleans Levee Board

EXHIBIT 56



CITY OF NEW ORLEANS
OFFICE OF THE MAYOR

MOON LANDRIEU
MAYOR

March 21, 1975

Colonel E. R. Heiberg III
District Engineer
Department of the Army
New Orleans District
Corps of Engineers
P. O. Box 60267
New Orleans, La. 70160


Dear Colonel Heiberg:

I very much regret that I was unable to attend the public hearings held February 24, 1975 concerning the Lake Pontchartrain and Vicinity Hurricane Protection Project. While I well understand the many variables that must be taken into account in the design and construction of a project of this magnitude and complexity, I very much respect the work of the corps and the Orleans Parish Board of Levee Commissioners.

Since the protection of the lives and property of the citizens of the City of New Orleans is my prime responsibility, I fully support the construction of all parts of the project.

Please, feel free to make this letter a part of your record of public reaction to the Lake Pontchartrain and Vicinity Hurricane Protection Project.

Yours very truly,


Moon Landrieu

"An Equal Opportunity Employer"

EXHIBIT 57

February 22, 1975

U. S. Army Corps of Engineers
New Orleans, Louisiana

Gentlemen:

Until the U. S. Army Corps of Engineers can modify the present hurricane protection plan to provide equal assurance of safety to the residents of St. Tammany parish, I strongly oppose the implementation of the existing Lake Pontchartrain and Vicinity Hurricane Protection Plan.

Sincerely,

William J. Langley
106 Southpark Dr.
(address)
Slidell, La. 70458

STATEMENT OF GREG J. LANNES, JR., CHAIRMAN
HURRICANE AND LEVEE PROTECTION COMMITTEE OF THE
REGIONAL PLANNING COMMISSION AT THE PUBLIC
MEETING HELD BY THE U. S. ARMY CORPS OF ENGINEERS
RELATIVE TO THE LAKE PONTCHARTRAIN AND VICINITY
HURRICANE PROTECTION PROJECT
FEBRUARY 22, 1975, ROOM 203, UNIVERSITY CENTER,
UNIVERSITY OF NEW ORLEANS

MR. LANNES: I AM GREG J. LANNES, JR., CHAIRMAN OF THE
HURRICANE AND LEVEE PROTECTION COMMITTEE OF THE REGIONAL
PLANNING COMMISSION FOR JEFFERSON, ORLEANS, ST. BERNARD,
AND ST. TAMMANY PARISHES.

SINCE THE REGIONAL PLANNING COMMISSION IS THE
FEDERAL CLEARINGHOUSE FOR FUNDING AND THE REGIONAL COUNCIL
OF GOVERNMENTS FOR THE FOUR-PARISH AREA, WE HAVE ASSUMED A
REGIONAL OVERVIEW OF ALL HURRICANE AND LEVEE PROTECTION FOR
OUR AREA.

THE PLAN BEFORE US TODAY INCLUDES NEEDED
IMPROVEMENTS AND CONSTRUCTION OF LEVEES ALONG THE LAKE IN
BOTH JEFFERSON AND ORLEANS AND ALONG THE INNER HARBOR NAVI-
GATION CANAL, THE INTRACOASTAL WATERWAY, THE MISSISSIPPI
RIVER GULF OUTLET AND INCLUDES THE RIGOLETS PASS, CHEF
MENTEUR PASS, AND SEABROOK COMPLEX BARRIERS IN ORDER TO CON-
TROL THE LEVEL OF LAKE PONTCHARTRAIN IN THE EVENT OF A
HURRICANE.

MORE

EXHIBIT 59-1

A SECOND PLAN UNDER DISCUSSION TODAY, CALLED THE CHALMETTE AREA PLAN, CALLS FOR CONSTRUCTION OF A LEVEE AND FLOODWALL SYSTEM FROM THE MISSISSIPPI RIVER ALONG THE EAST BANK OF THE INNER HARBOR NAVIGATION CANAL, DOWN THE SOUTH BANKS OF THE INTRACOASTAL AND MRGO TO VERRET, THEN A RETURN LEVEE TO THE RIVER AT CAERNARVON. THE CHALMETTE PLAN INCLUDES CONSTRUCTION OF FLOODGATES ON BAYOU BIENVENUE AND BAYOU DUPRE AT THE GULF OUTLET.

LET'S GET DOWN TO A FEW BASICS. I BELIEVE THAT I HAVE BEEN AS CLOSE TO THIS THING CALLED HURRICANE PROTECTION AS ANYBODY IN THIS ROOM.

MY REASON FOR BEING HERE TODAY IS TO TALK BRIEFLY ABOUT THE OPTIONS AND ALTERNATIVES WHICH REALLY GO A STEP BEYOND WHETHER YOU ARE FOR OR AGAINST THE BARRIER AND LEVEE PLAN. WE HAVE LOOKED RATHER CAREFULLY AT THE ALTERNATIVES AND OPTIONS AND WOULD LIKE TO QUICKLY LAY THEM ON THE TABLE IN ONE, TWO, THREE FASHION.

OPTION #1 -- GO WITH THE BARRIER-LEVEE PLAN.

OPTION #2 -- SCRAP THE BARRIER-PLAN BUT

RAISE ALL EXISTING LEVEES TO GREATER HEIGHTS

AND COMPLETE THE LEVEE SYSTEM FOR THE REGION

USING THE HIGHER LEVEE SPECIFICATIONS AND

MODIFY THE PUMPING STATIONS TO HANDLE A MUCH

LARGER CAPACITY.

MORE

OPTION #3 -- DO NOTHING AND PRAY THAT WE NEVER HAVE A HURRICANE ON A CRITICAL PATH THROUGH OUR AREA AGAIN.

LET'S LOOK AT OPTION #1 -- THE BARRIER/LEEVE PLAN, ALL EXISTING AND PLANNED LEEVES, PUMPING STATIONS AND OTHER CONTROL STRUCTURES HAVE BEEN BUILT THUS FAR ON THE PREMISE THAT THE BARRIER PLAN WILL BE APPROVED, FUNDED AND COMPLETED. OPTION 2 AND 3 ARE ALTERNATIVES TO OPTION #1.

NOW, LET'S SUPPOSE WE DECIDE THAT OPTION #1 -- THE BARRIER/LEEVE PLAN -- IS TOO HIGH A PRICE TO PAY, BOTH ECOLOGICALLY AND MONEY-WISE SO WE MOVE DOWN TO OPTION #2 WHICH WE WILL CALL THE RAISE THE LEEVES PLAN.

THE CORPS TELLS US -- AND THEY ARE THE ONLY ONES WHO HAVE DONE EXTENSIVE STUDIES ON IT -- THAT THE RAISING OF THE LEEVE HEIGHTS IN THE ENTIRE SYSTEM IS GOING TO BE FANTASTICALLY EXPENSIVE. WE MUST GET ADDITIONAL RIGHTS-OF-WAY AND THERE ARE A THOUSAND STICKY ENGINEERING PROBLEMS BECAUSE OF THE SUB-SOIL CONDITIONS. EVEN IF WE RAISE THE LEEVES, THE CORPS TELLS US THAT THEY WON'T STAY RAISED. IN A FEW YEARS THEY'LL SINK BELOW SPECIFIED HEIGHT AND WE'LL HAVE TO ESTABLISH A CONTINUING BUDGET TO KEEP THEM IN REQUIRED SHAPE. THE ALTERNATIVES TO THE RAISE THE LEEVES PLAN IS OPTION #1 OR #3.

MORE

OPTION #3 WHICH WE CALL THE DO NOTHING AND PRAY OPTION HAS A NICE FATAL RING TO IT. IT DOESN'T COST ANYBODY A DIME, IT DOESN'T TAMPER WITH THE ECOBALANCE AND IT MIGHT EVEN BE A SHOT IN THE ARM FOR THE SAGGING ROSTERS OF CHURCHGOERS IN THE AREA, BUT THAT'S ABOUT ALL YOU CAN SAY IN ITS FAVOR.

SOME MIGHT THINK THAT EVACUATION OF THE POPULATION WOULD BE A VIABLE ALTERNATIVE TO OUR THREE OPTIONS, BUT THERE IS A 12 HOUR TIME LAG BETWEEN PINPOINTING THE STORM'S EXACT PATH INTO THE AREA AND GETTING EVERYONE OFF TO INLAND EVACUATION POINTS. STATISTICS SAY THIS WOULD BE AN EXERCISE IN FUTILITY AND PERHAPS AN INVITATION TO BE TRAPPED IN A TRAFFIC JAM IN THE MIDDLE OF A HURRICANE. WE HAVE DISCUSSED THE INHERENT PROBLEMS OF MASS EVACUATION IN GREAT DETAIL IN OUR EARLIER MEETINGS OF THE RPC'S HURRICANE PROTECTION COMMITTEE. IT IS MY PERSONAL OPINION THAT EVACUATION OF THE METRO AREA OR EVEN OF ANY SIGNIFICANT PERCENTAGE OF THE POPULATION OF THE AREA -- AS AN ALTERNATIVE -- DOES NOT EVEN MERIT FURTHER DEBATE.

THE ENVIRONMENTALIST GROUPS AND INDIVIDUALS HAVE MADE US ALL PAINFULLY AWARE OF OUR PRECIOUS NATURAL RESOURCES AND OUR WETLANDS AROUND THE REGION. WE KNOW THAT THERE WILL BE SOME KIND OF IMPACT BY PUTTING UP MANMADE BARRIERS. WE DON'T KNOW JUST EXACTLY WHAT THAT IMPACT WILL BE.

MORE

THE CORPS OF ENGINEERS ENVIRONMENTAL STATEMENT ON THE PROJECT WHICH IS NOW ON FILE WITH THE PRESIDENT'S COUNCIL ON ENVIRONMENTAL QUALITY CONTAINS STATEMENTS FROM WILDLIFE AGENCIES WHICH APPEAR TO BE IN CONFLICT WITH THE CONCLUSIONS DRAWN IN THE STATEMENT. WHAT IS THE QUANTITATIVE IMPACT? I DON'T THINK ANYBODY KNOWS AT THIS POINT. I BELIEVE THAT IT MAY COST SEVERAL HUNDREDS OF THOUSANDS OF DOLLARS TO FIND OUT.

WE KNOW WHAT KIND OF PROTECTION IS FEASIBLE FROM AN ENGINEERING STANDPOINT, FROM A COST-BENEFIT STANDPOINT, FROM A MODELED CONTROL STANDPOINT. WE DO NOT KNOW -- POSITIVELY -- THE LONG RANGE IMPACTS TO THE ENVIRONMENT OF OUR AREA AND ESPECIALLY TO THE ECOSYSTEM OF LAKE PONTCHARTRAIN.

I WOULD VERY MUCH LIKE TO SEE A PROFESSIONAL IN-DEPTH STUDY OF THE LAKE'S ECOSYSTEM. WE REALLY KNOW VERY LITTLE ABOUT WHAT GOES ON UNDER THE SURFACE OF LAKE PONTCHARTRAIN. WE HAVE READ THAT THE MARINE LIFE RECEIVES NUTRIENTS FROM THE WESTERN PORTION OF THE LAKE AND THEREFORE IT WOULD SEEM THAT ANY LEVEE ALONG THE ST. CHARLES PARISH BOUNDARY OF THE LAKE WOULD AFFECT THAT NATURAL FOOD-GIVING SOURCE. HOWEVER, THIS AND MUCH OF THE TALK OF THE FREE MOVEMENT OF MARINE LIFE IN AND OUT OF THE PASSES IS LITTLE MORE THAN SPECULATION OR AT BEST AN EDUCATED GUESS AT THIS POINT. THE

MORE

LANNES STATEMENT, D

FACT IS THAT WE DON'T KNOW AND WON'T KNOW UNLESS AND UNTIL A COMPREHENSIVE AND VERY EXPENSIVE STUDY OF THE LAKE'S ECOSYSTEM IS COMPLETED AND PUBLISHED.

SO THE AGENCIES RESPONSIBLE FOR HURRICANE PROTECTION -- THE LEVEE BOARDS AND THEIR RESPECTIVE PAROCHIAL OR MUNICIPAL GOVERNMENTS -- ARE SAYING: "HERE IS THE BEST FORM OF HURRICANE PROTECTION WHICH MODERN TECHNOLOGY CAN OFFER. WE THINK IT WILL WORK TO SAVE LIVES IN THE EVENT OF A HURRICANE AND WE DON'T THINK IT WILL HARM THE HYDROLOGY OR ECOLOGY."

THE FEDERAL GOVERNMENT IS SAYING: "YOU DECIDE WHAT YOU WANT IN THE AREA OF HURRICANE PROTECTION, SHOW US IT WON'T DO MORE HARM THAN GOOD, AND WE'LL SHELL OUT MOST OF THE MONEY TO BUILD IT PROVIDED YOU RAISE THE REST FROM YOUR LOCAL TAXPAYERS."

THE ENVIRONMENTALISTS ARE SAYING: "YOU'RE GOING TO BE SORRY IF YOU MESS AROUND WITH NATURE. WE CAN'T TELL YOU FOR SURE THAT THE CURE WILL BE WORSE THAN THE DISEASE. BUT EVERYTHING ELSE IS EITHER POLLUTED OR UNNATURAL IN THE NAME OF PROGRESS. SOME OF US THINK IT WOULD BE BETTER TO TAKE OUR CHANCES WITH THE ODDSMAKERS THAT WE WON'T HAVE A HURRICANE RATHER THAN MESS UP A GOOD LAKE."

MORE

LANNES STATEMENT, 7

SOME VESTED INTERESTS ARE SAYING: "YOU'LL RUIN MY BUSINESS. YOU'LL KILL OFF THE CRABS AND CROAKERS AND SHRIMP AND SPECS. HOW WILL I GET MY SAILBOAT THROUGH YOUR BARRIERS?"

WHERE WILL IT ALL END?

IN OUR OPINION, ALL THE VOTES HAVE NOT AS YET BEEN COUNTED. THERE ARE STILL SOME COUNTIES TO BE HEARD FROM. I PERSONALLY WANT TO SEE THE RESULTS OF THIS PUBLIC MEETING HERE TODAY.

WHATEVER THE OUTCOME, WE AT THE REGIONAL PLANNING COMMISSION WILL CONTINUE TO PROVIDE THE FORUM TO DISCUSS THE ISSUES AND TO KEEP THE PROBLEM IN THE PUBLIC AWARENESS.

IT IS OFTEN EASY TO POINT TO THIS INDIVIDUAL OR THAT AGENCY AND MAKE THAT PERSON OR GROUP THE VILLAN. HOWEVER, IN THE CASE OF HURRICANE PROTECTION THERE ARE NO REAL VILLANS OR REALHEROES FOR THAT MATTER. WE'RE ALL IN THIS TOGETHER. WE ARE TRYING TO COPE WITH A DEATH AND DESTRUCTION PHENOMENON CREATED BY NATURE. IT IS A VERY EMOTIONAL ISSUE FOR MOST PEOPLE.

COMPARED TO A MIGHTY HURRICANE MAN IS VERY SMALL. BUT MAN HAS THE RIGHT AND THE MEANS OF SELF-PRESERVATION THROUGH TECHNOLOGY AND THE APPLIED SCIENCES.

WHEN ALL THE WORDS ARE SPOKEN AND ALL THE DIVISIVE ELEMENTS HAVE HAD THEIR DAY IN COURT, WE WILL STILL NEED HURRICANE PROTECTION IN THE VICINITY OF LAKE PONTCHARTRAIN.
THANK YOU.

The Board of Levee Commissioners

OF THE

Orleans Levee District

200 WILDLIFE AND FISHERIES BUILDING
418 ROYAL STREET

New Orleans, La.
70130



GUY F. LEMIEUX, PRESIDENT
BERNEL R. SANDERS, PRES. PRO-TEM
DANIEL P. KELLY, JR.
JOHN D. LAMBERT, JR.
~~XXXXXXXXXX~~
EUGENE V. MACON
JAMES C. SCALISE
Richard Kernion

March 21, 1975

PROTECTING YOU
AND YOUR FAMILY

RICHARD J. MCGINITY,
GENERAL COUNSEL
JOHN P. MCNAMARA
CHIEF ENGINEER & SECRETARY
GEORGE J. LABRECHE,
EXECUTIVE ADMINISTRATOR

Colonel E. R. Heiberg, III
District Engineer
U. S. Army Corps of Engineers
P. O. Box 60267
New Orleans, Louisiana 70160

Reference: LMNED-MP
Lake Pontchartrain & Vicinity Hurricane
Protection Project

Dear Colonel Heiberg:

Enclosed are copies of letters or resolutions in support
of the referenced project:

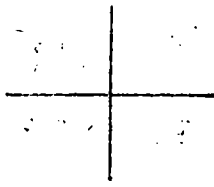
Lake Terrace Woman's Club of New Orleans
Village de L'est Improvement Association
East Orleans Civic Council
Young Men's Business Club of New Orleans, Inc.
New Orleans Chapter of the Louisiana Engineering
Society

The Orleans Levee Board respectfully requests that these
letters and resolutions be appended to the previous public
statement made by this Board at the February 22, 1975 public
hearing on this project.

Very truly yours,


GUY F. LEMIEUX
PRESIDENT

GFL/MJA/s



Lake Terrace Woman's Club
New Orleans

Thursday March 5th

Mr. Guy F. Le Mieux,
418 Royal St.
N. O. La. 70130.

Dear Mr Le Mieux,

As you suggested, the members of Lake Terrace Woman's Club would like to go on record as being in favor of supporting the program that you outlined!

We are vitally interested in hurricane protection for our area and for our city.

The slides and your very interesting talk was most informative. We thank you very much.

Sincerely,

Mary Martin (Mrs Joe C)

Corresponding Secy L. T. W. C.

not what we have but what we share

Village de l'Est Improvement Association

P. O. BOX 29005

NEW ORLEANS, LA. 70189

BOARD OF DIRECTORS

ALLEN F. NORMAND
President

NANCY SNYDER
1st Vice President

DOUGLAS C. PRITCHETT
2nd Vice President

WILLIAM R. STOLTZ
3rd Vice President

JEANNE MORRIS
Secretary

BETTY ROGER
Treasurer

February 8, 1975

The Board of Levee Commissioners
200 Wildlife and Fisheries Building
418 Royal Street
New Orleans, La
70130

Attention: Guy F. Lemieux

Subject: Position Paper: Lake Ponchartrain and
Vicinity Hurricane Protection Project

From: The Executive Board and the General Membership
of the Village de l'Est Improvement Association.

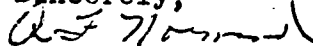
Dear Mr. Lemieux:

Our Association engineers and other interested members in Village de l'Est have studied the project and are in full agreement with the project, its plan of action, and proposed implementation.

Our association represents over 7,000 persons living in Village de l'Est Subdivision and is the sounding board for the 10,000 persons living in the Michoud vicinity.

We have found not one negative position for the plan in our sample poll conducted in late December and early January. Our evaluation of the plan and our analysis of the studies done by others prove to us that the proposed Floodgates will not hamper fishing or be detrimental to any marine life in the lakes and rivers involved.

Sincerely,



A. F. Normand
President
Village de l'Est Improvement Association

CC: T. Wegener, Jr.

Note: This position paper will be amended if there is any change in opinion greater than 5% of voting members or 10% by Village residents.

EAST ORLEANS CIVIC COUNCIL
NEW ORLEANS, LOUISIANA

Castle Manor Improvement Assn.
Coronado Heights-Merlie Manor Improvement Assn.
Dona Villa Improvement Assn.
Front Nine Civic Assn.
Hayne-Lakeshore Improvement Assn.
Irish Bayou Improvement Assn.
Kenilworth Civic and Improvement Assn.
Spring Lake Home Owners Assn.
Sherwood Forest Improvement Assn.
Lakeland Terrace Improvement Assn.
Neighborhood Nine Civic and Social Club
Venetian Isles Civic and Improvement Assn.
Village de l'Est Improvement Assn.
Villa Sites Improvement Assn.
W.A.T.C.H.E.R.S.
Young Men's Business Club (Gentilly Council)
Del Mar Villas Home Owners Assn.

4683 Galahad Drive
New Orleans, Louisiana 70127
February 21, 1975

Col. E.R. Heiberg III, District Engr.
Department of the Army
New Orleans District, Corps of Engineers
P.O. Box 60257
New Orleans, Louisiana 70160

Dear Colonel Heiberg:

The East Orleans Civic Council representing some eleven civic improvement associations in New Orleans East has passed a resolution supporting the "Barrier Concept" flood protection plan as specified in the U.S. Corps of Engineers Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project. It is our belief that this project is of vital importance for the protection and growth of the entire New Orleans area. We therefore encourage the cooperation of all local, state and federal governmental agencies to begin implementation of this project as soon as possible.

Yours very truly,

Robert J. Alonzo
Robert J. Alonzo, President

cc: Guy F. LeMieux, President
Orleans Levee Board

EXHIBIT 60-C

FROM: The Ad Hoc Committee on
Hurricane Protection Relief of
The Young Men's Business Club of
Greater New Orleans, Inc.

TO: The Board of Directors of that Organization

A RESOLUTION

WHEREAS, hurricanes, a most unpredictable force in nature,
have frequently racked Southeastern Louisiana;

WHEREAS, the people and property of coastal Louisiana
continue to be nearly unprotected from severe tidal
surges incident to such storms;

WHEREAS, we recognize that nature has not provided our
area with sufficient protection, or ground elevation,
to combat hurricane forces, including heavy winds,
unusual rainfall, and high water;

WHEREAS, Congress has authorized and enabled the Lake
Pontchartrain, Louisiana and Vicinity Hurricane
Protection Project;

NOW, THEREFORE, BE IT RESOLVED, that the Young Men's Business
Club of Greater New Orleans, Inc., request the Corps of
Engineers to conduct a thorough study of the feasibility
and practicality of the alternate proposal known as the
Shaw plan, and urges without delay or interference the
scheduled dredging work and the construction of the other
hurricane barriers included in the present proposed Lake
Pontchartrain Hurricane Protection Plan; and

BE IT FURTHER RESOLVED, that copies of this resolution be
presented to the United States Corps of Engineers, and
forwarded to the Governor of Louisiana, the metropolitan
area Levee Boards, the Louisiana Congressional delegation,
the Louisiana Department of Public Works, and the news
media.

I certify this resolution was approved by the (Board of
Directors) Young Men's Business Club of New Orleans, Inc., on
Feb. 20, , 1975.

Carl M. Worling, Jr
Secretary

February 17, 1975

System Fuels, Inc.
225 Beronne Street
New Orleans, La. 70114

Colonel E. R. Heiberg III
District Engineer, New Orleans District
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160

SUBJECT: Public Meeting, Feb. 22, 1975
re the Lake Pontchartrain,
Louisiana and Vicinity Hurricane
Protection Project

Gentlemen:

This letter is in reference to subject meeting; it is requested that the comments contained herein be incorporated into the record of said meeting.

On January 21, 1975 the Executive Committee of the New Orleans Chapter of the Louisiana Engineering Society voted to endorse the Corps of Engineers' recommended Lake Pontchartrain and vicinity Hurricane Protection Plan, the so-called "Barrier Concept." This action by the Executive Committee was supported by a vote of general membership present at a Chapter meeting the same night.

In making this endorsement, the Chapter recognizes the detailed data acquisition, thorough engineering studies and designs, and supporting model studies performed by the Corps in making its plan selection. The Chapter is also cognizant of the economic, environmental, and engineering considerations which were evaluated in reaching the recommended plan. The Chapter urges that all public work decisions be made on such a rational basis, with supporting documentation, including benefit-to-cost ratio determinations.

Because of the compelling public necessity of saving lives and protecting property which will be accomplished by this project, it is strongly urged by the Chapter that an early decision be reached in this matter and that construction of the project be accomplished on an expedited basis.

Very truly yours,

L. C. Grundmann, Jr., P.E.
President

BCC: Messrs. L. G. Bodet ✓
R. A. Mouton

EXHIBIT 60-E

DAVID P. LEVY ENTERPRISES
527 LEGENDRE DRIVE
SLIDELL, LA. 70458

February 18, 1975

Corps of Engineers, N. O. District
P. O. Box 60267
New Orleans, La. 70160

Gentlemen,

It is requested that this presentation be made a part of the record of the Public Hearing to be held on Sat., Feb. 22, 1975 in New Orleans in reference to the Lake Pontchartrain and Vicinity Hurricane Project.

The following is an outline of this presentation:

- I . . . History of the Project
- II . . . Need for the BARRIER PLAN
- III . . . Undesirable Navigational Aspects
- IV . . . Undesirable Developmental Aspects
- V . . . Undesirable Ecological Aspects
- VI . . . Undesirable Flood Protection Aspects
- VII . . . Summary and Conclusions

I . . . History of the Project

In 1947, a severe hurricane occurred which did extensive damage to the Mississippi Gulf Coast. At this time two areas of Orleans Parish, then largely undeveloped, were flooded - namely - the area behind New Orleans Airport, now known as Lake Forrest and an area in Jefferson Parish between the 17th St. Canal, Veterans Highway and the St. Charles Parish line. The Orleans Levee Board, under the administration of the late Billy Dillon, wanting to see these areas developed without future exposure to flooding thought it would be a good idea to prevent same by preventing hurricane tides from entering the lake. This course of planning was pursued until 1965 by the Levee Board and the Corps of Engineers when the project was authorized. This is the first serious Public Hearing since this time, in spite of the fact that the project (BARRIER PLAN only) is obsolete, unpopular and counter productive. No serious attempts to develop alternate plans have been made or studied, and this is obvious, because all attempts by this writer to obtain SPECIFIC details on a "High Level Plan" have been in vain. This writer has asked for specific details regarding costs, areas to be leveed, heights of levees and their location. This information could not be furnished, so it seems obvious that such studies were never made.

Since 1947, a levee has been built along Hayne Blvd. from Paris Rd. to the Industrial Canal, a levee behind the Seawall from the Industrial Canal to the 17th St. Canal in Jefferson Parish along the lakefront to the St. Charles Parish line. Four (4) serious hurricanes have occurred since this time - namely - Hilda, Floxie, Betsy and Camille. Not only was there no flooding, there was no serious threat. On the other hand, there was extensive flooding from the N.R.G.O. and Industrial Canal during Hurricane Betsy and it will be noted that these areas are outside of the BARRIER PLAN areas.

II . . Need for the BARRIER PLAN

A review of the history books will show that New Orleans was founded by Bienville in 1715 - 260 years ago. There has never been a hurricane flood from the lake. Every probable path a hurricane could take has been experienced since this time. In 1915, the eye passed over New Orleans, in 1965 Betsy passed just to the West and in 1969 Camille passed just to the East. In 1915, flooding was experienced by a failure of the pumping system, but there was no loss of life or property due to lake water intrusion. The flooding experience was due to the rain which accompanied the hurricane and most of the damage was due to windstorm.

In order to justify the BARRIER PLAN, a hypothetical hurricane known as the STANDARD PROJECT HURRICANE was "designed". This hurricane would take a path slightly to the west of New Orleans and then turn on a 50 mile radius 90° and pass to the east. It would, on turning 90°, then slow down and maintain its strength. A study of hurricanes plotted since 1871 in Technical Paper #55 by the U. S. Dept. of Commerce Weather Bureau, will show that no hurricane has ever turned 90° on a 50 mile radius. Furthermore, hurricanes usually speed up and diminish in intensity when passing the coast line. It would appear that an earthquake is more probable than anything close to the STANDARD PROJECT HURRICANE.

During the past years, extensive progress has been made in Hurricane Seeding. It seems certain that with a little more effort in this direction, hurricane seeding could be made a reality. If the BARRIERS were begun tomorrow, it would be approximately ten years before they were completed and hurricane seeding certainly should be perfected by that time - at worst, not much later. This would afford not only flooding but more serious windstorm protection. No evidence or studies have been presented regarding what could happen if a serious hurricane occurred while the BARRIERS were in the process of construction - a period of approximately ten years. It is conceivable that not only would partially completed BARRIERS be destroyed, but cause extensive flooding and loss of life since the control structures could not be operated.

Because over half of the Orleans - Jefferson levee system is out of the BARRIER area and these areas, as shown by history, are much more vulnerable than the Lake Pontchartrain lakefront, this writer can see no reason why the lakefront cannot be adequately protected by levees.

The areas north of the lake do not need levee or BARRIER protection. There is no history of hurricane flooding here; the people do not want it, and the building codes are being updated to insure that future construction will be sufficiently high.

The fact that the BARRIER PLAN is unpopular can readily be seen because the voters have three(3) times rejected its funding at the polls. On March 5, 1974, the people of Orleans Parish voted a three mill tax (after having 2 times previously rejected a 2 1/2 mill tax) with the assurance of the Orleans Levee Board that the Barriers would not be built with that money.

III . . . Undesirable Navigational Aspects

The Lake Pontchartrain Area is just beginning to experience an upsurge in shipbuilding, waterfront industrial development and recreational boating. It is proposed at the Rigolets to put a 110' lock between two 150' clearance bridges. It is proposed to put a 13.2' sill in an area with over 30' of water. In the future these areas could be dredged to give deep water navigation; this would forever prevent such a happening.

Maritime interests have repeatedly protested building a waterway smaller than those which presently exist. Every waterway built (Panama Canal, Suez Canal, N.Y. state Barge Canal, etc. etc.) has become restrictive over the years. It is unthinkable to build a waterway smaller than presently exists! All efforts to have the locks made a reasonable size (150'x30'x1200' Rigolets, 150'x35'x800' Chef Menteur, 97'x40'x1200' Seabrook) have fallen on deaf ears.

This writer, at a previous discussion, asked if it would be in order to get statutory guarantees that the locks would be open as stated by the Corps of Engineers and vessels would not have to stop to file lock reports. The answer was, "Certainly not." It is obvious that these statements are untrue and after the level of the lake rises (see V and VI), the locks will be in continuous operation and the flood gate at Chef Menteur will be permanently closed. This will prevent sailboats from entering or leaving the lake and make it so undesirable for pleasure boats that they will either not be purchased by residents of the area, or will be moved to other areas. A severe loss of jobs, economic benefits and stagnation will result. Incidentally, this was never considered in the fictitious cost - benefit study.

The lock at Seabrook will present a hazard to tows having to wait for locking when heavy weather exists. There have been no costs or detailed plans presented to the public concerning a sheltered, bulkheaded forebay area of sufficient size to accommodate waiting tows - nor is there any place for tows to wait inside of the Industrial Canal, waiting to lock into the lake. The presence of locks at Seabrook would be a potential for a maritime catastrophe. If it is desired to prevent the swift current at the Southern Railroad Bridge, this can be very easily accomplished by replacing the land fills with an open trestle and maintaining a uniform cross-sectional area of the canal.

IV . . . Undesirable Developmental Aspects

The principal reason for the development of the lakefront and north shore areas of the lake is the use of the lake - industrial, shipbuilding, fishing, recreational boating, swimming, etc. Raising the everyday level of the lake, the imposition of locks with their delays and restrictions would certainly have a severe adverse effect on future development of marinas, waterfront real estate, fishing etc.

V . . . Undesirable Ecological Aspects

It is believed that an exchange of marine life through the control structures would be impeded. It will be noted that future dredging permits will not permit future borrow-pit canals from being dug deeper than the lake. But at the Rigolets, which is over 100' deep at its entrance to Lake Pontchartrain, there will be a control structure with a 30' sill on one side and a 12' depth on the other side.

The beneficial effect of salt water from the M.R.G.O. to the lake will be choked by a 30'x50' control structure at Seabrook which even now, with its present restriction, is approximately 5400 sq. ft.

The lake at present is considerably higher than Gulf Mean Sea Level, the Corps of Engineers gauges show approximately a 2' average; statements by Corps officials put it at a lesser figure, but it is agreed that the lake is considerably higher than the Gulf. This results from the natural cross-sectional restriction at the passes, holding in the lake: 1) Rain-run-off, 2) Pumping drainage from Orleans and Jefferson Parishes, 3) Run-off from artesian wells and 4) Underground springs and fissures in the lake bottom and tributaries. It is proposed to reduce the cross-sectional area of the passes by approximately 75%. This will certainly raise the level of the lake considerably, causing adverse effects: 1) Existing docks and bulkheads will be too low, 2) Roads in St. Tammany Parish, which flood even now, will be even worse off and who will pay to raise all these roads? 3) In the event of a hurricane, the gates will be closed on a much higher lake than presently exists, 4) The lake will become fresh and this will inhibit or destroy existing marine life, 5) The Duckweed, which choked up the yacht harbor and other areas when the Bonnet Carré Spillway was opened in 1973, would present an expensive and constant problem in the lake and its tributaries.

VI . . . Flood Protection Aspects

The BARRIER PLAN is counter productive. (It was obsolete when it was first conceived.) The levees along the Orleans-Jefferson Parish lake-front had not been built nor had the M.R.G.O. been dug. Any excuse for the BARRIER PLAN has been dispelled because of the foregoing. Additionally the Spillway could not be used. The jeopardy to New Orleans from the Mississippi River is much greater than from the lake. When the Spillway was opened in 1973 (which would almost certainly occur during the spring when heavy rains fall and strong SE winds are present) put in over 18" additional water - the highest ever experienced where I live - even higher than during Betsy and Camille. With 75% of the Rigolets eliminated, a recurrence of 1973 would either flood out St. Tammany Parish or the Spillway could not be opened and much more serious flooding would occur in New Orleans from the river.

In the M.R.G.O. and Industrial Canals, the additional restriction at Seabrook in the event of a recurrence of a Betsy-type hurricane would raise the water to dangerous levels. Even if the flood walls were not overtopped, moored ships, barges, tugs, fuel tankers, etc. would surely be blown into the flood walls and flood the city. The solution to this problem is to keep the water level low in the Industrial Canal by allowing it to escape into the lake which can easily accept it. The same SE

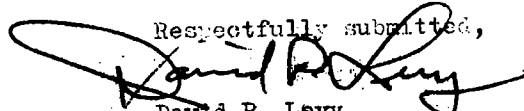
winds which blow the water up the canal will be blowing it away from the South shore of the lake. Therefore, by removing the restriction that the Southern Railroad bridge presents and not imposing any additional restrictions, this problem can be solved.

VIII . . . Summary and Conclusion

This writer cannot accept statements that the High Level Plan is more costly. Such statements have never been supported by figures. It is inconceivable that raising approximately 30 miles of lakefront and out-fall canal levees approximately 2' to 3' (if this is necessary) can cost the \$70 - 300,000,000.00 that the barriers will cost. Certainly approximately 160,000 lineal feet of sheet piling can be driven for somewhere in the neighborhood of \$300.00 per ft. or approximately \$50,000,000.00. Again, if it is contemplated to levee the North shore areas of the lake, this is unnecessary and the people have emphatically rejected any such proposals. The alternative suggestion mentioned in Art. 10, Sec. a (2) on page 9 would seem the logical action eliminating any levees contemplated in St. Tammany Parish. The other alternative suggestion in Art. 10 Sec. b (1) on page 9 seems also satisfactory. It is not believed that raising a levee 2' to 3' with sheet piling and terracing with non-structural earth would be offensive. The lakefront levee already blocks the view residents have of the lake, so another 2' to 3' can't hurt anything. The other levees are in undeveloped areas. It is doubtful if these levees will have to be raised, however, since the highest flood tide recorded in the lake is 7.6' and the existing levees are approximately +12.5'.

This writer wants to make clear that he does not oppose the Lake Pontchartrain and Vicinity Hurricane Project or meaningful flood protection. But, the BARRIER PLAN is so bad, from every standpoint, except creating a few temporary jobs, that it should be eliminated from the Project.

Respectfully submitted,



David P. Levy

David P. Levy Enterprises

DPL/mf

4217 Hessmer, #118
Metairie, LA 70002
February 22, 1975

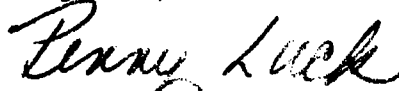
U. S. Army Corps Of Engineers
New Orleans
Louisiana

Gentlemen:

As a resident of Jefferson Parish, I would like to go on record as being opposed to any type of lock construction on or near Lake Ponchartrain.

Any system to regulate the amount of water in the lake would upset the natural balance of our parish area. Fishing, recreation and natural wildlife would all suffer at any human attempt to regulate the lake.

Regards,



Penny Luck

February 17, 1975

New Orleans District Corps of Engineers
Post Office Box 60627
New Orleans, Louisiana 70160

Subject: Proposed Barrier Structures in the Rigolets and the
Chef Menteur Pass, Opposition to

Gentlemen:

It is requested that this letter be entered as part of the public hearing concerning the subject proposal.

We are opposed to this part of the New Orleans and Vicinity Hurricane Protection System. Our opposition is based on the following:

1. To meet the cost-effectiveness criteria for such projects, too much land area was included.
2. Because there were no established methods for fixing a monetary value for the economic impact to Slidell and St. Tammany Parish and for the ecological impact on Lake Pontchartrain and the wet lands, these were not used to off-set the cost of alternate designs.
3. Alternate systems, such as, high levees to protect the inhabited areas, should be considered now that the portion of the system proposed for St. Charles Parish has been deferred.
4. There has been notable changes in the values which people put on things since the concept of this project; therefore, it would appear prudent to reevaluate the project in light of these changes.
5. Because very questionable tactics were used by some local officials to foster the project, the creditability of the plan is questionable.

Very truly yours,

Carlos R. Lynch

Carlos R. Lynch

107 D1 Jon Dr.

Slidell, La. 70458

3739 Brookwood Dr.
Slidell, La.
Feb. 18, 1975

U.S. Army
Corps of Engineers
New Orleans, La.

Dear Sirs:

As a U.S. citizen and resident of Slidell, La. I would like to give my personal opinion on the Hurricane Protection Plan presently under "discussion".

From reading about the proposed levees, etc. I understand there are none planned for the north shore of Lake Ponchartrain.

I do not claim to know anything about waterways, engineering, etc. but I do live on a street that floods terribly with just a heavy down-pour. I can imagine what a hurricane can do. He lived in Metairie in 1947 and had severe flooding - also lived in St Bernard during "Betty". These are experiences

that I can never forget and hope never to experience again.

While I do not understand the ecological problems, I do care about the lives of my children. I value them as highly as people in New Orleans value theirs.

I also have read that the people of New Orleans, themselves, voted against the project several times and yet it is being "pushed" by "special interest groups."

Could these areas where the levees are to be constructed, be where some of those pushing this project live? That is the question many people are asking.

I am a Native, Oleanian, and all my life have understood the River (Miss.) was the greater risk to New Orleans, especially during flood stage. Yet it seems like the levees there break quite often - especially in St. Bernard

and Plaquemine Parishes. I wonder why these areas do not get such a focus of attention.

I understand that the tendency would be to protect the greatest number of people. But all people are human beings and equal to the same protection. I hope you will consider those of us in the Northern areas of the Lakeshore as being as important as New Orleans.

Thank you for reading my views on the subject,

Sincerely,
Mrs. Neil M. Mansfield
Sidell, La.

5519 Urquhart Street
New Orleans, Louisiana 70117
March 21, 1975

Colonel E. R. Heiberg, III
District Engineer
U. S. Army Corps of Engineers
P. O. Box 60267
New Orleans, Louisiana 70160

Dear Colonel Heiberg:

This letter is to confirm my public statement made at the City Council meeting of March 6, 1975 regarding my endorsement of the Lake Pontchartrain and Vicinity Hurricane Protection Project.

Metropolitan New Orleans is very vulnerable to flooding caused by hurricane driven tides and needs the added protection it would be afforded by this project.

As State Representative of an area that suffered devastating property damage, as well as several deaths from Hurricane Betsy, I am vitally concerned with the completion of this project.

Please make this letter a part of the public record and attach it to the public hearing report of February 22, 1975.

Very truly yours,



THEODORE J. MARCHAND
STATE REPRESENTATIVE
STATE OF LOUISIANA
DISTRICT 102

TJM:cjp

cc: The Honorable Guy F. LeMieux, President
Orleans Levee Board

Kerilworth Civic and Improvement Association

P. O. Box 26043

New Orleans, Louisiana

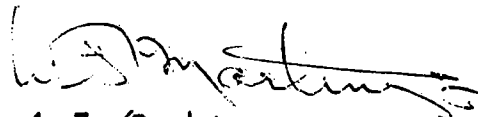
February 21, 1975

To Whom It May Concern

The proposed Hurricane Protection Plan of the New Orleans District of the U. S. Army Corps of Engineers was presented to the Kerilworth Civic and Improvement Association at its general meeting on November 20, 1974.

Due thought and consideration was given to this project, and at the general meeting of February 19, 1975, the Kerilworth Civic and Improvement Association voted to unconditionally support the Lake Ponchartraine and Vicinity Hurricane Protection Plan.

This Association represents residents of the area bounded by W. Laverne, Wales, Morrison, and Mayo Roads.



A. F. (Ray) Martinez, Jr.
President



CLIO *Sportsman's* LEAGUE

Address Reply To:

P. O. BOX 219 ● KENNER, LOUISIANA 70062

STATEMENT ON HEARING FOR
LAKE PONTCHARTRAIN AND VICINITY HURRICANE
PROTECTION PROJECT

February 22, 1975

I'm Glenn Mercadal and I'm here representing the members of the Clio Sportsman League of New Orleans.

First, the members of our club, who mainly live in the New Orleans Metropolitan Area, would like to point out that we are not opposed to hurricane protection. However, we are opposed to placing protection levees around undeveloped marsh and swamp.

We object to the Environmental Impacts Statement's omittance of cost to the enviroment in the benefit cost ratio. A value can be placed on marshland and swamps and has been in recent studies by members of the University of Georgia's Institute of Ecology. Therefore, the value of marsh and swamp can be included into the benefit cost ratio and would greatly reduce the ratio to a questionable point regarding the economic feasibility of the project.

The Corps has admitted several times in the final statement that the project will hasten urbanization and industrialization of valuable marshes and swamps by providing for further flood protection and

AFFILIATED WITH THE LOUISIANA WILDLIFE FEDERATION, INC

EXHIBIT 67-1

land reclamation. What is mentioned on paper will be felt in real life by the sportsman— citizen taxpayer who will see their recreation areas dwindle at the hands of land owners.

The Corps main purpose for the project is protection of lives and property. Yet, we feel the Corps has failed to completely explain why levees are placed around undeveloped areas — or is it for the explicit purpose of development.

Barriers on the Chef Menteur Pass and Rigolets are backed by claims that there will be minimal environmental effects. We disagree and feel such 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 Maurepas, Pontchartrain, Catherine, Borgne estuary system.

A final Environmental Impact Statement has been prepared and not yet been approved by the President's Council on Environmental Quality while the Bayou Bienvenue Floodgate, Bayou Dupre floodgate and Chef Menteur Gulf Intracoastal Waterway relocation is already complete. Work has also begun on several levees in the project.

This leads us to believe that this meeting, like most held by the Corps, is only to fulfill a requirement of the law and no matter what is said or done the project will be completed.

Closing, I would like to reaffirm our clubs position in favor of flood protection and opposing the policy of unnecessary private land enhancement at the expense of the public and the environment.

Thank you.

Glenn Mercadal

Glenn Mercadal
Chairman, Conservation Committee

SLIDELL SPORTSMEN'S LEAGUE

P. O. BOX 1208

SLIDELL, LOUISIANA 70458



February 22, 1975

District Engineer
Dept of the Army, Corps of Engineers
New Orleans District
P O Box 60267
New Orleans, La 70160

Dear Sir:

The members of the Slidell Sportsmen's League wish to thank you and certain members of our Congressional delegation for giving us the opportunity to present our opinions on the Lake Ponchartrain and Vicinity Hurricane Protection Plan. My name is Robert H. Kerrell, I serve as President of the Slidell Sportsmen's League and today I speak for the 161 members of that organization.

Since its organization, the League has had as one of its continuing and major concerns the well-being of the great natural resource at our doorstep. This estuarine lake area was at that time threatened by this very same project that was known to us as amendment 6, the title it carried on the ballot in an attempt to amend the Louisiana Constitution to enable taxes to be levied to finance it. Amendment 6 was defeated. Amendment 6, in one form or another, has been defeated three times by the voters. If anyone wonders why, I'll be glad to tell them- the people don't want this thing built!

Now that the Final Environmental Impact Statement has been filed with CEQ, the Corps has complied with its legal obligations under the National Environmental Policy Act. We hold very basic disagreements with the conclusions of that Statement. However, the action has now shifted to the arena of public opinion and political means and we must remain hopeful that the will of the people, three times ignored in the ballot booth, may finally be served.

Others here today will tell of the possible ominous effects of these barriers on the people and property of St Tammany Parish. We share these concerns and believe we will be subjected to increased danger as a result of closed barriers channeling surging waters into our towns and homes that otherwise might have returned through the passes. Of particular concern is the apparent lack of coordination with the Mobile District on the effects of the closed barriers on inhabited areas near the Pearl River Basin. We expect that blocked waters will seek an outlet into the Pearl River Basin, flooding riparian property and the town of Pearl River.

Since the project is claimed to be good for business interests, let's take a look at what our business interests can expect from it. First, let's speak of the two shipbuilding concerns in the Slidell area. These yards have been building vessels of considerable size and draft. Ocean-going tugs have been constructed here. With the

proposed barriers in place and the necessary navigation facilities in operation, the maximum draft available for passage restricts our shipyards to building vessels of less than 16' draft. It is revealing that a project alternative involving a lock in the GIWW was rejected out of hand because of inconvenience to navigation. What of this inconvenience to navigation, commercial and private? We who fish the Rigolets frankly do not believe that the locks will be closed only 2½ hours per day. OUR navigation will be greatly inconvenienced. Obviously it makes a difference WHOSE navigation is interrupted. We expect major impacts in the commercial fishing, crabbing, and shrimping business in our area. The attraction of industry to the area will suffer in reflection of the navigational impediment in the lake.

In addressing ourselves to the direct effects of the project we find many areas of disagreement with your conclusions. We cannot believe that reducing the cross-sectional area of the Rigolets and Chef channels will have no appreciable effect on the volume of flow through them. This is not reasonable no matter how cleverly designed the gates are to be. A tabletop model is not going to tell you everything you need to know about flows, currents, velocities, tidal heights, mixing, migration of larval aquatic life, salinity effects, fish movement, pollution control, and a hundred other things that should be known before building something like this. 5265 Acres of productive marshland are to be converted to structures and levees. Thousands of acres in New Orleans East which presently do experience some degree of interchange with the Lake will be permanently cut off. This area ^{is apparently} is apparently not slated for development and will be kept as open marsh. According to research it is in very good condition and has the potential to be restored to full estaurine productivity by providing some more positive interchange points with the lake. Spoil from the structures at the Chef Menteur is scheduled to be dumped into the marsh. This will permanently convert it from marsh uses.

Reduced organic detritus coming into the Lake is an admitted effect of the project. According to the EIS most of the commercial species of fishes and invertebrates feed heavily on this organic matter and depend heavily on the interchange between the Lake and surrounding wetlands. The value of the Lake as a marine nursery area is well established. The project's planning has stated this but has not adequately treated the Lake system as a part of the whole La. estaurine system and considered the cumulative effects of this project combined with all the others planned or in progress in the larger system. When the commercial and sport fishing suffers the effects of this project the economy of the whole area will feel it. Not just the fishermen themselves, but the whole range of industries and services which provide support to them, process and distribute their catch, and those who support the supporters.

Turbidities associated with the dredging in this project are to be temporary, according to what we are told. But how temporary is a construction period lasting up to 15 years? The effects of this turbidity over such a long period of time is bound to have

severe and prolonged effect on the regimen of bottom growth, plant and animal in the lake. Belgrass, Widgeongrass, brackish water clams, and other organisms provide important parts of the food chain, both for aquatic life and some 600,000 wintering lesser scaup, the main fare of local duck hunters. Poul d'Eau or coots graze on the vegetation. Prolonged dredging turbidity will have its effect.

Urban outfall is causing pollution now along the Orleans and Jefferson shorelines. The project will hasten urbanization, increasing this pollution that already renders shellfish unfit to eat and prohibits swimming in some areas.

We object vigorously to the use of public funds for private benefit through land enhancement schemes. This is exactly what we will be getting in the New Orleans East area. The levee along the south shore of the lake from Citrus to South Point is to protect undeveloped areas to make them suitable for urbanization. It is claimed that this area would be developed anyhow. Without this Federally provided flood protection, we doubt very much if this is true. New flood insurance regulations provide minimum requirements for construction areas that could not be met without this levee. Mortgages for construction cannot be obtained unless these standards are met. Let those who stand to profit so handsomely from the development of this wetland area provide their own flood protection. Then we'll finally see just how economical it is to develop lowlands when our unwilling share of the cost is denied. The Corps has claimed there is no basis to demand that these landowners participate in the cost of their levee. We challenge them to make that determination and the analysis upon which it is based public along with the identity of the landowners and major stockholders of owning corporations.

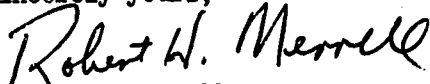
Alternatives to the project selected would reduce the damage and still protect DEVELOPED areas from flooding. In particular the Hi Levee alternative would do the job and not be nearly so costly as claimed if the New Orleans East Levee were omitted. The remaining levees would mostly be existing ones to be heightened and they already have stabilized bases.

So much for our concerns over the project, now let's turn to our other concerns that are no less grave. As mentioned before the people three times defeated proposals that would allow the Orleans Levee Board to levy taxes to cover its share of costs. The St Benard and St Tammany Police Juries have refused to provide their shares of the local funding. The former governor stepped in and guaranteed those shares. The present governor has confirmed his actions. Our congressional delegation has completed this rape of democracy by passage of a special law allowing payments to be extended over a thirty year period. Our funds were not provided because we don't want this thing built as it is now conceived. This was the only way we had to express this opinion. In this government of the people, by the people, and for the bureaucrats we have been denied even this. Why do we even vote? No wonder people are disgusted with government and politics. Does anyone expect that the shares guaranteed by the governor will not come out of the pockets of those who exercised their right to decide to deny them? Then they are mistaken. They will come out of revenue sharing, highway, school funds, and any other way they can be withheld.

The cost estimates have already proven to be much too low. If you think the Superdome was a boondoggle, just wait. We wonder if the final cost-benefit ratio were known, would the project enjoy such claimed justification? The assumed interest rate on funds to be committed to the project is 3.25%. This is ridiculous, yet many such projects are justified on such assumptions as this. Those of us who are to pay our taxes, direct or indirect, to build this thing are not, unfortunately, able to borrow at 3.25% to pay them.

Finally, the most important and overriding objection of all must be repeated for emphasis and that is that we have been disenfranchised. Our ballots have been ignored as the project has moved toward implementation. The people have said their say on the subject Mr. Hebert, Mr Long, and Mr. Johnston. Now why don't you quit listening to the bureaucrats and listen to the people? Assuming we don't know what's good for us just isn't going to wash anymore. We hope you are listening. We hope you are listening too, Mr. Edwards. We are not against hurricane protection. That is a necessity, but there are other ways than the one the Corps has selected. Modify the plan to eliminate the barriers and then come back to us with it at the polls. We hope you are listening, because other elections are approaching in the future!

Sincerely yours,



Robert H. Merrell
President
Slidell Sportsmen's League

Y-4-F Hensel
College Station, Texas 77840
March 11, 1975

Colonel E.R. Heiberg
New Orleans District
Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160

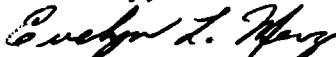
Dear Colonel Heiberg:

I wish to express my disapproval of the Hurricane Protection Project for Lake Pontchartrain. The destruction of approximately 73,000 acres of wetlands does not compensate for any hurricane protection which the project may render. The draining of these wetlands will only further the problems of urban sprawl. The area itself is unsuitable for any form of development, since the land will begin to sink after it has been drained. In addition, the land will be prone to flooding.

These wetlands are an integral part of the Lake Pontchartrain drainage system. To tamper with this system would be detrimental to the water quality of the lake. The area also provides a habitat for fish and wildlife, which are of definite economic value to the state.

For the above reasons, I would advocate that the Hurricane Protection Project for Lake Pontchartrain be abandoned.

Sincerely,



(Ms.) Evelyn L. Merz

Route 2 Box 326 M
Slidell, La. 70458
March 7, 1975

Colonel E. R. Heiberg III
New Orleans District Engineer
Foot of Prytania, New Orleans, La.

SUBJECT: The Lake Pontchartrain Hurricane Protection Plan

Dear Colonel Heiberg,

Since I was unable to attend the recent public hearing on the Lake Pontchartrain Protection Plan, I wish to state my opposition to the barriers and dams at Chef Menteur and the Rigolets passes. Any restriction to normal effluence will flood our Bayou Liberty Farm located on Bayou Liberty. Our home is the first building located some one and half miles north of Lake Pontchartrain. The older or central portion of this residence has withstood the test of time since at least the year 1810.

My field is Chemical Engineering; therefore, I sought the advice of your Hydraulic Officer by telephone when it was deemed necessary to divert part of the Mississippi River into Lake Pontchartrain in 1973. After a few minutes of office consultation, your officer assured me that the additional river water would cause absolutely no problems on the North Shore. However, the resulting Easter flood put 18 inches of water in our lower living room, gallery and connecting greenhouse as well as in our Commercial Tomato greenhouse and other out buildings. It also resulted in severe soil erosion.

This disaster would seemingly indicate that your office is less than knowledgeable about contrary winds, high tides and their effects on the North Shore of Lake Pontchartrain. Had I followed my first inclination and provided a levee for the tomato greenhouse, that much would have been saved. As you may know, St. Tammany Parish was subsequently declared a disaster area for purposes of Federal relief.

EXHIBIT 70-1

By all means raise your existing levees to protect New Orleans, but do not install dams at Chef Menteur and the Rigolets which will surely raise the level of the Lake and flood Slidell and the North Shore areas. I do not understand how barriers and dams at the Chef Menteur and the Rigolets would provide any additional protection for New Orleans. Suppose the barriers did function as proposed, with the spillover being minimal, there would still be enough water left before reaching New Orleans for the wind to build up another tidal wave making the expenditures of these huge monies entirely useless. The survivors of Hurricane Betsy can testify to such an experience.

Bond issue proposals to support the Plan have been defeated three times. The three mil proposal recently passed in Orleans Parish was actively advertised on the media by the Levee Board president as a project for existing levee improvements and definitely stated not to be in support of the Plan.

If the Lake Pontchartrain Hurricane Protection Plan has been tested at the Corps Development Laboratory, I would suggest that the parameters used did not give enough value to contrary winds, 12 inch rainfalls, high tides and complete closure of the proposed dams for periods of time in the event that Project Hurricane stalled for three or more days.

It would be appreciated if these objections were given your consideration and that the Corps of Engineers not dam our Lake.

Very truly yours,

John S. Miller
John S. Miller

JSM/gap

CC: Rep E. C. Scogin
2063 Second St.
slidell, La. 70458

2-22-75

DEPT. OF THE ARMY
N.O. DIST. CORPS OF ENGINEERS
P.O. Box 60627
N.O. LA. 70160

GENTLEMEN:

THIS LETTER IS INTENDED TO DISCUSS THE PROPOSED LAKE PONTCHARTRAIN HURRICANE PROTECTION PROJECT, AND TO INFORM YOU THAT I BITTERLY OPPOSE THE BARRIERS.

I HAVE THREE QUESTIONS IN MY MIND THAT DESERVES TO BE ANSWERED, AND YOUR REPLY WOULD BE APPRECIATED.

#1 - IN THE EVENT OF A HURRICANE, AND THE BARRIERS OR LOCKS ARE CLOSED, WHAT WILL HAPPEN TO THE SURGE OF WATER THAT WILL BUILD UP BEHIND THE DAMS? ISN'T IT POSSIBLE THAT THE WATER WILL FLOW THROUGH THE CITY OF SLIDELL, THROUGH N.O. EAST?

A SERIES OF LEVIES WILL BE ERECTED TO PROTECT THE SOUTH

EXHIBIT 71-1

(21)

SHORE OF THE LAKE, WHAT ABOUT THE NORTH SHORE? I AM IN FAVOR OF THE LEVIES, BUT NOT THE BARRIERS, A DANGEROUS UNDERTAKING.

#2 THE TREMENDOUS COST TO CONSTRUCT, MAINTAIN AND MAN THIS PROJECT WILL BE A BURDEN ON THE TAX PAYERS.

THE DELAY AND INCONVENIENCE THAT THE BOATING PUBLIC WILL BE SUBJECTED TO, AND IN THE EVENT OF AN EMERGENCY BEYOND THE LOCKS, THE COAST GUARD, AND C.G. AUX., COULD MEAN THE DIFFERENCE BETWEEN LIFE OR DEATH, CERTAINLY SHOULD BE CONSIDERED.

ISN'T IT POSSIBLE THAT THE BECAUSE ^{OF THE} RESTRICTED FLOW, THE LAKE WILL BE KEPT AT A HIGH LEVEL, CAUSING FLOODING IN THE LOW-LANDS. ISN'T IT POSSIBLE THAT EVENTUALLY THE LAKE WILL BECOME STAGNATED, BECAUSE OF THE LACK OF NEW WATER TO ENTER AND KEEP THE LAKE FRESH.

#3 THIS IS MY CONCERN NOT ONLY FOR THE NORTH SHORE OF THE LAKE, BUT MAINLY FOR THE CITY OF N.O. LA.

(3)

WHAT WILL HAPPEN IF THE MIGHTY MISSISSIPPI RIVER RISE ABOVE FLOOD STAGE, AND THE CORPS OF ENGINEERS ARE FORCED TO OPEN THE SPILLWAY? WHAT WILL HAPPEN TO THE TIDE IN THE LAKE? IN THE PAST WHEN THE SPILLWAY WAS OPENED, AND BECAUSE OF THE HIGH TIDE, WE HAD WATER ON OUR STREET THE ENTIRE TIME IT WAS OPEN, VIA BAYOU BONFOUCA. IT IS OBVIOUS, THAT WHEN THE BARRIERS ARE THERE TO FURTHER RESTRICT THE FLOW OF WATER OUT OF THE LAKE, WE PROBABLY WILL HAVE WATER IN OUR HOMES. I DON'T MEAN TO BE SELFISH, I AM JUST USING MY PERSONAL EXPERIENCE TO PROVE A POINT, MY CONCERN IS FOR EVERYONE.

IT IS MY OPINION THAT IF THE SPILLWAY IS OPENED, IT WILL HAVE TO BE CLOSED AGAIN, BECAUSE OF THE HIGH LEVEL IN THE LAKE, AND SUBJECT THE CITY OF N.O. TO THE RAGE OF OLD MAN RIVER, THAT CAN SURELY FLOOD THE CITY. IT WOULD

(4)

BE A CATASTROPHE EITHER WAY,
FLOOD SLIDELL, OR NEW ORLEANS.

GENTLEMEN THE FACT THAT I
AM NOT AN ENGINEER, MY APOLOGY
IF I AM OVER CONCERNED, HOWEVER
A MISGUIDED MISTAKE NOW COULD
BE DISASTROUS AND IRREPAIRABLE,
AND FURTHER STUDY SHOULD AND MUST
BE MADE, REGARDLESS OF PERSONAL GAINS.

IN CLOSING, JUST AS A MATTER
OF SUGGESTION, IN THE EVENT THAT
OUR PLEA WILL NOT BE CONSIDERED
OR IGNORED, AND THE BARRIERS ARE
CONSTRUCTED, WHY DON'T THE CORPS OF
ENGINEERS DO WHAT THEY SHOULD HAVE
DONE A LONG TIME AGO EVEN BEFORE,
OR INSTEAD OF SPENDING A LOT OF OUR
MONEY ERECTING SPILLWAYS, THE BONNE-
CARRE, AND THE (I HATE TO MENTION)
MORGANZA) KEEP A FEW DREDGES
AND DRAG-LINES AT THE MOUTH OF
THE MISS. RIVER TO KEEP IT CLEAR
OF OF SAND BARS, THIS WILL HELP
SHIPPING AND ELIMINATE THE

(5)

THE RESTRICTION OF FLOW OF WATER
THAT SHOULD LOWER THE WATER
LEVEL IN THE MISS. RIVER, LOAD THE
SILT ON BARGES AND USE IT TO
BUILD HIGHER LEVIES. IN OTHER
WORDS, PREVENT RESTRICTION,
DON'T CREATE THEM.

SINCERELY
CC TO LOCAL NEWSPAPERS

Wilson Miramon

WILSON MIRAMON
3243 BONFOUCA DR.
SLIDELY, LA. 70458

CEL. E. R. HEIBERG III
U.S. ARMY CORP OF ENGINEERS
P.O. Box 10267
NEW ORLEANS, LA 70116

DEAR SIR:

WITH REFERENCE TO THE PROPOSED LAKE PONTCHARTRAIN BARRIERS, PLEASE PERMIT ME TO ONCE AGAIN PROTEST THE INSTALLATION OF THESE BARRIERS.

THERE ARE MANY MANY REASONS WHY THEY SHOULD NOT BE INSTALLED, ALL OF WHICH YOU ARE AWARE OF, BY THE MANY COMPLAINTS YOU HAVE RECEIVED.

MY RECENT LETTER TO YOU, STATED SEVERAL REASONS WHY THEY SHOULD NOT BE BUILT, BUT I WILL "ZERO IN" ON ONE REASON ONLY NOW, AND A PUBLIC REPLY IS REQUESTED TO GIVE YOUR THOUGHTS AND RESEARCH ON THE FOLLOWING.

THE MISSISSIPPI RIVER IS RISING TO A DANGEROUS STAGE, AND THE ARMY CORP OF ENGINEERS ARE CONTEMPLATING OPENING THE BONNE CARRE SPILLWAY, "WHAT WOULD HAPPEN IF THE BARRIERS WERE INSTALLED, AND THE FLOW OF WATER RESTRICTED TO A VERY SMALL OPENING AT EACH BARRIER, OPPOSED TO THE CURRENT

(2)

OPENINGS NOW?

AS STATED TO YOU IN MY PREVIOUS LETTER WHEN THE SPILLWAY WAS OPENED IN 1973, THE LEVEL IN THE LAKE ROSE TO A POINT THAT THE ROAD IN FRONT OF MY HOUSE, AND PART OF THE YARD WAS UNDER WATER MOST OF THE TIME WITH RIVER WATER FLOWING IN THE LAKE, BECAUSE THE PRESENT OUTLETS WERE NOT LARGE ENOUGH TO KEEP THE LEVEL NORMAL. AGAIN I WILL ASK YOU, "WHAT WOULD HAPPEN IF THE BARRIERS WERE INSTALLED?" IT IS MY HUMBLE OPINION THAT SLIDELL, NEW ORLEANS, JEFFERSON, ST. TAMMANY, AND POSSIBLY ST. CHARLES PARISH, WILL BE FLOODED, THAT WILL NECESSITATE THE CLOSURE OF THE SPILLWAY, AND SUBMIT N.O. AND ALL THE AREA BELOW N.O. TO THE DELTA AT THE MERCY OF OLD MAN RIVER.

IF THE SPILLWAY MUST BE OPENED, YOU HAVE MY PERMISSION TO SEND SOMEONE TO MY PROPERTY TO GET TO GET A 'BEFORE AND AFTER', CHECK TO PROVE MY POINT.

1307

(3)

TAKE MY PREVIOUS SUGGESTION
FOR WHAT IT IS WORTH, CLEAR THE
MOUTH OF THE MISSISSIPPI RIVER OF
SAND BARS, AND KEEP IT CLEAR. THIS
SHOULD PERMIT A FREE FLOW OF
WATER AND KEEP THE WATER LEVEL
LOWER IN THE RIVER, AND IT WILL
CERTAINLY HELP SHIPPING.

AS I MENTIONED BEFORE
PREVENT RESTRICTION, DO NOT
CREATE ONE.

SINCERELY

Wilson Miramon
3243 BONFOUCA DR.
SLIDELL, LA. 70458

COPY TO LOCAL NEWSPAPERS



F A C S I M I L E

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160

IN REPLY REFER TO
LMNED-MP

6 June 1975

Mr. Wilson A. Miramon
3243 Bonfouca Drive
Slidell, LA 70438

Dear Mr. Miramon:

This is in response to your letters of 22 February 1975 and 2 April 1975, in which you requested some specific information concerning the Lake Pontchartrain, Louisiana and Vicinity hurricane protection project.

You have asked what will happen under hurricane conditions to the surge of water which you say will build up behind the dams, and if a resulting additional flood threat will be posed to Slidell and New Orleans East. I am unable to determine whether you refer to a buildup of water on the gulfside or the lakeside of the barrier so I will address both cases.

The fear of a buildup of water under hurricane conditions on the gulfside of the closed barrier has been voiced before. It seems largely based on the assumption that with the passes closed, the water will build up in Lake Borgne to a higher level than it would without the barriers in place and that this water will be forced over the US Highway 90 embankment and around the northern end of the barrier to produce greater flooding than would occur without the barriers in place. The hurricane generated stages in Lake Borgne are governed by many parameters such as wind velocity, wind duration, wind direction, water depth, and friction factors at the water surface as well as at the lake bottom. In addition to the above parameters, some form of resistance to flowing water must exist before there can be a buildup of water. In the case of Lake Borgne, this resistance is provided by the gently rising lake bottom, the land area between Lakes Borgne and Pontchartrain, and highway and railroad embankments. Under existing conditions a major hurricane will produce stages of 10 to 13 feet mean sea level (m.s.l.) in Lake Borgne. The water flowing into Lake Pontchartrain through Chef Menteur Pass and The Rigolets does not lower these stages (except in the immediate vicinity

EXHIBIT 72-4

F A C S I M I L E

LMNED-MP

6 June 1975

Mr. Wilson A. Miramon

of the passes where the water slopes toward Lake Pontchartrain) since any water leaving Lake Borgne is rapidly replaced by the infinite supply of water in the Gulf of Mexico. Likewise, closing Chef Menteur Pass and The Rigolets during a hurricane will not increase stages in Lake Borgne since the stages are governed by the parameters listed above and not by the passes.

Under existing conditions, without the barrier complexes, hurricane tidal water flows through the passes (Chef Menteur Pass and The Rigolets) and spreads along the lakeside of the US Highway 90 embankment flooding development in that area. For a hurricane which produces a stage greater than 9 feet above m.s.l. in Lake Borgne, overtopping of the US Highway 90 embankment occurs even without the barrier. This has been observed during recent hurricanes.

There will be no appreciable difference in the hurricane produced stages in Lake Borgne between the current situation without the barrier complexes in place and the future situation with the barrier structures in place and closed. The closure of the barrier structures will eliminate the flooding of the developments lakeside of the US Highway 90 embankment for hurricanes which produce a stage in Lake Borgne of less than 9 feet m.s.l. Additionally, the closure of the barrier structures will slightly reduce the flooding depth on the lakeside of the highway for those hurricanes which produce a stage in Lake Borgne greater than 9 feet m.s.l. because Lake Pontchartrain, to which all overtopping water flows, will be substantially lower than it would be without the barriers.

The fear of an increased flood threat within the lake resulting from a buildup of water against the lakeside of the barriers when the wind shift occurs, has also been previously voiced. It seems to be based on the assumption that with the barrier structures closed a hurricane may dump 12 to 14 inches of rain into Lake Pontchartrain and cause worse flooding than without the barriers. Our detailed studies included this possibility, and these studies have shown that the level of Lake Pontchartrain, exclusive of the effects of the hurricane winds on the lake, would rise to only 2.5 feet m.s.l. at worst with the barrier structures closed during a hurricane. This level includes rainfall over the lake, runoff from tributary streams and pumping stations, lake water already in the lake at the time of closure and the overtopping of the barrier. If the eye of the hurricane passes to the east of Lake Pontchartrain, lake water will tend to be blown toward the passes. Since the barrier structures will be closed to prevent gulf waters from entering the lake, then certainly the lake water cannot get out. The wind tide at the barrier structures when the wind shift occurs could build up to 7 to 8 feet m.s.l.

F A C S I M I L E

LMNED-MP

6 June 1975

Mr. Wilson A. Miramon

However, without the barrier structures, water from Lake Borgne and the Gulf of Mexico would flow into Lake Pontchartrain, and the resulting lake level would be from 5 to 9 feet m.s.l. instead of 2.5 feet m.s.l. with the barrier structures. The wind tide could be 11 to 13 feet m.s.l. when the wind shift occurs without the barrier structures instead of 7 to 8 feet m.s.l. with them. Moreover, without the barriers, the lake water still cannot exit Lake Pontchartrain when the wind shift occurs because the water level in Lake Borgne is always at least as high as that in Lake Pontchartrain during any hurricane. Because of this, the water in Lake Pontchartrain cannot get out until the hurricane is well past the area. This fact is documented in several reports, including those for Hurricanes Betsy and Camille.

The operation of the barrier structures under hurricane conditions and the wind shift will result in a lake surface level 4 to 5 feet lower than the lake surface level that would be produced by the same hurricane conditions without the barrier structures. This result is the whole basis for the barrier plan and is applicable at any location on the shore of Lake Pontchartrain.

We are attempting to design and implement the most economical project when all factors are considered, e.g., costs, benefits, and environmental matters. I assure you that I am doing and will continue to do all that I can to keep the cost of this project as low as possible. This includes cost conscious design commensurate with adequate study and testing and it also includes speedy construction of the project features before the construction costs rise even further. It should be noted that local property owners, through their levee boards and police juries, are paying for only about 30 percent of the project while taxpayers throughout the rest of the country are helping to protect them against hurricane disasters by paying for about 70 percent of the project. It should also be noted that the benefit/cost ratio of the project as of July 1974 is 12.6 to 1. That is, the benefits to be derived from the protection of the area from the ravages of hurricanes would amount to 12.6 times the cost of the project. As the cost of the project has risen since authorization, so have the benefits. This pattern can be expected to continue and the project will continue to be a good investment.

Certainly some delay and attending inconvenience to the public will result from the requirement to transit navigation structures in the barrier complexes. Our studies indicate that during normal weather conditions, lockage would be required at Seabrook for about 7 hours over each 24-hour period and at The Rigolets for about 5 hours per day for 15 days of each month. Free passage will be possible at Chef Menteur Pass at all times during normal weather conditions. Through proper coordination in an emergency situation, any normal navigational delay can be reduced to insignificance.

F A C S I M I L E

LMNED-MP

6 June 1975

Mr. Wilson A. Miramon

During the very early stages of planning on the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project, a hydraulic model investigation was conducted from January 1960 to June 1961 by the Waterways Experiment Station at Vicksburg, Mississippi to insure the adequacy of the size and location planned for the barrier structures in order that the natural tidal interchange between the lake and the gulf would be basically maintained. Conclusions from this investigation were that the construction of the barrier structures would have an insignificant effect on the natural tidal interchange between the lake and the gulf and that the lake levels would be increased an insignificant amount. Subsequent to this general investigation, when specific alternative locations for the structures were evaluated, it was determined that a different site for the Rigolets control structure would be more economical. To be certain that its proper operation will not be affected by the relocation, to reevaluate its environmental effects, and to reexamine in part the results of the previous investigation, a new model test of the Rigolets complex is currently being conducted. The structures which are eventually constructed will be hydraulically equivalent to the natural passes and will have an insignificant effect on the lake water level and the natural tidal interchange with the gulf.

Our studies indicate that the discharge from the Bonnet Carre spillway will increase the level of Lake Pontchartrain by about 0.7 foot without the barriers and 1.1 feet with the barriers. During the 1973 Mississippi River flood, the Bonnet Carre spillway was operated from 8 April through 21 June. The structure was fully open during the period 11 April through 31 May. The high stages recorded in the lake were caused primarily by the unusually strong (35 miles per hour) southeasterly winds which began on 15 April and continued through 24 April and by heavy rains which fell over the Lake Pontchartrain Basin on 16 and 17 April. The highest lake stage during the 1973 flood, 5.0 feet m.s.l., occurred on 18 April due to the effects of the winds and rain. When the period of high winds ended, the lake level began to fall and by 29 April had returned to a near normal stage of 1.7 feet m.s.l. (about 0.7 foot above the normal lake level). The Mississippi River did not crest at the Bonnet Carre spillway until 16 May. Large portions of Plaquemines, St. Bernard and Orleans Parishes and part of St. Tammany Parish were flooded by the tidal overflow induced by the southeasterly winds and the heavy rainfall and not by the operation of the Bonnet Carre spillway. Similar flooding due to the high winds and heavy rainfall also occurred on the west bank of the Mississippi River where river stages could have absolutely no effect on the flooding levels.

In reference to your suggestion concerning work at the mouth of the Mississippi River, we have a continuing dredging program there designed to keep the river open and safe for navigation and, consequently, as free as possible for flows into the Gulf of Mexico.

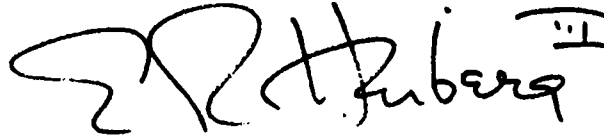
F A C S I M I L E

LMNED-MP
Mr. Wilson A. Miramon

6 June 1975

I hope the above discussion has served to clarify your questions concerning this project. If I may be of any further service, please call on me.

Sincerely yours,

A handwritten signature in black ink, appearing to read "E. R. Heiberg III". The signature is stylized with a large, sweeping initial "E" and "H".

E. R. HEIBERG III
Colonel, CE
District Engineer

3820 45th Street
Metairie, LA 70001
February 22, 1975

U. S. Army Corps of Engineers
New Orleans.
Louisiana

Gentlemen:

I am opposed to any type of lock system being constructed on or near Lake Ponchartrain.

Any attempt to regulate this lake would result in a disastrous ecological imbalance. Fishing and recreation would both be adversely affected. Our lake would eventually become a stagnant pool.

As a resident of Jefferson Parish and a member of the New Orleans Yacht Club, I rely on the lake for recreation. I do not wish to see it changed.

Regards,



R. M. Mirandona, Jr.

LITTLE WOODS LAKESIDE PROPERTY OWNERS ASSOCIATION

NEW ORLEANS, LA.

Office of the President
233 Broadway

March 10, 1975

Col. E. H. Heiberg III, District Engineer
U.S. Army Engineer District
District Headquarters - Foot of Prytania St.
New Orleans, La. 70118

Dear Col. Heiberg,

This letter is response to your request that organizations and individuals express their reactions to the Lake Barrier Plan as presented at the open meeting February 22, 1975 at the University of New Orleans; representatives of this organization were present at that meeting and wish to have this correspondence included in the public record in this matter which will then be available for distribution to interested parties as you set forth in your presentation.

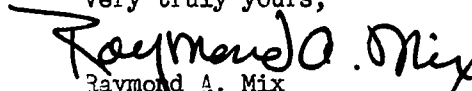
The Lake Barrier Plan as we understand it will close Little River and the Little Woods Canal when the proposed levee is constructed from Parish Road to South Point.

We point out that Little River is a natural waterway existant on the maps and patents of Maxent, Lafon, and Michaud dating from at least the year 1763. These documents, maps and patents, show that what is now called the Little Woods Canal is in fact part of the original bed of Little River.

We are here requesting that Little River not be closed where it enters Lake Ponchartrain and that the Little Woods Canal (formerly a part of Little River) remain a flowing natural stream for use as it is at present as a navigable waterway used for recreation, fishing, boating, and scenic pleasure.

We are also requesting that you acknowledge receipt of this letter and comment on the U.S. Corps of Engineers plan for Little River and the Little Woods Canal.

Very truly yours,


Raymond A. Mix
President

RAM:pc

CC: All parties and organizations concerned



F A C S I M I L E
DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160

IN REPLY REFER TO
LMNED-MP

6 May 1975

Mr. Raymond A. Mix
Little Woods Lakeside
Property Owners Association
233 Broadway
New Orleans, LA 70118

Dear Mr. Mix:

This is in response to your letter of 10 March 1975 in which you requested some information concerning Little River and the Little Woods Canal in conjunction with the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project.

The project feature to which your letter pertains is the New Orleans East Lakefront levee which is to be constructed along the shore of Lake Pontchartrain from Paris Road to South Point on the landside of the Southern Railroad embankment. This levee is not unique to the barrier plan but would also be constructed as a feature of the "high-level" plan had it, instead, been authorized by Congress. It is independent of the barrier complexes at Chef Menteur Pass, The Rigolets and Seabrook. The levee will be built on the site of the existing Little Woods Canal which will be relocated southward to the landside of the new levee to provide drainage to the area equivalent to that which now exists. The drainage structure at Little River will be eliminated and the relocated canal will tie into relocated culverts just south of South Point.

A levee alignment lakeside of the railroad embankment was investigated and found to be economically infeasible; thus, the use of the Little Woods Canal site for the construction of the levee is unavoidable. The Little River drainage structure has for several years ceased to function as such. Littoral drift and drainage siltation have made the structure ineffective; moreover, any new structure at that location would be plagued by the same problems and would soon cease to function properly. Adequate drainage will be provided by the relocated canal and the

F A C S I M I L E

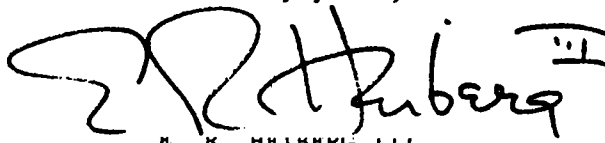
LMNED-MP
Mr. Raymond A. Mix

6 May 1975

relocated drainage structures at South Point. The relocated canal will also be available to you for recreational purposes such as the Little Woods Canal has in the past.

I hope that this discussion has helped to clarify the situation concerning the New Orleans East Lakefront levee. If I may be of any further assistance, please call on me.

Sincerely yours,

A handwritten signature in black ink, appearing to read "E. K. Heiberg III". The signature is stylized with large, sweeping loops and a distinct "III" at the end.

E. K. HEIBERG III
Colonel, CE
District Engineer

EXECUTIVE COMMITTEE
HAROLD P. HALTER
Chairman of the Board and
Chief Executive Officer
CECIL M. KEENEY
Secretary/Treasurer
JOHN D. McCUBBIN
President

BOARD OF DIRECTORS
DONALD BOLLINGER
LELAND BOWMAN
J. MELTON GARRETT
HAROLD P. HALTER
CECIL M. KEENEY
V. J. LEBLANC
ALAIN R. SELIGMAN

LOUISIANA SHIPBUILDING AND REPAIR ASSOCIATION

SUITE 2038 INTERNATIONAL TRADE MART • NEW ORLEANS, LOUISIANA 70130
TELEPHONE (504) 586-1155

February 21, 1975

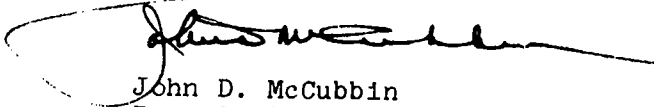
Colonel E. R. "Vald" Heiberg III
New Orleans District
U. S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160

Dear Colonel:

Attached you will find five copies for consideration with other statements presented at the hearing which you have scheduled for tomorrow. Please include this statement with the proceedings of that hearing.

It is hoped that the words of my preface are correct insofar as written (in lieu of verbal) statements are concerned.

Very sincerely yours,


John D. McCubbin
Rear Admiral
U.S. Coast Guard (Ret.)

JDMCC:vby

Attach. Copy of Louisiana Shipbuilding
and Repair Association Statement
dated February 22, 1975

EXHIBIT 75-1

STATEMENT PREPARED
BY JOHN D. MCCUBBIN FOR THE
SHIPBUILDING AND REPAIR ASSOCIATION
FOR THE
CORPS OF ENGINEERS, U.S.A.
HEARING ON THE

LAKE PONTCHARTRAIN, LOUISIANA AND

VICINITY HURRICANE PROTECTION

PROJECT

FEBRUARY 22, 1975

EXHIBIT 75-2

PREFACE

This is a written statement submitted in lieu of a verbal statement to the Corps of Engineers, U.S.A. to have equal weight with verbal statements, and to be included in such proceedings and considerations as may result from the hearing on February 22, 1975 on the subject of the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project.

STATEMENT FOR
HEARING ON THE
LAKE PONTCHARTRAIN, LOUISIANA
AND VICINITY HURRICANE
PROTECTION PROJECT

Colonel Heiberg, the Louisiana Shipbuilding and Repair Association, consisting of some twenty-eight members of the industry of the State of Louisiana, is pleased to be privileged to make a short statement, for your consideration on the occasion of subject hearings.

Of the foregoing members three and possibly four shipbuilding and repair companies are located on bayous about Lake Pontchartrain. All utilize one or more of the entrances or waterways to/from the lake in the testing and delivery of their products. It is understood that there are one or more industries at the east end of the lake which construct structures in excess of 110' in width for transit through The Rigolets. These companies build equipment with drafts from 10 feet to in excess of 20 feet.

Various techniques are currently employed to transfer these ships from the ways to deeper water in a somewhat less than satisfactory/desirable manner. At this time we believe

EXHIBIT 75-4

it is unwise to consider the "improvement" of the related waterways in such a fashion as to "wall out" future development of this valuable transportation resource.

Examples are myriad of projects thought to have been adequate for existing traffic and so designed, only to find them undersized and restrictive to a degree that adversely affects the economy of the areas about that/those project(s) in subsequent years.

To briefly summarize our position:

1. The Louisiana Shipbuilding and Repair

Association supports both waterway improvements which provide better opportunities for water commerce, and Hurricane Plans which protect that commerce, our citizens, our industries and our cities.

2. The Association is opposed to provisions

engineered for either purpose which would serve to reduce our current capability for commerce by reducing the dimensions of our waterways.

3. We would not wish to see a program proceed which

would limit future development of waterways or shoreside facilities unless there are no feasible and prudent alternatives, the program(s) is (are) essential and the need is immediate.

4. We specifically find the proposed sill heights

to be unnecessarily restrictive and potentially damaging to our future commerce.

The Association takes this opportunity to wish you every success in your efforts to build and sustain a strong, stable and productive America through waterway development and flood prevention programs.

John D. McCubbin

EDWARD J. McNAMARA
POST OFFICE BOX 61820
NEW ORLEANS, LOUISIANA 70160

February 25, 1975

Colonel E. R. Heiberg III
District Engineer
U. S. Army Engineer District
P. O. Box 60267
New Orleans, Louisiana 70160

Dear Colonel Heiberg:

At the public hearing on Saturday I originally requested to speak as a private citizen, then withdrew my request, stating I would submit a written statement.

For the record I think the presentation made by your staff was excellent.

I am a resident of Lake Terrace, New Orleans, and I live one block from the seawall that protects the city. You can see why I am a concerned individual.

I am a graduate civil engineer. I am responsible for all the engineering and research and development for the world's largest sulphur producer. Our major operations are located in the Gulf Coast area. In this respect we have been fighting hurricanes on the Gulf Coast for over 62 years of our existence. In addition we have had to design for hurricane forces and waves in our two offshore sulphur mines.

Similarly to that done by the U. S. Engineers, we have to design for the "project hurricane."

In all of the objections to the plan I listened to, all mentioned major storms which hit the coast of Louisiana and/or Texas. All the "experts" failed to mention these storms were west of the Mississippi River - "1915 Storm," "1947 Storm," "Flossie, Betsy and Carmen." None took enough trouble to recognize what would happen if a project hurricane ever came up the "slot" - the Chef and Rigolets area!

EXHIBIT 76-1

Colonel Heiberg

- 2 -

February 25, 1975

The question that has yet to be answered is - when will the environmentalists start evaluating "how many fish saved equals a human life?"

In conclusion, I am heartily in favor of the Barrier Plan as presented, and I endorse it in its entirety. As a taxpayer I expect to pay my part for flood protection. For much too long this country has expected someone else to pay the bill. I say we should all start paying our fair share now.

Sincerely,

A handwritten signature in cursive script that reads "E. J. McNamara". The signature is written in dark ink and is positioned to the right of the typed name "E. J. McNamara".

EJM/m

EXHIBIT 76-2



League of Women Voters of Louisiana

Municipal Auditorium -- Shreveport, Louisiana 71101

February 17, 1975

Col. V. Heiberg
U. S. Corps of Engineers
Foot of Prytania Street
New Orleans, La. 70130

Dear Colonel Heiberg:

The League of Women Voters of Louisiana, in accordance with its position of supporting unique aspects of the Louisiana wetlands, urges the Corps of Engineers to reconsider its proposed Lake Ponchartrain and Vicinity Hurricane Protection Plan.

Furthermore, in as much as this project has been rejected by the voters more than once, we feel it is an affront to the public to proceed with it.

We in the League of Women Voters have supported a sound Coastal Zone Management plan as recommended by the Louisiana Advisory Commission on Coastal and Marine Resources. We, therefore, suggest that before such a massive project as the proposed Hurricane Protection Plan be considered, that it be part of a total plan for the coastal zone.

The Louisiana Legislature no doubt will again consider coastal zone management legislation in the upcoming session. We hope a sound program will be passed in the not too distant future. Hence, any major activity in the coastal zone should await the passage and implementation of sound Coastal Zone Management.

Sincerely,

Doris McWilliams
President

DM/jbs
cc: Mrs. William Burt

EXHIBIT 77

COMMITTEE FOR PREVENTION OF DEATH AND DESTRUCTION IN ST. TAMMANY PARISH

March 20, 1975

Col. E. R. Heiberg
District Engineer
U. S. Army Corps of Engineers
Foot of Prytania Street
New Orleans, Louisiana

Dear Sir:

On March 19 our Committee mailed to you a copy of a petition with 553 attached signatures. We enclose another petition with 116 signatures, also opposing the so-called Lake Pontchartrain and Vicinity Hurricane Protection Plan.

We do hope that your decision will be in the "public interest."

Very truly yours,

Thelma M. Ouder

COMMITTEE FOR PREVENTION OF DEATH AND DESTRUCTION IN ST. TAMMANY PARISH
MRS. MARGARET DENDINGER, CHAIRMAN
MRS. THELMA M. OUDER, CO-CHAIRMAN
MRS. JUDY PLAEGER, CO-CHAIRMAN

To Be Filed in the Public Printed Record

EXHIBIT 78-1

To Be Filed in the Printed Public Record

The Commission would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Ponchartraine and vicinity. We feel the plan can only hurt the Lake and severely damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME	ADDRESS
Mr. H. D. DeLoach	Rt 1 Box 427 Slidell, La.
Albert Hymel	Slidell, La.
Ray D. Moore	209 NORMANDY DR. SLIDELL, LA.
Elaine Cutler	860 Oak St Slidell, La.
Virginia F. Benson	318 Robin Lane, Slidell, La.
Mrs. G. O. Currier	706 Maine Ave. Slidell, La.
Mrs. Robert Kirk	217 Normandy Slidell, La.
Mrs. Ethel Kavalaw	875 Box 84 Slidell, La.
Lola C. Mire	Rt. 2 Box 65 Pearl River, La.
Mr. Earl F. Fierde	607 Dale Dr. Slidell, La.
Mrs. Bruce Buelman	256 - Bluebird Slidell, La.
Mrs. Martha Rapoubel	756 House Blvd Slidell, La.
John Rapoubel	756 House Blvd Slidell, La.
Chick C. Hall	1599 E. Ridge Dr. Slidell, La.
Mrs. Harry D. Spence	1406 Business Dr. Slidell, La.
Verna Shaw	1321 - 8th St Slidell, La.
Walter P. Bandman	1421 5th St Slidell, La.
Howard P. Halls	301 Margon Ct Slidell, La.
Helene Seign	Rt 2 Box 374 Slidell, La.
E. P. Parrell, Jr.	1302 Sunset Dr. Slidell, La.
Patricien Miles	108 Rickford Slidell, La.
Ernest A. Booth	230 Hummingbird Slidell, La.
Mrs. Dolores Dennis	257 Bluebird Dr. Slidell, La.
Mrs. Mrs. D. L. Murray	384 Bulley Dr. Slidell, La.

To Be Filed in the Printed Public Record

We the undersigned would like to go on record as being opposed to the Corps of Engineers Maintenance Protection Plan for Lake Pontchartraine and vicinity. We feel the plan can only hurt the Lake and severely damage surrounding rivers and streams.

Since this proposed plan has been discussed at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME	ADDRESS
C. J. Apper	
Mrs. John H. Krueger	243 Caroline Lane Slidell
Mrs. Richard F. Howard	1624 Carly Dr. Slidell
Mrs. E. F. Brunson	607 LeFevre Dr., Slidell
Mrs. Oscar Jowers	1582 Fernwood Dr., Slidell
Mrs. John George	1510 Queens Dr. Slidell
C. R. Houze	1000 Rees Cartan
Carl Kappal	Rd. 6 Box 500 Slidell La
Anna C. Kappal	
Mrs. F. E. Furell	1099 St. Tammany Ave., Slidell, La.
Frank A. Foster	1099 St. Tammany Ave., Slidell, La.
Helene Foster	1079 9th. St. Slidell, La.
Daisy Foster	1308 Laurel Dr. Slidell, La.
Mrs. Ronald P. Quist	1308 Laurel Dr. Slidell, La.
Jim R. White	1308 Laurel Dr. Slidell, La.
Mrs. Steven A. Spence	1308 Laurel Dr. Slidell, La.
Mr & Mrs. Waters	1308 Laurel Dr. Slidell, La.
James B. Walsh	1055 Audubon St, Slidell, La.
Benjamin Russell Long and Senator J. Bennett Johnston	3288 Reine Ave, Slidell, La.
Senate Office Building Washington, D.C. 20510	P.O. Box 1021 Slidell, La.
	Rt 3 Box 524 Slidell
	P.O. Box 1224 Slidell, La. 70458
	1011 Belvidere Dr. Slidell, La.
	Governor Edwin Edwards Governor's Mansion Baton Rouge, Louisiana

Representative F. Edward Hebert, Rep. Otto Passman, Rep. Henson Moore,
Rep. Gillis Long, Rep. John Breaux
House of Representatives
Washington, D.C. 20515

PLEASE PLACE IN THE PUBLIC RECORD

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartrain and Vicinity. We feel that the plan can only hurt the Lake and gravely damage surrounding rivers and streams.

Since the Proposed Plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

NAME	ADDRESS
Laura L. Culley	1111 St Joseph St Slidell
Mrs Lucy J. Walsh	102 Hwy 99 Slidell
Dr R. M. Thorne	127 Laurent Slidell
Mrs. Philip P. Fox	2108 Park Dr.
Mrs John L. Galatas	RT 2 Box 348 Slidell La
Philip J. Galatas	RT 2 Box 348 Slidell La
Donald K. Wilcheck	Rd 4 Box 46 Slidell La
Marie Wilcheck	rt. 4, Box 46 Slidell, La.
C. P. Ouder	3277 Blanco St Slidell
Mrs. Dee Ouder	3277 Blanco St Slidell
Mrs Grace Loustalot	P.O. Box 304 Slidell La
Mrs. Gladys DeLaune	2769 Third St Slidell La
Mrs Barbara Holland	Slidell La.
Michael E. Haas	Slidell, La
Shigijy Chiqui Connet	Slidell, La
Steve Haas	Slidell, La
469 Hickory Dr.	Slidell, La
Odell McNeill	3154 Cay
Dot Rest	2550 Front St. Slidell, La
Leonard K. Rest	2550 Front St. Slidell, La
Mrs. Alma Harrison	Rt. 1 Box 635 - Slidell, La.
Alfred Harrison	Rt. 1 Box 635 - Slidell, La.
Margaret Bennett	P.O. Box 41 Pearl River La
Uella Tellion	Rt. 2, Box 165 - Pearl River, La.

Name	Address
John B. Ewing	256 Palm Springs Slidell, La.
Harold Kullman	1007 Belvedere Dr. Slidell, La.
Della Volz	Rt. 5 Box 411 Slidell, La.
Leroy McManis	Rt. 4 Box 285-A Slidell, La.
Bernadette L. McCallum	602 Maine Ave. Slidell, La.
Augustus Strahan	1546 Queen's Drive, Slidell, La.
Raymond	1361 Westlawn Dr Slidell
M. Gerald Jones	Robert Rount Slidell
Ruby Baudet	1361 W. Lavoie Dr Slidell
Carolyn Crockett	Rt 2 Box 666 Slidell La
Darlene H. Boe	Rt 5 Box 92, Slidell, La.
Mrs. Lemmy Jaciane	161 Laurant Rd Slidell La
Mrs. John L. Galatas	Rt 2 Box 348 Slidell La
Mrs. L M Roper	1154 Marie Stella Ave Slidell La
Mrs. Joe C. Varino	101 W. Jon Dr, Slidell, La
Mrs. Rosita M. Pasteret	1731 Old Spanish Tr, Slidell, La
Mr. A. E. Voyt Jr.	1042 Marie Stella Slidell La
Mrs. M. P. Landry	Rt 3, Box 330 Slidell, La.
Jeff Champagne	513 Port. Dr Apt. 5 Slidell, La.
Jimmie L. Jones	P.O. Box 181 Slidell, La
Jim LaMorge	Slidell, La.
Mrs. Vernon A. Rhoades	1037 St. Scholastica Dr. Slidell, La.
Katherine Desjardins	Rt 1 Box 74N Lacombe La
Mrs. C. Desjardins	Rt 1 Box 74N Lacombe La
Pat Noble	P.O. Box 77 Lush La
Russell Deogen	Slidell, La
Helen Martin	Slidell, La.
Mrs. Sue O'Keefe	Rt 2 Box 2N - Slidell, La.
V. F. Russell	2973 Camellia Slidell La
Charlotta Stovall	1070 Audubon St - Slidell
Wesley Smith	958 NINTH Slidell, La.
Mary Sanford	713W Hall Slidell, La.

John M. Olson Jr.	2990 Carey St.
Robert J. Shepherd III	156 50 Park Ave
Cheryl A. Shepherd	156 50 Park Ave
Jo Ellen Abney	2990 Carey St.
Charles E. Steele	Rt. # 4 Box 371 Slidell, La.
Evelyn Steele	Rt #4 Box 371 Slidell, La.
Martha J. Eriksen	Rt 2 Box 1166 Slidell, La.
Mrs. Roger E. Breland	Rt 5, Box 388 Slidell, La.
Roger O. Williams	1383 Westham Slidell, La.
Naomi N. Embrey	2046 Kent St Slidell La
Roger Breland	Rt 5, Box 388 Slidell
Mrs. M. W. Decker	Rt 4 Box 215 Slidell, La.
Mrs. J. K. Larsen	3612 Brookwood St.
_____	2128 Front
M. J. Johnson	2128 Front
Maurice Scogin Jendal	Lee Street, Slidell, La.
Lucy M. Zuker	2046 Kent St, Slidell, La.

March 31, 1975

(FOR THE OFFICIAL PRINTED PUBLIC RECORD)

WE, THE UNDERSIGNED, WISH TO GO ON RECORD AS BEING OPPOSED TO THE CORPS OF ENGINEERS PROJECT TO DAM THE RIGOLETS, CHEF AND SEABROOK PASSES IN LAKE PONTCHARTRAIN. IN AS MUCH AS THE PEOPLE OF THIS STATE HAVE VOTED THREE TIMES AGAINST THIS PROPOSED PROJECT WE BELIEVE CONGRESS SHOULD DE-AUTHORIZE THIS PROJECT, AND THE WISHES OF THE PEOPLE OF THIS STATE GRANTED.

Mr. Carl H. Cantrell	634 Citrus Slidell	
Mrs. W. F. Wallen	1458 Florida Ave., Slidell	
W. E. Mouton	373 Osbourne Slidell	
Barbara W. Hower	Rt 1 Box 258-D Slidell	
Margaret H. Johnson	635 Dale Dr.	Slidell, La.
Bruce J. Bulman	256 Bluebird Dr.	Slidell, La.
Susan Sue	3157 William Hill	Slidell, La.
Victor C. Gyles	452 Penn. Ave	" "
Dotty Immersitt	1285 Bethel St.	" "
H. M. Myers	1250 St. Tammany Ave	Slidell, La.
Edy Hargrave	Rt. 4, Box 285	Slidell, La.
Marion E. Crockett	Rt 2 Box 119	Slidell, La 70458
James L. ...	3706 ...	Slidell, La
Carrollera ...	1569 Eastwood Dr.	Slidell La.
Yvette ...	602 Regency Dr.	Slidell, La.
B. W. Smith	293 Bluebird Dr.	Slidell La.
Mr Michael D. Lawrence	123 Morrow dr	Slidell La.
Mrs. Stanley Dickson Sr.	Rt. 3 Box 3509	Slidell, La.
Mr Stanley Dickson Jr	Rt 3 Box 3508	Slidell La.
Mrs Shirley Morton	Rt 4 Box 406	Slidell La
Mrs Mary Shulif	Rt 4 Box 405	Slidell La
J. Crockett	604 TEDDY AVE	Slidell La.

Mr. J. G. Crockett Sr	1933 Fifth St	Slidell, La.
Mrs. Ann P. Addy	111 Richford Dr.	Slidell, La.
Mrs. Del. Heta. [unclear]	1353 Greenlawn	Slidell, La.
Philip [unclear]	P.O. Box 15	Slidell, La.
Bonnie B. Lunsell	206 Cho. An	Slidell, La.
Mrs. P. A. [unclear]	131 Penewood St.	" "
Mrs. Robert [unclear]	266 [unclear] St.	Slidell, La.
Mr. J. W. [unclear]	239 [unclear] St.	
Mrs. Jennie Abney Gant	Rt. 1 Box 120	Pearl River, La.
Mrs. H. J. Smith	Rt. 1 Box 111	Pearl River, La.
Wanda M. [unclear]	Rt. 6 Box 592	Slidell, La. 70458
William J. [unclear]	654 Dale Dr	Slidell
N. A. [unclear]	Rt. 1 Box 384	Slidell, La. 70458
Symon [unclear]	Rt. 1 Box 384	Slidell, La.
J. M. [unclear]	Rt. 1 Box 603	same La. 70458
N. A. Symon	Rt. 1 Box 394	Pearl River, La. 70452
Paul Symon	Rt. 1 Box 3931	" " " "

(39)

March 31, 1975

(FOR THE OFFICIAL PRINTED PUBLIC RECORD)

WE, THE UNDERSIGNED, WISH TO GO ON RECORD AS BEING OPPOSED TO THE CORPS OF ENGINEERS PROJECT R. DAM THE BIG LETS, CHEP AND SEABROOK PASSES IN LAKE MONTICELLO, TENN. IN AS MUCH AS THE PEOPLE OF THIS STATE HAVE VOTED THREE TIMES AGAINST THIS PROPOSED PROJECT WE BELIEVE CONGRESS SHOULD DE-AUTHORIZE THIS PROJECT, AND THE WISHES OF THE PEOPLE OF THIS STATE GRANTED.

J. McLean
 R. McLean
 Mrs. J. C. Chester
 Mrs. S. M. Swain
 Mrs. O. D. Martin
 Mary P. Phillips
 Nancy Sims
 Mrs. Henry L. Swain
 Mrs. John L. Smith
 C. J. Butler
 Ann Johnson
 Mrs. A. C. Brewster
 Mrs. Philip W. Wiper
 Mrs. L. C. Danforth
 Charles S. Hickey
 J. G. Strain

1104 Grand St. Shiloh, Ga. 30458
 377 St. James Pl. Shiloh, Ga. 30458
 Rt 2 Box 215 Shiloh, Ga.
 274 Pleasant Dr. Shiloh, Ga. 30458
 Rt 4 Box 406 Shiloh, Ga.
 Rt 4 Box 402 Shiloh, Ga.
 3702 Craydon Shiloh, Ga.
 200 Andrew Dr. Shiloh, Ga. 30458
 P.O. 1, Box 638-a Shiloh, Ga. 30458
 246 S. Wallingford Shiloh, Ga.
 Rt 3 Box 3381 Shiloh, Ga.
 Rt 4 Box 787-B Shiloh, Ga.
 Rt 4 Box 106 Shiloh, Ga.
 P.O. Box 815 Shiloh, Ga.
 263 Highland Shiloh, Ga.
 Rt 3 Box 3050 Shiloh, Ga.
 113 Manly Dr. Shiloh, Ga.
 30 Box 994 Shiloh, Ga.

W. M. Newman	3922 Croydon St.	Shedd, H.
Nancy Newman	" "	"
Betty Madant	216 N. Jay Ave.	Shedd, H.
Mrs. Sylvia Miller	Rt 2 Box 221	Shedd, H.
E. J. Haves, Jr.	126 Whitehall	Shedd, H.
7724 Jay Ave.	7724 Jay Ave.	Shedd, H.

March 31, 1975

(FOR THE OFFICIAL PRINTED PUBLIC RECORD)

WE, THE UNDERSIGNED, WISH TO GO ON RECORD AS BEING OPPOSED TO THE CORPS OF ENGINEERS PROJECT TO DAM THE RIGOLETS, CHEF AND SEABROOK PASSES IN LAKE PONCHARTRAIN. IN AS MUCH AS THE PEOPLE OF THIS STATE HAVE VOTED THREE TIMES AGAINST THIS PROPOSED PROJECT WE BELIEVE CONGRESS SHOULD DE-AUTHORIZE THIS PROJECT, AND THE WISHES OF THE PEOPLE OF THIS STATE BE HEARD.

Mrs. Norma Scogin Rt 3 Box 231, Slidell, La.
 Gerald Scogin Rt 3 Box 231, Slidell, La.
 Willie M. Parker P. O. Box 44 TALISHEEK, LA.
 Ruth Jenkins Rt. 4. Box 99 Slidell, La.
 W. Boy - P.O. Box 111 Slidell, La.
 Mrs. Frances Grier 220 Fla. Ave. Slidell, La.
 Mrs. Leonard Long 220 Fla. Ave. Slidell, La.
 Mrs. Alice Robinson Rt 2 Box 407 Slidell, La.
 Mr. Wm. Deebelman Rt 1 Box 213 Slidell, La.
 Wendell H. Crawford Rt 2 Box 155 Pearl River La.
 Mrs. Ruffy P. Crawford Rt 2 Box 155 Pearl River La.
 Jack H. Lewis Jr. Rt 1 Box 29-10 PEARL RIVER LA.
 Alcane LaBrie Rt 2 Box 246-B. R. R.
 Terrell E. Davis #13 Lym Park Pearl River, La.
 F. J. Crawford Rt 2 Box 495 Slidell, La.
 Joe Harris P. O. Box 563 Pearl River La
 B. Perkins Route # 2 Box # 155 Pearl River, La.
 Mrs. Mrs. Louis Pozza - P.O. Box 213 Slidell, La.
 Peare Hogan Rt 5 Box 325 Slidell, La.
 Kay Lewis Rt 2 Box 95 Slidell, La.
 Charles Bennett Gen. Del. Pearl River La.
 Steven D. Holt P.O. Box 148 Pearl River, La.

~~Pat Hannon~~ Rt 1 - Bush La
 David S. Hodge Jr.
 Barbara Szczepiacki Rt 2 Box 21 P.R. La 70452
 Marjorie Singletary Box 131 Pearl River La
 Edith J. J. Gen Del Pearl River La.
 Nancy J. J. Rt. 4 Box 10-J Covington, La.
 Lillian S. J. RT 4 Box 420D - Slidell - LA
 Sparkman J. J. 3844 Riviera Dr., Slidell, La
 C. J. J. RT 1 Box 168 Pearl River La
 Wesley W. Bangs RT 2 Box 208C Pearl River La
 P.E. Frazier Pearl River, La.
 Edward W. Avery Pearl River La.
 Kenneth W. Mitchell Pearl River La. RT 1 Box 84-m
 W. J. Hendrix Jr. Pearl River, La RT 1 Box 133
 Thomas L. Hill Pearl River, La RT 1 Box 220-n
 Gladys Smith Pearl River La. Gen. Del.
 M. P. Fogg Slidell La
 Charles Clark Pearl River RT 1 Box 197
 Owen Detwiler Pearl River RT 2 Box 218

Lorraine Clay Pearl River La Rt 1 Box 197
 Martin D. Heffner Pearl River La. Gr. D.L.
 Allan R. Decker Pearl River La. P.O. box 73
 Shirley Maken Pearl River La. P.O. Box 485
 Howard P. Sandford Pearl River La. P.O. BOX
 Lloyd Lewis Pearl River Rt 2 Box 29
 Linda McQueen Pearl River Rt 2 Box 191
 Elizabeth Sandford Pearl River P.O. Box 498 -
 Odie Sandford Pearl River La. P.O. Box 498
 John Benton Pearl River La. Rt 2 Box 9
 Nova Boyer Rt 2 Box 221 M, Pearl River, La.
 Milton Zechunly Alderman Pearl River La.
 Jo Ann Benton Rt. 2 Box 221 Pearl River, La.
 Lois Bowman Hickory
 Mrs. Milton Zechunly P.O. Drawer 10 Pearl River, La.
 Mrs. Gerald Moses Rt. 2 Box 42 Pearl River La.
 William Schultheis
 Pastor Epiph 124 Marche Blvd Slidell La
 Mrs. Robert Costello Rt 2 Box 210 Pearl River La
 Jerry Epiph 1100 Milton St Gretna La.
 Mrs. Ronald Stephen Box 425 Pearl River, La.
 Mrs. Patricia Spears Mrs. Denmark Spears
 Joseph C. Huff Rt 2 Box 38 Pearl River La 70452

10/17

Marc O'Connell Rt. 1, Box 358 Pearl River
William Lowley Rt 1 Box 326 Pearl River La.
Howard Mims Rt. 2 Box 47 Pearl River La.
E. J. Mason Rt 1 Box 325 Pearl River La

Earl
Jesse B Parker RT2 Box 209m PEARL RIVER
Les B. Baragona P.O. 402 Pearl River

Clifton Mobley P.O. Box 353 PEARL RIVER

Myke Smith 1624 East West Dr Slidell La

Shir Ballough PEARL RIVER

Jane Williams Rt 5 Box 151 Slidell La.
Robert A. Minton Rt. 2 Box 64^A Pearl River La.

Fred Cori Rt. I Box 52T Pearl River La

Dore E. Johnson Rt 2 #12 Lynn Park, Pearl River La.

Carolyn Johnson Rt. 2 #12 Lynn Park P.R. La.

Ben McReynolds Rt 1 Box 176 Pearl River La.

Debbie Manning P.O. Box 186 Pearl River La.

James J. Sengitary Rt 2 Box 214 Pearl River La

Donlee Sengitary Rt 1 Pearl River La

Mary Sengitary "

Walter Wilson^o Box 415 Pearl River La
 J. C. Spiers Rt. 2 Box 2715 Pearl River La.
 Davy J. Dant Rt 1 Box 120 Pearl River La.
 Richard Ellis Hwy 11 Pearl River La.
 Robert Tonton P.O. Box 335 Pearl River La.
 Jimmy Wigi vs Michelle DR Pearl River La.
 Ross S. Safford ~~Gen Del~~ Pearl River
 Cliff H. O'Neal Gen Del Pearl River La.
 R. L. Davis Rt 1 Pearl River, La.
 Nathan Jordan Rt 1 Pearl River, La.
 Douglas A Crawford Rt 1 Pearl River L.A.
 Bob Engstrom R 9 1 Pearl River L.A.
 Luther Williams Box 110 Pearl River L.A.
 Donald Howard Box 242 Pearl River, La.
 Jimmie Travis Box 373 Pearl River La.
 John B. Harford Jr. Pearl River La.
 Juanita Kennedy Rt. 2 Box 2 " " "
 John P. Singletary P.O. Box 225 Pearl River La.
 James M. Hollingsworth Rt-1 Box 218K Pearl River, La.
 George C. Singletary Rt 1. Box 4353K Pearl River, La.
 Marilyn Mason P.O. Box 543 Pearl River
 Alvin Roy 209 SCARLETT HAMMOCK LA
 Danell Webb P.O. Box 351 Pearl River, La. 70452
 A. S. Crawford Rt 1 Box 813 Pearl River, La 70452
 Jada A Bennett Jr. Rt 1 Box 119 Pearl River La 70452

James O. Probst Rt 1 Box 190 Pearl River La
 John Moore Rt 2 Box 312 Bogalusa La
 Daniel C. Caddak P.O. Box 222 Pearl River La.
 Dell Brister Gen. Del. Pearl River La
 Nedra Townsend, P.O. Box 157 Pearl River, La.
 James A. Auld P.O. Box 185 Pearl River La
 Patty Sims P.O. Box 250 Pearl River
 Ida Mal Harmon PO Box 302 P.R.
 Pauline Bennett P.O. Box 486 P.R. La.
 Harvey White Rt 1 Box 243
 Charlene Halfield Rt 2 Box 244
 Mike Lyle Rt. 4. Box 593
 Tommy Martindale Box 568, Pearl River La.
 Judy Smith Rt 2 Box 49 Pearl River, La.
 John Thomas Box 285B Pearl River
 Dan Wilson Rt 2 Box 260 w Pearl River
 W.C. Holcomb Box 285 Pearl River La
 D.A. Crawford Box 369 Pearl River La
 Jean Dunbar Rt 1 Box 401 Pearl River La
 Yvonne Lee R 2 Box 184 Pearl River La.
 Margy Moran Rt. 1 Box 305th Pearl River La.
 Willie Grimm Rt 2 Box 168 Pearl River La

Curtis S. Singletary Jr. Rt 2 Box 353M
Pearl River, La
Jerritt Parker
Rt B P.F.

Richard Crawford

Rt F Box 29M
Pearl River, La

Zabrina Ellison
Pearl River, La

Wayne Dillon
PEARL RIVER

Robert E. P. Jr
Rt 2 Box 184
PEARL RIVER LA.

Darel Anderson
Rt 2 Box 54W

Linda Davis
Rt 2 Box 4A
Pearl River, La

Mrs. Charles W. Brannon
Pearl River, La.

Karen McQueen
Rt 1 Box 46
Pearl River, La.

Bernice Kennedy
Rt 2 Box 234-m
Pearl River, La.

Sandra Martin
Rt 2 Box 64-A
Pearl River, La 70452

Lella & Herman Deems
Pearl River La 70452

Sam Jones
Mrs Gladie Moore

Rt Franco

Julie Jeffrey
Mr. Bobby Holliman
Mrs Bobby Holliman
R.R. 2 Box 47 R.R.

Peggy King
Allie McHenry
Pearl River, La.

Shirley Dean
Pearl River, La.

Clara Williams
Robert W. Harper
COT Army
Floyd T. Frierson P.R.

Denise Henne P.R.
Starling Crawford
Ada Crawford

Marcus Bennett
Earl Dyess
Danial G. Zukerly

Rt. 1, Box 365 Pearl River
Rt. 1 Box 135 M Pearl River, La

Jas

Jas James

Gerald Evans Pine St Pearl River

Almedia Whitehead Bush La.

Elmira J. Riedinger Bush La.

Mr & Mrs. Charles R. Holley

Doyle R. Crawford

Dennis Crawford Rt 2 Pearl River La

Leon Maddox

R. L. Davis Jr

Fred A. Park - Pearl River La.

Walter Johnson Covington, LA

Sorden Copeland P.O. Box 948 Slidell, La.
Eileen Hadge P.O. Box 443 Pearl River La.
Ellie McPherson Box 577 Pearl River La.
Mr. Ramon Faray RT 1 Box 114 F. PEARL RIVER La.
James McPherson P.O. Box 266 Pearl River
Arthur Matley RT 2 Box 325 Pearl River
Kathy Quarataro P.O. Box 537 Pearl River
George M. Wright RT 2 Box 43M Pearl River, LA
John F. Donaldson RT 4 Box 544 Slidell LA.
Raymond Bennett P.O. Box 86 Pearl River
Gris Burtch Rt 1, Box 83 Pearl River, La.
Pat Cuddick P.O. Box 431 Pearl River, La.
O. Crawford Pearl River, La.
Charles H. Wallace Pearl River
Gene R. Poppler P.R.
Daleen Neal P.O. Box 483 P.R.
Dorie + Smith P.O. 202 P.R.
Martha H. Woods Rt. 2, Box 199-c P.R. La.

Betty Haines P.O. Box 443 Pearl River La
Robert Lee Stillwell Po Box 197 Pearl River, La
M.M. Stillwell Gen. Del ~~Est~~ ^{Cognewton} La
Jack Cooper Gen Del Pearl River La.
J. F. Omet 5924 Lafayette MO
Wallace Caddock Pearl River, La

General Lumber & Supply Company, Inc.

1631 FRONT STREET • SLIDELL, LOUISIANA • PHONE 643-1620

March 18, 1975

Col., E. R. Heiberg, U.S.A.
Corps Of Engineers
Foot of Prytania Street
New Orleans, La. 70118

Dear Colonel Heiberg;

This letter is to voice my objections to the proposed portion of the hurricane barrier protection plan damming the Chef Menteur Pass and the Rigolets. The following reasons formed the basis of my objections:

1. The plan does not provide barrier protection for the Pearl River Estuary, allowing water to make an end run over U.S. Highway 90.
2. The shallow proposed will not allow free flow of water to and from Lake Pontchartrain and its Tributaries with the consequent disturbance to the ecology of the region.
3. The increased venturi affect by restricting the channeling of the Rigolets and Chef will impose impossible hazards on natural navigation.
4. The limited size of the proposed locks will damage the marine equipment industries on the North side of Lake Pontchartrain by restricting the size of equipment that can be built or repaired by them.
5. The proposed barriers will modify adversely the sporting and commercial fishing activities in Lake Pontchartrain and its Tributaries.
6. Additionally the proposed barriers will aggravate the pollution level of Lake Pontchartrain and its Tributaries by limiting the natural affect of tidal action.

I request that this letter be made a part of the fromal hearing on the Hurricane Barrier Protection Plan meeting held in New Orleans on February 22, 1975.

Respectfully,

E. B. Oulliber
E. B. Oulliber
Board Chairman

EBO/b
cc: Rep., Ed Scogin

EXHIBIT 80

W. L. Oulliber

REAL ESTATE APPRAISER

1631 Front Street
Slidell, Louisiana 70458

13 March 1975

Col., E. R. Heiberg, U.S.A.
Corps of Engineers
Foot of Prytania Street
New Orleans, La. 70118

Dear Colonel Heiberg;

This letter is to voice my objections to the proposed portion of the hurricane barrier protection plan damming the Chef Menteur Pass and the Rigolets. The following reasons formed the basis of my objections:

1. The plan does not provide barrier protection for the Pearl River Estuary, allowing water to make an end run over U. S. Highway 90.
2. The proposed shallow barrier will not allow free flow of water to and from Lake Pontchartrain and its Tributaries with the consequent disturbance to the ecology of the region.
3. The increased venturi affect caused by restricting the channeling of the Rigolets and Chef will impose impossible hazards on natural navigation.
4. The limited size of the proposed locks will damage the marine equipment industries on the North side of Lake Pontchartrain by restricting the size of equipment that can be built or repaired by them.
5. The proposed barriers will modify adversely the sporting and commercial fishing activities in Lake Pontchartrain and its Tributaries.
6. Additionally the proposed barriers will aggravate the pollution level of Lake Pontchartrain and its Tributaries by limiting the natural washing affect of tidal action.

I request that this letter be made a part of the formal hearing on the Hurricane Barrier Protection Plan meeting held in New Orleans on 22 February 1975.

Respectfully,

W. L. Oulliber, Appraiser
ASA, IFAS, RM

WLO/b

cc: Rep., Ed. Scogin

EXHIBIT 81

March 13, 1975

Alan Parker
719 Jefferson Park East
Jefferson, La. 70121

Colonel E. R. Heiberg III
New Orleans District
Corps of Engineers
P.O. Box 60267
New Orleans, La. 70160

Dear Sir:

I am opposed to the Hurricane Protection Project for Lake Pontchartrain as it is proposed. I feel that it would alter too much wetlands and allow for development on unstable soil. Too much of our wetlands are being destroyed as is. On the same grounds I am opposed to any alterations or "improvements" in or near the Atchafalaya Basin. Please make this letter a part of the public record. With all best wishes, I am,

sincerely,
Alan Parker

August Perez, III

March 3, 1975

Col. E. R. Heiberg
Department of the Army
Corps of Engineers
P. O. Box 60267
New Orleans, Louisiana 70160

Dear Col. Heiberg:

I oppose construction of the flood control structures at the Chef Menteur and the Rigolets. I have carefully reviewed information submitted by the Department of Army in its documents entitled "Announcement of Public Meeting" dated January 22, and at the Department's two meetings with the Venetian Isles Civic Association, and its public meeting at the Lakefront Airport. From these, I have concluded that the reason for construction of these structures is to make the now-unprotected lowlands located in the Lake Pontchartrain basin free from hurricane tides so that they can be used for future private development.

The fact that Lake Pontchartrain is a wide and relatively shallow lake makes the basin subject to extensive flooding from wind-driven rising water. This factor was not taken into consideration when the levee system was originally designed and built for New Orleans.

EXHIBIT 83-1

August Perez, III

-2-

The Corps of Engineers has, through studies, now determined that the present New Orleans hurricane protection system design is subject to failure under certain very remote conditions (so remote that one cannot calculate the chance of it happening).

They have evaluated several programs to ensure that the unsafe condition does not happen. Two of these that the report says "will do the job" are worth consideration - "The Barrier Plan" and "The High Level Plan".

The recommended "Barrier Plan" conceptually is to maintain absolute control over Lake Pontchartrain tides through the mechanical means of the Chef and Rigolets locks, therefore preventing the possibility of the lake tide rising high enough so that the dangerous potential failure condition could develop. This plan would cost \$327,000,000.

The alternate "High Level" plan is in two major sections: The first section simply raises existing levees to accomplish the same effective protective objectives of preventing the Lake from overflowing into New Orleans. This portion would cost only \$100,000,000. which is \$200,000,000. less than the "Barrier Plan."

The second section, though, would cost much more. It proposes building a levee around the entire Lake Pontchartrain basin.

August Perez, III

-3-

I agree we must protect the people who are now living within the levee. We are committed to do this; but the undeveloped unprotected present swamp lands in the Lake Pontchartrain basin should stay in their natural desirable state.

The few people presently living in these low lands are now, and have always been aware of the risks and the exposure to flood waters (incidentally, I am one of these). New persons who would be moving into these areas would also be knowledgeable of these same facts. There are certain construction techniques and safety precautions that can be taken to reduce their losses during these very highly unusual times, but most important, the basin itself would maintain its present natural integrity which is the very reason they are attracted to it.

In the past our society, in its progressive engineering and advance industrialization, has implemented two programs which have greatly affected the natural Pontchartrain basin. One is the construction of the levees on the Mississippi River. This has prevented the river from naturally overflowing into the Lake, thereby substantially affecting the lake ecology.

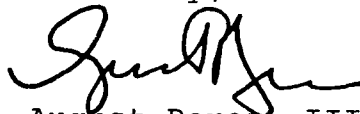
August Perez, III

-4-

Second, the construction of the Gulf Outlet. This has removed the natural marsh barriers and the Gulf tide flows directly into the lake, greatly affecting its salinity. These projects were designed and implemented for good reasons but without consideration to the effects on the Lake Pontchartrain basin, good or bad. Both were rightly done in the name of safety and economics, but, somewhere we must stop!

I ask reconsideration of the recommended structure program and implement a portion of the Corps of Engineers "High Level" plan at this time, raising the existing levees to protect the people that we are already committed to, save \$200,000,000., and, most of all, do not take the risk of destroying the Lake Pontchartrain basin in the name of, and I quote from the report itself, "urbanization of the project area".

Sincerely,



August Perez, III

AP, III:jba
enclosure

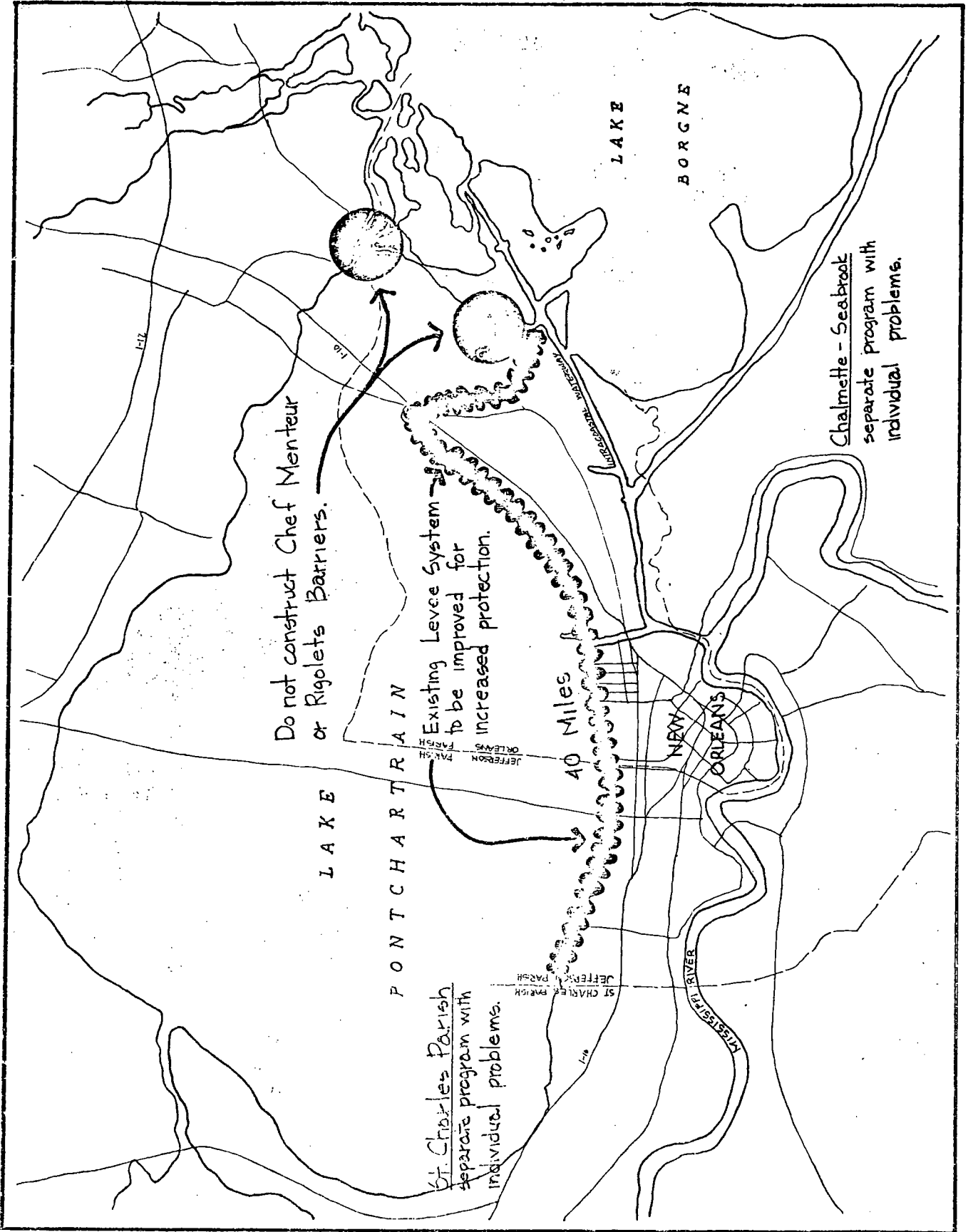


EXHIBIT 83-5

LaPlace, Louisiana
March 19, 1975

U.S. Army Corp. of Engineers
P. O. Box 60267
New Orleans, Louisiana 70160

Attention: LM NED MP

RE: Statement on Lake Pontchartrain
and Vicinity Hurricane Protection
Project

Gentlemen:

Enclosed is a statement which I am requesting that you include in the records of the meeting of February 22, 1975 on the reference public project.

I was present at the meeting and it was my intention to present an oral statement. However, because of the limited time allocated for statements from the general public, I decided instead to submit my statement in writing in accordance with the instructions given at the meeting.

Very truly yours,

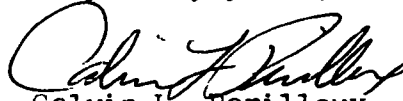

Calvin L. Perilloux

EXHIBIT 84-1

STATEMENT ON HURRICANE PROTECTION PROJECT,
LAKE PONTCHARTRAIN AND VICINITY

WEST SIDE OF LAKE PONTCHARTRAIN

BY: Calvin L. Perilloux, P. O. Box 389, LaPlace, La. 70068
Representing Property Owners and Residents of the Hammond
Highway (Hwy. 51) Area of LaPlace, Louisiana.

Even though past hurricanes, including Hurricane Betsy and the 1915 Hurricane, have never inundated residential areas of LaPlace, Louisiana, conditions are so altered that the project design hurricane now would, in all probability, flood many homes with possible loss of life.

The hurricane of 1915 is generally recognized by the older inhabitants as the storm which, in their memory, raised the highest waters, even though they readily acknowledge that the winds of Hurricane Betsy were of higher velocity. Descriptions of flooded fields in 1915 indicate that the flood waters reached the 7 or 8 foot mean sea level contour at LaPlace, Louisiana, whereas there is ample testimony to show that the waters of Hurricane Betsy only reached the five foot to five and one-half foot contour.

In 1915 there was no one residing ^{at LaPlace} below the eight foot contour except trappers and loggers in the swamp. Frenier, on the lake front, was completely destroyed by the storm that year with heavy loss of life.

Today there are many homes in the LaPlace area on land less than eight feet above sea level. Several large subdivisions are rapidly expanding on lands which are as low as the four foot contour.

The Corps of Engineers have acknowledged that the project design hurricane would drive waters up to the eight foot contour at LaPlace. What is there in the plans of the Corps to protect the LaPlace area? The barrier plan if approved will undoubtedly reduce hurricane tides considerably but will this alone protect us? In view of other developments and planned developments we believe that even if the barrier plan is approved we still will be subject to flooding. Let us look at these developments.

First, there is the newly created spoils bank along the route of the elevated Highway I-55 from the LaPlace area to Pass Manchac. This bank which is very broad and in places reaching a height of 10 feet above sea level, will in the event of hurricane tides obstruct the flow of water into the St. John Parish swamps and across the thin isthmus and into Lake Maurepas for dispersion into the swamps. There are cuts in this bank but they are designed for normal rain and tidal movement. As the hurricane approaches this area the northeast frontal winds would pile water along this new spoils bank. A look at a map will clearly show that the waters would be very efficiently funneled to the LaPlace area where the bank terminates a short distance north of Highway I-10.

Second, there is the planned St. Charles Parish Lakefront levee which would further prevent the dispersion of flood waters over a swamp area and also very effectively funnel the water raised by the hurricane's low pressure center into the unprotected LaPlace area as the storm center moved from east to west.

We believe that the solution to our flooding problem would be a barrier (or levee) in the wooded area one mile from the lakefront running from the Bonnet Carre Spillway to the I-10 spoils bank. This levee, about 3 miles long, could be built on the existing topsoil which at a distance of one mile from the lakefront contains very little organic matter and would provide an adequate base. The land is generally two or three feet above sea level, therefore the added levee height need not be more than seven or eight feet to protect against 10 foot tides at the levee. The earth for this levee could be silt deposits available nearby in the Bonne Carre Spillway. Silt is usable on this on this levee since it would not be subject to erosion from wave action.

This levee would not alter the ecology of the area. The existing rain water drainage pattern could remain as it now is. There is no tidal action in the area of the proposed levee except during storms. Therefore, it would not alter the ecology of Lake Pontchartrain.

The combination of good soil conditions and ready availability of free silt from the Bonne Carre Spillway would make construction of this three mile segment of levee feasible at a fraction of the cost of a lake shore levee.

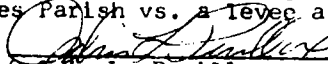
Perhaps such a levee along with the barrier plan would adequately protect the LaPlace area from storm flooding even with the construction of the lakeshore levee in St. Charles Parish. But in all honesty, is there really a need for a lakeshore levee in St. Charles Parish? How can its cost be justified? The residential area which in the past has been subject to flooding, lies 5 miles from Lake Pontchartrain.

What is the economic justification of a large and expensive lake front levee which must take the full height and fury of enormous hurricane waves, when a much smaller inland levee could be built to contain the waters after wave action and tidal height has been dampened and subdued by five miles of marsh and wooded swamplands? Is there any economic reason why a levee with a crown height of 8 or 10 feet above sea level could not be built along the north side of Highway 61? This levee, like the above proposed levee for the LaPlace area could be built of silt from the Bonne Carre Spillway upon the old spoils bank north of the highway canal. Such a levee should prove more than adequate to ward off flooding from all residential areas for the duration of the hurricane.

If the reason for a levee in St. Charles Parish is to protect its residents from flooding, then it should be constructed where it can do the job required at the lowest cost, which, undoubtedly, would be along Highway 61.

If the reason for the levee is to protect against flooding and to provide more dry land for the growth of the parish the same levee along highway 61 with an unproved sub-base could be utilized to drain an area which would be four times larger than that now being used in East St. Charles Parish for residential, commercial or industrial purposes combined. Such an area would provide growth space far beyond the year 2000 at the present rate of growth. Also, a levee so located would not appreciably alter the ecology of Lake Pontchartrain. Why should we pay now and into the indefinite future to drain land for which there is no foreseeable need?

In summary, we question the effectiveness of the barrier plan in providing flood protection to the LaPlace area, especially if a levee is built at the lake shore in St. Charles Parish. We propose that a study be made to determine the need for protection for the LaPlace area. We suggest that a levee be considered to plug the throat of the funnel created by the spoils bank of I-10 and the St. Charles Parish levee, and we question the economic justification of a lake shore levee in St. Charles Parish vs. a levee along Highway 61.


Calvin L. Perilloux
P. O. Box 389
LaPlace, La. 70068

HMK

RESOLUTION
R-75-26

CITY HALL: FEBRUARY 20, 1975

BY: COUNCILMAN LAMBERT

SECONDED BY: COUNCILMAN CIACCIO

WHEREAS, the Council of the City of New Orleans and the citizens of New Orleans recognize the necessity of providing adequate hurricane flood protection; and

WHEREAS, the U. S. Army Corps of Engineers has developed a hurricane flood protection plan as part of the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project; and

WHEREAS, this plan would employ a "barrier concept" of protection which would control water level increases in Lake Pontchartrain when a hurricane threatens New Orleans and the surrounding areas; and

WHEREAS, the Council believes that implementation of such a plan would virtually insure New Orleans residents against the major flooding to which we are so vulnerable at the present time; now, therefore

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF NEW ORLEANS, that the Council endorses the Hurricane Flood Protection Plan recommended by the U. S. Army Corps of Engineers.

THE FOREGOING RESOLUTION WAS READ IN FULL, THE ROLL WAS CALLED ON THE ADOPTION THEREOF AND RESULTED AS FOLLOWS:

YEAS: Ciaccio, Davis, DiRosa, Dupuy, Friedler, Lambert - 6

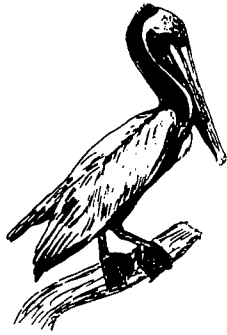
NAYS: Moreau - 1

ABSENT: 0

AND THE RESOLUTION WAS ADOPTED.

CRS-75-120
sdl

THE FOREGOING IS CERTIFIED TO
BE A TRUE AND CORRECT COPY.
Joseph H. Watson
CLERK OF COUNCIL
CITY OF NEW ORLEANS



SIERRA CLUB, DELTA CHAPTER

922 Octavia Street
New Orleans, Louisiana

February 24, 1975

Col. E.R. Heiberg
District Engineer
New Orleans Corps of Engineers
P.O. Box 67267
New Orleans, Louisiana 70160


Dear Col. Heiberg:

I attended the Lake Pontchartrain Hurricane Protection hearing of February 22, 1975. I want to take this opportunity to congratulate you on an excellent meeting. I thought the Corps presentation was succinct, interesting and to the point. The time relationships and the balance allowing both people for and against the project was handled excellently. From a personal standpoint, I think that you handled yourself in a very professional manner, despite the many critics of the program that were speaking.

Let me again say that there is room for an honest disagreement in principle between various facts in studying this complex plan. Sometimes, comments become heated and individuals become excited. I am sure that there is no personal animosity between the opponents of the Hurricane Protection Plan and yourself. I am personally convinced that you are conducting the matter in a most professional, honest and intelligent fashion. I feel deeply convinced that through such hearings of controversy, a plan will immerge which will both protect the already occupied areas under consideration, without permanently injuring Lake Pontchartrain estuary system.

Enclosed you will find a brief personal statement which I would like to have entered onto the records of the hearing.

Yours truly,


STUART I. PHILLIPS,
Editor *Delta Sierran*

SIP/al
enc:



EXHIBIT 86-1

February 24, 1975

To: The Department of the Army, District Corps of Engineers

From: Stuart I. Phillips

The subject statement to be entered into the record of the February 22, 1975 hearing on the Hurricane Protection Plan for Lake Pontchartrain:

As an individual deeply interested in the Lake Pontchartrain estuary system and a lifelong resident of this area who has enjoyed both the fruits from the Lake and the recreation on the Lake during my lifetime, I am very interested in maintaining the health and productivity of the Lake Pontchartrain estuary system.

I have a specific critique of the environmental impact statement as submitted. It seem to me unreasonable to include in the cost benefit ratio the value of development of wetland into residential area while not including in the same impact statement the value of the wetland before being destroyed in regard to production of harvestable marine organisms, and the intangible benefit of recreation for the community. I strongly recommend that the value of these wetlands for both food production and recreation be computed and that their value be entered into the computation and figuring the cost benefit ratio.

Expertise is available in the scientific community in the New Orleans area to determine with a fair degree of percision, the value of these wetlands. There is a program at the University of New Orleans and Louisiana State University that has people who can determine these values. These values should be added to the negative impact of the study before any final costs of benefit ratio is arrived at.

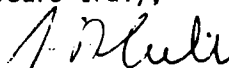
I also think it is imperative to arrive at an idea of cost of maintenance of the communities developed on the low-lying sites. From a personal observation standpoint, it has become obvious to me that there is a continued requirement to expend funds for both filling the site as land subsidence occurs and for building up levees when subsidence of the levees occurs. This expenditure is estimatable and an estimate of it should be placed into the cost benefit ration studies.

Without these figures added to the present statistics, the present statistics are meaningless.

After such computations have been made, I would be very pleased if a copy of them could be forwarded to me.

If further information is desired along these lines, I would be glad to reply.

Yours truly,



STUART I. PHILLIPS

SIP/al

EXHIBIT 86-2 922 Octavia St. New Orleans, La 70115

F A C S I M I L E

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160



IN REPLY REFER TO
LMNED-MP

14 April 1975

Mr. Stuart I. Phillips
Editor, Delta Sierra
922 Octavia Street
New Orleans, LA 70115

Dear Mr. Phillips:

This is in response to the statement inclosed with your 24 February 1975 letter relative to the 22 February 1975 public meeting on the Lake Pontchartrain, Louisiana, and Vicinity hurricane protection project.

We agree that the consequences of water resources proposals should be quantified to the maximum practicable extent, and that all consequences subject to expression in market-value terms should be included in benefit/cost analysis. The difficulty in the real world is that not all consequences are quantifiable and not all of those which are, are capable of expression in market-value terms.

Benefit/cost analysis is one tool for evaluating investment proposals. As currently practiced, it is concerned only with market-value data, even though in some cases the derivation of market-value may be indirect and complex.

Unless input data can be related rationally to market-value, its inclusion in benefit/cost analysis implies such a distortion in that analysis as to render it invalid. This is not to say that information not expressible in market-value terms is without influence in investment decisions, but rather that its influence must be exerted through mechanisms other than benefit/cost analysis.

We are aware of the considerable work done by various investigators in attempting to assign dollar values to what are usually referred to as "societal" capabilities of marshlands. Such values are not inherent in the market-value of marshlands, which is a reflection of transactions between interested buyers and willing sellers. We are also aware of the

F A C S I M I L E

LMNED-MP

14 April 1975

Mr. Stuart I. Phillips

wide range of societal values suggested by various investigators. The lack of general acceptance of the values, and the fact that they do not relate to market-value, currently forecloses their use in benefit/cost analysis. As alluded to previously, this is not to say that they are without influence in the decisionmaking process. The concepts are valuable in providing the multi-faceted insights which any decision-maker must have to exercise rational choice.

In the project in question, both environmental losses and environmental gains will be realized. These have been described in the environmental statement in physical terms. The previous conclusion has been that, with the possible exception of the St. Charles Parish levee, the environmental consequences of the project will, on balance, be favorable. However, I will await my final study of all responses to the February 22nd meeting/hearing before making any recommendations on the disposition of the project.

The benefit/cost analysis for Federal water resources development projects is intended to compare costs necessary to implement the project in question with the national monetary benefits that the project will provide. Where project benefits include an increment which can only be realized through investments over and above those for project implementation, such costs are included in the benefit/cost analysis. In the Lake Pontchartrain, La., and Vicinity project, however, there are no such benefits. There are included what are termed "land enhancement" benefits, which reflect a palpable increase in the value of certain lands as a result of the removal of the hurricane threat. The computation of such benefits was done by preparing estimates, from analysis of actual land sales, of land values with and without the project. This procedure implicitly, but not explicitly, takes into account the costs of development of enhanced lands after the hurricane threat is removed, since the value of enhancement will vary with the difficulty that developing the lands involves. Explicit balancing of costs and benefits of development is accomplished by those who weigh the pros and cons of development and decide on the investments involved.

I hope the above discussion helps to clarify the economics of this project. If I may be of any future service, please call on me.

Sincerely yours,



E. R. HEIBERG III
Colonel, CE
District Engineer

To: Col. E.R. Heiberg ¹⁷¹

FEB. 19, 1975

This letter was sent to me with
a request that it be entered into the
record.

Earl J. Wagner Jr.
2/22/75

Mr. Earl J. Wagner
7252 Lakeshore dr.
New Orleans, La. 70124

Dear Mr. Wagner:

I read the article in the St. Bernard Paper and also went over the material which you were so kind to send me referring to the meeting you are holding on Saturday, Feb. 21, 1975. I am a very interested party, not only for my safety as a ninth ward resident for the past fifty-four years, but for the safety of my children, grandchildren, and great grandchildren, who all reside in the unprotected parishes of St. Bernard. Nothing would make me happier than to be able to attend this important meeting and voice my free opinion. However, because of illness, this is impossible. If anyone could possible present my letter when public opinions are being heard, it would be very deeply appreciated.

I will open by saying that since Betsy hit in 1965, I have been passed from one official to another, including the President of the United States; writing and rewriting my letters, newspaper articles, etc., all which I have kept are at anyone's disposal. Everyone stresses their interest, but no actions! Perhaps there will be some in this audience with the experience I have had, people who have lived in the area all of their lives and experienced previous hurricanes.

A statement in the St. Bernard Paper stated that Lake Pontchartrain could be compared to a saucer of water, I must disagree. Lake Pontchartrain is twice the depth of Lake Borgne. It carries an average depth of 15 to 17 feet of water on it's north side. On the western side, shells have been dredged for the past forty years from the lake; near Pass Manchac which runs into Lake Maurepas, causing a large depth in this area also. My knowledge is due to sixty years fishing experience on the lake and it's surrounding areas.

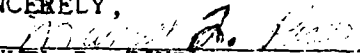
My Proposal is:

1. Decrease instead of close as presently proposed the Chef Pass, Rigolets and Chef to half their present width. The water can still flow in and out of the lake thus preventing complete polution of the lake, (which would occur if closed off) but the flow would not be forceful enough to do severe damage (if half closed) to the flood areas. Also if these passes are completely closed, the water will have only one way to flow; up the Industrial canal, from the north side of the lake by way of the Intracostal Waterway and from the south side by way of the Gulf Channel Outlet.

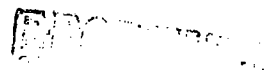
2. Place a lock at the Intracostal Canal between Paris Road and the Industrial Canal. The water will stop before reaching the ninth ward and city of New Orleans.
3. Put a levee on the east side of the lock, (like the one built by the engineers of the government around the Michoud Plant) 20 to 25 feet high along Paris Road 3 miles long extending from the Intracostal Canal to the Forty Arpent Canal.
4. Place a flood gate at Bayou Bienvenue to allow city water to drain outside this levee.

The four suggestions I have listed would cost a small portion of what is proposed and would take much less time to complete, thus allowing sooner protection to the people. I am sure this proposal is not flawless, but no plan is. I will be very happy to speak with any interested party and share my knowledge. Please contact me at WH-5-2857.

SINCERELY,


MANUEL B. PINTO

MANUEL B. PINTO
3113 BURGUNDY ST.
NEW ORLEANS, LA. 70117



FLD

DEPARTMENT OF THE ARMY
NEW ORLEANS, LA.

February 27, 1975

Dear Sir:

I am only a housewife but I am a registered voter and I was always taught that when something failed at the polls, that it was dead, forgotten. Now I am being told that that isn't necessarily true. That if the majority of the people vote against something, it might become law anyway.

I am referring to the three elections that were held on the Corps of Engineers Proposed Barrier Plan. Three times the plan has been defeated by the people. How many more times do we have to say no before we're heard?

If their idea is to set a precedent, then this country is in trouble. From now on the losers will be elected to office and the winners will have to "wait till next year", and you would not have the job you have right now. The man you won to would have it. That is not the kind of democracy this country was founded on. Unless we have completely misread history.

I hope you understand what I am trying to say. I am against the Proposed Barrier Plan because the majority of the people have proven they are against it.

My husband and I attended the public hearing Saturday, February 22. Not one time did we hear the Corps admit that the plan had been defeated. Has anyone bothered to tell them?

Yours truly,
Mrs. Alvin A. Plaeger
Route 1 Box 443-R
Slidell, Louisiana 70458

P. S. PLEASE PLACE THIS LETTER IN THE PUBLIC RECORD.

Appraisal Associates
REAL ESTATE APPRAISERS

1631 FRONT ST. SLIDELL, LA. 70498

PHONE (504) 643-1620

March 18, 1975

Col., E. R. Heiberg, U.S.A.
Corps of Engineers
Foot of Prytania Street
New Orleans, La. 70118

Dear Colonel Heiberg;

This letter is to voice my objections to the proposed portion of the hurricane barrier protection plan damming the Chef Menteur Pass and the Rigolets. The following reasons formed the basis of my objections:

1. The plan does not provide barrier protection for the Pearl River Estuary, allowing water to make an end run over U. S. Highway 90.
2. The shallow proposed barrier will not allow free flow of water to and from Lake Pontchartrain and its Tributaries with the consequent disturbance to the ecology of the region.
3. The increased venturi affect caused by the restricting of the channeling of the Rigolets and Chef will im-possible hazards on natural navigation.
4. The limited size of the proposed locks will damage the marine equipment industries on the North side of Lake Pontchartrain by restricting the size of equipment that can be built or repaired by them.
5. The proposed barriers will modify adversely the sport-ing and commercial fishing activities in Lake Pontchar-train and its Tributaries.
6. Additionally the proposed barriers will aggravate the pollution level of Lake Pontchartrain and its Tributaries by limiting the natural affect of tidal action.

I request that this letter be amde a part of the formal hearing on the Hurricane Barrier Protection Plan meeting Held in New Orleans on February 22, 1975.

Respectfully,


Jack W. Powell

JWP/b
cc: Rep., Ed Scogin

Feb 22, 75

Dept. of Army
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, La 70160

Gentlemen

Until the U.S. Army Corps of Engineers can modify the present Hurricane protection plan to provide equal assurance of safety to the residents of St. Tammany parish, I strongly oppose the implementation of the existing Lake Portchartrain and Vicinity Hurricane Protection Plan.

Sincerely,

Leon H. Richmond
106 Legendre Dr
Slidell, La 70458

Post Office Box 605
(2525 Lakeshore Dr.)
Mandeville, La. 70448
April 2, 1975

Colonel E. R. Heiberg III
U. S. Army Corps of Engineers
Office of the District Engineer
U. S. Army Engineer District
New Orleans, P O Box 60267
New Orleans, La. 70160

Subject: Opposition to the
Lake Pontchartrain & Vicinity
Hurricane Protection Project

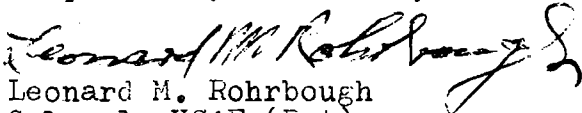
Sir:

I join the large numbers of persons who are staunchly against the subject project. This issue has been dealt with several times. Always the people are against it. These repeated hearings convinces me that the Corps does not accept the will of the people but will keep bringing the subject up, hoping that some time fatigue will make them fail to respond.

My property is on the lake front in Mandeville. The house has stood there for about 150 years. This has a reasonable influence on the evaluation of the 100 years theoretical storm. The property has been in the family for 65 of those years.

The town does need a seawall to prevent storm and ordinary erosion. Use a percent of the money for that and you will gain approval.

Respectfully submitted,


Leonard M. Rohrbough
Colonel, USAF (Ret)



MOORE STEEL *Incorporated*

400 THALIA ST.

OFFICE & WAREHOUSES
P. O. BOX 51388
New Orleans, La. 70151
A.C. 504-524-3171

March 10, 1975

Department of the Army
Corps of Engineers
P. O. Box 60267
New Orleans, La. 70160

Ref: Flood Control Project
Hearing held on 22 Feb. 1975

Gentlemen:

We would appreciate this letter being made a part of the referenced hearing. We are apposed to the proposed flood control structures for the following reasons:

1. - The reduction of the rogoletts and chief passes will tend to cause the polution level in the lake to rise due to the restriction of the flow.
2. - Will increase the navigation hazards.

Sincerely,

A handwritten signature in cursive script, appearing to read 'John St. Paul III'.

MOORE STEEL, INC.
John St. Paul III

JSP/lk

February 28, 1975

Dear Col. Heiberg:

I am opposed to the damming of the Rigolets Pass because it could endanger life and property in the surrounding areas. The project could cause environmental harm to the marsh, and, in the distant future, it may cause Lake Pontchartrain to stagnate. The southern part of St. Tammany Parish could be flooded if a hurricane passed over the general area.

A suitable alternative would be to adopt the high-levee plan.

Please enter this letter in the public record.

Respectfully yours,

Carlyle J. Logan, Jr.

Col. E. R. Heiberg
District Engineer
Corps of Engineers
P. O. Box 60267
New Orleans, Louisiana 70160

EXHIBIT 93

February 18, 1975

Editor
Daily Sentry News
Pontchartrain Drive
Slidell, Louisiana 70458

Dear Sir:

I read again in the Daily Sentry News about the so-called Hurricane Protection Plan that keeps popping up in the papers.

I am really confused. I don't know if we are living in a democratic country or not. If we are, then why in the name of justice doesn't the U. S. Army Corps of Engineers just go home, or at least do as they are asked to do. I think the people have expressed their opinion on this so-called Must by the Corps, as far as the people are concerned. I would have Col. Heiberg understand that we voted on this issue three times before and we still have it with us. It seems to me that Col. Heiberg is the one that is "not very well informed", or else he chooses to ignore the wishes of the people who voted against this same project before.

We, the people, may be right or wrong in our vote against this project, but the record stands that it was voted down each time. So why not let it be. I think the voters have answered this question enough. I say we need more men like Representative Ed Scogin and Mr. Ron Guth, but most of all, we desperately need men in public office, either elected or appointed, who will listen to and carry out the wishes of the people. I think the stand that the Corps is taking will be well remembered by the people who care. Time will tell, Col. Heiberg.

Very truly yours,



W. J. Brogan
Rt. 4, Box 310
Slidell, Louisiana 70458

STATEMENT OF ENGINEER HENRY G. CASSERLEIGH, SR.

PREPARED FOR REP. SCOGIN

SPECIFIC REASONS FOR OPPOSITION TO THE PLAN:

The voters of St. Tammany rejected the plan on 3 occasions. Statewide, voters rejected it 2 times. True, the vote was against the bond issue to finance the work. However, my vote was against the Project. I did not want to see the natural passes closed. Many others I have spoken to expressed the same feeling. The fact that Representative Ed Hebert's bill allows 25 years for payment of local interests' share does not change the basic fact that the voters don't want the project (barrier phases at least).

With a hurricane crossing Lake Pontchartrain in the vicinity of New Orleans moving south to north or southwest to northeast, with the barrier gates closed at the Rigolets and Chef under the influence of the west wind from the southwest quadrant of the storm, the "tilting phenomenon" will cause the Lake waters to flood a large area of St. Tammany Parish that has not had storm water on it since the 1915 hurricane. How quickly can and will gates be opened?

Because of dangerous currents through the structures at the Rigolets during flood and ebb of nearly every tide every day of the year, (the Corps says this condition will obtain only 15 days of every 30 days); it will be necessary to lock boats through for about 5 hours nearly every day (the Corps says only for 15 of every 30 days). This will prove a serious handicap to commercial and sport fishing boatmen. I cannot imagine a lock 110 feet wide and 800 feet long operating to let my 18 foot skiff through! Isn't it more likely that actual practice will require a wait until a number of boats are standing by to negotiate the lock. A boat trip from Lake Pontchartrain to Lake Borgne via the Rigolets could end up a 2 day trip or at best, a bit of night running.

After one good flooding of developed areas between the Lake and Highway 190 including the Eden Isles area, the local citizens will scream for protection. Uncle Sam will put 70% of the necessary funds, local interest the rest, and a levee will be built from North Shore along the Lake front to Pass Manchac with flood gates and
levee

systems on Bayou Bonfouca, Bayou Lacombe, the Tchefuncta River and Tangipahoa River. Except for the marsh on the Lake in St. Charles Parish the last vestage of (life-giving to the Lake, that is) marsh will then have been destroyed. The Lake will become a barren and desert body of water or at best a mighty poor fishing area. (But just think of all the 50X120 foot lots that can be sold!!)

As the plan now stands its purpose appears to be for the protection of the New Orleans area only. The plan provides no new protection for St. Tammany or Tangipahoa Parishes, except for the (highly debatable) 6 foot lower Lake level during a hurricane. It is interesting to note that, quote "work on the Mandeville seawall is inactive due to lack of financial participation in the project by the St. Tammany Parish sponsors".

The greatly increased salinity of the Lake since the MRGO was constructed has already had a detrimental effect on the crab fishery. This can be verified by talking to many of the old time crab fishermen. If the salinity of the Lake is not sharply reduced fairly soon, the much prized "fat Lake Pontchartrain Blue Crab" will be a thing of the past.

The flat statements that construction and operation of the barriers will have no appreciable effect on the life patterns of larvae and very young migrating specimens, nor on more mature specimens, sounds like theory to me. Where, in this country or elsewhere in the world have similar works been undertaken. Marine biologists will be hesitant to mention Florida where some regrettable and costly mistakes were made.

Just about every hurricane of the past that came near New Orleans put water over Highway 90 in the vicinity of the Rigolets and Chef Menteur and water deep enough to float large boats and buildings across the roadway. Therefore, I cannot agree that barriers to the same elevation as Highway 90 will prevent storm driven water in large quantities from entering the Lake, even during storms of lesser intensity than the "design hurricane".

In my opinion it would border on criminal action by sponsors and builders to proceed with the barrier plan. It would seem to me that there is legal grounds to request an injunction, at least why not a referendum on the project as now proposed, not a bond issue vote!

Slidell, La February 21, 1975
Regarding the "Lake Pontchartrain
Hurricane Protection Project"

Gentlemen:

I speak in opposition.
We remember this project
all too well. We voted against
it three times when it was
called "Amendment Six". And
what does it take to keep
your Government from damaging
you?

In my opinion, it would
damage so many facets of our
livelihood in this area it
would appear that the engineers
would readily recognize them.
Ecology, drainage, Homebuilding,
our Shipyard industry, Seafood
industry etc etc etc.

I know that our
State Representative, Mr Ed Magin,
who was born and raised in
this area has a full and
complete grasp of the situation,
and I support him 100% in
what he is trying to do to
help our people.

Respectfully,

Michael Haas

MICHAEL HAAS

2149 CAREY ST

SLIDELL, LA-70458

February 22, 1975

Regarding the Lake Fontchartrain Project:

Please enter my statement into the Public Record.

Dear Sirs:

I am opposed to this project, because it would have the reverse effect of entrapping water into the lake during a hurricane, causing it to spill either into Orleans Parish or St. Tammany Parish. Any small hurricane with a reasonable amount of rain causes the bayous in St. Tammany and Tangipahoa Parishes to overflow, and if the lake was closed for a couple of days during this time these bayous would back up and destroy many homes and businesses. Also if the Rigolets and other key points were dammed up over a period of years it would totally destroy the fish and wildlife as we know it today. Emphasizing this absolute madness of damming the Rigolets to a very narrow 14 foot alleyway would eliminate 60% of the pleasure boats from using the Rigolets as an exit. In this proposed Rigolets lock system with a passage of only thirty feet would eliminate all of the major shipyards now in business in St. Tammany Parish. This project has been brought before the people under the name of Amendment 6 and three times it has been voted down by a large majority. Therefore, I propose, Gentlemen, that if you have a large sum of money to be spent please find a more suitable project which is less damaging and also desirable to the people of the state.

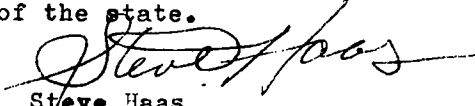

Steve Haas
469 Hickory
Slidell, Louisiana 70458

EXHIBIT 94 D

3739 Brookwood Dr.
Slidell, La.
Feb. 14, 1975

Honorable Edward C. Scogin
La. House of Representatives
Rt. 1 - Box 603
Slidell, La.

Dear Sir:

I am usually one of the "silent majority". However, I wanted to let you know I appreciate your stand in trying to protect our rights in the controversy of the "hurricane protection project."

We have as much right to protection as the people in New Orleans. I understand the voters in New Orleans voted against this plan several times. It looks like the officials would respect their wishes, ^{even} if it proved to be wrong. I am ^{one} who is tired of bond issues, taxes and etc., for things that may not be necessary or may be detrimental to some people, in the end result.

It looks like the people who live in this area would know more about flooding (in this area) than officials in Washington, D.C. or elsewhere.

We had to leave our home in 1947 in Metairie due to severe flooding for several weeks. We also witnessed the flooding in St. Bernard after Betty & had friends who had water up to their roof-tops

*
in minutes. (Carolyn Park, Arabi.)

We now live in Sellowood Subdivision in Slidell. And usually leave our home during times of "high-water-danger". We have one or two feet of water normally after heavy rains, in front of our house.

In referring to the article in Sunday's Times-Picayune (Feb. 9, 1975) about the "Lake area Hurricane Protection Project". To quote a quote (by George Lowell) used by Mr. Kimball, of Washington, D.C. in regard to the Corps hearings: ^(in being heard) "all animals are equal but some animals are more equal than others" - I only hope the ^{city of the} people of New Orleans are not more equal to those of Slidell, in the minds of the U.S. Corps. of Engineers.

I admit to total ignorance of the whole project. Please - I do not know a thing about levees, etc. but wanted let you know I appreciate your trying to help us. Thank you.

Mrs. Nel M. Mansfield
3739 Brookwood Dr.
Slidell, La.

P.S. I know the quotation is taken out of context but seemed appropriate.



SOUTHERN SHIPBUILDING CORPORATION
POST OFFICE BOX 1089 · SLIDELL, LOUISIANA 70458

504-843-3144
IN NEW ORLEANS 523-8384

February 19, 1975

TWX 510-888-8888

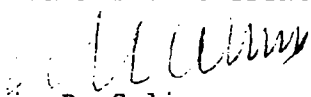
The Honorable Ed C. Scogin, Representative
State of Louisiana
House of Representatives
2063 Second Street
Slidell, Louisiana 70458

Dear Ed:

Enclosed herewith please find machine copy of my statement to the Corp of Engineers as we discussed in our telephone conversation of today.

Sincerely yours,

SOUTHERN SHIPBUILDING CORPORATION


Alain R. Seligman
President

dg
enc.

EXHIBIT 94 F-1

STATEMENT PREPARED BY A. R. SELIGMAN
SOUTHERN SHIPBUILDING CORPORATION
FOR PRESENTATION TO THE U. S. ARMY CORP OF ENGINEERS
ON FEBRUARY 22, 1975

LADIES AND GENTLEMEN, COLONEL HEIBERG,

SOUTHERN SHIPBUILDING CORPORATION HAS BEEN IN EXISTENCE SINCE 1957, ON THE BANKS OF BAYOU BONFOUCA IN SLIDELL, LOUISIANA. THERE HAS BEEN A SHIPYARD AT THAT SAME LOCATION SINCE BEFORE THE TURN OF THE CENTURY. SINCE THE INCEPTION OF SOUTHERN SHIPBUILDING CORPORATION, IN 1957, THE SHIPYARD IN SLIDELL HAS GENERATED MORE THAN FIFTY MILLION DOLLARS IN DIRECT PAYROLL. WE ARE CURRENTLY GENERATING IN EXCESS OF FOUR MILLION DOLLARS PER YEAR OF PAYROLL FOR THE SLIDELL AREA.

WE HAVE REQUESTED THE HELP OF THE U. S. ARMY CORPS OF ENGINEERS SEVERAL TIMES FOR CHANNEL IMPROVEMENTS ON BAYOU BONFOUCA AND IN THE APPROACH IN LAKE PONTCHARTRAIN, AND WE HAVE RECEIVED, TWICE, PARTIAL HELP FROM THE U. S. ARMY CORPS OF ENGINEERS IN NEW PROJECT OR MAINTENANCE DREDGING. THERE HAS BEEN NO MAINTENANCE DREDGING DONE ON BAYOU BONFOUCA OR IN THE LAKE PONTCHARTRAIN APPROACH CHANNEL SINCE 1963.

WE AT SOUTHERN SHIPBUILDING CORPORATION HAVE USED ALL SORTS OF DEVIOUS METHODS TO TAKE OUT DEEP DRAFT BOATS. THESE METHODS HAVE INCLUDED THE USE OF DERRICK BARGES TO PARTIALLY LIFT OUT BOATS, THE USE OF PONTOONS TO PARTIALLY LIFT OUT BOATS. A SURVEY OF THE DEEPER DRAFT BOATS BUILT BY SOUTHERN SHIPBUILDING CORPORATION SINCE 1957 GIVE THE FOLLOWING RESULTS:

WE BUILT IN SLIDELL THIRTY-ONE (31) BOATS WITH DRAFT OF APPROXIMATELY 14 FT., WE BUILT FIFTEEN (15) BOATS WITH DRAFT OF APPROXIMATELY 16 FT., AND WE HAVE BUILT AND/OR ARE CURRENTLY

BUILDING FOUR (4) BOATS WITH DRAFTS IN EXCESS OF 20 FT. THE PROBLEMS IN GETTING THESE BOATS FROM SLIDELL TO NEW ORLEANS HAVE BEEN DIFFICULT BUT RESOLVABLE IN ALL CASES. WHEN PONTOONS ARE USED TO TAKE OUT SOME OF THE DEEPER DRAFT BOATS, IT IS NECESSARY THAT THESE PONTOONS BE REMOVED FROM THE BOAT THEY ARE HELPING AND LIGHTENING IN APPROXIMATELY 20 FT. OF WATER. THIS IS USUALLY PERFORMED IMMEDIATELY NORTH OF THE SEABROOK BRIDGE ADJACENT TO THE NEW ORLEANS AIRPORT.

FROM THE ABOVE TABULATION OF BOATS BUILT BY SOUTHERN SHIPBUILDING CORPORATION, I THINK THE NEFARIOUS AFFECT OF THE PROPOSED LOCKS AT THE SEABROOK IS SELF EVIDENT FOR ALL PRACTICAL PURPOSES. NONE OF THE FIFTY (50) BOATS LISTED ABOVE COULD HAVE BEEN BUILT BY SOUTHERN SHIPBUILDING CORPORATION HAD THE PROPOSED SEABROOK LOCKS BEEN IN EXISTENCE DURING THE PAST EIGHTEEN (18) YEARS.

IT MIGHT BE ADDITIONALLY POINTED OUT THAT THE CONSTRUCTION OF THIS TYPE OF BOAT BY SOUTHERN SHIPBUILDING CORPORATION NOT ONLY HAS AN EFFECT ON THE SLIDELL AREA WHERE THE BENEFITS OF THE PAYROLL ACCRUE, BUT ALSO HAVE AN EFFECT ON THE OVERALL ECONOMY OF THE UNITED STATES FOR MOST OF THE BOATS CURRENTLY UNDER CONSTRUCTION AT SOUTHERN SHIPBUILDING CORPORATION ARE GOING TO BE USED EITHER IN THE ENERGY PRODUCING BUSINESS, THE ENERGY TRANSPORTATION BUSINESS, OR THE FOOD TRANSPORTATION BUSINESS. I DON'T THINK IT IS NECESSARY TO MENTION HOW CRITICAL TO THE WELFARE OF THE ECONOMY OF THE UNITED STATES THE FOOD PRODUCING AND ENERGY INDUSTRIES ARE. ADDITIONALLY, IT MIGHT BE POINTED OUT THAT SOME OF THE BOATS BUILT BY SOUTHERN SHIPBUILDING CORPORATION IN THE PAST WERE BUILT FOR FOREIGN COUNTRIES AND HELPED REDUCE THE DAILY BALANCE OF PAYMENT DEFICIT FACED IN THE UNITED STATES. IN 1972, SOUTHERN SHIPBUILDING

CORPORATION WAS ONE OF THE UNITED STATES' FIVE HUNDRED LARGEST EXPORTERS. WE CERTAINLY ANTICIPATE THAT WE SHALL BE IN THAT POSITION AGAIN.

IN CONCLUSION, LET ME STATE THAT WE SHALL NOT JUDGE THE LAKE PONTCHARTRAIN HURRICANE PROTECTION BARRIER SYSTEM; WE SHALL NOT JUDGE THE EFFECT ON THE PEOPLE OF NEW ORLEANS OR ON THE PEOPLE OF ST. TAMMANY PARISH; WE SHALL NOT JUDGE ON THE IMPACT THIS PROTECTION SYSTEM WILL HAVE ON THE ECOLOGY OF LAKE PONTCHARTRAIN AND SURROUNDING WATERS; FOR I AM SURE THAT DURING THE DAY THERE WILL BE MANY PEOPLE WHO WILL ADDRESS THEMSELVES TO THOSE SUBJECTS. WE SHALL, HOWEVER, STATE THAT EVEN THOUGH WE WOULD PREFER TO HAVE A 90 FT. WIDTH ON THE SEABROOK LOCKS, WE WILL SETTLE FOR 84 FT. HOWEVER, UNDER NO CONDITION CAN THE SURVIVAL OF SOUTHERN SHIPBUILDING CORPORATION AND ITS CONTINUED GROWTH IN THE YEARS TO COME BE HEALTHY WITHOUT A 20 FT. SILL DEPTH AT THE SEABROOK LOCKS. IT IS MOST PROBABLE THAT I SHALL REGRET TEN OR FIFTEEN YEARS HENCE FOR HAVING AGREED TO A 20 FT. DEPTH ON THOSE SILLS FOR TRADITIONALLY, CLEARANCES ON BRIDGES, LOCKS, ETC. ARE ALWAYS TOO SMALL WHEN LOOKED UPON IN RETROSPECT; BUT SOUTHERN SHIPBUILDING CORPORATION WILL ONLY BE ABLE TO PLAY THE PART IT MUST IN RESOLVING THE ENERGY SHORTAGE AND THE WORLD FOOD SHORTAGE IF ITS NAVIGATION CAPABILITIES FROM SLIDELL TO NEW ORLEANS ARE NOT IMPAIRED AND A 20 FT. LOCK SILL DEPTH IS THE ONLY WAY NOW THAT IT WILL NOT BE IMPAIRED.

PLEASE NOTE THAT I HAVE MADE NO MENTION OF THE ADDITIONAL COST TO SOUTHERN SHIPBUILDING CORPORATION OF LOCKING THROUGH

THE SEABROOK BRIDGE. THIS IS A COST THAT AS RESPONSIBLE
CITIZENS WE SHALL TAKE UPON OURSELVES, BUT WE MUST HAVE OUR
20 FT. SILL DEPTH. THANK YOU VERY MUCH.

164 Pinewood Drive
Slidell, LA 70458
20 February 1975

Department of the Army
New Orleans District
Corps of Engineers
P. O. Box 60267
New Orleans, LA 70160

Gentlemen:

I regret that I will be unable to attend your public hearing on the proposed Lake Pontchartrain Hurricane Protection Project scheduled for Saturday, February 22, 1975, so I am writing, as a resident of the affected area, to express my concern and opposition to your plan. There are four reasons which lead me to question your basic motivation to implement this project:

1. The Plan has been developed to protect New Orleans against a hypothetical hurricane, which has never occurred in recorded history.
2. The potential adverse impact of the proposed locks and known adverse impact of the proposed levee system on the Lake Pontchartrain Ecosystem.
3. The inconvenience of the proposed locks to water traffic in and out of the Lake.
4. The mandate of the New Orleans voters rejecting the proposed levee system on several previous occasions.

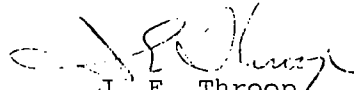
However, if the basic premise of protecting New Orleans' residents from flooding caused by hurricanes is your primary motivation, I commend you. This is a humanitarian cause. But, I object to your proposal to use a considerable amount of general public funds to benefit a few. More specifically, I think it is criminal to propose an assessment of North Shore residents who not only do not benefit from and violently oppose the project, but have been ignored as is evidenced by the obvious lack of any proposed levee protection for the North Shore.

Department of the Army
Page two
20 February 1975

In summary, I feel that the Corps is trying to push this project onto an unwanted public for reasons which remain unexplained.

I would appreciate your comments regarding this matter.

Very truly yours,



J. E. Throop

cc Congressman F. E. Hebert
Representative E. C. Scogin ✓
Mayor F. M. Cusimano

WE THE UNDERSIGNED OPPOSE THE BARRIER PROTECTION PHASE OF THE HURRICANE PROTECTION PROJECT.

WE FEEL IT WOULD BE DETRIMENTAL TO LIVES, PROPERTY, AND THE LIVELIHOOD OF MANY PEOPLE. ALSO, IT WOULD CREATE UNTOLD ENVIRONMENTAL HARM.

George Dimperio; 316 Sun Valley Drive, Slidell, La.

Betty Eastman; 618 Hailey Avenue, Slidell, La.

Don Wall; Lakeview Drive, Slidell, La.

Jimmy DiVault; 128 Whitehall Drive, Slidell, La.

Elizabeth Waller; P. O. Box 1249, Slidell, La.

Charles L'Fere; 3402 Teddy , Slidell, La.

Mary J. Hostler; 1553 Queens Drive, Slidell, La.

Harold F. Gardzinski; 3653 Riviera Drive, Slidell, La.

Kevin J. Robichaux; 3074 Careu Street, Slidell, La.

Carol Dimperio; 316 Sun Valley Drive, Slidell, La.

Mrs. Martha A. Hall; 2181 Park Drive, Slidell, La.

Mrs. Wesley G. Winterstein; Rt. 2, Box 86 W, Slidell, La.

Cindy Godsey; 202 Venus Street, Slidell, La.

Tim Torregano, Jr.; 2615 Eighth Street, Slidell, La.

Marion Vicknair; 861 Oak Street, Slidell, La.

Signatures attached

1-18-1975

We the undersigned oppose the further protection phase of the hurricane protection project. We feel it would be detrimental to lives, property, and the livelihood of many people. Also it would create untold environmental harm.

-
- George McKinley - 316 Sun Valley Dr. - Slidell, La.
 - Betty Eastman - 618 Bailey Ave. - Slidell, La.
 - Don Wall - Lakeview Drive - Slidell, La.
 - Jong de Vries 128 W. ^{Missis' Dr.}
 - Elizabeth Haller P.O. Box 1249 Slidell, La.
 - Paul Pfeiffer - 3402 Trinity Dr Slidell La.
 - Mary J. Hostler 1553 Queens Dr. Slidell, La.
 - Harold F. Gaudzinski 2653 Riviera Dr. Slidell La.
 - Ronnie B. Riviereaux 3074 Corey St Slidell La.
 - ~~Mrs. Charlie F. J. ... 1029 St. ... Slidell~~
 - Carel Dimpers - 316 Sun Valley Dr Slidell La.
 - Mrs. Martha A. Hall 2181 Park Dr Slidell La.
 - Mrs. Judy B. Winterstein Rt. 2 Box 86 W Slidell La 70458
 - Girdy Godsey - 202 Venus St. Slidell La 70458
 - Tim Torgunovs - 2615 8th Street Slidell, La.
 - Marion Vukobari 861 Oak St. Slidell, La.

CRITICISM OF THE FINAL ENVIRONMENTAL
STATEMENT OF THE CORPS OF ENGINEERS
PERTAINING TO PROTECTION OF NEW ORLEANS

Page

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The proposed destruction of 5,265 acres of marsh land in the vicinity of the Barrier and connecting levees is passed over slightly. The report claims that such land produces detritus or debris not too important, as "this action will possibly decrease the amount of secondary production of organic material in Lake Pontchartrain".

In a recent marine survey of San Francisco Harbor which is similar to Lake Pontchartrain Basin it was determined that an acre of unpolluted marsh would produce more food for marine life than an acre of the best wheat land would produce food for human consumption.

I-1 In mentioning the 4,700 square miles of drainage area that flows into Lake Pontchartrain and through the Rigolets and Chef Menteur Passes, the approximate 48,000,000 gallons of effluent and raw sewage dumped into the lake daily, which must flow through the two passes is not considered. Neither is the polluted flow from the drainage canals of Orleans and Jefferson Parishes not considered, nor the dairy area flow north of Lake Pontchartrain.

1-2 "Overtopping of existing protective works along the south shore of the lake and flooding of developed areas have occurred several times in the past".

The hurricane of 1947 overtopped the lakefront levees along Jefferson Parish and flooded East Jefferson because the levee was not of sufficient height to withstand an elevation of 5.42 feet M.S.L. The Hurricane of 1965 (Betsy) overtopped the levees along the M.R.G.O. and the lower Mississippi River levees because the Corps of Engineers did not build these levees high enough. Before Betsy the levees along the Jefferson Parish Lakefront were raised and strengthened by the Corps and no flooding occurred in 1965, although the tide level in Lake Pontchartrain reached 7.6 M.S.L. Since Betsy the levees along the M.R.G.O. the Industrial Canal and the lower Mississippi River have been raised by the Corps.

1-2 According to this report the Standard Project Hurricane (S.P.H) for which this Barrier System is designed, would have a frequency of once in 200 years. Who is going to maintain the structures waiting for such a hurricane to occur. Since 1905 over 20 hurricanes have passed within 100 miles of Lake Pontchartrain. The hurricanes of 1915 and 1947 were the only ones that approached the theoretical S.P.H.

paths, the 1915 hurricane within 20 miles and the 1947 hurricane within 5 miles.

1.-3
1-17

The construction of the Barrier according to proposed plans, will restrict the combined cross sections of the Chef Menteur and Rigolets Passes 75 per cent, with gates built to elevation + 14.0 M.S.L. Between the two restricted Passes the flood water during time of hurricanes will flow over U.S. 90, a distance of approximately 50,000 feet, average elevation ^{7.5} 9 feet above M.S.L. Suppose a hurricane of the magnitude of Camille, which struck the Mississippi Coast in August 1969 and raised the tides an average of 20 feet above M.S.L. between Bayou Cady and Biloxi, a distance of over 30 miles. The bluff shore line of the Mississippi Coast helped to build up this elevation, but along the south shore of the Bay of St. Louis where the ground elevation varies between + 1.0 to + 6.0 M.S.L., the water rose as high as 20 M.S.L.

Such a hurricane could raise the flood waters to an elevation of + 14.0 M.S.L. or 5 feet above the elevation of U.S. 90, between the two gates and circle Apple Pie Ridge and flood the Slidell area, which is only + 5.0 to + 10.0 M.S.L. Thus by closing the two passes, which eliminates the buffer action of Lake Pontchartrain, Maurepas and surrounding streams and marsh land, the storm waters will pour over U.S. 90, which suddenly has developed into an opening over twice the unrestricted cross section of the two passes. And during such a storm, who will be around to open the gates in time to release the storm water in Lake Pontchartrain after the eye of the storm passes and the counter-clock-wise winds build up the water along the New Orleans Lake Front. During such a hurricane the increase in tide level will flood the St. Bernard area and wash out the L & N R.R. road bed.

11-83
11-87

In this section of the Final Environmental Statement the flood heights, loss of life and damage caused by 5 Hurricanes between 1909 and 1965 are given. As shown in the accompanying report, "Why Bottle Up Lake Pontchartrain" the flood damage and loss of life was caused in 1915, 1947, and 1965 due to inadequate protection levees along the Lake Front, Mississippi River, Industrial Canal and the Mississippi River, Gulf Outlets. These levees have all been raised and strengthened to a safe elevation since 1965. The proposed Barrier is designed to hold down the flood level in the lake to a safe elevation, thus preventing a surge from counter-clock-wise winds topping the New Orleans and Jefferson Parish lake front sea wall and levees. Neither of the New Orleans and Jefferson areas are in direct path of hurricanes as Galveston, Cameron, Grand Isle or the Mississippi Coast.

III-13
50

A vertical sea wall with a height of 6 feet is proposed to protect the Mandeville Lake Front. A stepped type wall similar to the New Orleans Lake Front built to elevation +14 M.S.L with a foreshore beach, protected with groins would be a safe protection, without the proposed Flood Gates.

And finally only flood water damage prevention is being considered in the proposed Barrier Plan. How about the 150 to 200 M.P.H. winds and tornados which cause more damage than water during hurricanes? Perhaps some of the proposed millions should be spent in "seeding" these hurricanes while they are still tropical storms.

According to the New Orleans newspapers the Orleans levee Board has revived the plan to "Bottle Up Lake Pontchartrain", with a barrier across Chef Menteur and Rigolets Passes and the low lands between as a protection against a "Killer Hurricane" flooding New Orleans.

The proponents base their theory on the possibility of a hurricane of the magnitude of Camille, building up the tide levels of Lake Pontchartrain then reversing its path towards the south, thus blowing the lake water over the lake front and drainage canal levees, which are at present built to a minimum elevation of 14 feet above mean sea level, which controls the level of Lake Pontchartrain.

As a civil engineer who worked for the Orleans Levee Board over 10 years, building levees, raising levees, dynamitting levees on the lake front and New Orleans Airport construction and operation, I have been against this project when it was first conceived by the U.S. Engineers and Orleans Levee Board. At that time I asked one of the Corps engineers working on the plans, if the idea of flood gates at the Chef and Rigolets Passes would not restrict the flow of tide water in and out of Lake Pontchartrain and this was his answer; "When you

water your lawn, step on the hose and you will notice no restriction of flow. The increased velocity at the restricted section will overcome the decrease in cross section."

From then on I became an advocate against this plan, especially since such stupid reasoning was proposed in planning this project. To compare the natural flow through channels such as the Chef and Rigolets, where the current velocity would not exceed 4 feet per second, to the flow through a garden hose, where the velocity would be 15 feet per second, was stupid. God I did not have to try the restricted hose experiment.

Since that time many changes and happenings have occurred to further increase my objections to this plan. Lake Pontchartrain is fast becoming an oxidation pond, caused by the human and industrial wastes being dumped by the drainage canals, rivers, improperly designed septic tanks, marinas, and overtaxed oxidation ponds. Also the lessons that can be learned from the tide levels reached during Hurricane Camille on the Mississippi Gulf Coast, show that a barrier with flood gates across the Chef and Rigolets, would have to be of such height and

strength to be effective, that its construction cost through this swamp would be prohibitive, if possible.

In addition to straddling the tax payers for the next 30 years with amortization costs which may eventually exceed \$200,000,000 dollars for their share for a worthless project, the following are further reasons why this plan should not be constructed:-

(1) Hurricane Paths do not Reverse Themselves.

Between 1886 and 1974, the paths of the 19 hurricanes which occurred in the Louisiana - Mississippi area, proceeded in a north west, north or north east direction after entering the coast, and none reversed their paths in a southerly direction.

(2) Restriction of Flow Through the Chef and Tigoleto Passes will Affect the Ecology of Lake Portchartrain, Lake Maurepas and the Streams Flowing into these Lakes.

On restrictive tidal flow is necessary through the two passes to remove the pollutants and river water when the Baromet Carré Spillway is operating.

(3)

The restriction of the two passes will change the salinity of the two lakes, which will affect fishing and the further growth of clams, which furnish an important construction material, used in this area.

(3) Building this Barricade will Destroy the Buffer Section of the Two Lakes and Surrounding Low Land During Times of Hurricanes and Resulting High Tides.

Lake Pontchartrain, Maurepas and the surrounding low lands and streams serve as a natural reservoir when tides are raised during storms. The minimum of 720 square miles of water and low land surfaces in this reservoir can store over 20,000,000,000 cubic feet of storm water with a rise of 10 feet, which has never been experienced in this area to date. In order to back up this amount of water, a minimum of 3 days flow through the two passes and over the 615 90 embankment, would be required, after the levels in Lake Borgne and Lake Catherine reach a minimum 10 foot height. The duration of hurricanes when approaching this area have always been for periods less than 3 days, after being ~~at~~ within striking distance of the Gulf Coast.

The maximum tide reading at West End during Hurricane Betsy was 7.6 feet above mean sea level, which is the record to date. During Hurricane Carmen the storm tide raised approximately 4.0 feet above mean sea level. During Hurricane Betsy waves broke over the lake front sea wall built to elevation 10.0 above mean sea level, but was restrained by the levee previously built to elevation 12.0, behind the sea wall. The water that flooded the Ninth Ward of New Orleans and St. Bernard Parish washed over the Gulf Sea way and Industrial Canal Levees, which were not built to sufficient heights. Since Betsy these levees have been raised to a minimum of 14 feet above mean sea level and safely with stood the high water of Hurricane Camille.

The so called "Killer Hurricane" which the Orleans Levee Board and Corps of Engineers propose to protect the City of New Orleans against, would have to strike between the Chef and Rigolets, and would require a period of 3 or more days to build up the levels of the reservoir and Lake Borgne to a dangerous height, then reverse itself at the north shore of Lake Pontchartrain and push the storm water over the lake front and drainage canal levees, thus flooding New Orleans. It is difficult

to conceive of this phenomenon, when it verifies all the past performances of the 19 hurricanes which passed through this general area.

(4) This Proposed Barrier if Effective would Build up Tide Levels to the South During Hurricanes

During Hurricane Camille, which would approach the magnitude of the "Killer Hurricane" feared by the Orleans Lease Board, the tide along the Mississippi Gulf Coast rose an average of 20 feet above sea level, between Bayou Caddy and Biloxi, determined by surveys made by the Corps of Engineers. On examination of these charts will show that the extreme tide levels was caused by the bluff banks of the Mississippi Gulf Coast resisting the high water and wave action.

The proposed barrier between the Chef and Rigolats, if built, to a sufficient height to be effective, would duplicate the conditions along the Mississippi Coast and would create a dangerous back water problem, during a major hurricane. It is not difficult to predict a storm tide of 20 feet against the south side of the proposed barricade, which would back up water to a dangerous level in the Gulf Seaway and Industrial Canal where the protection levees are 14 feet

above sea level. The low levees and lands of St. Bernard Parish would also be flooded by this back water. Should this barricade be built as originally planned on the north side of U.S. Highway 90, between the Chef and Rigolote, the back water during a hurricane would destroy the camps along this highway and cause considerable damage to the L&H Railroad tracks and road bed in this area.

Instead of spending untold millions on this unnecessary project, the levees in the New Orleans areas should be built and strengthened to a minimum elevation of 12 feet above mean sea level, and where these levees are subject to wave action the exposed slopes should be protected, similar to ^{the} levee built by the Corps of Engineers along the Jefferson Parish Lake Front. Where financially possible permanent sea wall should be built to the 12-foot elevation. Along the exposed lake and connecting river shore lines, where levee construction is not feasible, flood levels of camps and homes should not be built lower than 10 feet above mean sea level.

WHY BOTTLE UP LAKE PONTCHARTRAIN?

The Corps of Engineer's - Orleans Levee Board's Hurricane Protection Plan to bottle up Lake Pontchartrain, is based on the theory that a so called "Killer Hurricane," following either the Number 1 or Number 2 path, will by means of counter clock-wise winds, dump the lake water over the New Orleans Lake Front Seawall and the Jefferson Parish Lake Front Levee, thus flooding the low areas behind. In the past several hurricanes of great intensity, their paths shown on the attached map, followed these paths very closely, and the following results occurred:

Hurricane of 1915. In September 1915 the most severe hurricane of record up to that time in the New Orleans area, occurred across the city and Lake Pontchartrain. Winds reached a velocity of over 120 M.P.H. at the New Orleans Post Office weather station and tides reached 6.1 feet M.S.L. at West End. The north shores of Orleans and Jefferson Parish along the lake front were flooded, as there were no protection levees along the Lake Front at that time.

Hurricane of 1947. At the time this hurricane struck, the City of New Orleans was protected along the Lake Front with a concrete sea wall and locks at the New Basin Canal and Bayou St. John, built to an elevation of 10 feet above M.S.L. The old embankment of the New Orleans-Hammond Highway along the east Jefferson Parish at an average elevation of only 3.5 feet M.S.L. The hurricane winds reaching an estimated velocity of 110 M.P.H., and the maximum tide level reaching 5.42 feet M.S.L., overtopped most of the levee along the Jefferson Parish Lake Front. Of the total 48.6 square miles were flooded. Over \$3,900,000 property damage was sustained, but none in the New Orleans area.

Hurricane of 1965 (Betsy). Shortly after the 1947 Hurricane, the United States Government authorized the Corps of Engineers to construct flood protection for the East Bank of Jefferson Parish. A levee with a 50 foot crown, built to elevation 10.0 M.S.L. and protected on the lake side with rip rap and asphalt was constructed and has withstood Hurricanes of 1949 and 1965, the latter of greater intensity than the Hurricane of 1947.

However, the City of New Orleans and St. Bernard and Plaquemines Parishes experienced severe flooding caused by the 150 M.P.H. winds and high tides of Hurricane Betsy. Although the New Orleans Lake Front Seawall was topped by wave action, the levees behind sea wall, previously built to elevation 14.0 M.S.L., restrained the lake water from flooding. The elevation of the Lake at West End reached 7.6 M.S.L., which broke the 50 year record held by the 1915 Hurricane.

The flood damage caused by this Hurricane in the Ninth Ward of New Orleans and St. Bernard Parish was caused by the flood waters of the Mississippi River Gulf Outlet, topping the low levees built by the Corps of Engineers, when this water way was constructed. The low levees of the Mississippi River in Plaquemines Parish were also topped by the flood tide backing up the river.

Since 1965 the levees along the Industrial Canal, New Orleans drainage canals emptying into the Lake, and the Mississippi River Gulf Outlet have been substantially built to a minimum elevation of 14.0 feet M.S.L., and the main river levees have been raised to prevent a reoccurrence of 1965, in Plaquemines Parish. Since the raising of the levees in Orleans and Jefferson Parish East Bank, the Federal Government has subsidized Flood Insurance rates on home with floor elevations as low as 2.0 feet below M.S.L., fixing the rate as low as 5 cents per \$100.00.

With such protection built since 1965 by the Orleans Levee Board and the Corps of Engineers it is apparent the construction of the proposed barrier across and between the Chef Menteur and Rigolets passes, will not be necessary, and if constructed may impose additional flood hazards and be detrimental to the Lake Pontchartrain - Maurepas Basin. The following are reasons why this proposed expenditure of over \$300,000,000 of tax payers money, 70 percent federal and 30 per cent local, should not be spent.

(1) Tidal Flow of the Pontchartrain.- Maurepas Drainage Basin will be Impeded.

This drainage area depending on free tidal flow through the two passes, consists of over 5,200 square miles in Louisiana and Mississippi, the Louisiana area approximately 20 per cent of the total state surface. This drainage area sheds run off through over 20 rivers and creeks, the slow flow of which depends on the diurnal tidal fluctuation of the lakes, which approximates only one foot in elevation, each 24 hours. The fresh water discharge of this drainage area, together with the occasional discharge of the Bonnet Carre Spillway, in time will affect the salinity of these lakes.

(2) The Ecology of these two Lakes will be Affected by Restricting Flow Through the Two Passes.

According to the 1974 report of the Louisiana Stream Control Commission and the Louisiana Health and Social and Rehabilitation Services Administration, there are over twenty-eight industrial plants and fifty-five municipal treatment plants, many over taxed, discharging over 48,000,000 gallons of untreated sewerage, waste and effluent daily into the above Drainage Area. This discharge at present is from 377,000 people which number should increase to 560,000 by 1980, according to the above report.

None of this discharge has better than secondary treatment, much with only primary treatment, and much is raw sewerage from over taxed plants, camps, marinas and boats in the rivers and

lake areas. In addition polluted run-off from the cattle and dairy operations north of the two lakes, drains into the rivers, which empty into the lakes.

Flow from the Orleans and Jefferson Parish Drainage Canals also contribute to the pollution of Lake Pontchartrain, forcing the closing bathing beaches, after heavy rains flush out the bottom deposits of these canals. The shallow water of these two lakes act at present as oxidation ponds, the pollutants of which must have free exit through the two passes. An occasional storm tide would benefit the lake waters by flushing out these pollutants.

(3) The Planned Barrier would Destroy the Buffer Action of the two Lakes, Before and During a Hurricane.

The reservoir area of the two lakes, rivers, and surrounding wet lands, consisting of over 750 square miles, will hold over 670,000,000,000 cubic feet of storm water, with a rise of 8 feet. Assuming a tidal flow of 4 feet per second through the two passes, which is high, as the tide builds up during the approach of a hurricane, the time required for the tide to increase to + 8.0 M.S.L., would be approximately three days. Before the three day period the eye of the hurricane will have passed over Lake Pontchartrain and counter clock wise winds would be blowing. With sea walls and canal levees built to the 14.0 M.S.L. elevation, and two passes unobstructed, the storm water would start a back flow through these channels into Lake Borgne and the Mississippi Sound. During Hurricane Betsy, which followed the path of the Number 2 Critical Hurricane, the tide level only reached 7.6 M.S.L. at West End, and all the lakefront protections held.

This reversal of hurricane flood waters was evident during Hurricane Camille on the Mississippi Coast, when a 20 foot tide at Gulfport flowed back into the Gulf in less than one hour after the eye of the storm passed over the coast line. Suppose that a hurricane of the magnitude of Camille struck the area between Chef and Rigolets, with the proposed flood gates closed and levees raised. Such a storm would produce tides that would top the gates and U.S. Highway 90, and by circling Apple Pie Ridge at only 7.0 M.S.L., flood the entire area of Slidell, not above elevation 10.0 M.S.L. And how would the floodgates be opened in time to relieve the high lake water when the counter clock wise winds backed up the tides along the south shore of Lake Pontchartrain and the barricade structures?

(4) Restriction of Cross Section Areas at the Chef and Rigolets Passes, Would Change the Salinity of Lake Pontchartrain and Maurepas.

As proposed by the Hurricane Protection Plan, the cross section of the Rigolets Channel would be reduced from the natural area of 124,000 S.F. to 24,000 S.F., a reduction of 80 per cent, and the cross section of the Chef Menteur Channel would be reduced from 17,500 S.F. to 10,000 S.F., a reduction of 40 per cent. The cross sections of the two proposed locked canals would not increase the tidal flow appreciably.

When this barricade was first proposed by the Corps, it was assumed that the velocity of tide water would be increased through the restricted openings by tidal build up. This is difficult to believe as during normal tidal flow, the diurnal change is only one foot in 24 hours. Salt water from Lake Borgne and fresh water and pollutants from Lake Pontchartrain would be backed up at the flood gates during normal tidal flow.

In time the two lakes would become polluted bodies of stagnant water, unfit for fishing, recreation or propagation of food fish. The reproduction of clam shells which provide a \$12,000,000 yearly operation, necessary for furnishing material for road and foundation construction, would be ruined. In this connection the following recommendations are submitted from the Louisiana Wild Life and Fisheries Commission's, "Study of the Clam, Rangia Canata, in Lake Pontchartrain and Lake Maurepas".

"The most important recommendation for the clam shell industry to consider, encompasses steadfast opposition to any environmental disruption from any source affecting the ecology of the lakes. All the information derived and compiled and technical knowledge of factors directly or indirectly affecting shell production should be utilized in preventing environmental disruption. If wisdom is not used, the industry can no longer expect abundant production of this renewable natural resource that has been so long enjoyed. The voice of the Louisiana clam shell dredging industry should be clamorous in order to protect, maintain and possibly enhance clam shell production in Lakes Pontchartrain and Maurepas."

- (5) Should this Proposed Barrier be Built Across the two Deep Passes, Construction Difficulties Would Impose Hazardous Flood Conditions in the Area and Great Unforeseen Costs.

In order to construct the foundations for flood gates in 30 feet of water extensive and costly coffer dam construction would be required that would completely close the passes for periods of two years or more. Subsoil conditions in the Chef-Rigolets area are very poor. U. S. Highway 90 has been raised several times to take care of settlement and the piers of the L & N Railroad bridges were sunk to a depth of over 100 feet to obtain safe bearing.

Should a hurricane strike between the Chef and Rigolets during construction, with the passes blocked with high level coffer dams, the Slidell area would be flooded with backed up tides from the east, the camps along U.S. 90 would be destroyed and the low areas west of the Chef in Orleans Parish would be flooded. Also an increase in construction costs would be excessive.

In conclusion it should be remembered that this Hurricane Protection Plan was submitted to the Louisiana Tax Payers several times and was rejected by overwhelming votes. However, later a three mill property tax was voted for "building and raising levees" in Orleans Parish by the Orleans Levee Board. It has

developed that this plan was a subterfuge, as practically all of the levees in Orleans Parish have been completed to hurricane proof sections and elevation. This three mill tax will be used as the Orleans Levee Board's contribution toward, the proposed \$300,000,000 protection plan. This would mean a contribution of at least \$90,000,000 by the Orleans tax payers, or 30 per cent of the total cost.

In the latest plan of "Protection of Lake Pontchartrain and Vicinity" the following statement is incorporated; "Due to the importance of getting the barrier structure complexes at Rigolets and Chef Menteur and Seabrook under construction as quickly as possible, the New Orleans District placed major emphasis on their engineering and design. To this end the engineering capabilities of the district are being augmented by that of the three other Corps districts, and five architect-engineering firms". In th's connection it might be stated that Mr. Guy Le Mieux, president of the Orleans Levee Board and prime mover of this proposed plan, is also executive vice president of a New Orleans engineering firm.

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Levee Millage and Barriers

Orleans Levee Board officials and PR men have been making increasingly bold claims that they've found a way to finance the Chef Menteur and Rigolets barriers and locks for the Lake Pontchartrain and Vicinity Hurricane Protection Plan.

The means are said to be tied partly to the congressional act sponsored by Congressman P. Edward Thompson to allow the levee board to extend its 30 per cent cost-sharing payments over a 25-year period. Presumably that would somehow let some of the new three-mill tax revenues approved last March toward the controversial barrier facilities. These were not listed among the 35 projects toward which the \$33 million local funds would go.

Levee board president Guy LeMieux conceded at election time that the \$33 million would generate credits of \$10 million that could apply to other aspects of the plan.

It's difficult to see, however, how the three-mill levy can do much more than cover the costs of the delineated projects between this year and 1965, when the new tax must be reduced to three-quarters of a mill "to supply funds necessary for maintenance purposes."

The 11-year three-mill increase thus cannot be used for bonding, as Mr. LeMieux said they would not.

While rising assessments may generate more than the round-figure \$3 million of annual works scattered over the decade, it is also likely that inflation will balloon the estimated costs of the 35 perhaps even beyond the money-raising capacities of the annual three mills.

Some voters believe Mr. LeMieux was less than ingenuous when he and his board members were using the campaign spiel that the millage request had nothing to do with the Chef and Rigolets barriers. It's true that levee officials never said that the controversial parts of the plan had been abandoned — which editorially this newspaper never led people to believe either.

But there's a difference between saying the three-mill proceeds would be spent for specific projects and then using those revenues (not "credits" or other freed levee board funds) for the locks and barriers.

Said board member James C. Scalise three days before the March election, "There are no controversial ecological or environmental projects involved" directly in the millage request. If Mr. LeMieux and the Orleans Levee Board go back on their word, they will be squandering whatever credibility they have with the public.

THE STATES-ITEM

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The States-Item prints the news impartially. It supports what it believes to be right. It opposes what it believes to be wrong, without regard to party politics.

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New Orleans, La., Thursday, February 6, 1975

Lake hearing

All parties should get a fair hearing when the U.S. Army Corps of Engineers holds its public meeting on the Lake Pontchartrain hurricane protection system. The meeting is scheduled for Saturday, Feb. 22 at 9 a.m. in the University Center Ballroom of the University of New Orleans.

It is important that everyone, especially those who have serious questions about the project, is given an equal time to express their views. After all, the lake is a regional asset, a vital component in the Lakes Maurepas-Pontchartrain-Catherine-Borgne estuary. The manner in which Lake Pontchartrain is affected, either by piecemeal private development or by massive public works projects, could have a serious effect on the ecology and resources of the entire estuary.

Commenting on testimony presented in the suit against Chen Isles and the Corps of Engineers, The Times-Picayune observed last Jan. 19 that "the wider issue is whether piecemeal accumulation of lakeside residential developments will be permitted to the point of killing the lake. Expert testimony on this subject in our view easily proved the environmentalist case."

The point hardly is less valid when applied to massive federal public works projects, especially when the Corps of Engineers acknowledges that the project will hasten urbanization (private developments) along the lake's shore.

With the exception of the Louisiana Wild Life and Fisheries Commission, which has questioned the project on both flood-protection and ecological grounds, state agencies, if not silent or neutral, have actively promoted the project. Appealing to public fears of hurricanes, the Orleans Parish Levee Board has promoted the barrier plan through paid advertisements and commercials.

Most recently, the Regional Planning Commission brought Dr. Robert H. Simpson, former director of the National Hurricane Center in Miami, to New Orleans to promote the plan, reportedly at a cost to the commission of \$3,000.

A common complaint among citizens' groups is that Corps hearings usually are conducted in favor of the Corps, other government agencies and the political and industrial promoters of public works projects. Such complaints have been registered with Corps headquarters in Washington in the wake of recent hearings on Atchafalaya Basin projects at Morgan City and Lafayette.

There can be little doubt that those powerful public agencies and groups with vested interests in the lake project will, as in the past, be heard loudly at the upcoming hearing. We believe that it is time for those individual citizens and groups who have serious questions about a project which will affect their lives and the lives of future generations to have their day in court.

Storm barriers wetlands threat --Corps report

The final environmental impact statement on the controversial Lake Pontchartrain and Vicinity Hurricane Protection Project reports the project "will hasten urbanization and industrialization of valuable wetlands," the Army Corps of Engineers has announced.

Copies of the statement are now available from the local office of the Corps.

Features of the original project include construction of barrier structures along the eastern side of Lake Pontchartrain at the Rigolets and Chef Menteur, a levee along the St. Charles Parish lakefront (deleted for the time being), a dual-purpose lock at Scabreos, and enlargement of existing protective works along the north and south shores of the lake, the Intracoastal Waterway and the Inner Harbor Navigation Canal.

The project has drawn criticism from some environmental groups and residents of the north shore of the lake. They object particularly to plans for the Rigolets and Chef Menteur barriers, which would have locks that could be closed in the event of a hurricane to prevent waters from the Gulf of Mexico from sweeping into Lake Pontchartrain and onto land.

Col. E. R. Heibert III, New Orleans district engineer of the Army Corps of Engineers, said the project is intended to provide hurricane flood protection for the 16-parish area bordering Lake Pontchartrain, especially for the densely populated portions of St. Bernard Parish.

Heibert said the construction of the St. Charles Parish levee "has been placed in an inactive status." He said emphasis is being placed on "areas already in, or already committed to, urban type uses." The St. Charles levee, he said, would cause the "irrevocable loss of 25,000 acres of wetlands."

Approximately 5,265 acres of marsh and swamp wetlands will be used for con-

struction of the project, he said.

According to the environmental statement, the project "will hasten urbanization and industrialization of valuable wetlands by providing basic features for further flood protection and reclamation," a Corps spokesman said. The statement points out "all of the marsh and swamp enclosed and protected by the project could be converted to urban use when local interests choose to drain and fill those areas."

The draft environmental statement was reviewed by appropriate federal and state agencies, ecological organizations and other interested groups and individuals, the spokesman said. It was forwarded to the President's Council on Environmental Quality Jan. 8.

Copies are available upon written request to the Office of the District Engineer, U.S. Army Engineer District, ATTN: LMNPLH, P.O. Box 60267 New Orleans 70160.

Our 'Drying' Wetlands

By PETER J. BERNSTEIN
(Times Picayune National Service)

WASHINGTON — Coastal estuaries, the fragile wetlands where fish spawn, reflects the sea to provide spawning habitats for much of the nation's fish and waterfowl, no longer are being drained and filled in by the square mile.

Today these irreplaceable wetlands are being destroyed on a smaller scale — acre by acre.

Given the staggering rise in land values, the destruction of estuaries by the acre rather than the square mile is considered to be a small but not insignificant measure of progress by many state and federal conservation officials.

"The dredging still goes on," says Nathaniel P. Reed, assistant Interior secretary for fish and wildlife, "but real estate developers are beginning to encounter tough resistance. Every square inch of coastal land represents a battleground."

To tighten controls on wetland dredging, Congress is weighing proposed amendments to the 1962 Fish and Wildlife Coordination Act that would require construction agencies like the U.S. Army Corps of Engineers and the Soil Conservation Service to assess environmental impacts of planned waterway projects on an equal footing with the economic effects.

The changes, sought by Reps. John Blatnik, D-Minn., and Henry S. Reuss, D-Wis., two of the principal authors of the federal water pollution control legislation, would forbid construction agencies' assessing wildlife losses "solely in monetary terms," without weighing the true value of wilderness.

Increasing consideration is also being given to the proposal, advanced by Supreme Court Justice William O. Douglas, perhaps the nation's best-known and most respected conservationist, that legal rights ought to be extended to environmental objects — forests, rivers, oceans and wildlife. It would mean that the environment would have standing under the law — the right to have legal actions instituted on its behalf — in much the same way that law-

yers speak for corporations and states.

Construction interests strongly oppose this notion. They believe, perhaps rightly, that dredge-and-fill projects for condominiums and other coastal development would be stymied.

In an interview, Interior's Reed said far more estuaries could be saved if tighter legislative controls were placed on dredge-and-fill permits issued by the Corps of Engineers. Rather than give the Interior Department an absolute veto over the granting of such permits, as many conservationists advocate, Reed believes the corps should face sanctions if it fails to hold public hearings on permit applications or if it disregards recommendations from other federal and state agencies.

Largely because of public outcry against loss of wildlife habitat, Reed believes some of the corps' worst abuses are ebbing.

Until recently, wetlands could be drained and filled with impunity. Federal surveys show that during the 20 years from 1947 to 1967 as much as 7 per cent — 665,000 acres — of the nation's coastal estuaries was lost to commercial and residential development. California alone has lost 67 per cent of its coastal marshland between Oregon and Mexico, to the point where the spawning habitat for salmon and steelhead have "drastically diminished."

On the Atlantic coast, surveys show that 33 per cent of New York State's wetlands and 21 per cent of Connecticut's have been drained and filled in. Similar encroachment has occurred from New Jersey to Florida and along the Gulf Coast, where more than 16 square miles of Louisiana marshland are lost each year, largely due to oil production.

To an even greater extent, the dredge has taken its toll of inland marshes. It has been used during the past 20 years to destroy 14 million acres of wetlands and to channelize 8,000 miles of streams.

But the full extent of the loss — both inland and on the coastlines — is unknown because no nationwide survey has been

conducted since 1967.

"The rate at which wetlands are being dredged and filled is being brought under control very rapidly," says Maj. Gen. John W. Morris, a West Point graduate who heads the corps' civil works division.

As evidence of its growing response to environmental concerns, the corps last April directed its district engineers to give full consideration to environmental values and to ban dredge-and-fill operations in biologically valuable estuaries.

The Justice Department's land and natural resources division, which is responsible for prosecuting illegal dredging, has elevated wetlands' protection to one of its top priorities. The number of prosecutions involving illegal dredging jumped from 21 two years ago to 151 today.

Federal wetland experts say the protection program is seriously under-funded.

Reed told Congress that "because of the lack of adequate financial and personnel resources we are now doing little or no long-term data collection." He said the department is making recommendations on water resource projects without adequate information, and that it is approving trade-offs that wildlife officials "cannot fully evaluate and understand."

Conducting its own investigation, the General Accounting Office (GAO) found that the wildlife service's work is being done on a hit-or-miss basis.

GAO, the investigatory watchdog of Congress, zeroed in on some of the more glaring inadequacies. It found that the wildlife service's study of the Army Engineer's Atchafalaya project, a 53-mile-long navigation channel planned in Louisiana for moving oil and gas rigs through coastal wetlands, omitted any mention of wildlife that would be lost or damaged. When wildlife service officials subsequently visited the channel site at GAO's request, they agreed that the navigation channel would extensively damage a wide variety of wildlife ranging from endangered alligators to deer and waterfowl.

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Wednesday, February 5, 1975

ANY OTHER PLANNING MATTERS - HURRICANE FLOOD PROTECTION PLAN

ACTION:

The City of New Orleans has received from the U. S. Corps of Engineers an "Announcement of Public Meeting" to both "discuss all aspects of the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project including the environmental effects of the project" and "provide a hearing on planned or alternative procedures for the disposal of dredged materials occasioned by the construction of certain project features, as required by Section 404 of the Federal Water Pollution Control Act of 1972" to be held on February 22, 1975 at the University of New Orleans.

There are two separate, though related, aspects of this public meeting. The first is proposed as informational and without legal purpose in order to further inform the general public as to the proposed hurricane protection plan including the barrier system. The Corps considers this to be important in view of both the general interest already expressed concerning the plan and the fact that the Final Environmental Impact Statement on the plan has recently been filed with the Federal Council on Environmental Quality. The second aspect concerns the specific legal requirement of the Federal Water Pollution Control Act of 1972 and, particularly, Section 404 thereof which relates to procedures for disposal of the dredged materials generated by the construction of certain elements of the aforementioned hurricane protection project.

The City of New Orleans has been requested by the Corps of Engineers by letter to Mayor Moon Landrieu of January 21, 1975 to participate in these public hearings. The Mayor, on behalf of the City, has previously commented favorably upon the plan by letter of May 12, 1972 wherein he urges "that this project be pursued with all deliberate speed, because the benefits to the more than million people in the New Orleans area far outweigh any deleterious effects."

PROBLEM:

Hurricanes which enter the Gulf of Mexico frequently expose southeastern Louisiana to their devastating effects. The physical characteristics of coastal Louisiana pose particular vulnerability to hurricane forces consisting of high winds, high water, and heavy rainfall. The lack of adequate natural protection against such forces has fostered complex artificial devices to combat this annual hurricane threat. The hurricane protection project herein examined was

authorized by the Flood Control Act of 1965 approved October 27, 1965 and is designed to provide hurricane protection to the Greater New Orleans Metropolitan Area which includes portions of Orleans, Jefferson, St. Bernard, St. Tammany, and St. Charles Parishes.

Under existing conditions, as a hurricane approaches the City from the Gulf of Mexico, the tides in advance of the hurricane would be elevated to above-normal heights. The rate of this rise varies depending on the storm, but it is generally rather gradual. Due to the natural connections with the Gulf waters at Chef Menteur Pass, The Rigollets, and at Seabrook (junction of Lake Pontchartrain), water levels in Lake Pontchartrain would rise above normal elevations. Levels in Lake Borgne would also be well above normal elevations. Low-lying unprotected areas adjacent to the lakes would be inundated. Greater New Orleans would be virtually surrounded by high waters. If the center of the storm passed in close proximity to the City, the high winds of the storm would produce large waves on top of the already elevated water levels in the lakes thereby worsening the flood threat. Since the storm drainage systems of adjacent communities discharge into Lake Pontchartrain, high water levels in the lake would deny adequate pumping and prevent relief against flooding from heavy rainfalls.

The "barrier concept" is the most distinguishing element of the recommended hurricane protection plan. The barrier consists of three basic features: namely, the Rigollets Complex, the Chef Menteur Complex, and the Seabrook Complex. Each of these complexes includes a gated flood control structure, a navigation structure, and a closure embankment.

The purpose of these structures is to control water level increases in Lake Pontchartrain when a hurricane threat is imminent. When a hurricane approaches the Louisiana coastline, the area in advance of the storm experiences a gradual rise in sea level generated by the storm. For the design hurricane, under natural conditions, this rise would elevate Lake Pontchartrain by 5 to 7 feet above normal lake levels. This rise, combined with the "tilting effect" could produce lake levels from 10 to 13 feet above normal elevations at any location adjacent to the lake. This phenomenon occurred during Hurricane Betsy in 1965.

The barrier structures are designed to prevent the lake from attaining such high levels. As a hurricane moves toward the City, the gated flood control structures at Chef Menteur Pass, The Rigollets, and at Seabrook would be closed, thereby preventing the hurricane produced tides from entering and raising the lake to extreme heights. To the greatest extent possible, this closure would maintain the lake at near normal levels just prior to the passage of the storm.

The total cost of the project as of July 1974 is \$327,000,000 of which \$224,000,000 are Federal costs and \$103,000,000 are non-Federal costs. The proposed 1976 Federal budget includes a \$22,000,000 allocation for the project. With that amount and the \$3,300,000 carried over from fiscal 1975, it would increase the federal funds allocated to \$62,339,000. The Corps has projected that the benefit to cost ratio of the project is 12.6 to 1. This means that for every dollar spent to implement the project, about \$12.60 of flood protection or related benefits will be produced by the project after its completion.

The project in this form was authorized by the Flood Control Act of 1965 (Public Law 89-298), approved October 27, 1965, described in House Document No. 231, 89th Congress, 1st Session, and, in May 1967, the first Congressional construction appropriation was made and work on the levee phase of the project was begun.

POSSIBLE ALTERNATIVES:

Higher Levees: The "high level" plan was one alternative studied. The plan simply proposed raising all of the existing hurricane protection levees, and, where necessary, constructing new high level levees to a height that would prevent flooding in the developed areas. Detailed studies, however, revealed to the Corps that such a plan had many serious drawbacks. The foundation soils in the Louisiana delta area are not conducive to certain types of construction. A commonly experienced problem in levee construction is settlement, and due to poor foundation conditions, building levees to the high levels required for such a plan would require long periods of time, extending exposure to more hurricane seasons without complete protection. In order to construct levees to high levels, it would be necessary to widen the base of each levee, thus requiring more land for rights-of-way. In an urban setting, a demand for more land means higher cost and additional displacement of homes and persons where land areas are congested. Another shortcoming of the high level plan involves the problem of drainage. Due to the nature of the pumping system, a high level plan would prevent adequate drainage of the area during a hurricane unless all of the pumping stations which discharge into Lake Pontchartrain were extensively modified. Each of these problems may be translated into cost, and at the time comparative plans were being evaluated, the "high level" plan was estimated by the Corps to cost approximately 50% more than the plan now recommended.

Eliminate the Lake Pontchartrain barrier and modify the levee system to retain the same extent and degree of protection provided by the proposed action. Under this plan, the barrier system would not be constructed and Lake Pontchartrain would remain open to the tides of tidal surges. The grades of the levees included in the proposed action would be increased and new levee systems along the shores of Lake Pontchartrain would be included to provide protection to unleased areas equivalent to that which they would receive from the reduction in hurricane stages in Lake Pontchartrain which the barrier would produce. Such a plan would cost on the order to three times as much as the proposed plan without any increase in economic benefits. The environmental disruption attendant to providing the additional levee systems along the shores of Lake Pontchartrain would be of major proportions.

No Action. The aforementioned alternatives are the most prominent among the many alternatives examined by the Corps. In addition the Corps reviewed, as it must, the consequences of no action.

The no action alternative would indeed, preserve, for a time, the existing environmental dynamics of the area. The Corps believes that it would leave the area subject to massive overflow from hurricanes, with attendant major economic loss, social disruption, and a potential for extensive loss of life.

The area to be protected under the proposed plan has experienced many severe hurricanes and lesser storms which have caused loss of life and damage to property. Official National Weather Service meteorological records are not available prior to 1893 and most accounts of storms prior to 1893 are obtained from newspapers and historical documents. Because a large portion of the area was relatively uninhabited, it can be assumed that some historical flooding went unobserved.

The project area surrounding Lake Pontchartrain is susceptible to flooding from wind-driven hurricane tides from the lake. This condition is aggravated by increases in lake level resulting from the influx of surges from Lake Borgne and the Gulf of Mexico that accompany hurricanes from the southeast, south, and southwest. Historical hurricanes have produced recorded stages up to 13 feet on the southwest shore of the lake, 6.2 feet on the south shore, 7.1 feet at the southeast shore, and 7.7 feet at the north shore. Overtopping of protective works and flooding of developed areas have occurred several times during recent hurricanes. On several occasions, the marsh area between Lake Pontchartrain and Lake Borgne has been flooded by stages up to 11 feet. Much of the developed area

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in Orleans and Jefferson Parishes is below lake level, some land being as low as -7 feet, with a considerable portion lower than -2 feet. In some areas, flooding as deep as 16 feet above ground level could result from severe overtopping. Stages attending a Standard Project Hurricane (SPH) would cause overtopping of all existing areas. The pumping system on which removal of all flood waters is dependent would be inoperable for an extended period of time. This prolonged inundation would cause enormous damage to private and public property, create serious hazards to life and health, disrupt business and community life, and require immense expenditure of public and private funds for evacuation and subsequent rehabilitation of local residents. The potential for damage and disruption was well demonstrated in September 1965 when Hurricane Betsy passed west of New Orleans. Although the Corps states that this is not the most critical path for a project design hurricane, 18,260 homes and 837 commercial establishments were flooded in the project area, and some 80 persons lost their lives.

EFFECT ON CITY'S HURRICANE PROTECTION:

The Corps estimates that the occurrence of a Standard Project Hurricane wind tide for any location in the area would produce maximum wind tides of 11.5 feet along the south shore of Lake Pontchartrain, 12.8 feet at Mandeville, 13.0 feet in the Chalmette area along the Citrus and New Orleans East back levees, and at the Chef Menteur and The Rigolets areas. The SPH would inundate a land area of approximately 700,000 acres to depths of up to 16 feet in the proposed protection area in the absence of the proposed project. The estimated damage within the area that would result from an occurrence of the SPH under preproject conditions is between one-half and three-quarters of a billion dollars (\$500,000,000 - \$750,000,000). A prolonged inundation would cause enormous damage to private and public property, create serious hazards to life and health, disrupt business and community life, and require immense expenditure of public and private funds for evacuation and subsequent rehabilitation of local residents.

Similarly, damages and expenditures related to Hurricane Betsy in September 1965 were estimated by the Corps at over \$2 billion. More than 2.5 million acres of land were flooded; approximately 300,000 persons were evacuated or changed living quarters;

and more than 27,000 homes were destroyed or flooded. In addition, offshore and coastal oil installations and public utilities reported unprecedented damage. Sugarcane, pecan, and fall crops were heavily damaged and much livestock drowned. Severe damage resulted to all types of fish and wildlife. Deaths in Louisiana resulting from Hurricane Betsy are listed at some 80 persons. The residents of the low-lying areas heeded the warnings of the National Weather Service and local responsible agencies and evacuated promptly. Otherwise, it is conceivable that the death toll may have exceeded the record high of more than 556 persons caused by Hurricane Audrey in June 1957 which struck southwest Louisiana.

This proposed protection plan will combat such destructive occurrences in the future against a Standard Project Hurricane which is one that may be expected from the most severe combination of meteorological conditions that are reasonably characteristic of the region and corresponds to one having a frequency of one in about 200 years in the area.

SECTION 404 HEARING:

An integral part of the February 22, 1975 public meeting is the hearing required by Section 404 of the Federal Water Pollution Control Act of 1972 regarding planned or alternative procedures for the disposal of dredged materials occasioned by the construction of certain features of the hurricane protection project. The hearing on "Section 404" covers the Barrier, the New Orleans East, and the Chalmette units.

The dredging work within these units consists of constructing new levees and closure dams, enlarging existing non-Federal levees, and constructing flood control structures, navigation structures and connecting navigation and approach channels. New levees will be constructed and existing non-Federal levees will be enlarged by first pumping dredged material to the levee fill areas and then shaping this material at a later date into a levee section. Navigation and approaching channels will be constructed by dredging these areas and pumping this material to the levee fill area and/or ponding areas.

The disposal areas for these units are as follows:

- a. Barrier Unit. The disposal areas are located in the vicinity of Chef Menteur Pass, Lake Borgne and the Gulf Intracoastal Waterway, and in the vicinity of the Rigolets, Lake St. Catherine, and Stump Lagoon.

b. New Orleans East Unit. The disposal areas are located on the north bank of the Gulf Intracoastal Waterway from the Inner Harbor Navigation Canal to approximately Bayou Thomas, and along the land-side of the railroad tracks along the south shore of Lake Pontchartrain from Paris Road to South Point. Unloading and stockpile sites for barged levee material and riprap are located along the south shore of Lake Pontchartrain.

c. Chalmette Unit. The disposal areas are located on the south bank of the Mississippi River-Gulf Outlet from the Inner Harbor Navigation Canal to a point opposite Verret, Louisiana, and from there to Caernarvon, Louisiana.

The land adjacent to the barrier unit disposal areas is mainly marsh lands used for hunting and trapping. Camps and commercial businesses are located on the protected side of the proposed new levees. The Scabrook Complex is adjacent to the areas referred to as the New Orleans East Unit.

The land adjacent to the New Orleans East unit disposal area, between the Inner Harbor Navigation Canal and Michoud Canal on the protected side is commercial, industrial, and residential; on the flood side of the disposal area is the Gulf Intracoastal Waterway. Between Michoud Canal and Bayou Thomas, the land on the protected side of the disposal area is partially drained marsh land subject to commercial, industrial, and residential development; on the flood side of the disposal area is the Gulf Intracoastal Waterway. The land adjacent to the disposal area between Paris Road and South Point on the protected side is partially drained marsh land subject to commercial, industrial, and residential development; and on the flood side of the disposal area is Lake Pontchartrain.

The land adjacent to the Chalmette unit disposal areas between Florida Avenue and the intersection of the Inner Harbor Navigation Canal and the Mississippi River-Gulf Outlet is industrialized on the flood side and is marsh land on the protected side used for hunting and trapping. From the intersection of the Inner Harbor Navigation Canal and the Mississippi River-Gulf Outlet to Verret, Louisiana, the land adjacent to the disposal areas is marsh land used for hunting and trapping.

The concern of the City in regard to this hearing would be whether any of these proposed plans would be in conflict with the Coastal Zone Management Plans being formulated or with the existing archaeological sites prevalent in the area. This plan has been reviewed for these purposes and particular attention should be directed toward the levee fill areas in the New Orleans East unit which could impact the following archaeological sites:

1. 16 OR 12 - South Point: (South Point Quadrangle, 30°08'34"N, 89°53'02"W) partially destroyed shell midden (concentration of various kinds of refuse built up over a period of years which represent habitation sites and often contain burials that may or may not have attendant grave goods) of Coles Creek and historic affinities.

2. 16 OR 11 - Dwyer Canal: (Chef Mentour Quadrangle, 30°04'28"N, 89°56'25"W) dredged shell midden mostly covered by marsh.

3. 16 OR 25 - Haughts Canal: (Little Woods Quadrangle) destroyed or buried site about 300 yards east of the junction of Paris Road and Hayne Blvd.

Finally, further attention should be given to the location of the disposal areas west and east of Savin Pass in the barrier unit since the adjacent marsh and their impact on the provisions of the developing Coastal Zone Management Plan which seeks to protect such marsh areas from further erosion and degradation.

EVALUATION:

Although the Commission has taken no formal action on this plan in the ten years that it has been developed and reviewed, it may wish to do so at this time, considering the growing importance of environmental elements in planning, decision making and the significance of the project to the metropolitan area.

Since the project was authorized by Congress in 1965 it has not yet been subject to the environmental reviews contained in the National Environmental Policy Act of 1969 (NEPA) and, as such, the Corps has been proceeding with the upgrading of levees and similar public works projects under its original authorization. However, the barrier segment of the plan has undergone sufficient design revision as to warrant an Environmental Impact Statement (EIS) under NEPA prior to its actual construction.

The Commission staff's environmental and engineering resources are currently so limited as to severely impact its ability to comment upon the technical aspects of the plan but the Commission could reinforce its recognition of the need for proper hurricane flood protection by recommending to the Corps of Engineers that:

- 1. It concurs that proper hurricane flood protection is a vital element in the welfare and safety of the citizens of New Orleans and its neighbors.

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DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 5027
NEW ORLEANS, LOUISIANA 70180

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2. It recognizes that the Corps of Engineers has devised, tested, and recommended this plan as the best system for hurricane flood protection in New Orleans.
3. This plan should be supported and encouraged in the absence of a more feasible system.
4. Without regard to the other considerations involved, the Corps of Engineers should be encouraged to proceed with the implementation of this plan with an abundance of caution for the vitality of the surrounding natural resources.

As to the Section 404 Public Hearing, the Commission could respond by directing attention to proper surveillance of the aforementioned archaeological sites and further evaluation of the Sawmill Pass disposal areas while still concurring in the procedures otherwise proposed for review in the Section 404 Public Hearing.

IN REPLY REFER TO:
LWED-MP

Honorable Moon Landrieu
Mayor of New Orleans
City Hall
New Orleans, LA 70112

Dear Mayor Landrieu:

I will soon announce a comprehensive public meeting to discuss the Lake Pontchartrain, Louisiana and Vicinity hurricane protection project. The purpose of the meeting is twofold: to discuss all aspects of the project, including its environmental effects, and, to provide a "hearing" on planned or alternative procedures for the disposal of dredged materials conjunctive with certain features of the project. This hearing portion of the meeting is required by "Section 404" of the Federal Water Pollution Control Act of 1972.

I have recently been in contact with Louisiana's Representative Edward Scogin regarding this project, in particular, respecting my plans for the conduct of the public session described above. Representative Scogin strongly holds the view that I should not combine a general public meeting with a "Section 404" hearing regarding the disposal of dredged material.

The portion of the combined meeting which provides a general discussion of all aspects of the project is "my meeting," it is not required by law or regulation. The "Section 404" hearing is required by law to specifically examine the plans and alternatives for the disposal of dredged materials, and is necessary in order to inform the Federal decision makers of public views in this regard. There are several reasons why I have elected to broaden the base of the meeting by combining the discussions into one comprehensive session. Primarily, I feel that a general discussion of the project is a requisite for a meaningful and constructive public response to the narrow "Section 404" issue. The public will be allowed to respond to the "Section 404" portion of the meeting up to 30 days after the meeting date.

21 January 1975

LINED-HP
Mayor Moon Landrieu

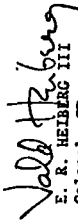
21 January 1975

Further, because of the far reaching area of influence of the project, some interested individuals may have to travel a considerable distance to attend the meeting. Separating the meeting into two sessions would unnecessarily inconvenience these individuals.

I firmly believe that by combining these sessions, I am best serving the public. This format will allow citizens interested in basic project issues as well as the limited area of disposal of dredged material to attend one presentation and direct their comments to any or all of the topics discussed.

There is a good deal of public and political interest in the project. I am very confident that one recommended plan will serve the area well. I hope you share my views and that you will be able to attend the upcoming meeting.

Sincerely yours,


V. R. HEIBERG III
Colonel, CE
District Engineer

HURRICANE FLOOD PROTECTION PLAN

DISCUSSION:

The Staff Manner presented the report and suggested that the City Planning Commission could recommend the following to the Corps of Engineers:

1. That the City Planning Commission concurs that proper hurricane flood protection is a vital element in the welfare and safety of the citizens of New Orleans and its neighbors.
2. That the City Planning Commission recognizes that the Corps of Engineers has devised, tested and recommended the barrier plan as the best system for hurricane flood protection in New Orleans.
3. That this plan should be supported and encouraged in the absence of a more feasible system.
4. That without regard to the other considerations involved, the Corps of Engineers should be encouraged to proceed with the implementation of this plan with an abundance of caution for the vitality of the surrounding natural resources.

With regard to the Section 404 Public Hearing, the Commission could respond by directing attention to proper surveillance of the aforementioned archeological sites and further evaluation of the Sawmill Pass disposal areas while still concurring in the procedures otherwise proposed for review in the Section 404 Public Hearing.

Upon receipt and discussion of the foregoing information, the following motion was made by Mr. Saputo, seconded by Mr. Grandbouché, and adopted.

MOTION:

Be it moved by the City Planning Commission that the foregoing report be and is hereby approved and further that the staff is authorized and directed to transmit said report to the Mayor and City Council and further to present said report and recommendations at the public hearing scheduled on February 22, 1975.

7

YEAS: Colbert, Dent, Favrot, Grandbouche, Montelepre, Perez,
Sapuro

NAYS: None

RECUSALS: None

ABSENT: None

The Chairman, Mr. Barnett, not voting.

Appraisal Associates
REAL ESTATE APPRAISERS

1631 FRONT ST. SLIDELL, LA. 70458

PHONE (504) 643-1620

March 18, 1975

Col., E. R. Heiberg, U.S.A.
Corps of Engineers
Foot of Prytania Street
New Orleans, La. 70118

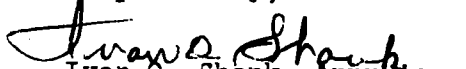
Dear Colonel Heiberg;

This letter is to voice my objections to the proposed portion of the hurricane barrier protection plan damming the Chef Menteur Pass and the Rigolets. The following reasons formed the basis of my objection:

1. The plan does not provide barrier protection for the Pearl River Estuary, allowing water to make an end run over U. S. Highway 90.
2. The proposed shallow barrier will not allow free flow of water to and from Lake Pontchartrain and its Tributaries with the consequent disturbance to the ecology of the region.
3. The increased venturi affect caused by restricting the channeling of the Rigolets and Chef will impose impossible hazards on natural navigation.
4. The limited size of the proposed locks will damage the marine equipment industries on the North side of the Lake Pontchartrain by restricting the size of equipment that can be built or repaired by them.
5. The proposed barriers will modify adversely the sporting and commercial activities in Lake Pontchartrain and its Tributaries.
6. Additionally the proposed barriers will aggravate the pollution level of Lake Pontchartrain and its Tributaries by limiting the natural affect of tidal action.

I request that this letter be made a part of the formal hearing on the Hurricane Barrier Protection Plan meeting held in New Orleans on February 22, 1975.

Respectfully,


Ivan O. Shank, Appraiser
ASA, IFAS

IOS/b
cc: Rep., Ed Scogin

EXHIBIT 96



university of new orleans
lake front new orleans louisiana 70122 (504)288-3161

DEPARTMENT OF MANAGEMENT
AND MARKETING

February 25, 1975

Department of the Army
New Orleans District Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160

REFERENCE: MMED-1P

Attention: Colonel E. R. Heiberg III, District Engineer

Dear Colonel Heiberg:

SUBJECT: Public Meeting, Lake Pontchartrain Hurricane Protection Project,
February 22, 1975.

I attended the public hearing at UNO on Saturday, February 22, 1975, and wish to make the following comments to you and for inclusion in the official record of the hearing.

Attendance: At 9:00 a.m. there were about 17 persons. At 3:00 p.m. 75 remained.

Your handling of the meeting: Excellent. Maintained a professional demeanor while being courteous and respectful to all speakers. Kept the meeting moving yet flexible enough to meet some unusual situations.

Corps Presentation of the Project Plan: Well presented and logical.

Use of the Standard Project Hurricane: Not explained well enough in the corps presentation. It seems that any economic analysis should be based on continuous probability rather than on a discreet 100 year killer hurricane. Continuing yearly probabilities such as those following (my subjective estimates) can greatly influence your conclusions:

<u>Location</u>	<u>P</u>	<u>Intensity</u>	<u>P</u>	<u>Speed</u>	<u>P</u>
Direct Hit on New Orleans w/i 20 miles	.02	75-99 mph	.75	0-10 mph	.2
20-49 miles of New Orleans	.06	100-149	.20	11-20	.5
50-100 miles of New Orleans		150-199	.04	21-30	.2
No effect on New Orleans or over 100 miles	.92	200 or over	.01	30 or over	.1

a member of the louisiana state university system

EXHIBIT. 97-1

Colonel E. R. Heiberg III
Page 2
February 25, 1975

It appears that the standard Project Hurricane would have a probability of:

$$P(\text{Direct Hit}) \times P(\text{Highest Intensity}) \times P(\text{Slow Speed}) \\ .02 \quad \times \quad .01 \quad \times \quad .2 \quad = \quad .00004$$

Calculations assume mutual independence of the probabilities. To design for such a remote probability can be economic folly.

Nine foot rise in Lake Pontchartrain Prior to Hurricane: This figure was mentioned during the Corps presentation. What part of the 9 feet is due to "water inflow" and what part is the "tilt" effect. This was not answered to my satisfaction.

Water rise due to inflow from Rigolets, Chef Menteur, and Seabrook inlets: Seems like 3 garden hoses trying to fill up a large swimming pool. Having observed the Bonne Carre Spillway opening and its minimal effect on the lake level at New Orleans it seems unlikely that barriers at those 3 locations could have much effect on the lake level. I doubt that a 9 foot head difference due to hurricane produced tides at these 3 locations would equal the Bonne Carre opening last time.

High Water in Lake Pontchartrain due to Hurricane: Seems to be 90% tilt effect and 10% water inflow.

St. Charles Levee: Postponed permanently. I have been back in these wetlands near the RR and Interstate highways. It is loaded with fish and other nutrients necessary to Lake Pontchartrain. The major portion of the southern part of the lake is now artificial (RR tressed to Kenner). We don't want another dead lake like Lake Erie.

Gantry Crane at Chef Menteur Pass: If the barrier concept is correct, failure of the single Gantry Crane at a critical time would be intolerable.

Questioning of Corps Personnel: Even though the primary purpose of the meeting is to aid you in your decision-making progress, questions from the public might bring out items that would not be considered otherwise. Time restraints would prohibit open questions from the floor. Possibly a neutral screening committee could select presubmitted written questions for answering.

Equality of Presentations: Both groups received equal opportunity to express their views.

Public Officials Views: In a previous letter you justified allowing public officials to speak first because they represented many people's views. In this I disagree. Ultimately, it is an individual decision, by that public official based on what he knows. Most of their views were emotional oratorics directed to voters (they hope).

Colonel A. R. Heiberg III
Page 3
February 25, 1975

Alternate Methods of Project Evaluation: To aid your decision making you need input from the public. I presume this is why the public hearing was held. Possibly it would be better to appoint an interdisciplinary investigatory group having no interest in the outcome to study the project as the Corps recommends. Such a group might be of more value to you as the decision maker.

My recommendation: I came to the meeting neutral but now feel the barrier plan of the Corps should be rejected. Too many questions remain unanswered.

Sincerely,



G. Kent Stearns
Assistant Professor of
Management

GKS/jap



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Duval Building
9450 Gandy Boulevard
St. Petersburg, Florida 33702

March 21, 1975

FSE21/DM

Colonel E.R. Heiberg III
District Engineer, New Orleans District
Department of the Army, Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160

Dear Colonel Heiberg:

The National Marine Fisheries Service (NMFS) has reviewed Public Notice LMNED-DL (Levee Construction, Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project) dated November 29, 1974, wherein the Corps of Engineers requested comments regarding the proposed continuation of levee construction by hydraulic dredging operations relating to the above mentioned hurricane protection plan. An Announcement of Public Meeting, referenced LMNED-MP and dated January 22, 1975, also requested comments regarding this proposed hurricane protection plan. The comments contained in this letter are in response to both public notices.

The NMFS supports and concurs in the comments expressed by the Fish and Wildlife Service (FWS) at the public meeting in New Orleans, Louisiana, on February 22, 1975. We now wish to emphasize the aspects of this proposed project which are of greatest concern to the NMFS.

Approximately 18,000 acres of swamp, intermediate and brackish marsh, and numerous open water areas are being enclosed by the Chalmette Area Plan portion of this proposed project. These areas serve as valuable nursery habitat for many important fishes and crustaceans and also contribute nutrients and detrital materials which help sustain the highly productive nature of adjacent estuarine areas. To maintain these conditions, the NMFS recommends that full tidal exchange be maintained at all times through the floodgates at Bayou Bienvenue and Bayou Dupre except when excessively high storm-induced tides are forecasted or experienced. We recommend this for the life of the project, not just "initially," as stated in your Announcement of Public Meeting. Of the 21,000 acres enclosed by the New Orleans East portion of this proposed project, 14,000 acres, that have not been drained

EXHIBIT 98-1

and/or otherwise developed, are still marsh and shallow open water areas. However, these 14,000 acres, which functioned as an excellent nursery area for fishes and crustaceans, is now segregated from the adjacent estuary by the levee. This area could be restored to its previously productive condition as an estuarine nursery if it were again made subject to tidal exchange for the life of the project. The NMFS, therefore, recommends that the four drainage structures between South Point and the Gulf Intracoastal Waterway be modified to allow this undeveloped, but enclosed, 14,000-acre wetland area to again be subject to the normal tidal ebb and flow. In addition, the dikes around the ponding areas created for construction of the Chef Menteur and Rigolets Complexes should be breached or otherwise segmented, following revegetation, to permit re-establishment of tidal exchange to the ponding areas. The FWS, the Louisiana Wild Life and Fisheries Commission (LWLFC), and the NMFS should be consulted regarding the timing and location of the suggested breaching.

At the public meeting, the FWS also recommended that, "Studies be initiated to determine the effects of the barrier structures on salinity regimes, and on ingress and egress of marine and estuarine organisms through the Chef Menteur and the Rigolets Passes." The NMFS believes that such studies should definitely be conducted, and would be pleased to discuss their detailed design. The final design of the project should incorporate the size of openings determined necessary to maintain the present estuarine characteristics of Lake Pontchartrain. The proposed location of spoil disposal associated with the Rigolets Complex also concerns us. Destruction of valuable wetlands adjacent to the Rigolets could be avoided if an existing spoil disposal area on the north side of the Rigolets between U.S. 90 and the Rigolets Entrance Light No. 2 were used. We strongly recommend that either this or some other upland area be used for disposal of spoil generated in the construction of the Rigolets Complex.

If the levee construction along the St. Charles Parish lakeshore from the Bonnet Carre Floodway to the St. Charles-Jefferson Parish line were to be implemented, approximately 25,000 acres of swamp, marsh and numerous open water areas in St. Charles Parish would be impacted. The NMFS is, therefore, pleased to note that you have indefinitely deferred construction of this segment of the proposed hurricane protection plan.

Thank you for the opportunity to provide these comments. Please advise us of your subsequent decisions regarding this proposed project.

Sincerely,

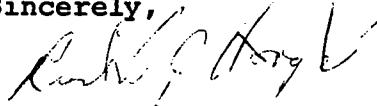

William H. Stevenson
Regional Director

EXHIBIT 98-2

COPY

LAKE OAKS CIVIC ASSOCIATION

NEW ORLEANS, LOUISIANA

OFFICERS

WESTON STRAUCH — PRESIDENT
JOSEPH PRAYCHINAUD — VICE PRES.
FREDERICK ELLIOTT — TREAS.
GILDA SACKS — REC. SEC.
MARLENE BERKE — CORRES. SEC.

February 21, 1975

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LEGAL COUNSEL

KENNETH BERKE

Department of the Army
New Orleans District, Corps of Engineers
Post Office Box 60267
New Orleans, La. 70160

Gentlemen:

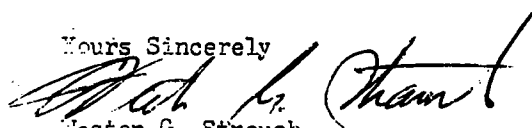
We of The Lake Oaks Civic Association, a subdivision facing on to Lake Pontchartrain are highly in favor of the proposed Hurricane protection system proposed in the Lake Ponchartrain, Louisians And Vicinity Hurricane Protection Project.

The Lake Oaks Subdivision consists of more than 250 homes, all owner occupied, and the price range of these homes is from 850,000 to 175,000.00. We are most interested in this project, because we sincerely feel if Hurricane Camille had hit New Orleans we in Lake Oaks would have been as devastated as the beach area at Biloxi, Gulfport and other beach communities, was after Camille.

The Association that the undersigned represents, consists of more than 125 members, recently we met together in a special meeting to discuss the pros and cons of this project. After thoroughly making ourselves aware of the project, the Association unanimously voted in favor of this project.

To state our position again, WE OF THE LAKE OAKS CIVIC ASSOCIATION DO EMPORSE THE LAKE PONCHARTRAIN, LOUISIANA AND VICINITY HURRICANE PROTECTION PROJECT. We urge you to consider it most favorably for our, and our neighbors protection.

Yours Sincerely



Weston G. Strauch
President
Lake Oaks Civic Association

WBS:car

ADDRESS CORRESPONDENCE TO:
LAKE OAK CIVIC ASSOCIATION, 2238 LAKE OAKS PKWY., NEW ORLEANS, LOUISIANA 70122

164 Pinewood Drive
Slidell, LA 70458
20 February 1975

Department of the Army
New Orleans District
Corps of Engineers
P. O. Box 60267
New Orleans, LA 70160

Gentlemen:

I regret that I will be unable to attend your public hearing on the proposed Lake Pontchartrain Hurricane Protection Project scheduled for Saturday, February 22, 1975, so I am writing, as a resident of the affected area, to express my concern and opposition to your plan. There are four reasons which lead me to question your basic motivation to implement this project:

1. The Plan has been developed to protect New Orleans against a hypothetical hurricane, which has never occurred in recorded history.
2. The potential adverse impact of the proposed locks and known adverse impact of the proposed levee system on the Lake Pontchartrain Ecosystem.
3. The inconvenience of the proposed locks to water traffic in and out of the Lake.
4. The mandate of the New Orleans voters rejecting the proposed levee system on several previous occasions.

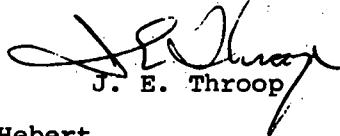
However, if the basic premise of protecting New Orleans' residents from flooding caused by hurricanes is your primary motivation, I commend you. This is a humanitarian cause. But, I object to your proposal to use a considerable amount of general public funds to benefit a few. More specifically, I think it is criminal to propose an assessment of North Shore residents who not only do not benefit from and violently oppose the project, but have been ignored as is evidenced by the obvious lack of any proposed levee protection for the North Shore.

Department of the Army
Page two
20 February 1975

In summary, I feel that the Corps is trying to push this project onto an unwanted public for reasons which remain unexplained.

I would appreciate your comments regarding this matter.

Very truly yours,



J. E. Throop

cc Congressman F. E. Hebert
Representative E. C. Scogin
Mayor F. M. Cusimano


February 20, 1975

STATEMENT FOR THE PUBLIC RECORD ON THE LAKE PONTCHARTRAIN
AND VICINITY HURRICANE PROTECTION PROJECT

we the St. John Environmental Council, oppose the St. Charles segment of this project as we feel it would do great harm to Lake Pontchartrain. Levees in Jefferson and Orleans Parishes greatly contribute to pollution from sewerage in the lake. This is stated in the final impact statement. We also feel that a levee on the lakeshore in St. Charles Parish would create a flood threat to our parish. Our state representative has raised such an issue. We also feel that if the levee is built as planned in St. Charles Parish, then plans would soon be under way for a levee along the lake in our parish. We believe such a study is already under way. We know that if we levee almost all land around the lake it will certainly become less productive and possibly cause a dead lake.

If a levee is needed for St. Charles Parish, then the location should be along U. S. 61 where a right of way exists. A levee there would be easier and quicker to build, and cost the taxpayers many millions of dollars less and be less expensive to maintain. It would also provide for better flood protection as a buffer zone would be left between the lake and the levee. This would be a tremendous safety asset and Lake Pontchartrain would continue to receive the food chain from the marshes necessary for survival.

St. John Environmental Council



Barry J. Triche
President

Obtain H P Project

My name is Michael J. Jitica.
I am a citizen and a
representative of a group of
scientists known as the New Orleans
Ecology. We are concerned about
many ecological aspects of this project.
We ~~are~~ have and even
stronger apprehension that
the Corps of Engineers may
be afraid to admit to Congress
that trying to save New Orleans
from flood waters has become
technologically and economically
unfeasible. The Corps
should not be timid in
telling those of us who have
families in vulnerable regions
that we should relocate
to higher ground. I would
personally rather experience
the hassle of moving
than the nightmare of
being in this city when
a levee does not function

I am willing to accept my responsibility to safeguard people who are relying on me for protection, even when it means that I must admit mistakes, abandon the plans I may have worked for years to implement, and even when it means that I must sacrifice some respect for ~~the~~ principles which may have proved to be impractical because of my own faults or the faults of others. The Army Corps of Engineers should be similarly willing to consider their plans for protection of area citizens. I am convinced that the present attempt ^{will fail} ~~will fail~~ ^{to} ~~to~~ always the original Goodwards plan. I now propose that the Army adopt an alternative plan for flood control in the Lower Mississippi.

Yes, even though I suspect
that this alternative plan
may well fail eventually as
the Orleans subsidies
go deeper into the mud.
The plan was first proposed
by [unclear] in 1927 and I have
included a copy of the statement
he made at that time.
I have no additions to
make, it was a better
plan than the 1927 Army
plan and it is still
a better plan than what
we ~~are~~ have going for us.
(Submit proceedings of 31st Annual etc.)

In the long haul, New
Orleans as we know it will
have to be abandoned. Such
a thing is a gradual unacceptability
but it will happen whether
or not anyone wants to admit it
not because the Army didn't
give it their best, but
because common sense
and natural powers will eventually

spirit of values, I suggest
that the people of New
Orleans are intelligent and
courageous enough to
begin considering an
orderly plan for phased
evacuation of their residences
and of their property
and transformation of
their economic structure
across a decade rather
than in one terrible night,
and for assuming a
leadership role in
demonstrating to the rest
of the nation that we
are trying to avoid the
unfathomable possibility
of having to ask Congress
for billions of dollars
to rebuild a submerged city.
Relocation could be
accomplished and would
certainly have a cost/benefit
ratio far more acceptable
than would an immense salvage

undertaking.

Concerning ecological ramifications of
1947 PP, the Marine Environment
Researchers are not fully

convinced that an artificial
water exchange structure
will alleviate the pressing
chemical and biological
problems associated with
debris buildup in Lake
Ponchartraine. I won't

discuss that any further,
but I will call to the
attention of the environmental
planners the following
reports which are pertinent:

a 1944 study of the effects
of dredging on Lake Ponchartraine,
which should be available
from the Shell Dredgers
Association.

a 1928 technical paper
by Percy W. H. Mason entitled "Louisiana
Mud Flats and the value of
their wild life and fishing
resources."

The 1978 paper is available because it reports not a possible failure of coastal forms but their true state in a marine system.

The 1978 paper contains valuable insights into the impact of sedimentation and field control on survival of the natural systems.

I'll close with a direct quote from Mr. Viosca's 1978 paper:

"It seems that the time is ripe for an enormous development of the La. wetlands along new and intelligent lines, the actual conditions to be demonstrated by observation and research and that this development should be included in a broad program of conservation which has for its object the RESTORATION of those conditions best

visited to an abundant marsh
and swamp fauna...

'It should be considered
a state educational
problem of great significance
to agricultural development,
to wit: "It should state
that, although you enjoy a
most palatable diet,
"a beautiful recreation
and during prosperity."

I thank you for listening
to Mr. Viodca in
1938. I hope someone's
listening today.

STATE OF LOUISIANA
DEPARTMENT OF CONSERVATION

V. K. IRION, Commissioner

TECHNICAL PAPER No. 6

LOUISIANA WET LANDS AND THE VALUE
OF THEIR WILD LIFE AND
FISHERY RESOURCES

MAY 14 1930

BY

PERCY VIOSCA, JR.

Director, Division of Fisheries



NEW HILL MEMORIAL LIBRARY,
LOUISIANA STATE UNIVERSITY,
BATON ROUGE, LA.

New Orleans Court Building

April, 1928

Published by the

DEPARTMENT OF CONSERVATION

LOUISIANA WET LANDS AND THE VALUE OF THEIR WILD LIFE AND FISHERY RESOURCES¹

PERCY VIOSCA, JR.

Department of Conservation of Louisiana

OUR VANISHING AQUATIC LIFE

We are often only too apt to blame the gun, fishing tackle or the steel trap for the great era of destruction of our native wild life which has happily been retarded by the birth of the rather recent movement for the conservation of the supply. With the inauguration of a conservation program in Louisiana some species have shown phenomenal increases, others have remained more or less stationary, although often only a remnant of their former numbers, whereas others have decreased and still continue their decline in spite of numerous laws for their protection. It seems, therefore, that we cannot always legislate vanishing species back into existence, and we must look to their conditions of life and relations to their surroundings for the key to the solution of our most perplexing problems in conservation.

Among our wild species which, at least until recently, have been slowly but surely on the decline, we might consider as a group, our aquatic fauna generally, using the term in its broadest sense. Often, a decrease may not be as apparent as it is real, because the drainage or reclaiming of marshes, by depriving these creatures of much of their habitat, causes them to concentrate in the remaining suitable areas, and, because of this supposed increase in more restricted territory, the aggregate decrease is apt to be overlooked. A prominent case is that of the Louisiana muskrat where the aggregate increase in the catch is due to a phenomenal growth of the trapping industry in the last few years, as a result of the failure of the supply of more valuable fur bearers in other regions. It is not many years since the trappers complained of the handicap to their trapping operations due to the abundance of these "pesky rats," yet today they are alarmed at their relative scarcity and are taking steps for the preservation of their new industry.

Proof that man, by interfering with nature, has created new conditions of existence in our wet areas, and that further decline is inevitable unless some effort is made to restore the former state, is evinced by the scarcity of aquatic species which he does not seek by gun, rod, or trap. Until a few years ago, every summer, great numbers of water bugs and water beetles were attracted by the arc lights in the cities of South Louisiana. Lately,

¹ Presented before the Ecological Society of America at Kansas City, Mo., on December 31, 1925, Revised and Enlarged.

except during flood years, aquatic species are virtually absent from the group of insects found around the lights, and are replaced almost entirely by terrestrial species.

While it is well, by proper restrictions, to prevent too rapid destruction of our wild species, our conservation laws, in too many instances, are only delaying the fate of such species as are unable to adapt themselves to the new conditions. What, therefore, is to become of our marsh and shore birds, our valuable mammals, reptiles, amphibians, fish and invertebrates which have been deprived of their normal habitat? Since the territory suitable for their development under former conditions is becoming more limited every year it is necessary to consider where such organisms will breed and feed in the future; but before we can do anything to assist or redevelop these vanishing resources, or hinder factors which are adverse to them, we must know and understand the workings of nature in greater detail. If our attempts to modify the natural state had been preceded and accompanied by scientific inquiry, they would not have led to such serious consequences, and in many cases would have saved enormous expenditures. Before we take into account the factors which brought about these profound changes, it is necessary to review briefly the geography and geology of Louisiana.

PHYSIOGRAPHY OF LOUISIANA WET LANDS

The Mississippi alluvial plain extends southward along the eastern border of Louisiana in a broad belt about four hundred miles in length and averaging about fifty miles in width. Its lower portion swinging out in the gulf toward the southeast, where it terminates in the present delta of the Mississippi River. On the east side in the state of Mississippi and in the Florida Parishes of Louisiana, and on the west side in Louisiana, the more modern alluvial lands are bordered by the loessal or bluff formation. These in turn are bordered on the east and west by the various manifestations of the belted coastal plain, which is young along the coast and grades inland to a maturely dissected peneplain. Extending diagonally across the state from its north-west corner, and joining the Mississippi alluvial plain midway between the Arkansas line and the Gulf, is the broad valley of the Red River. Paralleling the Mississippi alluvial plain in the northern part of the state is another broad valley, that of the Ouachita River. East of Alexandria, the Ouachita valley merges with that of Mississippi to form an immense flood plain.

The flood plains of the three large silt bearing rivers passing through North Louisiana are in contrast to the more or less eroded upland country through which they run. An intricate network of drainage channels during the post glacial period has carved out the hills of the upland forming the wide shallow valleys of the Red and Ouachita, but in the course of time these rivers have abandoned their former valleys and cut deeper into the underlying strata leaving extensive flats accompanying the narrow tortuous rivers of

today. The drainage system of North Louisiana of today thus consists mainly of two large rivers and a complicated network of smaller streams, creeks and streamlets. The Mississippi River in North Louisiana runs southward along the eastern border of its valley, but since today it is still building rather than cutting, the valley here is still a flood plain, at least when the artificial levees fail to function.

Accompanying each of the master streams of North Louisiana are two long chains of lakes located upon the diluvial plateaus at their lowest levels away from the main rivers. These lakes are more or less surrounded by swamps, some of great extent, and are characterized by cypress and tupelo in the wetter situations and close hardwood stands in the better drained areas. Bayous enter these lakes on the north and leave them on the south where they join the main rivers. These lakes and swamps today are simply flat collecting basins caused by the clogging of the mouths of tributary streams near the main streams due to insufficient drainage during flood times, when the main rivers not only cannot carry off the flow, but actually flood them by backing water up through the bayous, raising the lake and swamp level sometimes as much as twenty-five feet. Except during the flood periods, the greater portion of these areas go dry, and even the lakes may become very shallow.

Below the mouth of the Red River, the Mississippi has no tributaries of any importance, but in the broad fan-shaped alluvial plain which terminates in the present delta, there are numerous important outlets. These, except the Atchafalaya and the present passes at the mouth of the Mississippi have now been dammed by the levee builders. The Mississippi itself flows near the eastern edge of this area while the Atchafalaya flows near the western edge. The other distributaries, both those abandoned by the river naturally, and those closed artificially, originate at the Mississippi or Atchafalaya and, by branching, spread fan-shaped over the area. That portion of the flood plain which lies west of Morgan City was built originally by the Red River alone and later in combination with the Mississippi, whereas the remainder was built by the Mississippi alone or later in combination with the Red.

Geologically speaking, the Louisiana portion of the Mississippi flood plain belongs to the immediate present. Its topography has resulted from a differential building up by sedimentation, and not from upheaval or erosion. Along the main river or its distributaries, present or past, are the natural levees, popularly called 'front lands,' formed by the deposition of the coarser sediments, whereas the 'back lands' differ not only in their lower level, but in finer texture due to an excess of clays. The slope and transition from one to the other, however, is gradual. The topography of the more elevated alluvial lands is varied by meanders and cut-offs which produce a large series of oxbow lakes, these being especially numerous in the upper or older portions of the flood plains.

Where the level of the back lands dips below the mean ground water

level, swamps are formed. These vary from shallow swamps characterized by a variety of hardwoods, to the deeper swamps in which only tupelo and cypress grow. Many of these swamps, especially those in the lower region, differ from those associated with the chain lakes already described in that they are not flooded by back waters but are merely catch basins for the high waters which normally overflow the natural levees in times of flood, although today this occurs only when the artificial levees give way. They also catch the rainfall in the alluvial plain, since the drainage is away from the master streams. Some swamps partake of the nature of both types.

The swamps which are not connected with the master streams wherein they drain during times of low water develop as their drainage systems another type of bayou, the swamp drainage bayou. These are sluggish streams carrying little or no silt in suspension, and the natural levees along them are very insignificant. From this type of bayou to the well developed distributary with high banks, a sort of miniature replica of the present Mississippi, there is every intergradation.

As we approach the coast, the younger wet areas are treeless marsh, and there are many sea level lakes and lagoons resulting from arms of the sea being surrounded but not as yet completely filled with alluvium. The trees, largely cypress, start their growth near the ridge of the master stream and slowly migrate out over the marsh toward some lake or sluggish bayou in the rear. In very young formations, or where the sea water near the coast has prevented the growth of trees, the marsh (fresh or brackish as the case may be) borders the ridge without the intervening swamp.

In addition to the swamps and marshes of the delta of the Mississippi there are a number of smaller rivers traversing the coastal plain from the Pearl River on the southeastern boundary of the state to the Sabine on the southwest, which exhibit, in miniature, replicas of the swamps and marshes of the Mississippi.

There is still an area of Louisiana wet lands which has not been touched upon as yet. The prairies in the southwest portion of the state, formed by almost modern marine deposit, incline gradually to the sea, becoming more and more marshy as we approach the coast. The mud of the Atchafalaya is at present being carried westward and deposited in a shallow sea, and beach formations, still extant but far inland, indicate that this condition has existed for some time in the past. Because of these wave and wind built beaches, which act as dykes against intrusion by the sea water, the fresh water in the marsh, furnished by rainfall, groundwater seepage, and springs, tends to remain fresh and at a more or less constant level, producing near the coast a permanent marsh of wide expanse, varied only here and there by lakes and by shell or sand ridges sometimes far inland. These ridges are the former beaches of lakes, bays or the gulf.

CLASSIFICATION OF LOUISIANA LANDS

The State of Louisiana contains approximately 46,000 square miles of land and 2,500 square miles of rivers, bayous, lakes, lagoons and land locked bays. Of this area (29½ million acres of land and 1½ million acres of water bottoms), only about nine million acres were classed by the census bureau in 1924 as farm lands, about four million acres of which were in crops.

The wet lands, comprising the swamps and marshes which are not considered as water bottoms, comprise some 8½ million acres bringing the area covered with water at some season of the year, to some ten million acres, or nearly one third of the total area of the State. Under primitive conditions, the area subject to overflow only during excessive floods of the master rivers, would total about fifteen million acres or nearly one half of the entire State. Today, when the levees hold, this is reduced to the small figure, about ten million acres, allotted about as follows: Permanent water bottoms, including rivers, bayous, lakes and bays, 1½ million acres; sea marsh 2½ million acres; fresh water marsh 1¼ million acres; permanent swamp 1½ million acres; and hardwood swamp subject to periodic overflow 2¼ million acres.

The State is divided roughly then into three great areas, each occupying at present about one third of the total, upland forest lands, agricultural lands, and wet lands, each of which is productive of great wealth: the first, primarily for its timber and pulp wood (cypress excluded); the second primarily for its crops and pasture lands; and the third for its great wild life and fisheries resources and cypress and associated timber.

FLORA AND FAUNA OF OUR WET AREAS

The wooded alluvial swamp lands range from the deep swamps characterized by heavy growths of cypress and tupelo to the more shallow swamps with their stands of cypress, tupelo, ash, maple and sometimes willow. In the upper portions of the State there are few or no marshy tracts, but as we approach the coast, all of the younger formations except the willow grown ridges, are treeless and characterized by thick growths of rushes, bulrushes, grasses, sedges, reeds, cat-tails, pickerel weeds and arrow-heads. Among the genera represented are *Juncus*, *Scirpus*, *Carex*, *Arundinaria*, *Typha*, *Pontederia*, *Sagittaria* and others. This marsh blends insensibly into the sea marsh with its wiry sedges and grasses. The silt-bearing streams and the greater shores of our flat bottomed lakes are free from rooted vegetation. Along the shores of some of our lakes and throughout our marsh lagoons are various subaquatics depending upon the nature of the soil and other factors. *Ceratophyllum*, *Cabomba*, and *Potamogeton* predominate. In the lagoons and smaller lakes the surface growths are largely *Lemna*, *Azolla*, water lilies, chiefly *Castalia odorata*, lotus, *Nelumbo lutea*, and water hyacinths, *Purpurea crassipes*, the last having taken almost complete possession in some of the tide

el fresh water areas, and particularly in the swamp drainage bayous. The water hyacinth cannot, however, stand as much salt as our native plants. The permanent swamp country is rich in animal species; deer, black bear, quirels, raccoon, woodduck, egret, herons, alligators, snapping turtles, and allfrogs, being perhaps the most conspicuous. The lakes, rivers, bayous and lagoons abound in fresh water fish such as the buffalofishes, *Ictiobus*, the fresh water drum, *Aplodinotus*, the catfishes, *Ictalurus*, *Ameiurus*, and *Lepomis* and the paddlefish, *Polyodon spatula* among the commercial species; and various basses and so-called basses, sunfishes and crappie represented chiefly by the following species or genera: *Roccus chrysops*, *Morone intermedia*, *Micropterus*, *Chaenobrythius*, *Lepomis*, *Eupomotis* and *Pomoxis* among the game species. The young of all of these are dispersed throughout the bayous, which act as great natural fish hatcheries and brooders for the stream and lake fish of our State and assure a continuance of the supply.

The fresh water marsh partakes somewhat of the same fish, reptile and amphibian species as the swamps although somewhat modified as to assortment and with some additions. Ducks, rails, coots, gallinules, shorebirds, geese, marsh hare, deer, raccoon, mink and muskrat are conspicuous. Going from fresh to salt water marsh the animal associations change gradually, as to those of the plants. Many of the species named above tolerate brackish water but are absent from the tidal marshes. The fresh water terrapin is replaced by the diamond back, the king rail by the clapper, the strictly fresh water fish disappear and are replaced by salt water minnows and other types, and more or less generally by the young of larger marine species which inhabit shallow water. Snails, fiddler crabs, shrimp and fish of these marshes serve as a food supply for the salt water shore fishes, both game and commercial species and these areas bear the same relation to our salt water fisheries as the fresh water swamps and marshes bear to our fresh water fisheries. The liatomaceous flora of these brackish and salt marshes furnish an unending source of food for our great oyster crop, while the stems, leaves and roots of the salt marsh grasses, as well as other organic plant and animal debris which are washed into the bays and lakes by falling tides, form the bulk of the food supply for our salt water shrimp and the blue crab.

MAN-MADE CHANGES IN OUR WET LANDS

During the past fifty years great changes have taken place in this State due to man-made factors which are changing the conditions of existence for our wild life and fisheries from its very foundations. Perhaps the most significant of these is flood protection in the valley lands of our rivers by means of levees, which render the front lands and considerable areas of the back lands reasonably free from annual floods. This drying up of considerable areas formerly inhabited by water living creatures was thought necessary for the new agricultural communities which became established in our

alluvial lands, these lands being considered more valuable to the incoming white settlers as agricultural lands than for their wild life as long as a shortage of the latter did not manifest itself. This life, in part, retreated to the swamps and continued to exist there in sufficient abundance for the growing population. While this was going on, the sawmills were active in our great timbered areas until today 85 per cent of our 14½ million acres of upland forests have been cut over. The result of this, combined with agricultural drainage, has been to promote more rapid run off, resulting in more serious droughts and floods, those great fluctuations of water level in our swamps and overflow lands being disastrous to our aquatic creatures which are accustomed only to moderate droughts and floods. The situation has further been exaggerated by the fact that Louisiana has also to bear the brunt of the burden due to flood protection, drainage and deforestation going on in the entire area of 1,325,000 square miles of the Mississippi valley. In addition our wild species have to contend with a certain amount of artificial pollution of streams.

Another change affecting our wet lands is the cutting off of all important natural outlets of the Mississippi river except one, the Atchafalaya. Most of these outlets were simply closed with levees, but where navigation demanded, locks were installed. Another modification is the removal of stumps and natural impediments from streams, the deepening of channels and the creation of cut offs in our smaller streams and bayous to meet the demands of navigation. This of course further increased the run off and consequently lowered the mean water level, while increasing the fluctuations of the water level in the swamps and marshes which they traversed.

It was a normal condition for all of our swamps and marshes to be surrounded by natural levees, which, although sometimes low, tended to retain at least a few inches of water over these areas. These levees were either the natural alluvial levees along streams or the wave, drift and vegetation built ridges along the sea coast, bays, lakes or swamp drainage bayous. Three things have occurred which are nullifying the effects of these ridges. In order to remove the cypress and other timber from the swamps, it has been necessary to dig canals and cut pull boat runs throughout the length and breadth of our great swamp areas. Second, a large commerce has sprung up about the natural resources of our marsh lands and water areas, and in order to meet its requirements, there has been an enormous development of navigation canals which traverse our marshes and swamps in all directions. Third, in order to drain the ridge lands adjacent to the swamp and marsh country, many drainage canals and ditches have been dug from the relatively high lands, across the marsh or swamp to some natural lake or bayou. The result of this canalization of our wet lands has been to nullify the effects of the natural levees and to promote a rapid run off of the water, not only from the high lands but from the adjacent wider areas of marsh and swamp. The

drainage of these wet areas, of course, serves no useful purpose since the canals work both ways, bringing about abnormal fluctuations of water level, salt content and other conditions. These of course profoundly affect the microscopic life, and consequently the larger and commercial species as well.

A far more disastrous result of this canalization is the creation of a fire hazard. Especially during the west wind periods in summer when the rainfall is light and the gulf level low, sometimes for several months, the marshes and swamps become thoroughly dried out down to the clay subsoil. The peaty humus which has been accumulating under water for centuries is very inflammable and takes fire, evidently spontaneously in many instances, with the result that both active and acclimating species become annihilated. After the rain or high tides flood the lands again, the potash and other alkalis and salts resulting from the fire are dissolved, thus preventing the restoration of the marsh for a much longer period than would otherwise be the case.

Along the coast, another serious condition results from these canals. Meadow grasses migrate down the incline on the ridge side of the marsh as the water recedes. High water due to rains and tides floods these areas periodically killing the grasses. The resulting infusions are the ideal pabula for the larvae of *Aedes sollicitans*, *Culex salinarius*, and some other mosquitoes indigenous to our coast. Since the fish and other natural enemies which prohibit breeding over the wide expanses of our coastal marsh are reduced to low terms during the drought periods they cannot migrate back into the transition or meadow zone at the edges of these areas in sufficient numbers, and the so-called mosquito plagues are the result. That this condition formerly did not exist to the extent that it does today is evinced by the fact that our coastal islands were formerly developed as summer resorts and as sugar plantations, and by the fact that south of the end of the last levee on the Mississippi River where nature does not take man's influence as seriously as in the leveed zones, and in the deltas of other streams such as the Pearl River and the Atchafalaya, this condition does not exist. History does not record, and the oldest inhabitants have never experienced, such great invasions of mosquitoes as now periodically visit our coast immediately after every drought. Besides, the numerous Indian shell mounds and relics in the lake and marsh country are perhaps mute evidence that that country was comfortably habitable in prehistoric time.

THE NATURAL RESOURCES OF OUR WET LANDS

We will now review the natural resources which are more or less dependent upon our wet lands for their existence. The value of our great game resources cannot be measured in dollars and cents since their greatest importance is the incentive which they give for healthful outdoor sport and recreation, and their educational uses. Of our great variety of game birds and mammals, certain ones, such as bear, deer, squirrels, marsh rabbits, geese,

ducks, coots, rails and snipe are dependent entirely upon our wet lands for their existence; and even quail, doves and turkey among our upland game take to the adjacent swamps when hotly pursued, and would have long since been reduced to the vanishing point were it not for these convenient hiding places all over the State. With migratory game birds, such enormous numbers of which winter in our wet lands, these areas assume national and international importance. It is hard to estimate the food value of the game killed annually in Louisiana. If each of the 100,000 hunters in this State kills an average of \$10.00 worth of wild meat in a season, and this seems reasonable when we consider the great numbers of ducks, coots, and marsh hare killed annually, the food value of this resource would be worth a million dollars a year.

Our fresh water commercial fisheries have already passed the two and a half million dollar mark. To this we can safely add a food value of one million dollars for fresh water game fish caught by anglers. Frogs, turtles, fresh water shrimp, crayfish and fresh water mussels in the aggregate easily reach another million. Since these resources are more or less migratory, they benefit also the fisheries resources in adjacent states and the Mississippi Valley. The better part of these resources would disappear when the last acre of marsh and swamp, the great sources of their food supply, is drained. There is no exaggeration in this, since fresh water fish and frogs are very scarce for one to two years following every drought sufficient to dry our swamps, while they are abundant following a year of abundant rainfall, or locally in areas previously affected by back waters or a crevasse, and especially abundant following every great flood of the Mississippi.

The salt water fish industry, including crabs and diamond back terrapin, bring a revenue of two million dollars to the fishermen, and the salt water shrimp have reached the three and a half million mark. The food value of the shrimp, crabs and salt water fish consumed by the fishermen, plus that caught by anglers, added to the revenue derived from the sale of bait, certainly reaches a million.

The wholesale value of our oyster crop is two million dollars, bringing the annual production of our fisheries resources up to thirteen million dollars.

Practically all of our fur crop consists of animals caught in the swamps or marshes. The trappers were paid six and one-half million dollars during the 1924-25 season for these furs. Money values above mentioned, excluding the intangible returns, are summarized in Table I.

This twenty and a half million dollars means that every acre of permanently wet lands in the state is already producing a dividend for the mere collecting of it, of about three dollars a year, this in spite of the fact that normal conditions have been seriously interfered with and many species are harder to secure now than formerly.

TABLE I. Money value of natural resources derived from Louisiana wet lands

Gamewild	.....	\$1,000,000
Commercial fresh water fish	.....	2,500,000
Fresh water game fish	.....	1,000,000
Frog, turtles, fresh water shrimp and mussels	.....	1,000,000
Salt water fish, crabs, terrapins	.....	2,000,000
Salt water shrimp	.....	3,500,000
Salt water game fish, crabs and shrimp caught by anglers or consumed by fishermen, etc.	.....	1,000,000
Oysters	.....	2,000,000
Fur and Alligator hides	.....	6,500,000
		<hr/>
		\$20,500,000

I will mention again the recreational and educational value of these resources. Many of these areas are still among the most primitive natural areas in the country today, and their possibilities as parks and playgrounds are enormous. It is impossible to figure the immense value of healthful recreation in these great open spaces, but it must be tremendous, for enormous sums are spent in seeking it. The educational value also cannot be estimated, and is of benefit both to natives and visitors. A variety of biological species and types exist here, and are used in museums and educational institutions throughout the world. These areas are also the homes of a remarkable variety of birds and other creatures which serve as objects for study with binoculars or camera; while the scenic effects throughout this country have never and still serve as inspiration to the poet, philosopher and artist, and the legend and romance of the swamp and marsh country is still being written.

Even aside from the recreational and educational values which cannot be figured, the natural resources of our wet lands are worth far more than the mere severance values roughly enumerated. Around them is built up a large waterway commerce which has necessitated the development of the inter-lake canal system and many private canals connecting the parallel streams. The money derived from them is spent for provisions, arms and ammunition, boats, automobiles, fuel, etc., and the army of sportsmen, pleasure seekers, and professional fishermen and trappers are the main support of a large number of people who derive revenue as camp and resort keepers and guides, as well as for hunting and trapping privileges. These resources necessitate farming in order to supply the basic commodities required by both the resident and transient population which seek them and they therefore create values for the agricultural lands as well as for the resort sites in that country. Another important condition which cannot be estimated is that these areas support an abundant insectivorous bird population, and furnish a heavy crop of toads, grasshoppers, lizards and other beneficial creatures which could not exist on the agricultural lands alone, but are constantly overflowing on to

them, and already to meet almost any emergency in the way of a superabundance of insect pests in the adjacent farm and forest lands. These wet lands also serve as reservoirs for the collection of organic matter and minerals lost from the soils of adjacent agricultural lands or forests, and furnish a means whereby part or all of the fertilizer elements are returned to the dry land areas, more directly through such creatures as the marsh hare, frogs, tree frogs, toads, crayfish and aquatic insects, etc., which are storehouses for organic matters accumulated in the wet areas and which migrate into dry areas leaving their droppings or dead bodies to fertilize the soil; or more indirectly through small fish, molluscs and crustacea which are usually an intermediate product of this organic accumulation and are in turn devoured by birds, mammals or reptiles, etc., which fly or prowl over the land returning some of the fertilizer elements also in the form of droppings or their dead bodies.

Another immense value of the wet areas is that of maintaining a constant ground water level near the surface in the adjoining high lands. When the wet lands are drained, expensive irrigation systems become necessary during the dry periods, which have become far more serious now than in former years.

Our wooded wetlands, although 90 per cent cut over, are constantly growing new timber, particularly cypress whose greatest value is in boat building, as well as other woods particularly valuable as box wood and paper pulp.

While the greatest value of these forests lies in the future, they are at present furnishing an unlimited supply of firewood and poles, great quantities of fence posts and cross ties, and willow for mats to harness the rivers. There are also numbers of other products and by products such as willow for baskets, spanish moss, *Tillandsia*, which is the basic product of a large mattress and upholstery industry, palmetto for temporary huts, oyster shell and clam shell for chicken feed and road surfacing, white paille fine and other grasses furnish excellent pasturage for cattle which wade out into the marshes to feed.

RECLAMATION AND FLOOD CONTROL

The next problem to be considered is that of reclamation and flood control. We must remember that the policy for the past fifty years for the harnessing of the Mississippi River has been one of levees only, permitting the alluvial lands to be drained by gravity to the rear, and where they could not be drained thus, to drain by pumps as in the city and suburbs of New Orleans and the sixty odd present and past reclamation projects scattered throughout the swamps and marshes of South Louisiana.

Of course, in the last analysis, the demand for land for agriculture or other purposes determines its value, and whether or not the heavy overhead flood protection and drainage tax is justified. The fact that the large majority of agricultural drainage projects in Louisiana marsh lands have

sulted in failures, and that there are in crop and pasture at the present day only about one third the available acreage of the best lands suited to that purpose and not definitely consigned to reforestation, and also that food acres in Louisiana have not risen in proportion to the average for the country, which demonstrates that there is sufficient acreage for any increase in population for a long time to come. The area of the State from which crops were usually harvested in 1924 was less than one eighth the total land area of Louisiana, and there has been an actual decline in farm acreage of over one million acres, or many times the combined acreage of all reclamation projects ever attempted in the permanent wet areas.

As to a better flood control policy, waterway experts are at present seriously considering means to relieve the better agricultural lands forever from the everpresent menace of floods. A plan much advocated recently consists of artificial distributaries or spillways which dedicate the less elevated portions of the great river basins to the floods in order to permanently protect the more elevated regions along the rims of these basins. Since these areas are flooded periodically anyhow, why not let the floods in there under control instead of allowing them to run on a rampage. Such a plan, while permitting more of the better lands to be used safely for agriculture, would also assure an enormous development as well as the permanency of our great fresh water fisheries resources.

While the building of levees, the clearing of lands, farming, the building of cities and accompanying drainage projects have been justified in order to meet the needs of man, let us inquire whether it is not possible to overdo this civilization process? I say, emphatically, yes, if we expect to rely on any of the products of our wet lands as sources of food supply, wealth, and recreation. Even the real estate promoters who are making the gulf coast "America's Newest Playground," while extolling to the highest the natural wealth of this area, do not yet realize that they are "killing the goose that laid the golden eggs." Near New Orleans alone enough land has been reclaimed or is being reclaimed at the present time to support comfortably a population of several million people. Until all these suburban home sites are reasonably occupied, and until some ten million idle acres are placed in farms, not to mention some ten million acres which could raise several more timber crops before being ready for occupancy, if ever, we are not justified in reclaiming another acre of our permanently wet lands. It seems, therefore, that the best we can do at this time with some ten million acres is to encourage the normal marsh and swamp life by conserving the ideal water level as far as practicable, for the benefit of its own resources, and as the natural source of food supply for the species inhabiting our one and a half million acres of lakes, rivers and coastal water bottoms.

In the tidal country this could be done by the employment of levees and dams which would permit an inflow, but would prevent drainage below a

level which is detrimental to those species adapted to the brackish water conditions thus created. Where tidal conditions do not predominate, an attempt should be made to produce or restore the fresh water marshes as far as practicable. In southeastern Louisiana, where the Mississippi River level is practically always above the marsh level, some of the marshes could be irrigated with siphons and dams similar to those used in rice culture. Where siphon water is not available every effort should be made to conserve the rainfall and ground water seepage by means of small levees along the canal banks, and dams or weirs at the mouths of sloughs and small bayous which are not navigable. With properly constructed relief outlets along the Mississippi in connection with flood control the problem would almost solve itself.

It seems that the time is ripe for an enormous development of the Louisiana wet lands along new and intelligent lines, the ideal conditions to be demonstrated by observation and research, and that this development should be included in a broad program of conservation which has for its object the restoration of those conditions best suited to an abundant marsh and swamp fauna, but under some degree of control at all times.

It should be considered a state and national problem equal in significance to agricultural development, to the end that the state and nation may enjoy a more balanced diet, more healthful recreation, and enduring prosperity.

SUMMARY

Man, by creating new conditions of existence in the wet areas of Louisiana, has brought about changes in the flora and fauna, resulting in a decline of many species of economic and commercial importance. Hunting and fishing as at present regulated are only minor factors in the diminution of many of these species.

The greater proportion of Louisiana's wet areas are of alluvial origin, the most significant portion being in the lower flood plain of the Mississippi, where there are found extensive areas of inland swamps and lakes, and coastal swamps, marshes, lakes and bays and associated streams. In the southwestern part of the state, the marshes are part of the West Gulf Coastal Plain just emerging from beneath the Gulf waters.

The state is divided roughly into three equal areas of approximately ten million acres each, upland forest, agricultural lands, and wet lands, about seven million acres of the latter being permanently wet.

The permanent swamps, both those characterized by stands of cypress and tupelo, and the fresh water marsh lands, are rich in mammals, birds, reptiles and amphibians, and serve also as natural fish propagating places for the species found in the adjacent streams and lakes. The salt marshes are also rich, but in a different assortment of plant and animal species, and bear the same relation to our salt water fisheries as our fresh water swamps bear to our fresh water fisheries.

Man-made modifications in Louisiana wet lands which are changing the conditions of existence from its very foundations, are the result of flood protection, deforestation, deepening channels, and the cutting of navigation and drainage canals.

The natural resources of our wet lands in the aggregate are immense, and consist of game and fur bearing animals, fresh and salt water fish, shrimp, oysters and other sea foods, frogs and turtles, etc. These in the aggregate are worth over twenty million dollars to the catchers, and thus each acre of permanent wet lands is producing at the severance value, a dividend of three dollars per year.

Reclamation and flood control as practiced in Louisiana have been more or less a failure, destroying valuable natural resources without producing the permanent compensating benefits originally desired. Reclamation experts and real estate promoters have been "killing the goose that laid the golden egg." In view of the fact that the affected wet lands have been impaired by the so-called improvements, and because they are not needed and will not be needed for other purposes for many generations, if ever, our future conservation policy should be a restoration of those natural conditions best suited to an abundant marsh, swamp, and aquatic fauna, but under some degree of control at all times, to the end that the state and nation may enjoy a more balanced diet, healthful recreation, and enduring prosperity.

PROCEEDINGS
of the
American Fisheries Society
FIFTY-SEVENTH ANNUAL MEETING

at
HARTFORD, CONNECTICUT

August 8, 9, 10, 1927

The Fifty-seventh annual meeting of the American Fisheries Society convened at the Hotel Bond, Hartford, Conn., on Monday, August 8, 1927, at 10 a. m., President John W. Titcomb presiding.

REGISTERED ATTENDANCE

JOHN W. TITCOMB, Superintendent Conn. State Board of Fisheries and Game, Hartford, Conn.
CARLOS AVERY, Secretary American Fisheries Society, New York
JAMES A. LAIRD, South Side Sportsman's Club, Oakdale, N. Y.
SAMUEL I. BORGER, Fish Culturist, Brookhaven, N. Y.
CHESTER A. FITNEY, Peppinridge Lake Trout Hatchery, Eastport, L. I.
C. P. PETERSON, Game and Fish Commissioner, Bisbee, North Dakota.
MAYNARD S. JOHNSON, Division of Economic Zoology, U. of Minnesota, St. Paul, Minn.
JOHN N. COBB, College of Fisheries, University of Washington, Seattle, Wash.
PERCY VIOSCA, Jr., Director of Fisheries, Department of Conservation of Louisiana, New Orleans, La.
JOHN R. GREELEY, Ichthyologist, New York State Conservation Department, Survey 1927, Ithaca, N. Y.
CARL L. HUBBS, Museum of Zoology, Ann Arbor, Mich.
EMMELINE MOORE, Investigator in Fish Culture, Albany, N. Y.
EBEN W. COBB, Field Supervisor, Hartford, Conn.
WM. H. ROWE, Trout Breeder, West Buxton, Me.
FRANK W. WARDWILL, Maine Fish and Game Association, Portland, Me.
J. F. HAMPTON, Linville, N. C.
ALBERT M. POWELL, Lewistown, Md.
CHAS. O. HAYFORD, Superintendent State Hatchery, Hackettstown, N. J.
NATHAN R. BULLER, Commissioner of Fisheries, Harrisburg, Pa.
GEO. F. STACK, Superintendent Paradise Brook Trout Co., Cresco, Pa.
L. H. SPRAGLE, Treasurer, Paradise Brook Trout Co., Cresco, Pa.

tive to sewerage and stream pollution in accordance with a comprehensive plan, of which some of the major factors have been discussed above, the board feels assured that sane conservation and prudent utilization of water resources can best be attained through cooperation of the state, its municipalities, its industries and its citizens.

Supplementing his paper, Mr. Buller said:

Before the creation of this Sanitary Water Board in Pennsylvania the matter of the pollution of waters came under different heads. For example, the Department of Health had authority over sewage, the Department of Fisheries over industrial wastes, and the Water Supply Commission over obstructions, such as coal dust, and so forth. By drastic legislation for fifty years each of these organizations had been trying to accomplish things, but we found that they were not accomplishing anything at all, hence the creation of this Sanitary Water Board, and its progress.

I am a great believer in co-operation. You gentlemen all appreciate the difficulty experienced in getting adequate legislation to correct these evils. Fortunately our health law in Pennsylvania is very good; we need no further legislation so far as the Department of Health is concerned. But when it came to getting legislation covering the industrial situation, while we have a law making it unlawful to turn anything into the stream which is detrimental to the waters thereof, we could never get any fine attached to it in excess of \$100. In legislation after legislation attempts were made to have these fines made heavier, but it could not be done, and the result was that we were not getting anywhere. I believe in the cooperative way; if you can get to the real fountain head of all these corporations and polluters, as we call them, you can accomplish something. Every case that comes before the Sanitary Water Board for decision is placed in my hands with authority to act, and I have settled quite a number of these cases out of court.

FLOOD CONTROL IN THE MISSISSIPPI VALLEY IN ITS RELATION TO LOUISIANA FISHERIES

BY PERCY VIOSCA, JR.

Director of Fisheries, Department of Conservation of Louisiana.

When we consider that under primitive conditions about one-half of the State of Louisiana, an area comprising some fifteen million acres, was covered with water for at least part of the year, and that today this has been reduced to about ten million acres, we wonder what were the primary reasons for the reclamation of so large a proportion of this great flood plain from its annual inundation.

The idea of a rich virgin alluvial soil which needs no fertilizer is the first thought which comes to mind. Was that, however, the primary reason for the earliest settlement of Louisiana? Perhaps not, because a new country is always built up on its natural resources, and agricultural pursuits are developed as a secondary source of food supply, at first supplementing, and later gradually replacing the natural sources as the growing population depletes them. The early settlers found Louisiana abundantly rich in such resources, and because of her great areas of temporary or permanent wet lands, water-living creatures dominated the native species of this region. Then, as today, her wet areas were the most productive naturally, and waterfowl, fisheries and fishery products played no small part in the sustenance of Louisiana's pioneers.

Because of the inherent wealth of virgin Louisiana alluvial regions, the pioneers sought these lands and built their cabins or homes along the river banks, since here were the highest ridges in our great lowland basins. Owing to the richness of the soil in these periodically flooded areas, agricultural pursuits were a decided success and villages and towns sprang up and have evolved until today they have become the great population centers of our state. As a protection against these periodic floods, instead of building mounds or retiring to the highlands during the overflows, as did the Indians of this region, levees were found to be better suited to the needs of the white race, and these also have evolved until we have mountainous dykes so familiar to our inhabitants today. By means of these levees, built to hold the main rivers during flood stages within the same channels they occupy during low water, we have wrought many changes in the character of our state, for we have not only protected to a great extent, the better developed alluvial lands of higher level adjacent to the rivers, but

have in a great measure prevented this flood water from entering the extensive lowland basins where it normally deposited its fertility before the river stages lowered to such an extent that it could find an outlet to the sea. The shallow inland swamps above sea level, when filled only periodically by rainfall, do not possess the richness of the same area as when they are flooded by the rivers.

Thus man, by harnessing our rivers, has created new conditions of existence in the formerly wet areas, this resulting in a decided decline of the aquatic natural resources. Several million acres formerly suited to fish and other aquatic wild species have been made unfit for such creatures, yet are serving no other useful purpose, either because the land is not needed in these days of surplus crops, or because they cannot stand the tax necessary for reclamation, or because they are subject to the ever present menace of disastrous floods.

It is chiefly as a result of the building of levees, and not as a result of shooting and trapping, that our aquatic birds and mammals have suffered. On the other hand, moderate floods are not severe upon this wild life as is commonly supposed, while it recovers with startling rapidity even after severe floods. Just as our aquatic birds and mammals have suffered by our present and past means of flood prevention, reclamation and drainage projects, so have our fisheries, both marine and fresh water. This is sometimes not noticeable as in the case of the oyster, where artificial cultivation is supplementing the natural supply, or in some of our fisheries, where modern machinery and fishing tackle manned by an ever-increasing army of men, who often seek new and distant fishing grounds, have been keeping the supply equal to the increased demand.

The real reason, however, why Louisiana has not felt to any severe extent, a shortage of her fisheries resources, is because of the annual tendency of her rivers, particularly the Mississippi, to return the state to her primitive condition, and the history of crevasses has shown, that to a greater or lesser extent, they have succeeded from time to time.

While agriculture and industry have suffered greatly from the recent rampage of the Mississippi, let us try to look at this flood as an attempt by nature to return Louisiana and other parts of the valley to their virgin condition, and with this viewpoint, determine what benefits will accrue, and what lessons we can learn toward harnessing the streams of the Mississippi Valley so that we can derive most from the floods with the least harm to our native wild species.

FLOODS AND FISHERIES

The most obvious benefit resulting from an overflow on the lower Mississippi is the enrichment of the soil by deposition of fertilizer elements previously washed from the soils of two-thirds of the United States. This always insures fine crops with a minimum amount of work immediately following recession of the water. Only a small percentage of the fertilizer elements are deposited on the land, however, the balance being carried into the swamps, marshes, lakes, bays and shallow waters of the gulf. This in a very short time is converted through a biological succession into an inconceivably large supply of living plant and animal organisms, the fundamental food supply of our fresh and salt water food fishes, frogs, turtles, alligators, shrimp, oysters, fur bearing animals, and our ducks and other water birds. Those in the aggregate constitute perhaps the densest and richest wild fauna in the world, considered both from its commercial and recreational values. Ordinarily, most of this food material is carried out to sea, but when the levee system gives way and it is checked in its seaward course in the vast inland lakes recreated by crevasses, it fertilizes waters which are easily accessible to the fishing population of Louisiana and adjacent states.

The floods virtually create conditions in the formerly dried areas, similar, except for the mingling of species, to those in a fish hatchery. This hatchery instead of being only a few acres in extent, covers a great area. During the 1927 flood, it comprised some six million acres, or about one-fifth of the total area of the state. Since all of Louisiana streams are interconnected, the benefits of this gigantic fish hatchery and brood pond are statewide. Spreading over our swamps and farm lands, the fish formerly confined to our streams, propagate in inconceivable numbers and grow rapidly upon the abundant supply of micro-crustaceans, fresh water shrimp, crayfish, minnows, worms, insects and other live food available, as well as upon the dead animal and plant life destroyed by the floods. This results in an immense surplus of fish in our inland waters, and it almost becomes a patriotic duty for everyone to catch or eat fish, especially the big fish, because our streams have not the capacity to hold and feed all of the fish left in them when the high waters recede.

The fresh water commercial fish, such as the buffalofishes, the catfishes, the fresh water drum and the paddlefish, thrive in flood waters and the increase in their numbers and tonnage is almost inconceivable. River shrimp and crayfish, both of

which are highly prized delicacies in the lower Mississippi Valley, also show phenomenal increases during every flood, and turtles and frogs which suffer so severely during every drouth obtain a new lease of life.

The fresh water sport fishermen find exceedingly fine fishing, as soon as the waters recede, in all of the bayous and inland lakes and streams. Black bass, crappie, bairfish and sunfish become especially abundant after every flood.

In the salt water areas also, the floods on the whole are decidedly beneficial. It is true that on the coast some of the oyster beds close in are temporarily destroyed by excessive amounts of fresh water, but likewise many old reefs are rehabilitated. Even those oysters that are destroyed in turn serve as food for other organisms or as fertilizer for the minute aquatic plants which themselves serve as food for the oysters on the newly created reefs a short distance away. Under the water a well established biological cycle prevents the loss of the nitrogenous and other valuable elements, which cannot be dissipated into the atmosphere by fires as in the case of forests or land crops. The result in the case of the oysters is largely a shifting of certain fishing grounds but the total oyster crop is decidedly increased. The fresh water also destroys the army of Purpura or conchs, and otherwise retards the activities of other natural enemies of the oyster which thrive in sea water.

Salt water shrimp are always abundant in the gulf off the passes of the Mississippi where they feed on animal and vegetable debris deposited in the salt water by the river. As soon as the floods subside, young salt water shrimp migrate in great schools into those tide level lakes and bays where the debris has also been deposited, and there they become more accessible to the shrimp fishermen who cannot always venture into the open gulf or to more distant fishing grounds. The salt water shrimp also seem to benefit by the destruction of a certain parasitic disease which does not affect them in fresh water, and those shrimp which are grown in water of low salinity develop a more delicate flavor than shrimp maturing in sea water.

What has been said of the shrimp, also applies to the blue crab. While the young crabs are born in water of high salinity, they thrive best and grow to maturity faster in sea level fresh water, and our most abundant crops of hard and soft shelled crabs are always produced during the flood years on our rivers.

Because of a great increase of food supply, the salt water fish indigenous to Louisiana also benefit greatly by floods, and the people of the affected regions along the coast who make a livelihood by fishing quickly recover from any temporary setback, because during the floods there is virtually a natural close season during which the fish are growing rapidly due to the added food supply. After every flood the salt water anglers find their paradise because of the abundance of salt water game fish in the sea level lakes, bays and passes.

Another matter which has a direct relation to our fisheries must not be overlooked. The breeding places of the coastal mosquitoes become totally annihilated in all areas affected by the flood waters, and the restoration of the wetlands to their primitive condition, with a healthy growth of aquatic plants (incidentally the best foods for ducks and muskrats), and a heavy supply of Gambusia and other carnivorous minnows, prevents propagation of our most serious mosquito pests along the coast. In the interior swamps also, a similar situation prevails and the stockings of all waters with a healthy association of aquatic life which includes Gambusia minnows, prohibits malaria mosquitos from breeding in the flooded areas. It may not be generally known that our river swamps, where regu- larly flooded, are free from malarial mosquitoes, and our low- land regions are free from malaria fever.

FLOOD CONTROL

We do not desire to discuss the engineering aspects of flood control but are in favor, as far as they are shown to be practical by competent engineers, of a combination of all desirable methods of control, from checking inflow at the sources by reforestation, the terracing of farm lands on hilly or mountainous water sheds and the creation of artificial lakes and power projects, to bigger and better levees where needed, and relief outlets where desirable. Of the many methods of stream control which have been suggested from time to time, a summary of those ideas which have virtue in connection with the subject matter presented in this paper, with a few added comments will be presented.

STREAM CONTROL AT THE HEAD-WATERS.

The most frequently suggested methods of flood control at the head-waters of streams, are by the preservation of existing forests and reforestation on water sheds and in stream valleys, these being strongly advocated by such men as Col. W. B.

Greeley, Chief of the U. S. Forest Service, and Charles Lathrop Pack, President of the American Tree Association. This will tend to equalize the run off because of the absorbent action of the humus on the forest floor, thus benefiting the fisheries of the smaller streams. It will also favor a more steady input of organic matter and food organisms from outside sources, thus creating a more balanced biological cycle between the fish and their outside sources of food, which latter are much richer in forest covered than in barren land or gullied hillsides. The preservation of forests and reforestation of interior swamp lands would also be a decided benefit to the fisheries of the interior in that these areas are the natural spawning grounds and refuge places for young fish of most species inhabiting the Mississippi system.

The farmer as well as the forester can also be of help to our interior fisheries at the same time helping himself and helping to prevent floods. Deep ploughing to encourage absorption of water, terracing or building contour checks and furrows on hill slopes, prevention of over grazing, and planting of grass on barren water sheds suitable for grazing are among methods suggested. The building of obstructions with brush or wood work in gullies to prevent erosion, the erection of dams to provide ponds or impounding basins on farms, and the damming of small tributaries to create or to preserve lakes or swamps by individual farmers throughout the entire valley would in the aggregate not only help to minimize floods by aiding in the prevention of extreme fluctuations and thus assuring a more steady supply of water in the lower valley, but will materially benefit the fisheries nearer the sources of the streams. As it is now, in the lower valley, there is a shortage and high prices causing over fishing during the drouth periods, while there is an overproduction and consequent low prices just after the floods.

The benefits of stream control at the head-waters and their manifold interrelationships are too many to discuss in their fullness here. The results of such conservation of water supply at the sources, both in surface reservoirs and by maintenance of higher water tables thus creating vastly greater underground reservoirs, are only too obvious. The checking of soil erosion from farms and forests, preventing soil from muddying or clogging streams, will of course be a decided benefit to the fish and other aquatic life. By holding the water back so that there is more percolation and thus a greater flow in the drouth periods and so that the valley soil is kept damp and the swamps wet, the streams and their valleys become ei-

fective fire lines instead of fire hazards. The fire prevention thus afforded, helps to prevent "alkali poisoning" of streams or lakes by the accumulation therein of potash and other salts which are the residue of forest fires.

The general benefit to our fisheries from flood control at the sources of streams will be due then to a minimizing of the alternate disastrous effects of severe drouths and floods, a reduction of serious natural and artificial pollution, the maintenance of a more abundant and constant food supply, and the creation of natural fish hatcheries and refuge places for young fish along the smaller streams where they are most needed.

The individual farmer will be amply repaid for his efforts by holding his soil or soil fertility for rapid run off carries the top soil with its most valuable element, the humus, away. Instead of the water being absorbed and slowly filtering into the ground, H. H. Bennett of the Bureau of Soils, U. S. Department of Agriculture, estimates that the soil elements lost annually by lack of soil conservation to be worth two billion dollars. Is it a wonder then that we have an over production of fish in Louisiana waters after every flood? To quote Mr. Bennett, "Terrace all slopes of tilled land, put the steeper slopes and inferior soil types in grass and timber, and we will speedily have a situation that will not only serve as a mighty prop to the effectiveness of levees and reservoirs, but one that will lessen the economic ills of countless farmers." The farmer will also benefit by a supplemental food supply in the way of fish, frogs, turtes and game, as well as a fur crop to tide him over the winter idle period, to say nothing of the newly created sport and means of healthful outdoor recreation.

STREAM CONTROL ON THE LARGER TRIBUTARIES

The building of large impounding reservoirs upon the larger tributaries of the Mississippi as a means of flood control supplemental to our present levee system, finds its greatest argument in the need for water power and water for irrigation. From the standpoint of the farmer and the fisheries the benefits will be similar but greater in proportion as the storage capacity of these projects is greater than in the smaller projects. The fish of the Mississippi Valley not being migratory to any great extent, are all of the type that thrive in lakes, and fish production of such impounding basins will be of no little importance. Several such lakes in Louisiana, having a constant level maintained by a dam, Caddo Lake near Shreveport being the largest, are among the greatest inland fishing

resorts in the country, and demonstrate amply that a constant water supply means a constant source of fish as food and for recreation, this aside from the benefits to the other wild life, to the farm, and the attraction of a valuable tourist crop of no small proportions.

STREAM CONTROL BY RELIEF OUTLETS.

Since the Mississippi River itself is demanding relief outlets and since along the lower river our immediate concern is relief, a discussion of flood control by means of levees and relief outlets in their relation to fisheries should be our chief concern in this paper.

From the phenomenal increases in the fish life of the lower valley during every flood, so pronounced during the 1927 disaster, there is one important lesson we must learn. Those wet lands are in reality acting as reservoirs for the reception of organic matter which is washed by rainfall from the land areas. In sections of the country where there are no marshes, lakes, and bays, most of the richest elements of the soil are lost into the streams and eventually reach the sea where they fertilize waters inaccessible to the great bulk of the American population. Not so in our region where these wet areas serve as a check and there is a constant return of this organic matter, with interest, to the soil. The droppings of water birds and mammals, which feed upon fish or other aquatic creatures as well as the bodies of those which happen to die on land form a rich source of fertilizer. Many reptiles and amphibians which feed on aquatic organisms, are also an important source of fertilizer elements, this being particularly significant in the case of certain frogs and toads which live on organic matter in the water when tadpoles, but come out upon land after transformation to leave their droppings or dead bodies to become valuable ingredients of the soil. Among other aquatic creatures the insects play an important part in the restoration of the soil, for these live as larvae in the water and during their nuptial flights come upon the land in great swarms, where the majority die through accident or are eaten by land creatures, in either case eventually adding fertilizer to the soil.

Is there any wonder that our low level alluvial lands need no artificial fertilization? The secret has been discovered in the adjacent wet lands which are not only valuable then for their great diversity of natural resources, but because they return to our agricultural lands the richness which rightly be-

longs to them, making such agricultural lands the richest in the world. There is such a thing as carrying flood protection too far in one direction, and, if we continue to pursue a policy of levees only, combined with excessive drainage, our higher level alluvial lands in the interior of the state will soon lose their greatest value for agricultural purposes, because the interchange of organic elements between the land and water areas cannot continue when all the swamps are drained.

A proper system of levees and back levees, designed for the purpose of protecting the more valuable front lands along the rims of the great lowland basins, combined with relief outlets into those basins which should be dedicated to the floods, would restore much of our formerly wet areas to their primitive condition. This would result in a rehabilitation of these regions by their native wild fauna, a fauna so rich that during 1925, immediately after our most disastrous drouth, it produced a gathered crop valued in the raw state at some fifteen million dollars.

In some instances, such flood protection will complicate our drainage problems, requiring the use of pumping plants during the high water periods, but in other instances, especially where sea levels can be maintained, this problem actually can be simplified by proper location of levees. The details of drainage must be left to the engineers, but there is one aspect of drainage which should be discussed here. Just as the floods result in enrichment of the soil by the deposition of organic matter and certain minerals therein, so conversely drainage results in a loss of these valuable elements causing impoverishment of the soil. Therefore, the rich alluvial lands, deprived not only of their periodic flood-born enrichment, but actually made still poorer by drainage, must be artificially restored. This can be done by ordinary methods of fertilizing the soil, but might we not take the hint from the flood, so amply borne out also in rice irrigation in Louisiana, and resort to irrigation of other crops besides rice, not only to furnish adequate water to our crops during drouth periods which have now become exaggerated by drainage, but to restore the missing elements to the soil. River water, bayou water and swamp water are all rich in the needed elements and one or the other will be easily accessible in all of our alluvial lands if the flood control plan suggested herein is properly carried out.

The enrichment of adjacent farm lands will in turn react on our fisheries since a steady supply of insects and other terrestrial organisms will act as a constant source of food to the

fishes of the adjacent streams, whereas under present conditions during every drouth the amount of insect and other terrestrial life entering the waters becomes so small that our fish suffer greatly as a consequence.

As a result of a study of the effects of crevasses, coupled with studies of the natural passes at the mouth of the Mississippi, we have come to the conclusion, that from the standpoint of all our fisheries resources, properly constructed spillways, designed to utilize the great lowland basins in the lower valley, would be decidedly beneficial and would increase our fisheries wealth manifold.

It must be understood that a crevasse in reality results in the restoration of our wet lands to a primitive virgin condition, such as always existed before the days of levees, and still exists below the termination of the levee line near the mouth of the Mississippi. There is no habitat anywhere in the United States in which fresh water fish population, both game and commercial species, is as dense as in the lagoons and smaller passes in the marshes near the mouth of the river or in similar areas created by crevasses. This is due to the vast amount of plant and animal nutriment carried in the water. On account of the current and muddy water, most aquatic plants cannot grow in the Mississippi River, but as soon as the current slackens and the silt settles out, all kinds of fresh water vegetation thrive, the species depending largely upon the depth of the water, and the exceedingly rich aquatic fauna previously described develops as a consequence.

The effect of a crevasse is akin to cultivation and fertilization of farm lands and might be termed wholesale aquiculture. Since many of the larger aquatic organisms take from one to several years to reach maturity, the beneficial effects of permanent spillways would be cumulative, and the commercial value of those resources depending upon such water for their existence would be increased manifold.

The marine life of Louisiana differs fundamentally from that of the adjacent gulf states largely because of its ready adaptation to the temporary conditions produced annually by the Mississippi at flood time and the large majority of our valuable marine species thrive on floods. Such valuable forms as our shrimp, crabs, croakers and mullet and some others spawn at sea, or in sea water, but the young enter fresh or brackish water where they thrive and grow faster, free from their enemies and diseases. It is a well known fact that the oyster thrives in a mixture of fresh and salt water and fresh

water kills off their natural enemies. Shallow fresh water upon reaching the sea floats upon the salt water as it continues its seaward flow, while the sea tide rises and falls as usual beneath the fresh water. It is mainly for that reason that river water, when in a shallow sheet, is not as destructive to oysters and other fisheries as might be expected, and often while the surface water is fresh enough to drink, the oysters beneath are still salty and palatable.

As to the manner of construction of spillways that will increase instead of reduce the annual crop of fish and wild life, there is one matter of considerable importance to be considered. Such waters, after passing through the levees beyond the Mississippi ridge, must be spread out over a wide area just as it is taking place in the flooded regions this year. The same volume of water shunted between levees, would do irreparable harm to our oyster reefs on the coast, burying many beds under tons of mud which will not have had a chance to be deposited earlier, while over even greater areas the oysters would be killed by prolonged exposure to excessive volumes of fresh water, which would not flow out in a sheet over the surface of the salt water as it does when spread out, but would act as a mass flowing out way, then another, depending on the winds and tides. Such streams might also prove undesirable by creating engineering difficulties of their own, at the same time not producing the benefits of a large expanse of fresh water of shallow depth spread over a large area of marsh or swamp lands.

While not attempting to encroach upon the engineering aspects of the problem, it would seem that a protection levee south of the St. Bernard Ridge at or near the marsh line and another east of the Mississippi Ridge at the marsh line, extending south to Point-à-la-Hache would best serve the biological requirements of a spillway below New Orleans. The canals should lie on the ridge side of the levee so that the needs of drainage and irrigation might be served, yet without permitting the encroachments of salt water during times of drouth, which are ruinous to agriculture and cattle raising, as well as bring about the periodic mosquito plagues which make life unbearable and drive industry away from the lower parishes.

A spillway likewise has been proposed for the east bank above New Orleans. From the fisheries standpoint, that suggested near Burnside would be the most beneficial, because the waters could be spread out in a large shallow sheet in the extensive swamps of that section before they enter Lakes Maure-

pas and Pontchartrain. A great fresh water fishery, both game and commercial, now easily reached by highways would be perpetuated thereby, whereas if confined between levees and shunted into the lakes much harm might be done, while the benefits to accrue would not be as great. On the west side of the river, any spillway plans should include the use of the entire Achatafalaya and Tensas basins, except the higher level rims of these basins, if the benefits to our fisheries described in this paper are desired.

CONCLUSION

In view of the millions of idle acres of farm lands in this state today and the continued surplus production of our major crops, and after considering on the other hand, the almost insatiable demand for fisheries and their products in the interior states, the best use to which we could put our great lowland basins today would be to dedicate them to the floods, fish and higher aquatic wild life. The construction of proper spillways making use of these great basins would be the greatest move in fish conservation this country has ever made. Since the larger aquatic organisms take several years to reach maturity, if spillways on the Mississippi were permanently located, their beneficial effects would be cumulative and the value of our fisheries could be increased manifold thereby, and more than pay the bill for flood control. Since public hunting and trapping grounds are fast becoming a thing of the past, we could maintain forever in Louisiana for public use, the finest hunting, fishing and trapping grounds in the world, always easily accessible to the population of a large metropolitan district and a dense rural population, as well as being an attractive virgin territory available to sportsmen and naturalists of the entire country and possessing an intrinsic beauty so unique as to be a drawing card for tourists from everywhere.

There would be several other decided benefits brought about by regular flooding of our great lowland basins, among them moderation of climate, better health conditions and more productive farm lands, the latter due to the maintenance of a higher ground water level for growing crops, and proximity of water for irrigation of adjacent agricultural lands in time of drouth, which water in itself is sufficiently rich in fertilizer elements to make other artificial fertilization unnecessary.

With these valued uses, added to the fact that they will be continually growing valuable forests at the same time, while

always acting as flood insurance for the industrial centers and agricultural regions, the term waste lands applied by the ignorant to these great areas, would no longer have the slightest grounds for justification.

Our main hope now is that national patriotism will overpower sectionalism, and that partisan politics will not prevent Louisiana from overcoming her main drawback, the ever-present menace of floods, at the same time assuring her rightful place in providing for the nation a wealth of aquatic natural resources such as cannot be approached by any other region of the country, thus converting our flood regions into great revenue producers at all times.

Discussion

Supplementing his paper, Mr. Viosca said:

The fisheries of Louisiana differ from those of the other gulf states in that our fish are particularly adapted to mud bottom waters and are capable of migrating into fresh water. Practically all our salt water fish, even those that breed away out in the gulf, can migrate into fresh water, into sea level lakes; and some of them even ascend in above sea level.

Our Board of Health made an investigation of the effect of the floods on the oyster crop, and they found that every second sample showed a high salt content, and every alternate sample a low salt content. I inquired whether they took every second sample on the bottom, and they said yes. Every second sample showed pure sea water. I said: "Don't you know that fresh water floats on sea water?" The tide rises under the fresh water which flows out in a thin sheet. If this water was run out between two levees it would go out in a mass and, depending on which way the tide would turn, it would periodically kill the oysters by flowing out all the water to the bottom. Only a small percentage of our oyster reefs, approximately one-fifth, were actually killed by the present flood, because the water goes out in a thin sheet, usually not more than a foot deep, and under that is the sea water.

Mr. AVERY: One point made by Mr. Viosca, while perhaps it has no bearing on the question of the fisheries is interesting, to my mind, with reference to the whole subject of flood control. Perhaps many of you read recently an article by a prominent writer in a publication of wide circulation in which it was argued that the flooding of the lands of the delta region of the Mississippi was not beneficial to agriculture because it came at the time of year when it would destroy the crops, whereas in the delta of the Nile, where we are accustomed to regard the floods as beneficial, it comes at the time of year when it is not injurious to agricul-

tural interests, but, on the contrary is beneficial. I would like to hear what Mr. Viosca has to say on that phase of the subject.

MR. VIOSCA: If I were a farmer in Southern Louisiana I would raise one crop the year following every flood, and make more money than by continuing year in and year out, because the fertilizer in the higher level lands disappears in the course of a few years, and you have to pay a lot of money for fertilizer, which correspondingly reduces your profits. In the year following a flood you can start with land as clear as this floor, rich in fertilizing elements, and you can make more money off that crop than you can the rest of the time. But unfortunately in the case of some of our floods, as in this one, the flooding is too late in the year. Some of our floods come down early in February and March, and we can plant after the floods and make good crops. This year I think we shall still produce enough sugar cane, corn and cotton, because we have been complaining in the past of surplus crops, and the more the government complains of surplus crops the more crops the farmers plant, because they think the other fellows are not going to plant. So they are making less money out of farming every year because of surplus crops. But the flooding is actually reducing the farm lands to where they ought to be so that the farmers can make a profit. Next year the farmers will be able to make money without any fertilizers, and this year they can make a lot of money on fish; they do not need to go farming anyhow.

MR. GEORGE W. FIELD (Massachusetts): I think it would be desirable that this association should adopt a resolution urging engineers to tie up more closely with the biologists in dealing with these problems. Hitherto engineers have been inclined to go ahead and build sewers, levees, and various other engineering projects without reference to the biological factor. In this particular case there is almost no parallel with the Nile, although there is no question that a method can be worked out for the utilization of this surplus water at any season of the year when it can be used most advantageously for raising fish in Louisiana and for raising birds and fish in Minnesota and Wisconsin. It is an engineering problem which should be tied up with the biological aspects of the whole matter.

MR. LECOMPTRE: I would like to ask Mr. Viosca what effect this 1927 flood had on the muskrat industry of Louisiana.

MR. VIOSCA: I think it is going to be decidedly beneficial. In about 1924, I think it was, we went through the most disastrous drouth in the history of the state, and that section of the state that was flooded by the break twelve miles below New Orleans in 1922 produced fifty per cent of the muskrats of the entire state of Louisiana. The coastal plain section produced no muskrats; the only ones produced in that year were at the mouth of the Atchafalaya River near the mouth of the Mississippi and in the section where the 1922 crevasse broke out two years pre-

viously. There was some loss of muskrats which was spectacular, but that was in an area just a few square miles in extent right where the waters actually flowed down several feet deep. I do not expect any decrease in the muskrat crop this year except in the zones that were immediately affected.

MR. LECOMPTRE: Isn't that a large zone, however? Didn't it cover a large territory?

MR. VIOSCA: It affected a zone which included our best muskrat territory during the disastrous drouth period, but what has happened there? Thin sheets of water are rehabilitating sections of the state to a much greater extent, sections in which muskrats could not live on account of the salt water; they just moved over into a better area. When you get down to the coast the drainage of bayous which follow the passage of the Mississippi is amply sufficient to take care of the water which comes through these crevasses. Some twenty odd miles from the artificial opening in the river below New Orleans the land area is entirely out at low tide and only flooded at high tide. In other words, for a distance of twenty miles the water which is flowing some twenty feet above the high land level is dropped down below sea level and is taken off by natural channels.

MR. ADAMS: In this newly created breeding ground for muskrats, have you got a sufficient stock to properly stock it?

MR. VIOSCA: The past history of the crevasses seems to show that we have.

MR. ADAMS: In an article on the muskrat situation in Louisiana, Mr. Stanley Clisby Arthur, of your Wild Life Division, seems to paint entirely different picture from what you do. I understood from his article that the muskrats had been very greatly depleted by this flood, due to the lack of food, and also due to the effect of the sun.

MR. VIOSCA: He is talking of that area which was immediately affected by the dynamiting of the levee. I think nearly two thousand feet of levee were blown out, the water poured through there, and the muskrats had to climb trees in an effort to save themselves. But he and I made a joint investigation of the oyster lands, and we came to the same conclusions.

MR. ADAMS: Any of the commissioners who have not read the last biennial reports of the State of Louisiana, in which they deal more exhaustively with the muskrats than I believe has ever been done before, should by all means get that report and study it. It is a most extraordinary treatment of the muskrat problem.

MR. VIOSCA: We would be glad to send it to anybody who wants it. MR. LECOMPTRE: We have the same conditions in Maryland in the muskrat section—the flooding of our marshes by salt water, caused by extreme high tides. Of course we do not have what we term a flood

area, but we do have, with the extreme southwest and southeast winds which prevail for two or three days at times, extreme tides which overflow the marshes and of course leave the salt settling into the marsh grasses. That is very detrimental to the muskrats, which must have fresh water. During the season of 1925 we had an extreme drouth during the whole summer, continuing from about the first of April until September, and our muskrats were practically eliminated in a good many sections on account of there being no water. They suffer as much, or more, with us from lack of water as they do from over-flooding; because they require water to build their homes to live in; and they require water also to produce the aquatic roots on which they live. Your muskrats in Louisiana propagate, I should think, in February, whereas ours propagate in March; our first young will be seen about the fifteenth of March to the first of April. And this flood which hit your state—was it in May, or the last of April?

Mr. VIOSCA: April.

Mr. LECOURTE: Well, your muskrats were then from four to six weeks of age. I imagine that in the immediate territory which was flooded the young, and also the breeders, did suffer considerably. But as I understand Mr. Viosca's statement, whereas it did destroy in that immediate section where the flood occurred, it benefited the surrounding territories by flooding them with fresh water.

Mr. VIOSCA: For each area that was adversely affected there was ten times that much water area created, and the muskrats simply migrated for a few miles.

PROGRESS OF THE BIOLOGICAL SURVEY IN NEW YORK STATE

EMMÉLINE MOORE.

N. Y. State Conservation Dept.

In my paper before this society last year reference was made to present tendencies in the several states to emphasize stream and lake surveys and the importance that attaches thereto in developing a more intelligent stocking policy. Already two reports of this kind have come from the press during the past year—one from the Commonwealth of Pennsylvania entitled "A Survey of the Streams, Lakes and Ponds in Susquehanna County," and the other from New York State bearing the title "A Biological Survey of the Genesee River System"; the latter supplemental to the Sixteenth Annual Report of the Conservation Department. Both reports are the first of a series intended to cover eventually the entire areas of the respective states.

In New York State it serves our purpose best to pursue the surveys by watersheds. This plan is adopted because of the nature of certain major problems impinging upon that of a stocking policy, such as, pollution, basic problems in fish population and distribution, the impounding of waters in hydro-electric development, municipal water supplies, the influence of canals, problems in commercial fishing and the like—in all of which greater continuity and comprehensiveness is attained by attacking the watershed as a unit.

Last year for a start we selected the Genesee watershed, a relatively simple problem of a drainage basin covering a fertile valley of open, agricultural lands, and generally denuded hill country. The report of this survey is now being distributed. The survey now going on this season covers the Oswego drainage system, the second largest watershed in the state and the spreading over portions of a dozen counties.

While in general the plan of last year is being followed, the scope of the work is more extensive and offers interesting complexities in organization. Moreover, nature does not repeat herself even in watersheds, and this is offered in further justification for presenting another paper on our state survey.

Within the coverage of the Oswego watershed—including an area of 5,002 square miles—lie the seven Finger Lakes, all long, narrow, very deep lakes with generally steep slopes, little standing vegetation and with varying reputation as to productivity. The other large lake in the watershed is Oneida,



Louisiana Wildlife Federation, Inc.

STATEMENT ON THE LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY HURRICANE PROTECTION PROJECT

The Louisiana Wildlife Federation, Inc. is grateful for the opportunity to express our views on the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project.

Like any upright and upstanding citizen, the Louisiana Wildlife Federation is very interested and concerned in the complete protection of the citizens of this state and especially in this particular instance of those residents of New Orleans proper and surrounding parishes from the ravages, destruction and human misery which is wrought by our age old nemesis, the hurricane. The health, welfare and safety of the lives and properties of the individual inhabitants of these areas is always first and foremost in our minds. However, we do have some doubts and questions in our mind as to whether in effect, rather than actually affording that protection as elucidated by the proponents of the project, the completion of said project might not in fact lull city and parish residents into a sense of false security while they await in ingenuous confidence the arrival of the elusive standard project hurricane.

The aggregate project which we are discussing here today has been divided into several component enterprises. We feel that although some aspects of the proposed project may have some merit, redeeming qualities and social benefits, other portions are totally devoid of said benefactions and in fact may be construed to be highly deleterious not only to the citizens involved, but especially

to the areas affected. It is to those areas which fall into the latter category mentioned that I would like to address the remainder of my remarks.

The importance of Louisiana's and this nation's marsh and estuarine systems have recently been receiving much attention and publicity. The value of our coastal and estuarine wetlands as a fishery nursery, an optimum habitat for many wildlife species and as a source of innumerable recreational opportunities has been very thoroughly documented through many scholarly and studious scientific research endeavors. However, one need not read volumes of scientific literature to come to the same conclusions as have these knowledgeable scientists. All one need do is spend but part of one's day in the hinterland of our coastal marshes to appreciate the prolific abundance of many forms of aquatic and terrestrial wildlife and many forms of lower life forms and to experience the peace and tranquility which only the solitude of a remote swamp or marshland can provide. It is of extreme concern to us that many thousands of acres of what is now considered prime productive wetlands which support diverse populations of many forms of wildlife species and which provide many hours of outdoor recreational opportunity will be adversely affected by aspects of the project in question. The drainage of these productive wetlands caused by the project will be an encouragement to land speculation and domestic and industrial development into the areas. Such development can only instigate further encroachment and deterioration of a rapidly dwindling and fragile marsh ecosystem. This is especially true of the St. Charles Parish portion of the project. We are of the understanding that the preponderance of citizens of St. Charles Parish are opposed to the construction of the Lake Pontchartrain Hurricane Protection Levee in their parish. It also seems that the most vociferous of the project's proponents in St. Charles Parish are those who stand

to gain huge financial windfalls through land speculation and development after the marshlands are drained.

The citizens of St. Charles Parish have a high regard and a certain reverence for those marshlands which for many years have provided numerous hours of leisure, solitude and pure enjoyment. These concerned citizens are unwilling to forsake these valuable and natural wonders under the dubious guise of flood protection. They are unwilling to trade the salient benefits of their marshes for the urban sprawl from which many have moved to St. Charles Parish to escape.

The fact that Bayous LaBranch and Trepagnier have recently been incorporated into the Louisiana Natural and Scenic Rivers System is an additional reason why we would like to recommend that the St. Charles Parish Portion of the Lake Pontchartrain Hurricane Protection Levee be deauthorized.

Another portion of the proposed Lake Pontchartrain and Vicinity Hurricane Protection Project which causes us much concern relates to those phases of the project referred to as the Rigolets Complex and the Chef Menteur Complex. But before I continue, I would like to read a resolution which was presented by the Slidell Sportsman's League to our 1974 Federation convention held in Shreveport, Louisiana. This resolution was passed unanimously and adopted by our convention delegates on March 17, 1974. A copy of this resolution is attached for your reference.

RESOLUTION NO. 9

SUBJECT: LAKE PONTCHARTRAIN AND VICINITY HURRICANE PROTECTION PLAN

WHEREAS, the proposed Lake Pontchartrain and Vicinity Hurricane Protection Plan in its present form threatens ecological disaster in the estuarine area due to substantial changes in tidal flows and water level changes; and

WHEREAS, the project would actually provide little protection to the city of New Orleans and actually increase the possibility of serious flooding in St. Tammany Parish; and

WHEREAS, three times in succession the people have refused to endorse its construction at the polling booth, yet public money is even now being used and appropriated against the will of the voters with certain phases of construction in progress even now; and

WHEREAS, a large part of the economic justification for this project is "land enhancement" in the New Orleans East and St. Charles Parish areas abetting the conversion of viable and productive fresh water marshland to "developed land"; and

WHEREAS, the St. Tammany Municipal Association, Police Jury and City Governmental units oppose the project and have banded together in legal action to block it;

THEREFORE BE IT RESOLVED that the Louisiana Wildlife Federation, Inc. opposes the construction of the project in its present form, particularly the barrier phases across the Rigolets and Chef Menteur Passes and urges congressional and other governmental levels to bring pressure to modify its form towards acceptability.

BE IT FURTHER RESOLVED that the Federation urge re-examination of the project in accordance with the new criteria for judging the worth of public works projects as recommended by the President's Commission with particular attention to the areas of environmental damage and discount rate assumptions and the legality of the state's guarantee of the local funding which was refused by the elected representatives of the people of St. Tammany and St. Bernard Parishes.

We feel that the placing of barrier structures as proposed on the Rigolets and on Chef Menteur Pass may have severe, irreversible consequences on the

delicate balance which differentiates between that fine line which constitutes a fresh and a saline marsh ecosystem. The character and the productivity of the lake itself and of the surrounding marshlands can be detrimentally altered by a drastic change in salinity levels caused under stress conditions. We do not feel that at the present time the full impact of changes of salinity levels which might be effected by those portions of the project including the Rigolets and Chef Menteur Complexes have fully been determined. What effects dams and barrier structures will have upon the ingress and egress of certain marine organisms and species into and from the lake are still too little understood. We would therefore offer our opposition of the Rigolets and Chef Menteur portions of the project and would recommend that before work on these areas is authorized that a thorough study be completed which will suggest alternate proposals or alleviate any ecological problems which might be initiated by barrier constructions on these areas.

Again thank you for your attention and the opportunity to express our views.



Louisiana Wildlife Federation, Inc.

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Statement by BORDEN WALLACE, WALLACE MENHADEN PROD, INC.

I represent a commercial interest in the menhaden industry. The menhaden, an oily, bony, herring-like fish, was found, when settlers first came to this country, to be used by American Indians as fertilizer in their corn fields. Commercial ventures in this fishery date back more than 100 years; thus menhaden ranks among the oldest sustainable fisheries in the United States. Nutrition technology has recognized the value of this fish to be greater than use as fertilizer, and menhaden, today, is processed into three products: meal, condensed solubles, and oil. Menhaden meal is a high protein feed ingredient for poultry and swine. It provides essential sulfur amino acids for optimum growth for which vegetable protein cannot be economically substituted. It has a high energy value, is a natural source of phosphorus and selenium, and provides a yet unidentified growth factor. Solubles, a by-product of wet reduction of fish, is similar to the meal in nutritional value and is also used as a feed ingredient. Menhaden oil, being polyunsaturated, is desirable as a margarine ingredient, and accounts for approximately one-third of all U.S. exports of nonedible fishery products. Considering the international shortages of proteins and oils, it can well be envisioned that such nutritionally valuable products will be used for human consumption in the U.S. in the foreseeable future.

Menhaden landings in 1974 totaled almost two billion pounds which represents 44% of the total for all species including shellfish landed in the U.S. Of this figure, 67% of the menhaden were landed here in the Gulf, and of this 1 1/3 billion pounds, the operation I represent accounted for 18%, or approximately 230 million pounds. To accomplish this, we operate and maintain two reduction plants, seventeen 120-165 ft

vessels, thirty-four 36 ft vessels, one barge, and 12 airplanes. This represents a 39 million investment and livelihood for over 400 people, and we are only one of five companies operating in the Gulf.

I would like to further breakdown the menhaden landings for 1974. Louisiana, alone, accounts for 83% of all menhaden landed in the Gulf, and the menhaden landings contributed by Lake Pontchartrain last year was approximately 44 million pounds.

In order to relate this catch data to the consideration of the proposed Hurricane Protection Project, it is necessary to examine, somewhat, the life history of the menhaden. The adult fish spawns from late October to early March offshore at about the 50 or 60 fathom curve. The ensuing larvae actively move inshore in a northerly direction until they enter the estuarine areas. It is important to note that the National Marine Fisheries Service indicates this movement is the predominant action with only minor lateral movement along the coast. Also, in mid-summer and early fall, the juveniles and young adults move out of the estuaries, offshore in a southerly direction. This suggests that the catch in the areas south of Lake Pontchartrain and Chalmette Project could serve as an index of the contributions of those estuaries to the fishery. I will repeat, the landings in 1974 of Lake Pontchartrain fish was 44 million pounds. The ability to support this tonnage verifies that the Lake Pontchartrain area is one of the largest definable nurseries in the State.

Let us now examine the Summary of the Environmental Statement to learn of Lake Pontchartrain's importance in the early life of the menhaden. Darnell (1962) is correctly quoted as stating, "Most of the remaining abundant species (this includes menhaden) are migratory and spawn elsewhere, invading the lake as seasonal transients" (p.3). Consequently, little direct attention is given in the Environmental Statement to the menhaden. Although the menhaden is a transient in the lake, it is supported for most of its juvenile life by the lake.

Darnell (1958), in his study entitled "Food Habits of Fishes and Larger Invertebrates of Lake Pontchartrain," also states that "During field studies, menhaden around 100 mm in length were frequently captured in great abundance near the south shore of Lake Pontchartrain where wave action was reducing the organic material of the marshy shore to the consistency of coffee grounds. Here a suspension of ground up organic matter was almost always in evidence . . . The menhaden appeared to be thriving upon this suspended material."

Table 27, in the Final Environmental Statement verifies Darnell's observation by showing that organic detritus comprises 11% of the food of the young and 99% of the food of the juvenile menhaden. Since "the principle inflow of freshwater into Lake Pontchartrain is from the nutrient-poor acid soils of the pinelands to the north" (p. II-59), this valuable organic detritus must derive from other sources, being outlined in the following statement: "The ecology of Lake Pontchartrain is highly dependent upon an exchange of nutrients, producers, and consumers with surrounding marshes, swamps, and adjacent bodies of water" (p. II-59).

The role of this detritus is so primary that Darnell (1958) concluded it serves as an important source of nutrition, directly or indirectly for most of the 35 species which he stated were "the most important species comprising the estuarine community." It is also fundamental that one of the major contributing sources of this detritus is the marsh areas as outlined in Table 22.

With the previous statements clearly in mind, I would like to quote from the Final Environmental Statement: "All of the marsh and swampland made available by the project for conversion to urban use will be lost when local interests choose to drain and fill these areas. A decrease in release of detrital materials from the leveed marshes will affect the secondary productivity of the Lake Pontchartrain area. Organisms which utilize detritus will decrease in numbers, but this loss will not be extensive" (p. III-3). Considering that 44 million pounds of menhaden which could

Directly associated with this estuary was landed last year, and that the menhaden is only one of about 35 of the most important species from this community, the above quote from the Final Environmental Statement is totally false and irresponsible. Loss of marsh will result in a proportionate loss in production.

With respect to the three proposed complexes, a final statement should not be made at this time since sufficient data does not exist on the abilities of the various transient and migratory species of Lake Pontchartrain to swim against the high water velocities to be induced by the complexes. Evidence in the literature regarding the role of tides in the distribution of larvae is contradictory. And other evidence clearly shows the existence of both passive and active seekers of estuarine areas. To presume that these complexes will have no effect on those active seekers is certainly premature.

In addition, the statement, "these structures will not be closed until a hurricane enters the Gulf of Mexico, threatening the Louisiana coastline" (p. 4 of Summary) needs to be more clearly outlined. As it presently reads, the gates could be closed for considerable periods, including those times when menhaden leave Lake Pontchartrain. A large number of one and two year old menhaden, as well as the juveniles and young use the lake in the summer for feeding. Retention of these fish could lower landings, and more important, could possibly have a profound adverse effect on spawning.

With respect to the St. Charles Project, considering that the possible loss of marsh and consequently, production is extensive and would have a major effect on the ecology of Lake Pontchartrain, I would strongly urge that the status be changed from indefinitely deferred to permanently abandoned.

With respect to the construction of levees along the south and southeastern shores of Lake Pontchartrain, sampling stations in these areas set up by Tarver and Dugas

(.973) in their study of the Rangia clam record dissolved and suspended solids levels to be higher than the average for the whole lake. This evidence clearly demonstrates that those areas do indeed contribute much to the lake's productivity. Consequently, I urge that no action be taken in these areas which would further reduce the contributions of nutrients.

With respect to the Chalmette Area Plan, I will again state that loss of marsh can render direct and proportionate losses in energy exchange. The Chalmette Plan would cause marked decreases in productivity of the area and should be abandoned.

I sincerely believe that the reasoning behind these proposed projects should be examined. U.S. Department of Interior statistics indicate that the chance of a major hurricane crossing the New Orleans area is less than 5% annually. However, if carried out, proposed loss of marsh and changes in physical features is guaranteed, 100% annually. A large segment of the New Orleans, Lake Pontchartrain population has chosen this location for businesses and homes because it derives income directly or indirectly from the natural products of these wetlands. If we support the Hurricane Protection Project, we elect to protect these businesses and homes from possible flooding at the expense of the very reason why these businesses and homes are here, the wetlands. This rationale, to me, appears to be quite illogical. I strongly urge the abandonment of the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project.

FROM: The Ad Hoc Committee on
Hurricane Protection Relief of
The Young Men's Business Club of
Greater New Orleans, Inc.

TO: The Board of Directors of that Organization

A RESOLUTION

WHEREAS, hurricanes, a most unpredictable force in nature,
have frequently racked Southeastern Louisiana;

WHEREAS, the people and property of coastal Louisiana
continue to be nearly unprotected from severe tidal
surges incident to such storms;

WHEREAS, we recognize that nature has not provided our
area with sufficient protection, or ground elevation,
to combat hurricane forces, including heavy winds,
unusual rainfall, and high water;

WHEREAS, Congress has authorized and enabled the Lake
Pontchartrain, Louisiana and Vicinity Hurricane
Protection Project;

NOW, THEREFORE, BE IT RESOLVED, that the Young Men's Business
Club of Greater New Orleans, Inc., request the Corps of
Engineers to conduct a thorough study of the feasibility
and practicality of the alternate proposal known as the
Shaw plan, and urges without delay or interference the
scheduled dredging work and the construction of the other
hurricane barriers included in the present proposed Lake
Pontchartrain Hurricane Protection Plan; and

BE IT FURTHER RESOLVED, that copies of this resolution be
presented to the United States Corps of Engineers, and
forwarded to the Governor of Louisiana, the metropolitan
area Levee Boards, the Louisiana Congressional delegation,
the Louisiana Department of Public Works, and the news
media.

I certify this resolution was approved by the (Board of
Directors) Young Men's Business Club of New Orleans, Inc., on
Feb. 20, 1975.

Carl M. Werling, Jr
Secretary

WILKINSON & WILKINSON

ATTORNEYS AT LAW

HUGH M. WILKINSON
HUGH M. WILKINSON, JR.
JAMES WILKINSON, III
JOHN B. WILKINSON

SUITE 2650 - 1010 COMMON STREET
NEW ORLEANS, LOUISIANA 70112

TELEPHONE 504/523-5067

March 5, 1975

United States Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana

RE: Lake Pontchartrain Barrier Plan

Gentlemen:

On February 22nd I attended the public meeting that was held on the University of New Orleans Campus respecting the above captioned project proposed by the United States Corps of Engineers and in conjunction with participation of the Orleans Levee Board.

Because of the number of individuals who sort time in which to voice their opinions with respect to the Barrier Plan, the writer of this letter did not choose to seek time in which to express his views. I have though, on previous occasions, expressed my views to Louisiana Delegation of United States House of Representatives and United States Senators. These comments and expressions of disapproval have been made to said parties prior to the elections in which this matter has been defeated not once but three times by the people of the parishes involved. I shall continue, and have continued to voice this disapproval to my representative and senator in United States Congress, to the Corps of Engineers and the Orleans Levee Board.

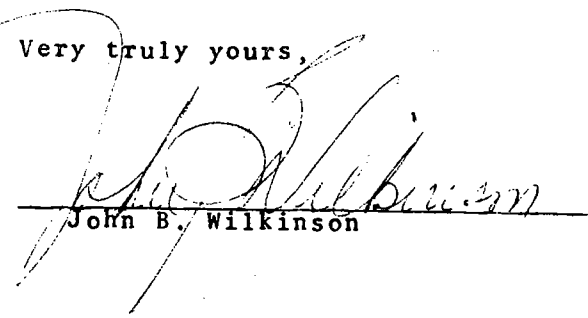
Since I did not go on record by a vocal expression on the 22nd of February of this year I would like this letter to go into the records of those proceedings, which I am informed is my prerogative. I would like that the record should reflect that I agree with those who feel that the inadequate, now dated, injurious and over priced Barrier Plan is harmful to the areas which it intends to protect; that I additionally would like to go on records that the expense which began in early 1962 at approximately NINETY MILLION AND NO/100 (\$90,000,000.00) DOLLARS has now been increased to a sum of approximately THREE HUNDRED TWENTY-FIVE MILLION AND NO/100 (\$325,000,000.00) DOLLARS which

is a waste of tax payers money and a violation of the duty owed by the United States Corps of Engineers to the tax payers with regard to the expenditures of those monies which should be properly protected; that the public, including those who are the most effected land owners, have become more educated with regard to the limited capacity, the restricted water flow and the possible increased danger of flooding as a result of the implentation of this ill advised Barrier Plan, and have on three occassions defeated the proposal for an increase in millage to allow this Barrier Plan to be built. It would appear to the public that the anticipated increased expenditure and the undeterred determination by those who propose this Barrier Plan smacks of possible pork barrel incentive.

Lastly I would like the record to reflect that the danger that will result will be irrevocable, that commerce and industry on both North and South shore will be damaged, that ecology will suffer a stern blow to its wild life and its fishing areas and that recreation will be effected. Most of all the inadequatities of the locks, flood gates, control structures, of locking systems, will destroy the Industrial potential of the area and will make it impossible for transverse of shipping. It will cut off pleasure boats from Lake Ponchartrain injuring the revenue producing use of the lakefront for mooring and will create an additional and a continuing expense for the maintenance of these control structures on a 24 hour basis which has never been revealed to the public or discussed. The worst effect, however, is that the restriction of water flow will create a hazard unseen behind the funnel type area of the locking system subjecting the areas along the Industrial Canal and upper St. Bernard Parish to greater danger of life and property ever known in the history of the State.

It's regrettable that the United States Corps of Engineers would not consider the Shaw Plan as an alternate stating that the cost would be increased which is doubted. I think that the increase in expenditure would be well spent if it would properly protect life and prevented an irreversable impact upon the areas affected.

Very truly yours,



John B. Wilkinson

March 31, 1975

Col. E. R. Heiberg III Cdr
P. O. Box 8267
New Orleans, La. 70160
and

D. A. Raymond
Major General, USA
Deputy Chief Of Engineers
Washington, D. C.

Dear Sir:

RE: No more Shrimp, Crabs, Fish and Fishing
If the Corps of Engineers Persist
In Bottling Up Lake Pontchartrain

On behalf of President Ford and citizens of the USA,
this is to express opposition to the Lake Pontchartrain
and Vicinity Hurricane Protections Project.

If you folks, the Corps of Engineers, go ahead with the
fiendish plan of bottling up Lake Pontchartrain by erecting
barriers at the Chef Menteur and Rigolets, then according to
the experts the lake will become a dead lake and we will no
longer be able to enjoy and use for food the shrimp, crabs,
and fish that beautiful Lake Pontchartrain is nationally noted
for. We need not bother going fishing because there will be
no fish.

Please, we beg and beseech you, do not do this awful thing.

Three times we have gone to the polls and voted against the
killing of beautiful Lake Pontchartrain. LET IT LIVE!!!!

Sincerely, *Donald Anderson 305 Markham Dr. Slidell La*

70458

Copy: Pres. G. Ford, White House, Wash., D. C.
Hon. F. Edward Herbert, House of Rep., Wash., D. C.
Hon Senator Wm. Proxmire, Senate Office Bldg., Wash., D.C
Jpm David Treen, House of Rep., Wash., D. C.
Hon. John BreauX, House of Rep., Wash., D. C.
Hon. Henson Moore, House of Rep., Wash., D. C.
Hon. Bennett Johnson, Senate Office Bldg., Wash., D. C.
Hon Russell Long, Senate Office Bldg., Wah., D.D.

EXHIBIT 107-1

LETTERS IDENTICAL TO THE PRECEDING WERE ALSO RECEIVED FROM THE FOLLOWING:

<u>Name</u>	<u>Address</u>
Baldo, Claude A.	5967 Dreux Avenue New Orleans, LA
Burk, Theodore R., Jr.	North Shore Slidell, LA 70458
Chesling, L. D.	13 Lafitte Apartments Lakeview Drive Slidell, LA 70458
Chronister, Marie	559 Beechwood Drive Slidell, LA 70458
Cyrus, Ralph	153 South Park Drive Slidell, LA 70458
Fayard, Mr. & Mrs. Dennis	3613 Meadowdale Slidell, LA 70458
Gilmore, Wm. D.	1176 Walnut Slidell, LA 70458
Goodrar, Joe	Mandeville, LA 70448
Guzman, John E., Jr.	Route 6, Box 63 Slidell, LA 70458
Hudson, Lawrence H. III	Route 6, Box 86, North Shore Slidell, LA 70458
Jalmitz, Kobet	Picayune, MS
Jones, William J.	3648 Meadowdale Drive Slidell, LA 70458
Landry, Debra A.	Route 6, Box 388 Slidell, LA 70458
Laurant, Paul	159 North Street Slidell, LA 70458
Macaluso, John J.	Route 6, Box 150 Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Morh, Ed	1025 South Jeff Davis Pkwy New Orleans, LA
McGee, Patrick A., Sr.	Route 1, Box 363 Slidell, LA 70458
Parrish, N. A.	114 Chantilly Slidell, LA 70458
Powe, Emily D.	262 Blue Bird Drive Slidell, LA
Sagorra, Fano S.	381 Carr Drive Slidell, LA 70458
Smith, Ernest H.	P. O. Box 38 Lacombe, LA 70445
Stiller, Albert H.	3613 Meadowdale Slidell, LA 70458
Stiller, Mrs. Sandi	3613 Meadowdale Slidell, LA 70458
Illegible	361 Carr Drive Slidell, LA 70458
Illegible	P. O. Box 257 Covington, LA 70433
Illegible	2062 Front St. Slidell, LA 70458

March 31, 1975

COLONEL ER. HEIBERG III, CE
P.O. Box 60267, N.O., LA 70160

D. A. Raymond
Major General, USA
Deputy Chief of Engineers
Washington, D. C.

Dear Sir:

RE: Opposed to Lake Pontchartrain Barrier
And Why

According to a recent Washington United Press International dispatch, we find that Senator William Proxmire "Blasts Louisiana Corps of Engineers Projects" because of outrageous overruns in Cost Estimates.

Thank you Senator Proxmire, for the great expose of the century! The dispatch further stated that as a result of a recent Government Accounting Office audit it was discovered that corps projects around the country costs have more than doubled since their estimates were first submitted to Congress.

"These outrageous overruns are the result of gross under-estimating," said senator Proxmire. "This in turn lures Congress into spending billions of dollars on projects that would not be funded if their true costs were made known early."

The Government Accounting Office also told him the New Orleans Venice hurricane protection system had leaped 800 per cent since its cost was first assessed in 1962. The initial cost was \$7.5 million, but by last year it had grown to \$74.9 million.

We, the tax payers, have gone to the polls THREE times and voted against the Lake Pontchartrain and Vicinity Hurricane Protection Project.

Are you going to forcibly use our tax money for something we have repeatedly voted down?

We do not need it. We do not want it. Futhermore, we can NOT afford it.

Sincerely,

Mary Hamilton
RT 1 Box 606
Slidell La. 70458

Copy: Pres. Ford, White House, Wash., D. C.
Hon. F. Edward Herbert, House of Rep., Wash., D. C.
Hon. Senator William Proxmire, Senate Office Bldg., D. C.
Hon. David Treen, House of Rep., Wash., D. C.
Hon. John Greaux, House of Rep., Wash., D. C.
Hon. Henson Moore, House of Rep., Wash. D. C.
Hon. Bennett Johnson, Senate Office Bldg., Wash., D. C.
Hon. Russell Long, Senate Office Bldg., Wash., D. C.

LETTERS IDENTICAL TO THE PRECEDING WERE ALSO RECEIVED FROM THE FOLLOWING:

<u>Name</u>	<u>Address</u>
Maddox, Dannell	P. O. Box 351 Pearl River, LA 70452
Illegible	2700 Mary St., Apt. 47

Our motto "WE PUT YOU IN AND WE CAN GET YOU OUT"

April 3, 1975

Colonel E. R. Heiberg III, CE, Dist. Engineer
District Corp of Engineers
P. O. Box 60267
New Orleans, Louisiana 70160

Dear Sir:

RE: Opposed to Lake Pontchartrain & Vicinity
Hurricane Protection Project
Violation of the Constitutional Rights of the
Voters of Louisiana

I am opposed to the Corps of Engineers building dams, installing locks at the Rigolets and Chef Menteur, or changing in any way Lake Pontchartrain and the natural ebb and flow of its waters and the way in which the natural tributaries flow into it.

For the fourth and last time----NO, NO, NO, and NO!!!! Three times we, the citizens, have gone to the polls and voted -- NO, NO, NO in regards to the referenced project. This makes the fourth time I have voiced my opposition.

The reasons I am against the project would fill a book. To mention just a few: violation of the constitutional rights of the voters of Louisiana -- we voted three times against it; the astronomical cost -- Senator Proxmire said, "The gross underestimating of cost-estimate submitted to Congress for Louisiana Corp of Engineer Projects lures Congress into spending billions of dollars that would not be funded if their true costs were known early!" (Washington (DPL) (The Slidell Daily Times, March 27, 1975); endangering our lives -- if the flood waters can not go into the lake it will be forced to back up into our homes and flood us out; destroy industries such as: fishing crabbing, shell and gravel businesses, boating, shipbuilding, etc.

The above are a few good reasons, but most of all, I stand on my constitutional rights and am saying to you in no uncertain terms---
LEAVE OUR LAKE AS IS!!!!!!!

Yours truly,

Lincoln Abney

*Lincoln Abney
605 Kostmayer*

605 Kostmayer Slidell La, 70458

Copy to: President Gerald Ford, White House, Washington, D. C.
Hon. F. Edward Hébert, House of Rep., Wash., D. C.
Hon. Senator William Proxmire, Senate Office Bldg, WashDC
Hon. David Treen, House of Rep., Wash., D.C.
Hon. John Breaux, House of Rep., Wash., D.C.
Hon. Bennett Johnston, Senate Office Bldg, Wash, D. C.
Hon. Russell Long, Senate Office Bldg, Wash, D. C.
Hon. Henson Moore, House of Rep., Wash., D. C.

LETTERS IDENTICAL TO THE PRECEDING WERE ALSO RECEIVED FROM THE FOLLOWING:

<u>Name</u>	<u>Address</u>
Akins, Wallace	Route 4, Box 349 Slidell, LA 70458
Aleman, P. J.	2433 Clover Street Slidell, LA 70458
Allay, Elizabeth	P. O. Box 477 Slidell, LA 70458
Allison, Glenda	Route 2, Box 78 Pearl River, LA 70452
Alney, R. H. Jr.	3470 Timmothy Drive Slidell, LA 70458
Alsobrooks, Faye	Route 3, Box 232 Slidell, LA 70458
Archie, S.	None
Armstrong, Al	None
Armstrong, A. W.	P. O. Box 741 Slidell, LA 70458
Armstrong, A. W.	None
Armstrong, Mrs. A. W.	None
Armstrong, Shelia	None
Atkin, Howard	P. O. Box 97 LaCombe, LA
Austin, Henry T.	Route 6, Box 616 Slidell, LA 70458
Badon, Michael A.	Route 5, Box 57 Slidell, LA 70458
Baham, Jim	112 Bishop Trailer Park Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Baker, Irving J.	2618 Slidell Avenue Slidell, LA 70458
Balling, W. O.	Route 4, Box 270 Slidell, LA 70458
Barfield, Billy Wade	210 Bishop Trailer Park Slidell, LA 70458
Barrais, Debra O.	None
Bateson, Allan G.	None
Bateson, Kenneth E.	None
Bathery, Mrs. R. L.	None
Beattie, Doris	1484 Florida Avenue Slidell, LA 70458
Bennett, Henry J.	None
Berly, Mrs. T. L.	129 Bishop Mobile Park Slidell, LA 70458
Bert, Raymond L., Jr.	None
Best, Anna	611 Gause Blvd. Slidell, LA 70458
Beverly, Fred	2180 Park Drive Slidell, LA 70458
Biggs, Elizabeth S.	P.O. Box 1272 Slidell, LA 70458
Billiot, J. L.	None
Bishop, Alden W.	Route 2, Box 204 Slidell, LA 70458
Bishop, Florence R.	Route 2, Box 204 Slidell, LA 70458
Bishop, T. L.	129 Bishop Mobile Home Park Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Boe, Bill	None
Boler, Mr. & Mrs. Wm. H., Jr.	None
Bolin, Mrs. Ferris E.	2136 Middle Drive Slidell, LA 70458
Bornio, Louaine R.	2166 Park Drive Slidell, LA 70458
Bourda, Frank S.	Route 2, Box 202 Slidell, LA 70458
Bourda, Mr. Joseph E. Jr.	Route 2, Box 202 Slidell, LA 70458
Bowman, Cecil J.	1626 Front St. Slidell, LA 70458
Braniff, Glenn R.	7144 Deonne Street
Breeding, Michael C.	P. O. Box 396 Slidell, LA 70458
Brent, Glenda M.	Route 2, Box 90-A Slidell, LA 70458
Brewbacker, Arlington E.	Route 2, Box 349 Slidell, LA 70458
Broden, James K.	Route 2, Box 300E Biloxi, MS
Brown, Lemuel O.	101 Bywater Drive Slidell, LA 70458
Brown, R. E.	Slidell, LA 70458
Brudy, H. B. III	1164 Cousin Street Slidell, LA 70458
Bryan, Joseph R.	165 Palm Springs Drive Slidell, LA 70458
Buckenger, Norma	104 Carr Drive Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Bulmer, John F. Jr.	None
Bulmer, Mrs. John F., Jr.	None
Calvet, Charles M.	None
Camet, John G.	3401 Belfast New Orleans, LA
Campbell, Otis L.	Illegible Slidell, LA
Carbo, Mr. & Mrs. Robert M.	Route 5, Box 510 Slidell, LA 70458
Castaing, Joe	2786 3rd Street Slidell, LA
Chadwick, A. C. Jr.	Route 2 Slidell, LA 70458
Chadwick, Jesse D.	1206 Walnut Street Slidell, LA 70458
Chadwick, Mrs. Jesse D.	1206 Walnut Street Slidell, LA 70458
Chan, Louise	705 Magnolia Street Slidell, LA 70458
Chester, Annie E.	Route 4, Box 223P Slidell, LA 70458
Chester, Sylvia Ann	2193 Park Drive Slidell, LA 70458
Chretien, Eugene A.	220 Jacqueline Drive Slidell, LA 70458
Chronister, Marie	559 Beechwood Drive Slidell, LA 70458
Colgen, Joe	None

<u>Name</u>	<u>Address</u>
Cook, John D. Sr.	557 Caranation St. Slidell, LA 70458
Cook, Mrs. L. F.	339 Teddy Avenue Slidell, LA 70458
Cook, Lionel F.	339 Teddy Avenue Slidell, LA 70458
Cook, Ray	None
Cornibe, Hattie	None
Cotty, G. M.	2015 6th Avenue Slidell, LA 70458
Courtrymo, W. R.	None
Cousin, Bernard	Route 2, Posquit Road Slidell, LA 70458
Crawford, Denyl D.	None
Crawley, Mrs. Kenneth	Route 2, Box 219 Slidell, LA 70458
Crochet, Mrs. J. H., Sr.	1933 Fifth Street Slidell, LA 70458
Crochet, Larry E.	1933 Fifth Street Slidell, LA 70458
Crockett, Ree	P. O. Box 33 Slidell, LA 70458
Cronander, K.	None
Crosby, L. E.	240 Scott Drive Slidell, LA 70458
Crosby, Nolan	None
Crosby, Wayne	None
Crow, Alvin J.	None

<u>Name</u>	<u>Address</u>
Cusimano, Frank N., Jr.	311 Michigan Avenue Slidell, LA 70458
Davis, Mark E.	None
Denison, Kathy	None
Desemar, Deborah	Metairie, LA
Desemar, Jack	Metairie, LA
Descon, John G.	373 Carr Drive Slidell, LA 70458
Discon, Mrs. Nancy Mason	4924 James Drive New Orleans, LA 70003
DeWald, C.	Route 4, Box 544 Slidell, LA 70458
Diecidue, Joel M.	3237 College Street Slidell, LA 70458
Diecidue, Joseph M.	3237 College Street Slidell, LA 70458
Dillon, Rita	P. O. Box 551 Slidell, LA 70458
Doby, Anthony J.	None
Doby, Clemont M.	None
Doyle, Mrs. Doris	P. O. Box 918 Slidell, LA 70458
Drennan, Cecelia	3678 Meadowdale Drive Slidell, LA 70458
Ducoung, Wm. F.	3280 Carey Street Slidell, LA 70458
Dudley, Lou	353 Daner Slidell, LA 70458
Dudley, Orin R.	353 Daner Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Dugas, U. B.	1143 St. Scholastica Drive Slidell, LA 70458
Dugas, Mrs. U. B.	1143 St. Scholastica Drive Slidell, LA 70458
Dulern, James R.	Route 6, Box 168 Slidell, LA 70458
Dulern, L. H., Jr.	P. O. Box 225 Slidell, LA 70458
Dullen, Charles E.	P. O. Box 551 Slidell, LA 70458
Durabb, Maurice T. & Margaret	P. O. Box 908 Slidell, LA 70458
Durabb, Mr. & Mrs. Maurice T.	Route 3 Slidell, LA 70458
Eley, Mr. & Mrs. W. D.	1626 Front Street Slidell, LA 70458
Elmer, Anna Y.	Route 1, Box 107 Pearl River, LA 70452
Embree, Mr. & Mrs. Finley M.	2046 Front Street Slidell, LA 70458
Emmon, Lee M.	226 Palm Spring Slidell, LA 70458
Engelken, Stephen A.	2700 Mary Street Slidell, LA 70458
Evans, Mrs. Edwena	None
Evans, Onnise	Route 1, Box 265M Pearl River, LA
Facione, G. A.	237 Mars Slidell, LA 70458
Farlsen, Harold M.	Route 1, Box 392 Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Farrell, Jamie	P. O. Box 594 Slidell, LA 70458
Felder, R. K.	1427 Eastwood Drive Slidell, LA 70458
Finch, Fred	625 Teddy
Fascione, Kirby G.	P. O. Box 113 Slidell, LA 70458
Fogg, Mrs. Floyd	None
Forbes, Carol	Route 1, Box 141-F Lacombe, LA 70445
Fowler, Gerard J.	None
Fowler, J. N.	Route 3, Box 338 C Slidell, LA 70458
Funch, Frank E.	2024 Roosevelt Kenner, LA 70062
Galatas, Frank H.	Route 2, Box 314 Slidell, LA 70458
Galatas, Leonard P.	Route 2, Box 314 Slidell, LA 70458
Galatas, W. J.	Route 2, Box 345 Slidell, LA 70458
Garrett, Barabara	284 Cardinal Lane Slidell, LA 70458
Garrett, Max Jr.	284 Cardinal Lane Slidell, LA 70458
Geer, Charles R.	P. O. Box 1297 Slidell, LA 70458
Gettys, Joseph A.	None
Ghrist, Mr. Jobie	None

<u>Name</u>	<u>Address</u>
Christ, Mrs. Peggy	None
Gilmore, C. T.	557 Beechwood Drive Slidell, LA 70458
Gilmore, William J.	234 Mars Street Slidell, LA 70458
Giordano, James	1261 Carnation Slidell, LA 70458
Giordano, Mrs. James	1261 Carnation Slidell, LA 70458
Gomez, Gerry	P. O. Box 1483 Slidell, LA 70458
Gomez, James C.	None
Gomez, Malcolm R.	Boyet Jr. High Slidell, LA 70458
Gomez, Martin J., Sr.	629 Florida Avenue Slidell, LA 70458
Gomez, Martin J.	629 Florida Avenue Slidell, LA 70458
Gonzales, G. J.	6223 Fleur de Lis New Orleans, LA 70124
Gorden, Leonard L.	Route 3, Box 185 Slidell, LA 70458
Gordy, Mrs. Patricia A.	None
Graham, Charles A.	Route 1, Box 155 Lacombe, LA 70445
Granger, James	1015 Poinsetta St. Bogalusa, LA
Gray, Joe Ann	P. O. Box 305 Lacombe, LA 70445
Gray, Lena May	P. O. Box 1331 Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Green, Brent	1496 Hermadel Drive Slidell, LA 70458
Greer, Mr. J.	Route 27, Box 1 Slidell, LA 70458
Greenwood, Pat	3718 Arrowhead Drive Slidell, LA 70458
Griffith, Thomas M.	None
Hall, J. D.	Route 1, Box 459 Slidell, LA 70458
Hancock, Paul A.	1041 Rue Corton Slidell, LA 70458
Hanson, Wm. W.	105 Bishop Mobile Home Pk. Slidell, LA 70458
Harmon, John R., Sr.	P. O. Box 1440 Slidell, LA 70458
Hart, L. E.	117 Bishop Trailer Park Slidell, LA 70458
Hauck, H. F.	4621 Lake Vista Drive Metairie, LA
Healy, L. D., Jr.	RR 3 - 366R Slidell, LA 70458
Hegwood, Bonnie	3731 Arrowhead Drive Slidell, LA 70458
Herrington, Mrs. Oliver	None
Hickman, Cecil Sr.	2557 College Street Slidell, LA 70458
Hillman, Mr. & Mrs. Harold	212 Bishop Mobile Home Pk. Slidell, LA 70458
Hinton, Mrs. Jan	111 Bishop Mobile Park Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Hodges, John H.	229 Buscaren, Apt. B Slidell, LA 70458
Holstz, George E.	None
Haley, Virgis L.	None
Hollier, Sherron	P. O. Box 1238 Slidell, LA 70458
Holmes, Darryl	2786 Third St.
Holmes, Randle	2787 3rd Street Slidell, LA 70458
Homes, Mr. Ralph A., Jr.	2787 3rd Street Slidell, LA 70458
Holmes, Mrs. Ralph A., Jr.	2787 3rd Street Slidell, LA 70458
Holmes, Mr. Ralph A., Sr.	2787 3rd Street Slidell, LA 70458
Holmes, Mrs. Ralph A., Sr.	2786 3rd Street Slidell, LA 70458
Hostler, Mrs. Mary J.	None
Honea, Mrs. W. M.	Teddy Avenue Slidell, LA 70458
Howard, Joe A.	Route 4, Box 280 Slidell, LA 70458
Howard, LTC and Mrs. Robert W.	None
Hungaford, Gerald	None
Hursey, Richard	2358 Carey Street Slidell, LA 70458
Jenkins, Marvin Stephan	None
Johns, Irene	None

<u>Name</u>	<u>Address</u>
Johnson, Mrs. Lewis A.	1208 St. Tammany Avenue Slidell, LA 70458
Johnston, B. E.	3609 Meadowdale Drive Slidell, LA 70458
Johnston, W. H.	11658 Chef Menteur Hwy New Orleans, LA 70128
Jones, Ella Mae	General Delivery Slidell, LA 70458
Jones, Mrs. Pearly D.	2512 10th Street Slidell, LA 70458
Jones, Harriet	2231 Third Street Slidell, LA 70458
Kahl, Sanford R., Jr.	None
Karlsen, N. T.	Route 1, Box 392 Salt Bayou Road Slidell, LA 70458
Keyser, B.	1336 Westlawn Slidell, LA 70458
Kinder, Nell	Alers Road
Kinsey, Jerry C.	None
Kinsey, Mrs. Jerry C.	None
Kittelstad, K.	Route 5, Box 177 Slidell, LA 70458
Knox, Rutherford L., II	116 Palm Springs Drive Slidell, LA 70458
Krikley, Roy	Route 2, Box 253 Slidell, LA 70458
Laborde, Lynn M.	None
Landry, John J.	6442 Baccich Street New Orleans, LA 70122

<u>Name</u>	<u>Address</u>
Lanes, Alfred	None
Langston, J. C. & Marilyn	538 Maine Avenue Slidell, LA 70458
Langston, J. C., Jr.	538 Maine Avenue Slidell, LA 70458
Laurence, Burnal	None
Lavigne, Pershing	Pearl River, LA
Lee, Cherie	None
Leemer, Cindy Gegen	Route 1, Box 107 Pearl River, LA 70452
LeJeune, Judy G.	Bishop Mobile Home Pk. Lot 106 Slidell, LA 70458
Leuch, Bruce F.	1420 E. Ridge Drive Slidell, LA 70458
Levy, David P.	None
Levy, David	Route 2, Box 219 Slidell, LA 70458
Levy, Mr. & Mrs. James W.	3036 Slidell Avenue
Little, Marvin J.	Route 3, Box 248 Slidell, LA 70458
Livaudais, Lennie	Route 1, Box 385 Slidell, LA 70458
Lodato, Ann Marie	1229 Brockenbruagh Court Metairie, LA 70005
Lolly, John	Illegible
Long, Mrs. Beatrice	Route 2, Box 120 Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Lott, Beverly	None
Lyle, Nannie	1925 4th Street Slidell, LA 70458
Maddox, Mable	None
Madison, Robert J.	1545 Ridgecrest Drive Slidell, LA 70458
Maloney, George J.	Route 2, Box 210C Slidell, LA 70458
Manger, Jason	145 Clara Street Slidell, LA 70458
Manger, J. J.	Route 2, Box 269 Pearl River, LA 70452
Mans, Mike	None
Marquer, Mrs. Raoul J., Jr.	1005 Old Spanish Trail Slidell, LA 70458
Martinis, Mrs. George	Slidell, LA 70458
Martin, Ronald	Route 2, Box 290-N Slidell, LA 70458
Mathes, John D.	7512 Jeanette Place New Orleans, LA 70118
McCann, Mr. & Mrs. Michael W.	201 Bishop Mobile Home Pk. Slidell, LA 70458
McClendon, Robert E.	Route 3, Box 229 Slidell, LA 70458
McDermott, Ed	Route 1, Box 107 Pearl River, LA 70452
McDermott, Helena	Route 1, Box 107 Pearl River, LA 70452

<u>Name</u>	<u>Address</u>
McDougal, W. E.	None
McGlove, Patrick	None
McIntosh, Mrs. R. C., Jr.	None
McMaher, C. F.	836 Maine Avenue P. O. Box 149
McMaher, Mrs. C. F.	836 Main Street P. O. Box 149
McManus, Mark	417 Fremaux Avenue Slidell, LA 70458
Middleton, A. M.	Hammond, LA
Miller, Mrs. Gerald	None
Miller, Norbert B.	3243 College Street Slidell, LA 70458
Miller, Mrs. J. S.	Route 2, Box 330 Slidell, LA 70458
Mills, Gary	120 Bishop Mobile Home Pk. Slidell, LA 70458
Mincey, J. E.	3176 Carey Street Slidell, LA 70458
Miramon, Wilson A.	None
Miramon, Mrs. Wilson A.	None
Mitchell, Russ	Route 1, Box 451 Slidell, LA 70458
Moarmar, Mrs. Katie	203 Bishop Mobile Park Slidell, LA 70458
Monroe, M. R.	P. O. Box 131 Slidell, LA 70458
Moore, Mrs. Edna P.	114 Bishop Mobile Park Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Moore, Harry	2026 10th Street Slidell, LA 70458
Moore, Mrs. Jane R.	None
Moore, Martha R.	2026 10th Street Slidell, LA 70458
Moore, Pat J.	1118 Maine Street Slidell, LA 70458
Morris, Mr. & Mrs. Alton J.	P. O. Box 385 Slidell, LA 70458
Morris, Deborah	525 Poplar Drive Slidell, LA 70458
Moser, (illegible)	Route 2, Box 219 Slidell, LA 70458
Mouch, Vernon F.	V. F. Mouch Electric Laurant Road Slidell, LA 70458
Murphy, William P.	None
Murray, Bernard O.	Route 6, Box 169 Slidell, LA 70458
Murray, Clyde A.	108 DeWald Lane Slidell, LA 70458
Mather, Emile L.	2556 Verbena Street New Orleans, LA 70122
Nelson, Fred E.	Route 1, Box 369 Slidell, LA 70458
Nelson, John P.	Route 1, Box 369 Slidell, LA 70458
Nelson, Neita	2422 6th Street Slidell, LA 70458
Neidermeier, Joseph F., Jr.	Route 6, Box 218 Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Newbill, M., Jr.	317 Jacob Street Slidell, LA 70458
Newbill, Mrs. Mathis	None
Newbill, Mrs. Yvonne	2910 William Tell Slidell, LA 70458
Noble, James P.	10106 Plainfield Dr. Apt. 59 New Orleans, LA 70127
Noland, Tenel W.	1509 West Hall Slidell, LA 70458
Northcutt, Larry G.	Illegible
Northcutt, Sandra	Illegible
Nowell, Mary	None
Nunley, Mrs. Bernice	None
O'Malley, Patrick M.	229 Bouscaren Slidell, LA 70458
Oppling, Ted	Slidell, LA 70458
Orr, Ralph W.	P. O. Box 411 Slidell, LA 70458
Orthmann, Louis H.	2786 3rd Street Slidell, LA 70458
Oullby, B. U.	238 Jacob Street Slidell, LA 70458
Oulliber, E. G.	2990 William Tell Slidell, LA 70458
Owen, Billy P., Jr.	None
Owen, Billy P., Sr.	None
Owen, Mrs. Mary Charlotte	None

<u>Name</u>	<u>Address</u>
Owen, Sammy	None
Parker, A.	None
Parker, Barney	2193 Park Drive Slidell, LA 70458
Parker, Morris	Route 5, Box 199 Slidell, LA 70458
Parker, Mrs. Victoria	Route 5, Box 199 Slidell, LA 70458
Parker, Terry G.	None
Patterson, James E.	P. O. Box 1409 Slidell, LA 70458
Peccraro, Steve	Route 2, Box 283 Slidell, LA 70458
Penton, James A.	None
Penton, Mrs. John E., Jr.	None
Penton, Robert	None
Perrette, Mr. & Mrs. Thomas A.	115 Bishop Mobile Park Slidell, LA 70458
Peterson, H. W.	805 Cousian Street Slidell, LA 70458
Pettway, Betty	None
Philippi, Hermann R.	145 W. Livingston Place Metairie, LA 70001
Pichon, A. L., Jr.	Route 2, Box 313 Slidell, LA 70458
Pichon, David	Route 2, Box 313 Slidell, LA 70458
Pichon, Eunice B.	Route 2, Box 313 Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Pecou, Helen	P. O. Box 311 Slidell, LA 70458
Pichon, James	Route 2, Box 313 Slidell, LA 70458
Pecou, Louis J., Jr.	P. O. Box 311 Slidell, LA 70458
Pichon, Lyman	Route 4, Box 482 Slidell, LA 70458
Pichon, (Sonny) Sidney John Joseph, Sr.	None
Pichon, Walter	Route 2, Box 329 Slidell, LA 70458
Piet, Audrey R.	611 Gause Blvd. Slidell, LA 70458
Piet, Ferdinand K.	611 Gause Blvd. Slidell, LA 70458
Piet, Kenneth H.	611 Gause Blvd. Slidell, LA 70458
Pinion, Dorothy T.	None
Pinion, Thomas D., Sr.	None
Pittman, Mrs. F. W.	454 Fremaux Slidell, LA 70458
Pollard, Covington H.	Route 2, Box 265 Slidell, LA 70458
Pollard, Mabel T.	Route 2, Box 265 Slidell, LA 70458
Ponson, Mrs. Joseph A., Jr.	216 Avery Drive Slidell, LA 70458
Porde, Willard L.	1248 Glayes Street Slidell, LA 70458
Reeves, Jay D.	None

<u>Name</u>	<u>Address</u>
Rest, Oscar B.	1945 Second St. Slidell, LA 70458
Ridder, W. H.	Box 18, Oak Lawn Lacombe, LA 70445
Rist, John W.	308 Oriole Drive Slidell, LA 70458
Rist, Mrs. John W.	308 Oriole Drive Slidell, LA 70458
Rist, Philip R.	3634 Eliz. Drive Slidell, LA 70458
Rist, Mrs. Philip	3634 Eliz. Drive Slidell, LA 70458
Robison, Lottie N.	P. O. Box 479 Slidell, LA 70458
Romero, Jodie M.	None
Rotondo, Vince	Route 1, Box 126 Slidell, LA 70458
Roviro, Burnell	Route 2, Pacquet Road Slidell, LA 70458
Roviro, K. A., Jr.	Route 2, Pacquet Road Slidell, LA 70458
Rush, John C.	None
Slavador, John	None
Sandoz, Elbert G.	3241 Elizabeth Street Slidell, LA 70458
Schneider, Mrs. Betty	None
Schneider, Lester J.	None
Scogin, Mrs. Lillian P.	Route 5, Box 509 Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Scogin, Marguerite N.	Box 865 Slidell, LA 70458
Scogin, Robert L.	1909 Jefferson Mandeville, LA
Scott, D.	Route 3, Box 200 Picayune, MS 39466
Scott, Mrs. Dilmar R.	Route 3, Box 200 Picayune, MS 39466
Scott, Kathy	None
Seals, George V.	None
Shannon, Mr. & Mrs. Robert	208 Bishop Mobile Park Slidell, LA 70458
Short, Mrs. Sandra W.	None
Shocle, Mrs. Tackel	Highway 11, North Shore Slidell, LA 70458
Simmons, Betty	Route 4, Box 97J Slidell, LA 70458
Simmons, Esco	54 Bonura Drive Destrehan, LA 70047
Singletary, David	None
Singletary, George C.	None
Singletary, Mary	None
Skilling, Mr. William	None
Smith, Courtney	4290-B Camelia Drive Slidell, LA 70458
Smith, Laurena	None
Snell, Harry T.	Route 5, Box 57 Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Snooh, Joe W.	None
Snooh, Mrs. J. W.	None
Stillwell, Mrs. Thomas W.	Lot 116 Bishop Mobile Home Pk. Slidell, LA 70458
Strecker, William I.	None
Striger, E. L.	P. O. Box 703 Slidell, LA 70458
Striger, Gert S.	P. O. Box 703 Slidell, LA 70458
Stripling, Donald W.	None
Swenson, Mr. Charles	228 Erlanger Avenue Slidell, LA 70458
Swenson, John	P. O. Box 853 Slidell, LA 70458
Talley, Mr. & Mrs. Lemuel M.	245 Clara Street Slidell, LA 70458
Talley, Mrs. Permie	2910 William Tell Street Slidell, LA 70458
Tauzier, Fred	Route 1, Box 385, Salt Bayou Slidell, LA 70458
Tauzier, Mrs. Fred, Sr.	Route 1, Box 385 Slidell, LA 70458
Thigpen, John N.	None
Thompson, Albert	None
Thurlow, Mrs. Nova	Box 1379 Slidell, LA 70458
Tillett, Mrs. Dorothy	P. O. Box 264 Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Tillett, Jesse W.	P. O. Box 264 Slidell, LA 70458
Townley, R.	127 Whitehall Drive Slidell, LA 70458
Troyani, Albert Paul	Route 1, Box 596 Slidell, LA 70458
Troyani, Glen W.	None
Troyani, Mrs. Merlin N.	Route 1, Box 596 Slidell, LA 70458
Troyani, S. A., Sr.	Route 1, Box 596 Slidell, LA 70458
Troyani, Sharon L.	None
Underwood, Louise	North Shore Slidell, LA 70458
Van Hoosen, Mr. & Mrs. Jerry W., Sr.	325 Maine Avenue Slidell, LA 70458
Vaultz, Delores	None
Vaultz, Mrs. Edward	2794 8th Slidell, LA 70458
Vinot, Warren	None
Wagner, Larry	7152 Deanne Street New Orleans, LA 70122
Wagner, Mary	7000 Catina Street New Orleans, LA 70124
Walcott, Jack	533 La. Avenue Slidell, LA 70458
Walker, Robert F.	2046 Front Slidell, LA 70458
Wartor, Marian O.	665 Hailey Avenue Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Walter, Hilda	P. O. Box 946 Slidell, LA 70458
Washington, Lionel J.	2730 Lincoln Avenue Slidell, LA 70458
White, William H.	None
Whitney, Mrs. Albert L.	Route 2, Riley Road Slidell, LA 70458
Williams, A. A.	None
Williams, Duane J., M.D.	P. O. Box 1232 Slidell, LA 70458
Wilson, Lenell	Route B340 Slidell, LA 70458
Winninghoff, John	None
Wolcott, Charles J.	534 Teddy
York, William T.	Route 1-201 Seicshnaydre Dr. Slidell, LA 70458
Youmans, Kermit D.	Slidell, LA 70458
Zaterain, Donald	Route 3 Slidell, LA 70458
Illegible	Route 3, Box 363-R Slidell, LA 70458
Illegible	Route 4, Box 507 Slidell, LA 70458
Illegible	103 Francisco Court Bay St. Louis, MS
Illegible	1365 11th Slidell, LA 70458
Illegible	P. O. Box 874 Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Illegible	Route 3, Box 157 Slidell, LA 70458
Illegible	3412 Miller Drive Slidell, LA 70458
Illegible	1343 Seville Drive New Orleans, LA 70122
Illegible	Highway 11, North Shore Slidell, LA 70458
Illegible	P. O. Box 734 Slidell, LA 70458
Illegible	Thompson Road Slidell, LA 70458
Illegible	115 Bosworth Street Slidell, LA 70458
Illegible	1538 Monaco Slidell, LA 70458
Illegible	P. O. Box 554 Slidell, LA 70458
Illegible	P. O. Box 477 Slidell, LA 70458
Illegible	Newhauser Gro. Slidell, LA 70458
Illegible	119 Bishop Trailer Pk. Slidell, LA 70458
Illegible	Route 2, Box 269 Pearl River, LA 70452
Illegible	P.O. Box 280 Slidell, LA 70458
Illegible	Highway 11, North Shore Slidell, LA 70458
6 illegibles with no addresses	

March 31, 1975

Colonel S. K. Halberg III, CE
P. O. Box 60407, N. O. , La. 70160
and

D. A. Raymond
Major General, USA
Deputy Chief of Engineers
Washington, D. C.

Dear Sir:

On behalf of President Ford and all citizens of the USA
(Corp of Engineers included) this is to express opposition
to the Lake Pontchartrain and Vicinity Hurricane Protection
Project.

You say Hurricane Flood Control Projects such as this are under-
taken at the direction of Congress based on an expressed interest
by the people and officials of the area that would be directly
affected.

Three times (please check this) this was brought to the polls
for the people to vote on and THREE times it was voted down.

In view of the above fact, I and the citizens of this area
must see the actual proof signed and documented that gives
the Corp of Engineers (according to you) the right to dis-
regard the wishes of the people.

Please have these documents in my hands within ten (10) days.
Otherwise I will know for sure you are attempting an illegal
act against the citizens of these United States of America.

Very truly yours, *James M. Barrat*

380 Carr Drive Metairie La 70458

CC: President Gerald Ford, White House, Wash., D. C.
Hon. F. Edward Herbert, House of Rep., Wash., D. C.
Hon. Senator William Proxmire, Senate Office Bldg., Wash., D.C.
Hon. David Treen, House of Rep., Wash., D. C.
Hon. John Breaux, House of Rep., Wash., D. C.
Hon Henson Moore, House of Rep., Wash., D. C.
Hon. Bennett Johnson, Senate Office Bldg., Wash., D. C.
Hon. Russell Long, Senate Office Bldg., Wash., D. C.

EXHIBIT 110-1

LETTERS IDENTICAL TO THE PRECEDING WERE ALSO RECEIVED FROM THE FOLLOWING:

<u>Name</u>	<u>Address</u>
Blackmon, Mr. & Mrs. Joseph L.	None
Blank, John Jr.	8008 Redfish St. New Orleans, LA 70126
Blank, Mrs. John Jr.	8008 Redfish Street New Orleans, LA 70126
Blank, John III	8008 Redfish Street New Orleans, LA 70126
Bourgeois, Clyde J.	241 Erlanger Slidell, LA 70458
Bourgeois, Mr. & Mrs. E. A., Sr.	Route 6, Box 133 New Orleans, LA 70129
Bourgeois, Mr. & Mrs. Louis	Illegible Slidell, LA 70458
Bourgeois, Wayne	241 Erlanger Avenue Slidell, LA 70458
Crochet, J. J.	None
Deyo, Ruby	None
Florence, N. W.	Highway 11, North Shore Slidell, LA 70458
Florence, W. L.	Highway 11, North Shore Slidell, LA 70458
Herman, S. T.	Route 6, Box 66 Slidell, LA 70458
Herman, Mrs. S. T.	Route 6, Box 66 Slidell, LA 70458
Julian, Thomas	Route 6, Box 141 New Orleans, LA 70129

<u>Name</u>	<u>Address</u>
Julian, Mrs. Thomas	Route 6, Box 141 New Orleans, LA 70129
Keet, Dominick H.	Route 6, Box 68 Slidell, LA 70458
Madiara, Earl H.	2910 Franklin Avenue New Orleans, LA 70122
Marquer, Joseph	Box 141 New Orleans, LA 70129
Mayer, Rudolph W.	7124 St. Claude Avenue New Orleans, LA 70113
Miller, Eugenie L.	11318 Pressburg St. New Orleans, LA 70128
Miller, Myles Louis	4170 Old Gentilly Road Suite 134 New Orleans, LA 70126
Miller, Miss Wilda	1021 First Street New Orleans, LA 70130
Norman, Mrs. Myrtle	100 Carr Drive Slidell, LA 70458
Parker, David	2193 Park Drive Slidell, LA 70458
Riche, Anthony	380 Carr Drive Slidell, LA 70458
Sagona, Fano S., Jr.	381 Carr Drive Slidell, LA 70458
Sagona, Joseph	381 Carr Drive Slidell, LA 70458
Sagona, Lou Ann	381 Carr Drive Slidell, LA 70458
Sagona, Stella S.	381 Carr Drive Slidell, LA 70458

Name

Address

Thomas, Judy S.

Slidell, LA 70452

Weir, Chris

380 Carr Drive
Slidell, LA 70458

Illegible

132 South Park Drive
Slidell, LA 70458

Illegible

720 Robert Road
Slidell, LA 70458

Illegible

Route 6, Box 145A
New Orleans, LA 70129

Illegible

Route 6, Box 141
New Orleans, LA 70129

March 31, 1975

D. A. Raymond
Major General, USA
Deputy Chief of Engineers
Washington, D. C.

Dear Sir:

RE: The End of Shipbuilding, Shell and Gravel Industries
and Fishing and Crabbing
If the Corps of Engineers Bottle Up Lake Pontchartrain
Under the Guise of Hurricane Protection.

On behalf of President Ford and citizens of the USA, this is
to express opposition to the Lake Pontchartrain and Vicinity
Protection Project.

Three times we have expressed opposition to this wild plan
by going to the polls and voting against it. Records will
show that the total vote was NOT to build barriers in Lake
Pontchartrain, Now, I ask you, who gave you the authority
to over-ride and try to ignore and disregard the wishes of the
people?

Shipbuilding and the hauling of shell and gravel as well as
the fishing industry has always played a large part in the
lives of the people in the Lake Pontchartrain area. We love
it that way and that is the way we want to keep it.

For the last time: WE DO NOT WANT THE LAKE BOTTLED UP!!!!!!!

Sincerely,

C. M. Black
128 Cathode CR

Copy: Pres. Gerald Ford, White House, Wash., D. C.
Hon F. Edward Herbert, House of Rep., Wash., D. C.
Hon. Senator Wm. Proxmire, Senate Office Bldg., Wash, DC
Hon. David Treen, House of Rep., Wash., D.C.
Hon John Breaux, House of Rep., WASH. , D. C.
Hon Henson Moore, House of Rep. Wash., D. C.
Hon. Bennett Johnson, Senate Office Bldg., Wash., D. C.
Hon. Russell Long, Senate Office Bldg., Wash., D. C.

EXHIBIT III-1

LETTERS IDENTICAL TO THE PRECEDING WERE ALSO RECEIVED FROM THE FOLLOWING:

<u>Name</u>	<u>Address</u>
Alfred, Stanley F.	Route 2, Box 146 Slidell, LA 70458
Anderson, Mr. & Mrs. Charles S.	None
Anthony, Mrs. Percy E.	645 Kostmeyer Slidell, LA 70458
Barrar, Norman J.	380 Carr Drive Slidell, LA 70458
Bateson, Jerry	Route 6, Box 342 Slidell, LA 70458
Bateson, Roger	Route 1, Box 342 Slidell, LA 70458
Burger, John	None
Carnibe, Elmer	Route 6, Box 220 Slidell, LA 70458
Collins, Mr. James C.	None
Collins, Mrs. James C.	None
Currie, Mr. & Mrs. Glynn H.	2727 Second Street Slidell, LA 70458
Davis, Wanda G.	Front Street Slidell, LA 70458
Deyo, Mr. & Mrs. Harry T.	1270 Magnolia Slidell, LA 70458
Dykes, Barney	P. O. Box 852 Slidell, LA 70458
Dykes, Bessie	P. O. Box 852 Slidell, LA 70458
Embree, Mrs. F. M.	2046 Front Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Flotte, Charles H. Jr.	940 Maine Avenue Slidell, LA 70458
Friedrichs, Andrew V., M.D.	Slidell, LA 70458
Friedrichs, Mrs. Anna C.	Slidell, LA 70458
Guth, Mrs. Ronald W.	119 Lee Street Slidell, LA 70458
Hammel, M.	3046 S. Palm Drive Slidell, LA 70458
Holstz, George E.	None
Hover, Mr. John S.,	2667 2nd Street Slidell, LA 70458
Hover, Mrs. John S., Sr.	2667 2nd Street Slidell, LA 70458
Lamarque, J. L., Sr.	3062 S. Palm Slidell, LA 70458
Lambert, Joe	None
Lamraw, Tony	110 Nunez Road Slidell, LA 70458
Levy, Howard E.	220 Florida Blvd. Slidell, LA 70458
Little, Allen L.	Slidell, LA 70458
Lully, Ralph T., Jr.	3807 Coventry Street Slidell, LA 70458
McClosky, Mrs. Joan	P. O. Box 280 Slidell, LA 70458
McClosky, Mrs. L.	P. O. Box 280 Slidell, LA 70458
Mchee, Mrs. Ruby Lee	None
McMurray, Charles J.	Route 3, Box 338C Slidell, LA 70458

<u>Name</u>	<u>Address</u>
McRussold, Mrs. Nora	None
Miller, A. C.	Route 1, Box 393M Pearl River, LA 70452
Miramón, Wilson A.	None
Miramón, Mrs. Wilson A.	None
Montgomery, Mike	Slidell, LA 70458
Moore, Harry	2026 10th Slidell, LA 70458
Narcisse, Mrs. Eugene	Route 3, Box 3572 Slidell, LA 70458
Olsen, Irwin, Sr.	Slidell, LA 70458
Pecou, Mrs. H. F.	Slidell, LA 70458
Phillips, O. S.	None
Pichon, Bette	Route 3, Box 3547 Slidell, LA 70458
Pichon, Joseph A.	Route 2, Box 323 Slidell, LA 70458
Pichon, Julius J.	Route 3, Box 3547 Slidell, LA 70458
Reimmuth, Andrew J.	Hammond, LA
Reis, Louisiana C.	Route 2, Box 214 Slidell, LA 70458
Roig, L. G.	169 Carr Drive Slidell, LA 70458
Sagona, James D.	381 Carr Drive Slidell, LA 70458
Sagona, Louis S.	201 Carr Drive Slidell, LA 70458

<u>Name</u>	<u>Address</u>
Sandoz, Katherine	Slidell, LA 70458
Schneider, Mrs. Betty	None
Schneider, Lester	None
Sewell, N. L., Jr.	609 Hailey Avenue Slidell, LA 70458
Spizale, Mrs. Felix A.	Highway 11, North Shore Slidell, LA 70458
Sustines, Christine	P. O. Box 375 Slidell, LA 70458
Thibodaux, Mr. & Mrs. Paul S.	None
Thomas, Mrs. Randall L.	Route 4, Box 215 1st Avenue Slidell, LA 70458
Williams, Duane J., M.D.	Box 1232 Slidell, LA 70458
Wolf, John P.	Route 6, Box 201 Slidell, LA 70458
Zeringue, Mrs. Patricia	Route 6, Box 374 Slidell, LA 70458
Illegible	North Shore Civic Club Highway 11, North Shore Slidell, LA 70458
Illegible	North Shore, LA 70458
Illegible	P. O. Box 417 Pearl River, LA 70452
Illegible	P. O. Box 1072 Slidell, LA 70458
Illegible	None

Printed Public Record

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Pontchartrain and Vicinity. We feel the plan can only hurt the Lake and gravely damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

Thelma O. Scogin

Mr + Mrs Ralph E. Stewart

Mr + Mrs. Elvira A. Plazger

Mr + Mrs. Thelma J. Harmon

Mrs. Charles Burks

Mrs Wm E. Hammell

Mr + Mrs. Robert L. Holbourne

Mrs. A. Fleury

Mrs. Fred Rives

Miss B. Sigs

Frank Dages

Mary Clare Davis

R. M. Dunscomb

Gale Galata

James C. Bony

T. Roach

Harmon Allen

Printed Public Record

As the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan on Lake Pontchartrain and vicinity. We feel the plan can only hurt the Lake and gravely damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

- Charles Whitlock 400 Olive Dr. Slidell
Lynn Denalinger Rt 1 Box 384 Slidell
Jennie Abney Bant Rt. 1 Box 120 Pearl River, La.
Mrs H. J. Smith Rt 1 Box 117 Pearl River, La.
Elmer C. Bant Rt 1 Box 120 Pearl River, La.
Hursery T Smith Rt. 1 Box 117 Pearl River, La.
Lucy Jay Bant Rt. 1 Box 120 Pearl River, La.
Vesta Ruckiade 149 Fountain Dr. - Slidell, La.
Mrs. Louis D. White 3702 Arrowhead Dr. Slidell La.
Mr. Cecil L. White 3702 Arrowhead Dr. Slidell La.
Kuanal (Kendrick) R.P. Rt. 1. Box 384, Slidell
Mrs. Nellie Brantley 259 Bluebird Dr. - Slidell
Mrs Dale W. Hagadone RT. 4, Box 285 Slidell,
Wileen Attayan - Rt 2 - Box 264 Pearl River, La.
Beatrice Crockett - 604 Teddy Ave. Slidell, La. 70458
Mrs Martha Jellis P.O. Box 403 Pearl River, La
James H. Meaurio 441 Country Club Blvd.
Mrs. Vernon L. Richardson P.O. Box 246 - Pearl River, La
Cecile Drennan 3628 Meadowdale Dr., Slidell, La
Judy Smith Rt. 2 Box 271-M Pearl River, La. 70452
Ronald M. White Rt 3 Box 360-P Slidell, La. 70458
Mrs Joan West RR 2 # Box 64X 190 Slidell La
Sheila Spivey Rt 6 Box 592 Slidell La. 70458
Margaret ~~White~~ Rt 5 Box 111 SL
Mrs J P Dyer P.O. Box 1019 Slidell
James G. Crockett 604 TEDDY AVE SLIDELL, LA.
Mrs. A.E. Radon 2211 Sixth St.

W B Breeding III 1164 Cousin Slidell, La
~~Mr. D. B. Breeding, III~~
 Mrs. D. B. Breeding, III 1164 Cousin St. Slidell, La
 Mrs. Neal M Myers Sr. 1250 St. Tammany, Slidell, La.
 Mr. Neal M. Myers 1250 St. Tammany Ave., Slidell, La.
 Joseph Dunn P.O. Box 15, Slidell, La.
 Mrs. Rosemary Guerra 15267 Remany Ave. Slidell, La.
 Mrs. Kenneth Browne Rt. 1 Box 13, Slidell, La.
 Mrs. Thomas Collins 130 Melody Slidell, La.
~~Janice~~ Karpia 3241 Duncan St. Slidell, La.
 Johnny C. Crow 1334 Jenth St. Slidell, La.
 Mrs. Phyllis L. Crow 1334 Jenth St. Slidell, La.

Printed Public Record

We the undersigned would like to go on record as being opposed to the Corps of Engineers Hurricane Protection Plan for Lake Fort Belknap and vicinity. We feel the plan can only hurt the Lake and gravely damage surrounding rivers and streams.

Since this proposed plan has been defeated at the polls on three separate occasions, we feel the Corps of Engineers should respect the wishes of the voters.

Margaret Arthur Rindinger Rt 1 Box 439 Slidell, La.
Samuel L. Caruthers P.O. Box 398
Louis H. Jangman 3239 Effie St. Slidell, La.
David Brock RT3 Box 243 Slidell, La.
Judith W. Brock Rt 3 Box 243 Slidell, La 70458
Joseph D. Kirn 4701 Marseller Pl. Metairie 70002
Edon C. Blanchard 6209 Cameron Blvd. New Orleans La.
TIMOTHY TERRELL 1305 MILAN ST. N.O. LA.
David P. Lemy 527 Legendre Dr. Slidell, La.
Rt 1 Rindinger Jr. Route 1 Box 439 Slidell, La.

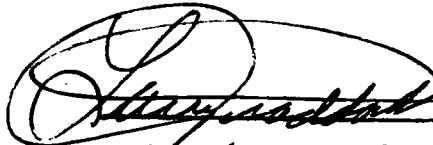
February 22, 1975

U. S. Army Corps of Engineers
New Orleans, Louisiana

Gentlemen:

Until the U. S. Army Corps of Engineers can modify the present hurricane protection plan to provide equal assurance of safety to the residents of St. Tammany parish, I strongly oppose the implementation of the existing Lake Pontchartrain and Vicinity Hurricane Protection Plan.

Sincerely,



RT # 3 Box 491
(address)

SHIDELL, LA-

Jan

RESOLUTION
R-75- 33

CITY HALL: MARCH 6, 1975

BY: COUNCILMAN MOREAU
SECONDED BY: COUNCILMAN DI ROSA

WHEREAS, Resolution R-75-26 adopted February 27, 1975, placed the City Council on record as endorsing the Hurricane Protection Plan recommended by the U. S. Corps of Engineers; and

WHEREAS, this resolution was adopted without benefit of a public hearing so that the opinion of the citizens of the community could be presented to the Council; and

WHEREAS, on March 6, 1975, several citizens appeared before the Council and spoke in opposition to the Hurricane Protection Plan; now, therefore

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF NEW ORLEANS that the Council hereby rescinds Resolution R-75-26 in its entirety and assumes no position with regard to the proposed Hurricane Flood Protection Plan.

THE FOREGOING RESOLUTION WAS READ IN FULL, THE ROLL WAS CALLED ON THE ADOPTION THEREOF AND RESULTED AS FOLLOWS:

YEAS: Moreau - 1

NAYS: Ciaccio, Davis, DiRosa, Dupuy, Friedler, Lambert - 6

ABSENT: 0

AND THE RESOLUTION FAILED TO PASS.

CRS 75- 167
sdl

THE FOREGOING IS CERTIFIED
TO BE A TRUE AND CORRECT COPY

Joseph C. Peterson

JOSEPH C. PETERSON, COUNCIL CLERK
CITY OF NEW ORLEANS

SECTION ONE—PAGE TWELVE

The Times-Picayune

Issued Even Times a Day, The Times-Picayune Publishing Corp., at 3800 Howard Ave.

ASHTON PHELPS

President and Publisher

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Editor

FRITZ HARSDOERF

Associate Editor, News

RUSS KINTZLEY

Associate Editor, Editorials

Want Ads 821-1075

ZIP Code 70140

God, Man and Floods

Acts of God are certainly involved in the kinds of floods and flood threats the Mississippi River Valley is experiencing with unusual frequency. But acts of man are also certainly involved, confirming, if confirmation is necessary these days, that man has become a geological force.

But the problem is that he is a "natural" force often operating outside — and even at cross-purposes to — the pattern of old-fashioned natural forces that evens out boons and disasters to preserve the basic system.

The enormous power of a modern state's technology has been applied over the years to taming the Mississippi and its feeder system to make it work for man. In doing so, man has often worked against nature. Channelizing streams, building reservoirs and spillways, straitjacketing rivers with levees are all two-edged tools — they can make things simple and efficient in good times, but they can worsen really bad times and increase the damage in times of disaster.

Channelization is under particular fire now from environmentalists who argue that it degrades the stream and its immediate system and contributes to floods by speeding local waters downstream. Leveeing in wetlands areas is being attacked for de-

stroying valuable natural wetlands and replacing them with artificial developed areas on floodplains still vulnerable to costly damage by high water.

Local examples of river problems are the Mississippi's channel-changing pressure on the Old River connection to the Atchafalaya and the enormous silting problem at the Mississippi's mouths, with direct affects on the New Orleans port.

In times of less technological power, people near rivers built high or far back, out of the way of high water, whose regular bounty of new soil and nutrients they would reap in partnership with a nature they could not control. Today we feel we can control nature, yet we are always being taken by surprise and hurt.

The modern equivalent of building high and back is the proposal for floodplain zoning. Implementing such a plan could get us away from an adversary relation to nature and back into responsive partnership. Present development is not to be undone, of course, but future development can be guided to where it is most appropriate, and new programs for necessary and proper defense against the excesses of nature can be spotted where they can do the job while creating as few problems elsewhere as possible.

Judge Asks Probe of Engineers Unit

By RICHARD E. HART

A Mississippi circuit judge Monday asked a newly empanelled grand jury to investigate charges that the U.S. Corps of Engineers has artificially caused the extensive flooding in the Mississippi delta, and is in the process of killing Yazoo County's last viable lake.

Circuit Court Judge Francis S. Bowling of Jackson said in an interview he further believes the charges are grounds for "an intense study" by the state's attorney general, and by officials of other counties affected by flooding.

"The Corps, because of channelization and the clearing out of natural streams and doing away with their natural courses, has thrown all this water into that part of the state," Bowling said.

The judge, who is president of the state's Game and Fish

Commission Board, said the Corps contends the present flooding is a result of heavy spring rains and snow run-offs,

Related story in Sec. 1, Page 4.

but, he said, "there has been, since 1937, just as much spring rain as there is now."

Over the weekend it was calculated by the Corps of Engineers that 670,000 acres in Mississippi was under water, including 399,000 acres of cleared land.

Judge Bowling said a nearby river, which has not had the

work done on it which the Yazoo River has, is "running completely within its banks and is having no problems. It's just as nature made it."

The Corps, according to Bowling, has also proposed putting a levee all the way around Dump Lake, the last lake in that part of the state which has not been condemned because of its pesticide content.

David Berry, the Yazoo county conservative officer, brought the lake's problem to the U.S. Fish and Wildlife Service, which conducted a study and determined that the lake "is destined to be a holding basin for pesticide-laden water" if the Corps went through with its existing plans.

Berry contends all the lake needs is a gate system to retain its connection with the Yazoo River as a cleansing force, rather than the levee, which would cut the lake off completely.

"The Corps won't even consider a gated structure," Berry said in an interview. They say it isn't feasible. The Corps had been written two letters by the Fish and Wildlife Service asking them to consider using gates, and they didn't even bother to answer.

"A lot of people have been disturbed that the Corps doesn't even want to cooperate with us," Berry said. "They haven't even held a public hearing since 1969."

"There's no doubt that the lake will be killed if plans aren't changed," Judge Bowling said. "A federal agency has confirmed that. The thing is, this is a revenue producing facility for the county and the last public fishing lake in Yazoo. All the others have been declared dead."

"It's one of the most famous in the state, and a minor modification could save it. The grand jury should see if they're taking it through due process of law," the judge said.

"There should be investigations to see whether or not the Corps of Engineers is actually dumping that water into the state," Judge Bowling said.

"Because, if it floods every spring, the farmers are going to just give up. And the state is going to go bankrupt."

THE STATES-ITEM

WALTER G. GUYAN
Editor

ROBERT A. FERGUSON
Executive Editor

ASHTON PLACE, President and Publisher

The States-Item prints the news impartially. It prints what it believes to be right. It opposes what it believes to be wrong, without regard to party politics.

PAGE A-10

New Orleans, La., Friday, April 11, 1975

Flooded farmlands

The time appears to have arrived when Congress, federal agencies and riverbottom landowners should reassess certain aspects of "soil conservation" and flood control practices.

Heavily flooded areas in central Louisiana and Mississippi's delta are the very farmlands which are supposed to benefit most from watershed projects and back levee construction.

Soybean growers and other farmers in the central Louisiana parishes for which Gov. Edwards is asking federal disaster relief are among the biggest supporters of stream channelization and land clearing and drainage.

In Mississippi, the flooding of some 400,000 acres of cleared lands by backwaters from Mississippi River tributaries has prompted a circuit judge to initiate a grand jury investigation into charges that flooding has been encouraged by Corps of Engineers projects.

Relating the channelization of streams, which turns them into

ditches and speeds water flow, to the flooding of farmlands, Circuit Court Judge Francis S. Bowling of Jackson says that "if it floods every spring, the farmers are going to just give up, and the state is going to go bankrupt."

Corps officials acknowledge that land clearing and channelization are speeding water runoff and eroding topsoil, which creates siltation problems in the lower Mississippi and Atchafalaya Rivers. Lt. Gen. W. C. Gribble, Jr., chief of engineers, recently observed that the Corps is considering non-structural alternatives in planning flood plain protection in line with provisions of the Water Resources Development Act of 1974.

As for the flooding of farmlands, the U.S. Soil Conservation Service and the farmers themselves should re-examine traditional land-clearing and drainage practices. Their loss is the general public's loss, because all taxpayers are called upon to provide emergency relief in addition to financing watershed drainage projects.

EXHIBIT 115-3

Struggle to control the Great Mud Chute

By LES BRUMFIELD

of The States Item File Staff

Are major floods on the lower Mississippi River and its tributaries destined to become an almost annual occurrence?

The flood of 1973 and this month's flow probably have caused many residents of Louisiana and Mississippi to wonder.

Since the Great Flood of 1927, great physical changes have occurred in the Mississippi River valley.

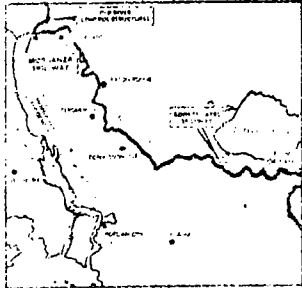
To some extent, the Corps of Engineers' struggle to prevent flooding has compounded the flood control problem. "The Corps' levees" have encouraged "artificial concentration" and recently have caused a flood-prone area. Flood Corps officials in Washington say they are ready to seek other than "structural" solutions to flooding in flood plains.

On the Mighty Mississippi project, Corps levees long ago succeeded in retreating the river's annual overflow, which was nature's way of distributing the burden and the bounty.

The bounty came in the form of swamps and delta-building, and nutrients to restore the estuarine marshes of south Louisiana.

Today the Corps' levees are essential to protect the huge population cluster along the river. But even as the levees protect us, they contribute to the problem of flood control. All the vast tonnage of sediment that used to overflow the river's banks has been trapped by the levees and builds up in the lower river after each big flood. The buildup of sediment on the riverbed raises the level of the water which, in turn, tends to require additional raising of the levees.

The vast clearing of land in the river valley for farming, shopping centers, housing developments and the like, has increased the quantity and speed of runoff into the river. The increased runoff has furnished into the river increasing amounts of sediment, the rich topsoil which the nation's farmlands can



Louisiana's floodways
Siltation a growing problem

stand to lose. The topsoil, which should be growing food for the nation, is piling up in the lower extremities of the Mississippi and Atchafalaya rivers, creating monumental dredging problems for the shipping industry and the Corps. It is, of course, good business for the dredging industry. Dredging at the river's mouth can become an around the clock operation, as the Corps struggles to keep the river open to shipping.

Last month, the Corps shifted the Goethals, its second largest sea going dredger, from the East Coast to Southwest Pass. There it joined other dredges under contract in the perpetual battle against the Great Mud Chute. Heavy siltation from the '73 flood had reduced the pass' project depth of 40 feet to 38 feet for most ships and 36 feet for ships of 100,000 tons dead weight or more. In addition, Louisiana's congressional delegation prevailed upon the House Appropriations Committee to produce an emergency \$6.3 million to help keep the passes open.

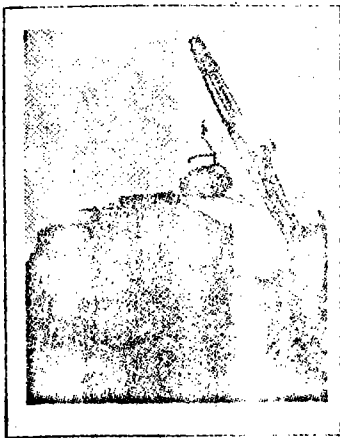
If flooding becomes frequent, the proposal to dredge the river channel to 55 feet to permit deep draft vessels to use the New Orleans and Baton Rouge ports may become most difficult to achieve, or maintain.

The Corps is counting heavily on upriver reservoirs to restrain the annual flow into the river. An assist from nature in the form of dry seasons will help, too. But some critics say the reservoirs, by expanding the water surface, will contribute to rainfall in the valley.

Meanwhile, the Morganza and Bonnet Carre Spillways loom as more vital than ever to the security of New Orleans. This circumstance hardly is reassuring to the residents of Morgan City and other lower Atchafalaya communities.

What if the Bonnet Carre has to be opened every several years? The '73 opening left 12 million cubic yards of "river sand" in the spillway, to say nothing of what went into Lakes Pontchartrain and Borgne. The more frequently the spillway is opened, the greater the sediment the Corps will have to dredge. Sediment pouring down the Atchafalaya is filling up lakes in the lower basin.

Flood control? The battle with the Mighty Mississippi just keeps rolling along.



Bonnet Carre mud pile
Legacy of the '73 flood

Flooding Theory Is Confirmed

By CORNELIA CARRIEN

(Times-Picayune Environment Editor)
Although floods are usually referred to as acts of God, the floods on the Mississippi River, this year and last, may well be caused by acts of man.

Environmentalists have long warned that, as rivers upstream are channelized and bottomland hardwood forests cleared and drained, flooding downstream will increase.

Speaking at a recent meeting of the Orleans Audubon Society Col. E. R. Heiberg III, district engineer of the U.S. Army Corps of Engineers, confirmed this theory. He talked about how lowlands upstream are being cleared and drained to grow crops—mainly soybeans. As these soybean farms move farther south, flooding increases, he said.

Heiberg explained that flooding becomes worse down here because there is less backwater flooding upstream.

It has long been the stance of environmentalists that channelizing streams into straight drainage ditches, not only ruins the beauty and fisheries and recreation potential of the stream, but also compounds flooding problems.

Water flows down a meandering stream in its natural state. If high waters come, they overflow into adjacent lowlands, further retarding the water flow.

Not so with a straight channel. When a stream is channelized, all the bends are taken out, allowing the water to race down the now straight ditch to the nearest larger river and eventually to the Mississippi.

Hundreds of streams have been channelized in recent years, and there is continued pressure for more channelization in Louisiana, Arkansas and other states to the north.

Most of these projects are carried out by the Corps and the U.S. Soil and Conservation Service. Some smaller ones are undertaken in Louisiana by the Department of Public Works.

What should be of special concern to all citizens is that public tax dollars pay for

channelization done by these agencies. Then the taxpayer must turn around and pay for the flood control works to protect populations from the increased flooding caused by channelization. It's a situation where the taxpayer is billed twice.

If environmentalists are right, and Heiberg and others seem to back up theory, then we can expect continued high flood waters in years to come.

The public should insist on two remedies. First, they should call a halt to any more channelization or drainage projects in floodplains upstream. If more are completed, even worse flooding than we are now experiencing may result.

Many channelization and drainage projects are "pork-barrels" touted by U.S. Senators and Congressmen, taking credit for them, as gifts from the federal government.

Oddly enough, floods on the Mississippi are coinciding with the decline for filing tax returns with the Internal Revenue Service. This coincidence should remind citizens that federal expenditures come out of the taxpayer's pocket—including not only porkbarrel drainage projects, but also flood control works.

Secondly, citizens should

insist on adequate floodplain zoning legislation. Although much development already exists in flood-prone lowlands, all further such developments should be discouraged.

Heiberg told the Audubon Society that the Corps has been in favor of floodplain management for years. He called it "agonizing to see federal dollars go to projects that shouldn't be built."

But, he added, there is "no hope on the horizon" for floodplain zoning as long as powerful Congressmen and special interest groups fight it.

The National Water Commission recommended perhaps the best solution—make the user pay. By this the commissioners meant that if a farmer wants his land drained for agricultural purposes, then the farmer must pay to drain it.

Or if an industry wants a channel to the sea, then that industry must pay to dig the channel. For multi-purpose navigation channels, barges and ships using the waterway must pay taxes just as the trucker pays gasoline taxes to build and maintain highways.

If the user were forced to pay, then it is likely that he would decide the cost was too high. It's up to the voting taxpayer to convince the government, that the cost is also too high for him.

ENVIRONMENT VIEWS

SECTION ONE—PAGE TWENTY-FOUR

THE TIMES-PICAYUNE, NEW ORLEANS, LA.

SUNDAY MORNING, APRIL 6, 1975

Drained Wetlands: How Infirm a Foundation?

By CORNELIA CARRIER

"How can the developer get away with it? Why don't the homeowners sue the developer? Why don't they throw the city administration out for allowing it? Are there no laws to prevent it?"

Those are just a few of the questions posed by assistants attorneys general from other states on a recent tour of subdivisions built on drained wetland soils in eastern New Orleans.

They were appalled at the conditions of the houses with their exposed foundations, cracked driveways, sunken, undulating yards and other evidences of subsidence.

They could not believe people actually bought truckloads of dirt on a regular basis to fill in their yards and cover the exposed foundations of their houses. But there were the piles of dirt, and there were the people shoveling it around their houses.

"Why don't the people here rise up and stop developments in these wetland areas?"

He had explained about various levee ridges that have been built up by the Mississippi River — about how the soils in these areas are suitable for development, while those in drained wetlands are not.

He told how wetland soils or peats contain high percentages of organic materials and water. When drained, these soils shrink and sink. In most drained wetland areas, land has subsided to five or more feet below sea level.

A natural marsh is a few feet above sea level. "If marshes are left alone, they last 3,000 or 4,000 years. They are living surfaces where decaying matter continues to build the marsh and keep it productive," Gagliano explained.

Gagliano showed the legal officers a pumping station at the lakefront that pumps the now below-sea level land dry. The extent of the subsidence is evidenced by the water level in the canal which

was about eight feet lower than the level of the lake.

The cost of building and operating the pumping stations is borne by the local taxpayer, Gagliano told the group. The attorneys were quick to note that the cost of keeping these areas drained must have skyrocketed since the energy crisis.

After a tour of Village de l'Est, the tour headed out 1-10 to the 56-square-mile New Orleans East Inc. tract. Gagliano said some of the peats in that area are 20 feet thick — explaining that the thicker the peats, the lower the land sank.

Thanks to public works projects, paid for by the taxpayer, the value of marshland in New Orleans East rose from \$201-300 to \$15,000 per acre in the past 20 years, Gagliano said.

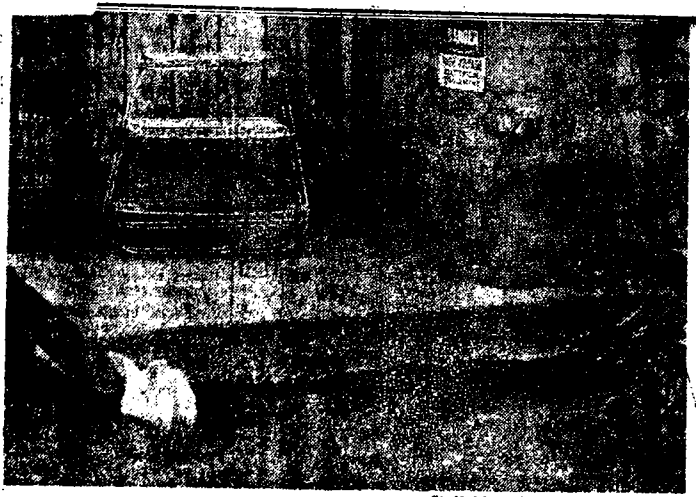
In addition to hurricane protection, built by the Corps of Engineers with federal tax dollars, construction of 1-10 through the area increased land value substantially, he said.

That has stopped on one of the overpasses that dead-ends in an uninhabited marsh where projected suburban homes never materialized. But these interchanges served to decrease the land value and stand ready for the developer to exploit.

The attorneys continued to fire questions about the why's and wherefores of wetland developments and tax-dollars going to enhance private land, but they received no conclusive answers.

That local residents are becoming more aware of the problem was the most hopeful answer they received.

At the end of the tour, the attorneys were still incredulous. "These people down here must be a bunch of nuts," one muttered.



—Staff Photo by Robert T. Steimer.

THE AIR SPACE under this utility slab has provided a comfortable home for Paati, the rabbit. Usually, however, the sinking of drained wetlands causes nothing but problems for the homeowner. As the land sinks, water mains and sewerage lines become stressed and cracked and repairs can run into the thousands of dollars.

APPENDIX A

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Supplementary Attendance List	A-1 - A-7
Supplementary Exhibit List	A-8 - A-10

SUPPLEMENTARY ATTENDANCE LIST

<u>Organization Represented</u>	<u>Name</u>
A. E. Hingle, Incorporated	Alden E. Hingle
Abita Springs, City Official	F. J. Lohman, Jr.
Alliance for Good Government	V. V. Palmer
Apple Pie Ridge Home Makers	Thelma O. Scogin
Archeology--UNO	J. Richard Shenkal
<u>Baton Rouge Morning Advocate</u> <u>and States-Times</u>	Richard Dennery
Bayou Bonfouca Estates	Wilson A. Miramon
Board of Commissioners Port of New Orleans	Pierre Cordell Reeh
Bonnet Carre Rod and Gun Club	Francis J. Braud
Bonnet Carre Rod and Gun Club	H. A. LeBlanc, Jr.
Buccaneer Villa Civic Improvement Association, Incorporated	Joseph E. Vidal, Jr.
Buccaneer Villa Civic Improvement Association, Incorporated Project Flood Control Tidewater Development Association	William J. Gilmore, Jr.
Burk & Associates	Fred I. Mahan
C. F. Bean Corporation	Peter Chocheles
Center for Environmental Research and Training (CERT)	Margaret Lickteig
Center for Environmental Research and Training	Dr. L. V. Trieschmann
Chamber of Commerce	Eugene I. Estopinal

SUPPLEMENTARY ATTENDANCE LIST (cont'd)

<u>Organization Represented</u>	<u>Name</u>
City of New Orleans	Councilman John D. Lambert
City of Slidell	Frank Cusimano, Mayor
City Planning Commission	Harold R. Katner
City Planning Commission	Walter L. Sentenn, Jr.
Civic Group	George A. Canal
Clio Sportsman's League	Glenn Mercadal
Clover Construction Corporation	Michael R. Romig
Derricks Incorporated A. E. Hingle, Incorporated	David P. Levy
East Orleans Civic Council	Robert J. Alonzo
<u>East Orleans News</u>	Bobbie White
<u>East Orleans News</u>	Mrs. O. M. Hayes
Ecology Center of Louisiana	John P. Sevenair
Edgewood Gentilly Civic & Social Club Gentilly Terrace & Gardens Imp. Assn.	Arthur A. Crais
Environmental Coalition National Audubon Society St. Tammany Environmental Group	Mrs. Elizabeth Waldrep Chalk
Essex County Ecology Center, Inc.	Gay Lamson
Essex County Ecology Center, Inc.	Nelson B. Robinson
Gerrets Shipbuilding Co., Inc.	Eugene Ellzey
Gerrets Shipbuilding Co., Inc.	Ludovic J. Gerrets
Greater Gentilly Civic Council, Inc.	Mel Menendez
Halter Marine Services, Inc.	John L. Moreau
Home Builders & Lions Club	Bill Allen

SUPPLEMENTARY ATTENDANCE LIST (cont'd)

<u>Organization Represented</u>	<u>Name</u>
L & N Railroad Company	W. H. Barber
Lake Oaks Civic Association	Weston G. Strauch
Lakeshore Property Owners Assn, Inc.	Ernest F. Cali
Lakeshore Property Owners Assn, Inc.	Lloyd Deano
Lake Vista Property Owners Assn, Inc.	H. R. Carson, Jr.
League of Women Voters	Rachel Hamilton
League of Women Voters of Louisiana	Mrs. R. D. Herr
Little Woods Property Owners Assn.	Raymond A. Mix
Louisiana Department of Public Works	Daniel V. Cresap
Louisiana Department of Public Works	A. R. Theis
Louisiana Department of Public Works	Earl J. Magner, Jr.
Louisiana Department of Public Works	Alfred E. Simpson
Louisiana Power & Light Company	L. R. Sibille
Louisiana Power & Light Company	Thomas J. Ward
LSU Marine Environment Researchers	Jerome D. Schwartz
Louisiana Wild Life & Fisheries Commisison	Johnnie W. Tarver
Louisiana Wildlife Federation	Richard F. Stanek
Louisiana Wildlife Federation	Edgar F. Veillon
Marine Environment Researchers	Michael Tritico
National Weather Service	Larry Mayne
National Wildlife Federation	T. F. Landreth
New City Limits Tarpon Club	Frederick J. Forstall, Jr.
New Orleans Sportsmen's League	

SUPPLEMENTARY ATTENDANCE LIST (cont'd)

<u>Organization Represented</u>	<u>Name</u>
New City Limits Tarpon Club New Orleans Sportsmen's League	Schuyler B. Thibodeaux
New Orleans East, Inc.	Harold E. Cook
New Orleans Mosquito Control	Malchholm A. Bech, Jr.
New Orleans Mosquito Control	Michael S. Brody
New Orleans Sportsmen's League	William C. Anderson
New Orleans Sportsmen's League	Lester J. Lautenschlaeger, J..
New Orleans Sportsmen's League	Lloyd A. Moreau
New Orleans Yacht Club	Rudy Y. Miradona, Jr.
North Shore Civic Club	Lawrence H. Hudson III
Northside Civic Club	John V. Macaluso
North Shore Volunteer Fire Department	R. M. Closky
North Shore Volunteer Fire Department	Louis S. Sagona
Orleans Audubon Society	Cliff Danby
Orleans Levee Board	Lawrence B. Bodet
Orleans Levee Board	Guy F. LeMieux
Orleans Levee Board	John P. McNamara
<u>Outdoor Life Magazine</u>	Frank Davis
Palm Lake Home Owners Association	Donald E. West
Pawleys Island Civic Association Southeast Coast Environmental League St. Tammany Environmental Assn., Member	A. T. Challe
Regional Planning Commission	Emile J. Gex, Jr.
Regional Planning Commission	Greg J. Lannes, Jr.
Regional Planning Commission	John H. Ross

SUPPLEMENTARY ATTENDANCE LIST (cont'd)

<u>Organization Represented</u>	<u>Name</u>
Regional Planning Commission	M. P. Schneider, Jr.
St. Bernard Council Chamber of Commerce	C. Earl Colomb
St. Bernard Council Chamber of Commerce	Raoul A. Colomb
St. Charles Environmental Council	Milton Cambre
St. Charles Environmental Council	Charles Torres
St. Charles Environmental Group Bonnet Carre Rod and Gun Club	Patrick R. Lambert
St. Charles Parish Police Jury	Steve Dibeneditto
St. Charles Parish Police Jury	Freddie J. Gianorosso
St. Tammany Environmental Council	Edith Eckart
<u>St. Tammany Farmer</u>	Ron Barthet
St. Tammany Parish, County Official	Frank Uphoff, Jr.
St. Tammany Parish Police Jury	Warren G. Allen
St. Tammany Parish Police Jury	Theodore Roach
St. Tammany Sportsmen's League	Mrs. Kenneth Sollberger
Save Our Unique Lake Committee	Beverly J. Fritz
Sea Grant Legal Program, LSUBR	Sheryl J. Jolissaint
Sierra Club	Mr. & Mrs. Marion Fannaly
Sierra Club	Mrs. Stuart Phillips
Sierra Club, Delta Chapter	William A. Fontenot
Slidell Chamber of Commerce	Dave Martin, Jr.
Slidell City Attorney	Ron Guth
Slidell Police Department	Louis Jacques
Slidell Sportsman's League	Glynn H. Brock

SUPPLEMENTARY ATTENDANCE LIST (cont'd)

<u>Organization Represented</u>	<u>Name</u>
Slidell Sportsman's League	Judith W. Brock
Slidell Sportsman's League	Mrs. Mary Clare Davis
Slidell Sportsman's League	David H. Hoffman
Slidell Sportsman's League	Phyllis R. Huffman
Slidell Sportsmen's League	Robert H. Merrell
Slidell Sportsman's League	Joann R. Miller
Slidell Sportsman's League	Lawrence K. Miller, Jr.
Southern Natural Gas Co.	J. H. Norris
Southern Yacht Club	Ross G. Allen
Southern Yacht Club	W. H. Johnston, Jr.
Southern Yacht Club	William H. Johnston
Spanish Fort Civic Association	Francis E. Laurent
State of Louisiana Department of Justice	Mr. & Mrs. R. M. Troy
State of Louisiana House of Representatives	Joseph Accardo, Jr.
State of Louisiana House of Representatives	Edward H. Booker
State of Louisiana House of Representatives	Edward C. Scogin
T. L. James & Co., Inc.	L. C. Gibbs
<u>The States-Item</u>	Les Brumfield
Town of Mandeville, Councilman	A. Denis Bechac
United Gas Pipe Line Company	C. B. Davis

SUPPLEMENTARY ATTENDANCE LIST (cont'd)

<u>Organization Represented</u>	<u>Name</u>
US Coast Guard	Captain P. C. Gaucher
US Fish & Wildlife Service	Joseph E. Burgess
US Fish & Wildlife Service	David W. Fruge'
US Fish & Wildlife Service	Ronald L. Fowler
Venetian Isles Civic & Improvement Assn.	Robert J. Boczon
Venetian Isles Civic & Improvement Assn.	Clarke Harper
Village De L'Est Improvement Assn.	Robert E. Carey
Village De L'Est Improvement Assn.	Allen F. Normand
Wallace Menhaden Prod. Inc.	W. B. Wallace
YMBC of Greater New Orleans	Joseph W. Smollen III

SUPPLEMENTARY EXHIBIT LIST

<u>Exhibit No.</u>	<u>Organization Represented</u>	<u>Name</u>
52	A. E. Hingle, Inc.	A. E. Hingle
60	Board of Levee Commissioners of the New Orleans Levee District	Guy F. LeMieux
20	Bonnet Carre Rod and Gun Club	Francis J. Braud
28	Scott Chotin, Inc.	Scott Chotin
67	Clio Sportsman's League	Glen Mercadel
39	Derricks, Inc.	A. B. Dunham
10	East Orleans Civic Council	Robert J. Alonzo
80	General Lumber & Supply Co., Inc.	E. B. Oulliber
36	Jefferson Parish Council	Frank J. Deemer
66	Kenilworth Civic & Improvement Association	Ray A. F. Martinez
16	Kiwanis Club of New Orleans	Thompson F. Bechtel
99	Lake Oaks Civic Association	Weston G. Strauch
25	Lake Vista Property Owners Assn.	H. R. Carson, Jr.
61	David P. Levy Enterprises	David Levy
7	Louisiana Department of Public Works	Roy Aguiard
49	Louisiana Engineering Society New Orleans Chapter	L. C. Grundman, Jr.
42	Louisiana, Governor	Edwin Edwards
6	Louisiana House of Representatives	Honorable Joseph Accardo, Jr.
18	Louisiana House of Representatives	Honorable Edward H. Booker

SUPPLEMENTARY EXHIBIT LIST (cont'd)

<u>Exhibit No.</u>	<u>Organization Represented</u>	<u>Name</u>
19	Louisiana House of Representatives	Honorable A. Charles Borrello
75	Louisiana Shipbuilding & Repair Association	John D. McCubbin
56	Louisiana State Senator	Honorable Nat G. Kiefer
13	Louisiana Wild Life & Fisheries Commission	J. Burton Angelle
103	Louisiana Wildlife Federation, Incorporated	Edgar F. Veillon
74	Little Woods Lakeside Property Owners Association	Raymond A. Mix
102	Marine Environment Researchers	Michael Tritico
98	National Oceanic & Atmospheric Administration	William H. Stevenson
85	New Orleans City Council	Joseph C. Peterson
114	New Orleans City Council	Joseph C. Peterson
57	New Orleans, City of	Mayor Moon Landrieu
95	New Orleans City Planning Commission	Walter L. Sentenn, Jr.
14	New Orleans East Business Assn.	Roy F. Baas
35	Orleans Audubon Society	Cliff Danby
48	SMU Environmental Law Clinic	Paul G. Gosselink
31	St. Bernard Council Chamber of Commerce	C. Earl Colomb
27	St. Bernard Parish Planning Commission	Angelo Chetta
23	St. Charles Environmental Council	M. L. Cambre

SUPPLEMENTARY EXHIBIT LIST (cont'd)

<u>Exhibit No.</u>	<u>Organization Represented</u>	<u>Name</u>
24	St. Charles Environmental Council	Milton Cambre
101	St. John Environmental Council	Barry J. Triche
41	St. Tammany Environmental Council	Mrs. Edith Eckart
37	St. Tammany Parish Commission for Prevention of Death and Destruction	Mrs. Margaret Dedinger
78	St. Tammany Parish Commission for Prevention of Death and Destruction	Mrs. Thelma M. Ouder
79	St. Tammany Parish Commission for Prevention of Death and Destruction	Thelma M. Ouder
44	St. Tammany Sportsman;s League	Henri Ferrer
15	Sertoma Club of New Orleans	J. G. Baudin
43	Sierra Club	Marion Fannaly
86	Sierra Club, Delta Chapter	Stuart I. Phillips
68	Slidell Sportsmen's League	Robert H. Merrell
21	Tulagi Enterprises, Ltd.	Frank Brock
17	US Fish & Wildlife Service	Kenneth E. Black
51	Venetian Isles Civic & Improvement Association	Clarke Harper
104	Wallace Menhaden Products, Inc.	Borden Wallace
105	Young Men's Business Club of Greater New Orleans, Inc.	Carl M. Werling, Jr.

APPENDIX B

Excerpts on procedures for the disposal of dredged materials as required by Section 404 of the Federal Water Pollution Control Act of 1972

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EXHIBITS

The Final Environmental Statement dated August 1974 is considered as part of this record and this appendix although it is bound separately. A copy will be provided with each copy of this record.

SPEAKERS LIST

<u>Name</u>	<u>Organization Represented</u>	<u>Page</u>
Col. E. R. Heiberg III	US Army Corps of Engineers	B-1
C. Harold Hart	US Army Corps of Engineers	B-2 - B-4
Charles Grimwood	US Army Corps of Engineers	B-4 - B-6
Dr. Glen Montz	US Army Corps of Engineers	B-6 - B-9
Arthur R. Theis	Louisiana Department of Public Works	B-9 - B-11
Joseph E. Burgess	US Fish and Wildlife Service	B-12 - B-15
Johnnie W. Tarver	Louisiana Wild Life & Fisheries Commission	B-16 - B-18
Walter L. Sentenn, Jr.	New Orleans City Planning Commission	B-18 - B-19
Cliff Danby	Orleans Audubon Society	B-20 - B-23

PROCEEDINGS

COLONEL E. R. HEIBERG:

The purpose of the Section 404 hearing this morning is to give you an opportunity to present to the Corps of Engineers, and to local assuring agencies, your views concerning the procedures for disposal of dredged material in connection with the continued construction of the project.

Interested parties and concerned citizens having environmental, ecological or other comments regarding the project are asked to make statements concerning these matters. All oral statements will be heard, but to insure an accurate record, we suggest that all important facts and arguments also be submitted in writing. Written statements may be submitted up here, during or after this hearing, or mailed within 30 days to me at the District.

This is a public hearing under the provisions of the Federal Water Pollution Control Act of 1972, passed by the 92d United States Congress. Let me explain what this Act does and does not cover.

The Act requires an examination of the methods for disposing of dredged material removed from navigable water to insure that proper regard is paid to water pollution concerns. The Act also requires an examination of alternative methods of dredging, to insure that the least damaging, while still practicable, method of dredging is selected and to consider the effects of a "no dredging" alternative. Where the "no dredging" alternative is examined, then we are required to contemplate the ensuing results. Often, this means a "no project" conclusion, or a conclusion which will not withstand the test of economic feasibility.

The provisions of the Federal Water Pollution Control Act are not designed for an after-the-fact examination of the project formulation process.

I will now call upon Mr. Harold Hart and Mr. Charles Grimwood to discuss what work has been accomplished, what work, particularly work involving dredging operations, is scheduled for the future, and how this work relates to water quality. Mr. Hart.

MR. C. HAROLD HART:

Thank you, Colonel. Good morning, ladies and gentlemen.

Construction of the project under consideration this morning began with the construction of floodwalls along the Inner Harbor Navigation Canal in April of 1967. The following is a summary of what has been accomplished since 1967, and what is now planned, particularly as regards the disposal of dredged materials. (SLIDE 27)

The Jefferson Parish Lakefront reach has been constructed with earthen levees the Mississippi River and Tributaries projects, and has subsequently been elevated by means of earthen topping and/or steel sheet piling. Future work will consist of additional wavewash protection on the floodside of the levee.

The New Orleans Lakefront reach has been constructed with earthen levees. Future improvements include raising interim levees, raising the levees on the three drainage outfall canals, and construction of floodwalls in the area of the New Orleans Marina, the Pontchartrain Amusement Park, and the area surrounding the proposed Seabrook Complex. (SLIDE 28)

The Citrus Lakefront reach is now under design. Improvements will consist of floodwalls in the area of the New Orleans Airport and Lincoln Beach and raising existing levees in the remaining portion.

The New Orleans East Lakefront reach is now under construction and will consist of an earthen levee.

The New Orleans East-South Point to the Gulf Intracoastal Waterway reach has been constructed and consists of an earthen levee.

A first lift has been constructed for the New Orleans East and Citrus back levees. In addition to the earthen levees within this reach, floodwalls are in place on the west bank of Michoud Canal and are now under construction on the east bank of the canal. Also, from Paris Road through the Michoud slip, a floodwall has been constructed.

Floodwalls on the east and west side of the Inner Harbor Navigation Canal from the proposed Seabrook Complex, south to the Inner Harbor Navigation Canal lock are constructed with the exception of the short reaches in the Florida Avenue area.

The New Orleans East unit will require approximately 14,000,000 cubic yards of dredging and is scheduled to commence in August of 1975 and end in 1981 along the Gulf Intracoastal Waterway, and commence in March, 1975, and end in 1977 along Lake Pontchartrain. Dredging along the GIWW will not be continuous, but the Lake Pontchartrain work will be continuous. The material will be deposited in adjacent levees and adjacent stockpile sections. A ponding area is located in the South Point area. (SLIDE 29)

The Chalmette reach, consisting of an earthen levee on the south bank of the Gulf Intracoastal Waterway, commences at the Inner Harbor Navigation Canal, proceeds generally eastward, then southeastward along the Gulf River--excuse me--along the Mississippi River-Gulf Outlet, then southward through Verret, then westward to Caernarvon. A first lift in this reach has been constructed. The Bayou Bienvenue and Bayou Dupre control structures have also been constructed. This reach will require approximately 20,000,000 cubic yards of dredging and is scheduled to commence in November of 1975 and end in 1977 in the Orleans Parish area; and commence in September, 1975, and end in 1982 in the St. Bernard Parish area. Dredging will be continuous in the Orleans Parish area but will not be continuous in St. Bernard Parish. The materials will be deposited in existing levee sections. Ponding areas are adjacent to the levees. (SLIDE 30)

The Chef Menteur Complex includes a gated flood control structure and a navigation structure with approach channels, a levee across a portion of Chef Menteur Pass and across the existing GIWW channel, and levees which connect the structures to the New Orleans East levee system on the west and US 90 embankment to the north of the complex. A channel has been excavated on the floodside of the complex which will be the new route of the GIWW when the works are constructed.

This complex will require approximately 27,000,000 cubic yards of dredging and is scheduled to commence in September of 1975 and end in 1990. Dredging will not be continuous during this time frame. Material will be deposited in the aforementioned levees. Ponding areas are adjacent to the structures and levees.

The Rigolets Complex includes a gated flood control structure and a navigation lock with approach channels, a levee across a portion of The Rigolets and earthen levees which

connect the complex to US Highway 90 embankment north and south of the complex. This complex will require approximately 8,700,000 cubic yards of dredging and is scheduled to commence in September of 1975 and end in 1981. Dredging will not be continuous during this time frame. The material will be deposited in the aforementioned levees, and in disposal areas south of the site. A ponding area is contained within the site area.

The Seabrook Complex includes a gated outlet structure, a navigation lock and a rock and shell embankment which ties into flood protection system on each side of the complex. This complex will require approximately 300,000 cubic yards of dredging and is scheduled to commence in 1977 and end in 1980. Dredging will not be continuous during this time frame. The material will be deposited in nearby levee enlargements.

The aforementioned dredging will involve the deposition of dredged materials on areas which are now legally considered as navigable waterways. The magnitude and location of these areas were previously discussed by Dr. Montz and are also shown in our public notice. Dr. Montz's remarks will be made part of this 404 record. Additional details concerning proposed dredging operations are contained within our public notice of 22 January 1975, which will also be made a part of this public record.

Mr. Charles Grimwood will now discuss water quality data relative to this project as required by the provisions of Federal Regulations, Title 33, CFR 209.145. Mr. Grimwood.

MR. CHARLES GRIMWOOD:

Good morning. The Corps of Engineers has a network of sampling stations where water quality measurements are taken periodically throughout the project area. This map (indicating) shows the approximate location of 125 stations where water quality measurements were taken every 2 weeks in 1973. This network has been in operation since June, 1972. In addition, there are several stations at which daily water samples are collected and then analyzed for chloride concentration.

We use chloride concentration as a means of measuring salinity. In these terms, pure sea water has a chloride concentration of about 20,000 parts per million; that is, 20,000 parts of chlorides in 1,000,000 parts of water. The

US Public Health Standard for drinking water is 250 parts per million chlorides maximum. Some sources consider up to 1,000 parts per million chlorides to be suitable for human consumption. The other parameters most intensively monitored in this sampling program are pH, temperature, and dissolved oxygen. (SLIDE 32)

In Lake Pontchartrain, chloride concentration values of less than one hundred parts per million at Bayou La Branche, and as high as 4,300 parts per million near The Rigolets, were observed in 1974. The gradient between these extremes is fairly uniform. The mean value of chloride concentration at the center of the causeway was approximately 1,000 parts per million in 1974. In the Rigolets and Chef Menteur Pass areas, the chloride level increases to a mean value of 1,500 parts per million recorded in 1974. The maximum and minimum values recorded in 1974 were 4,300 parts per million, and 500 parts per million, respectively. (SLIDE 33)

The highest chloride concentration observed in Lake Borgne in 1974 was 7,000 parts per million at Bayou St. Malo, and the lowest was less than 500 parts per million at a point 9 miles northeast of Proctor Point.

In the Industrial Canal, the chlorides varied from a maximum of 4,700 parts per million to a minimum of 100 parts per million observed at the Seabrook Bridge in 1974.

In the MR-GO, the chloride concentration ranged from less than 1,000 parts per million to 10,000 parts per million in 1974.

The water quality criteria set by the Louisiana Stream Control Commission does not place a limit on the chloride concentration for any of these areas, as they are all under tidal influence. It does, however, place limits on the deviations of the pH to an acidity level of 6.5 and to an alkalinity level of 9.0 standard units. The pH of pure water is 7.0 standard units. The temperature is to be below 35 degrees centigrade and the dissolved oxygen is to be above 4 parts per million at all these locations, except for Lake Borgne, Eloi Bay and the Chandeleur Sound, where it must not fall below 5 parts per million. The pH in these areas is fairly stable and does not deviate too far from these limits. (SLIDE 34)

There are a few stations, however, such as one just north of Moisant International Airport, where the highest and

lowest pH values recorded in 1974 were considerably above and below these limits. No temperatures above the 35-degree centigrade limit were recorded in 1974. All dissolved oxygen readings, with the exception of one reading, were above the minimum values set by the Louisiana Stream Control Commission.

A preliminary summary of the water quality data available for these areas has been prepared and is available to you. In addition to the parameters just mentioned, it summarizes physical parameters such as turbidity and color, chemical characteristics such as dissolved metals, nitrogen, phosphorus, biochemical oxygen demand, hardness, et cetera, and biological pollution in the form of coliform organisms. Additional water quality data are available from the US Geological Survey which have been published and include some soil chemistry data from the analysis of bottom deposits.

Once dredging operations begin, the sampling is intensified and additional testing of the samples will be carried out in compliance with environmental protection agency requirements.

Thank you, ladies and gentlemen.

DR. GLEN MONTZ:

Good morning, ladies and gentlemen. My name is Glen Montz.

This presentation will cover environmental impacts associated with the project, and also 404 requirements will be discussed in detail by Harold and Charlie after my talk.

The draft and final environmental statements were filed with the President's Council on Environmental Quality on 17 August 1972, and 17 January 1975, respectively. Detailed impacts on the environment may be examined in these statements. Seventeen letters, which commented on the draft environmental statement, were received and are included in the final environmental statement. Comments extracted from these letters and Corps of Engineers responses are included in the final environmental statement. A statement of findings reveals the tradeoffs involved with construction of this project. Copies of the statement of findings are available upon request during breaks at the head table.

Construction, operation, and maintenance of the barrier will require the commitment of about 2,060 acres of land in construction rights-of-way spoil and borrow areas. The lands committed, which are predominantly marsh, will be permanently altered and the alteration will imply a loss of habitat and decayed organic material to the associated estuary, and a minor loss in the overall productivity of that system.

The construction of the proposed barrier along the east side of Lake Pontchartrain will not affect the existing salinity levels in the lake. In model studies, existing lake salinities were not altered significantly by control structures in the Chef Menteur and Rigolets Passes. Model studies are underway for the restructured Rigolets plan. The Seabrook Lock outlet structure will be operated to provide a desirable salinity regimen in Lake Pontchartrain to the end that deleterious alterations in lake ecology will be avoided. This complex will allow salinities in Lake Pontchartrain to be adjusted as may be necessary for the maintenance of fish and wildlife resources. The Seabrook outlet structure will mitigate certain detrimental effects of salt water intrusion which resulted from construction of the Mississippi River-Gulf Outlet.

Construction and maintenance operations will induce temporary increases in turbidity in surrounding water areas, with minor impact on water quality and flora and fauna. The imposition of structures, in particular, the locks and control structures on the existing landscape will alter natural surroundings. The position of the Corps is that the openings in the proposed structures at the Chef Menteur and Rigolets Passes will not interfere with the movements of organisms and nutrient substances.

The situation in St. Charles Parish is most complex. Unlike the other features of the project, the St. Charles Parish levee may have more adverse environmental impacts than can be justified by offsetting flood protection benefits. The need for hurricane protection for existing development, as well as the need for developable land to support anticipated expansion in the metropolitan population, are both well established. On the other hand, the levee would directly and irrevocably alter about 24,700 acres of estuarine marsh and swamp. The contribution of the St. Charles Parish wetlands to Lakes Pontchartrain and Lake Borgne is not, at the present state of our knowledge, susceptible to precise evaluation. Nevertheless, the Corps is convinced that, by any standard, this contribution is significant. The inclusion of Bayous Trepagnier and

La Branche in the Louisiana Natural and Scenic Rivers System currently forecloses the possibility of proceeding with the levees without contravening state law. While this impediment, as well as much of the potential for adverse environmental impact, could be removed by locating the levee near the Airline Highway, the economics of constructing such a relocated levee are highly unfavorable. Should the impediment imposed by the Natural and Scenic Rivers System be removed in the future, additional studies will be needed to fully evaluate the relationship of the marsh to the surrounding ecosystem, and provide a basis for a decision on whether the levee should be built. Accordingly, construction of this feature of the project has been indefinitely deferred.

Alternatives to the proposed plan include: no action, the high levee plan, and various fully responsive and partially responsive alternatives. These are discussed in greater detail in the final environmental statement and in the notice for this meeting.

Approximately 5,270 acres of land are required as rights-of-way for the entire project. Of this total, about 920 acres of intermediate marsh in St. Charles Parish; about 1,660 acres of brackish marsh at Chef Menteur; and 400 acres of brackish marsh at The Rigolets are required for construction features. Approximately 20 acres of deep water bottom will be required at the Seabrook area. Construction of these four features of the project have not begun. A total of about 2,290 acres of lands are presently occupied or will be occupied by project features upon completion of all remaining portions excluding The Rigolets, Chef Menteur and Seabrook Structures and the St. Charles levee.

Acreage by habitat type in each unit of this project is summarized in the final environmental statement.

Relocation of Bayous Bienvenue and Dupre with navigable floodgates in the relocated channels has been completed. The old channels of both bayous have been closed in the immediate area of the structures and dredged material has been placed on brackish marsh adjacent to the structures and new channels.

Initially, tidal interchange will be maintained in the Chalmette area. Conversion to urban type uses will likely occur, however, and as it does, habitat will be lost as will decayed organic material to the associated estuary.

Relocation of the Gulf Intracoastal Waterway near the Chef Menteur has been completed. Dredged material has been placed on brackish marsh south of this new alinement.

Placement of dredged material on existing levees involves the covering of weedy species. The levees affected by additional dredged material will revegetate again with roadside weeds.

Dredging activities in adjacent waters for fill material will result in temporary turbid water conditions which will decrease the amount of primary production in the disturbed area by decreasing the light available to the phytoplankton and other aquatic plants. Shading and silting will result in the destruction of rooted shoreline vegetation. Silting may result in the direct destruction of bottom organisms including clams, worms and other important food organisms in the disturbed area.

Placement of dredged material on wetlands in the project area for construction of levees, control structures, navigable floodgates and drainage structures will result in permanent loss of aquatic habitat for aquatic organisms. The commitment of marsh and swampland to levee and closure structures is irreversible

The project plan will hasten urbanization and industrialization of valuable marsh and swampland by providing conditions conducive to further flood protection and reclamation. The marsh and swampland made available by the project for conversion to urban use will be lost as development of these areas occurs. Should the anticipated increase in rate of development in the protected areas occur, an increase in the quantities of solid and liquid wastes cannot be avoided. Disposal of these wastes will be accompanied by corresponding environmental stresses. Thank you.

MR. ARTHUR THEIS (DEPARTMENT OF PUBLIC WORKS):

Ladies and gentlemen, I am Art Theis, the Assistant Chief Engineer for the Louisiana Department of Public Works, Mr. Roy Aguillard, Director, and I would like to read a letter to Colonel Heiberg from Mr. Roy Aguillard, and it reads as follows:

"Dear Colonel Heiberg: This is in response to your announcement dated January 22, 1975, of a public meeting to discuss the Lake Pontchartrain, Louisiana, and Vicinity hurricane

protection project and plans for disposal of dredged materials that is required by the Federal Water Pollution Control Act of 1972.

"The Louisiana Department of Public Works has been designated as the state agency responsible for the coordination of all Federal projects in Louisiana related to the flood control, navigation, hurricane protection, and related water resources projects. In addition, the Governor of Louisiana has designated this department as the coordinator for the Lake Pontchartrain and Vicinity hurricane protection project. In this role, we are responsible for coordinating the Federal project with the affected state and local interests to insure the best possible protection system for this area of the State of Louisiana. It is in this position that we present these comments today for your consideration on this project.

"The Lake Pontchartrain and Vicinity project was authorized by the Flood Control Act of 1965. The purpose of this project is to provide adequate hurricane protection to the Greater New Orleans Metropolitan Area, including all or portions of some 10 parishes, the principal beneficiaries being Jefferson, Orleans, St. Bernard, and St. Tammany Parishes. The project, as you have outlined today, consists of a series of levees, floodwalls, control structures and locks to provide protection to this area against hurricane generated tides.

"The need for this type project in this area has been dramatically indicated in the passage of several major hurricanes, such as Betsy in 1965, and Carmen in 1969. A considerable portion of the damages suffered by this area could have been alleviated had the project been completed at this time. The New Orleans Metropolitan Area is the major urban area of Louisiana, and, in fact, this entire region of the United States. This highly populated and industrialized section deserves the best available protection that can be devised in order to insure the continued and orderly development of our economy, as well as protecting the lives and properties of its citizens. We believe the proposed plan of development provides this protection and the completion of this project at the earliest possible date is urgently needed. The existing protective facilities are inadequate to insure the protection of this area.

"The environmental aspects of this project have already been thoroughly documented and commented on by interested

local, state and national agencies, as well as the general public. The environmental impact statement for this project has been filed with the President's Council on Environmental Quality as required by the NEPA Act of 1969; therefore, no further comments are considered necessary as pertains to this statement.

"Section 404 of the Federal Water Pollution Act of 1972, requires public meetings, when appropriate, to consider the dredging and disposal of material in navigable waters as associated with Federal projects. The term "spoil disposal" is inappropriate in regard to this project since we are discussing the construction of earth embankments for hurricane protection in this area. The dredging is, of course, necessary to obtain material to construct the embankments required.

"The areas designated as spoil disposal areas are coincidental with and pertain directly to the embankment location. These areas are adequately defined on the project plans and also indicated on drawings furnished with your hearing notices. In most cases, these areas have already been utilized in the construction of the hurricane levees, and land use will not be changed from that already established. Primary consideration, in regard to spoil disposal, dredging operations, and effluent discharges, should be directed toward the establishment of locations which will provide the least disturbance to the existing ecological balance of this area. Since this area of our state is a highly productive shellfish and seafood area, care should be exercised in all operations near existing oyster leases and other productive sites. We will work very closely with your District and with other appropriate state and local agencies in the development of satisfactory plans to accommodate these features.

"It is hoped that today's meeting will provide additional impetus to proceeding with this project as rapidly as funding will permit. We appreciate the opportunity to participate and comment on these features of the project and look forward to a continued and early completion of the project. Sincerely yours, Roy Aguiard, Director."

Thank you.

(Whereupon the document was offered
into evidence as Exhibit No. 7)

MR. JOSEPH E. BURGESS (US FISH AND WILDLIFE SERVICE, LAFAYETTE, LOUISIANA):

Thank you, Colonel Heiberg. My name is Joseph E. Burgess, Jr., Fish and Wildlife Service, Lafayette, Louisiana.

Colonel Heiberg, distinguished guests, ladies and gentlemen, I am presenting this statement today on behalf of the Regional Director, Kenneth E. Black, US Fish and Wildlife Service. This statement represents the official position of the Fish and Wildlife Service on the Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection project.

Four major features of this project plan are of particular concern to the Fish and Wildlife Service. They are the Chalmette Area Plan, the New Orleans East Area Plan, the Barrier Structures located in Chef Menteur and Rigolets Pass and the St. Charles levee.

Completion of the Chalmette Area Plan will inclose approximately 18,000 acres of swamp, intermediate to brackish marsh and open water. The open tidal ponds and creeks in adjacent tidal marsh located within this project segment constitute an important nursery area for numerous sport and commercial fishes and shellfishes.

This area will supply nutrient and detritus material so valuable to the continuous high production levels in the adjacent estuarine areas.

The New Orleans East portion of the project, which encompasses approximately 21,000 acres has an estimated 14,000 acres of marsh and associated water bodies which have not been drained or developed. Although these wetlands which have been separated from tidal influence, they still provide important habitat for numerous wetland wildlife species, including water fowl, fur bearers, game and non-game animals.

The final EIS contained a response by the District Engineer to a comment on the draft EIS by the New Orleans East, Incorporated. He noted: "That there is an interchange of water between the marsh and the lake at South Point." And that this exchange would tend to preserve the estuarine nursery by providing the release of traverse and the ingress and egress of juvenile and larvae forms of marine species.

We wholeheartedly concur and strongly recommend that before drainage structures, which are part of the New Orleans East, South Point to GIWW levee be modified to allow for the restoration of the estuarine character of approximately 14,000 acres of undeveloped and essentially unaltered wetlands located within the New Orleans East segment.

Another area of concern to the Service is the barrier structures to be located at Chef Menteur and Rigolets Passes. Lake Pontchartrain is an integral part of a vast estuarine complex in southeastern Louisiana. The value of the area has been documented in the final EIS and previous Fish and Wildlife Service Reports. The Fish and Wildlife Service is concerned that there is an insufficient amount of biological knowledge available to accurately predict the effects of the Barrier Structures on the movement of organisms into and out of the lake.

Contingency plans related to the modification of the barrier structures should be developed if it becomes apparent that the salinity regimens and/or the movement of organisms are adversely affected by these structures. This determination could be made by utilizing the data obtained during pre-construction and post-construction study of the movement rain and estuarine organisms through Chef Menteur and Rigolets Passes.

In the event that adverse effects exist, causes could be identified, the barriers modified to eliminate these problems.

The final area of concern relates to the St. Charles Parish levee portion of the project. Prior Fish and Wildlife Service comments and the Final EIS document the value of the area and the project induced effects that the proposed works on approximately 25,000 acres of marsh, swamp and open water areas in St. Charles Parish.

According to the final EIS, two streams in the St. Charles Parish area have recently been added to the Natural and Scenic River System of Louisiana. Construction of the St. Charles Parish levee, as currently planned, would involve the alteration of either or both of these bayous. Because this would contravene state law, this feature of the project is currently in a deferred status. We support this decision. We wish to point out that this action should not be based on the alteration of scenic streams

alone. Recently, published research regarding the extraordinary fish and wildlife productivity of wetlands, coupled with public concern for the loss of these vital resources, has compelled many natural resource agencies to establish policies of wetlands preservation. The Fish and Wildlife Service is opposed to the needless destruction of wetland areas associated with the project proposed for the St. Charles levee.

In view of the above considerations, the Fish and Wildlife Service recommends the following items be accomplished:

1. That the St. Charles Parish segment of the project not be constructed as currently proposed.
2. That navigation floodgates located at Bayous Bienvenue and Dupre continue to be operated to allow maximum tidal exchange of waters from either side of the Chalmette area levees, except immediately prior to and during hurricanes.
3. Drainage structures associated with the New Orleans East segment be modified to allow maximum tidal interchange between the waters located on either side of the protection levee. This action would restore the estuarine character of the enclosed marshes and would help mitigate the project induced losses to valuable fish and wildlife habitat.
4. Ponding dikes associated with the New Orleans East barrier segment following the revegetation of the ponding areas in order to restore tidal influence. The time and extent of this action should be determined through consultation with representatives of the Fish and Wildlife Service and Estuarine Fisheries Service and the Louisiana Wildlife and Fisheries Commission.
5. The plans for spoil disposal areas near The Rigolets be moved to previously utilized sites located on the north side of this pass between US Highway 90 and The Rigolets entrance light No. 2, or on the upland site north of Lake Pontchartrain.
6. Studies be initiated to determine the effects of barrier structures on salinity regimens and on the ingress and egress of marine estuarine organisms through Chef Menteur and Rigolets Passes.

If these studies indicate that the structures are detrimental to the estuarine ecosystem, the structures should be modified to rectify the problem. This study should be accomplished--rather, should consist of at least 1 year preconstruction inventories; extend throughout the construction period and include the 2-year postconstruction inventory. It should be designed in consultation with the Fish and Wildlife Service, the National Marine Fishery Service and the Louisiana Wildlife and Fisheries Commission. This would prevent--this would, rather, permit verification of the results of model tests conducted at the Corps' experiment station in Vicksburg, Mississippi.

We note references in the public notice to losses and benefits if wetlands within the project--protective levees are not converted to urban development. The structures proposed for hurricane protection obviously make possible the conversion and development of wetlands that would be left in their natural state without the project.

The Fish and Wildlife Service does not object to the project features designed to protect developed areas of Metropolitan New Orleans from damaging hurricanes; however, we cannot concur in the construction and operation of features which cause or accelerate the development of valuable wetlands. We believe that the intent of Congress regarding the conversion of the wetland areas to urban development was clearly established in House Report 91-917 on page 3, when it said:

"The Corps' obligation to consider all facets of the public interest in protecting estuaries, rivers, lakes, navigable waters, also arises from a national policy and directive expressed in many statutes and executive orders designed to minimize pollution, maximize recreation, protect esthetics, preserve natural resources and promote comprehensive planning and the use of water bodies to enhance the public interest rather than private gain."

We must also strive to preserve the highly productive ecosystems for future generations and strongly urge the Corps of Engineers adopt our previously discussed recommendations so that the destructive features of the Lake Pontchartrain and Louisiana and Vicinity hurricane protection project can be minimized.

Thank you.

(Applause)

MR. JOHNNIE W. TARVER (LOUISIANA WILDLIFE AND FISHERIES COMMISSION):

Thank you, Colonel. Colonel Heiberg, distinguished guests, public officials, and ladies and gentlemen.

This statement is presented on behalf of the Director, Mr. J. Burton Angelle.

The Louisiana Wildlife and Fisheries Commission appreciates the opportunity to appear at this meeting and provide our comments as they relate to the fish and wildlife interests within the project area.

The Commission has been interested in this project since the discussions of a proposed hurricane protection scheme which preceded the actual authorization of this project by Congress in 1965. It was our interest and concern, along with that of the US Fish and Wildlife Service, that pushed for and participated in a model study of the lake.

This model study allayed some of our fears regarding the interdiction of flows by the construction of the barrier structures at The Rigolets and at Chef Menteur Passes. If the data produced by the model study proves valid, the interception of nutrient waters, the movement of organisms into and from the lake and the interchange of saline and fresh waters will not be significantly altered by these structures.

We do have some serious concern regarding the damages to productive oyster beds, especially in Lake Borgne, near the Chef Menteur barrier structure. Dredging near and construction of the wingwalls have a potential for a considerable harm to the existing highly valuable oyster beds.

Two important factors here are the plans for the containment of sediment which results from the project work, as well as the apparent lengthy duration of the construction. We would like more information on each of these and would like an opportunity to work with you in planning to eliminate or reduce, to the greatest possible extent, the damages to this oyster producing area. We feel that oyster mortalities and closures of privately leased bedding grounds should be fully compensated by the project.

The proposed Seabrook structure was designed for addition to the Mississippi River-Gulf Outlet to partially correct the high salinities that are occasioned in the lake by waters from that navigation channel. This structure will

provide the capability for managing salinities within the lake. Excessive salinities in the upper part of the lake, which were historically fresher, have caused considerable marsh deterioration and mortality of fresh water vegetation. The most spectacular evidence of this is the dead cypress trees visible from Interstate 10.

The damages due to prior urban development are noted in your announcement of January 22, 1975. The investment of valuable wetlands that formerly supported this important ecosystem, for previous developments has doubtlessly contributed to a decline in primary productivity.

Previous developments--we calculated that within 2 miles of the lake, of both lakes--we lost to industrialization and commercialization, or both, 50,000 acres since 1900.

We note that the suspension of the planning for the St. Charles Parish portion of the hurricane levee. You correctly state that the disruption of flows from this wetland would have serious adverse effects on the productivity of the lake. You further conclude that implementation of this part of the original protection plan would lead to urban type development of this still productive wetland. The realignment of the hurricane levee along US Highway 61, as you discuss on page 9, would minimize the damages to fish and wildlife interests.

Since the proposed construction is for the period 1975 through 1990, a periodic review and evaluation regarding the effects on fish and wildlife resources, in light of other prevailing factors, should be scheduled. It is suggested that such a review involving appropriate state and Federal fish and wildlife agencies be held at least every 3 or 4 years.

We will continue to maintain a high interest in Lake Pontchartrain because of its productivity and the very high degree of utilization by the populace pursuing water related activities. Its proximity to the urban population in excess of a million people, provide ample incentive for all agencies to work together to assure its continuation as a viable recreation and commercial facility.

This statement should be considered as an interim statement and may be amended after careful review of the proposed project works by the Board of the Louisiana Wildlife and Fisheries Commission. The next regular meeting of this Board is Tuesday, February 25, 1975.

Our comments on the spoil disposal portion of this meeting will be forwarded during the period that the record is held open for comment. We will be soliciting more information from your staff in order to properly evaluate the placement of spoils.

Thank you.

(Applause)

(Whereupon, the above statement was offered in evidence and marked for identification as Exhibit No. 13)

MR. WALTER L. SENTENN (CITY PLANNING COMMISSION):

Thank you, Colonel.

My name is Walter Sentenn. I am appearing here on behalf of the New Orleans City Planning Commission and its Director, Harold Katner. The City Planning Commission, at its meeting on February 5th, directed the staff to appear at this meeting and to place before this body its recommendations and its feelings with regard to this hurricane protection plan. It indeed has also reviewed insofar as it has been able to the multitude of material that has been presented on this project.

Unfortunately, the City Planning Commission does not assert itself as capable engineers to assess the engineering techniques of the project and does, as most of you are aware of, with planning techniques approach the general overall plan and to perceive the general effect that it will have on the community.

As such, the City Planning Commission has asked us, the staff, to present these recommendations and that is that the City Planning Commission recommends the following to the United States Corps of Engineers:

1. That the City Planning Commission concurs that proper hurricane flood protection is a vital element in the welfare and safety of the citizens of New Orleans and its neighbors.
2. That the City Planning Commission recognizes that the Corps of Engineers has devised, tested, and recommended the barrier plan as the best system for hurricane flood protection in New Orleans.

3. That this plan should be supported and encouraged in the absence of a more feasible system.

4. That without regard to the other considerations involved, the Corps of Engineers should be encouraged to proceed with the implementation of this plan with an abundance of caution for the vitality of the surrounding natural resources.

With particular regard to the Section 404 public hearing, the Commission directs the Corps' attention to proper surveillance of the archeological sites that are in the area and evaluation of the Sawmill Pass disposal areas; but, indeed, concurs in the procedures otherwise proposed for review in the Section 404 public hearing.

For the matter of the record, the archeological sites that the City Planning Commission seems to believe could be impacted by the disposal segment of the project consist of three primary sites:

1. Designated 16 OR 12, which is the South Point partially destroyed shell midden;
2. 16 OR 11, which is the Dwyer Canal, dredged shell midden; and
3. 16 OR 28, which is the Haughs Canal in the Little Woods quadrangle, and it is a potentially a significant archeological site.

In addition, further attention, as I said, should be given to the location of the disposal areas west and east of Sawmill Pass in the barrier units since the adjacent marsh and their impact on the provisions of the developing Coastal Zone Management Plan, which seeks to protect such marsh areas from further erosion and degradation could be important.

Thank you, Colonel.

(Whereupon, a reproduction of the semi-monthly Planning Meeting of Wednesday, February 5, 1975, was offered into evidence and marked as Exhibit No. 95)

(Applause)

MR. CLIFF DANBY (ORLEANS AUDUBON SOCIETY):

My name is Cliff Danby. I live in New Orleans and I am here today to speak for the nearly 1,000 members of the Orleans Audubon Society.

The Orleans Audubon Society wants it clearly understood that we favor hurricane protection of areas presently populated.

On the other hand, we completely oppose hurricane protection for unoccupied marshes and swamps. This Corps project proposes to levee or fill in more than 50,000 acres of undeveloped swamps and marshes, excluding the 25,000 acres in St. Charles Parish. To do so would be economically unsound, ecologically disastrous and a monetary windfall to the owners of the land. Furthermore, the Corps can easily avoid placing levees around marshes and swamps while still protecting populated areas.

Let's examine the economics of the Corps' plan. Placing levees around swamps and marshes will lead to drainage and urban development of the land. These lands are essential to fisheries, aquaculture, waste assimilation and total life support values. Do you know what an acre of marshland is worth in terms of these values? From \$2,000 to \$80,000 an acre per year. Applying the lowest value of \$2,000 to the 50,000 plus acres of marshes to be lost immediately to this project, we get \$102 million annually. This is the environmental value that would be lost to us and, therefore, a cost to the project.

If we incorporate the \$102 million into the Corps' cost-benefit analysis, the heavily favorable ratio of 12.6 to 1 drops to 1.4 to 1; a ratio that is barely favorable. A value of \$3,000 per acre causes the cost-benefit ratio to be unfavorable. No wonder the Corps did not quantify environmental costs for their cost-benefit determination. Should we allow these valuable marshes to be destroyed when they can return so much to us economically and environmentally? We think not.

The Corps could exclude these marshes and swamps from their plans. To do so would require placement of levees adjacent to populated areas and not adjacent to the shorelines of Lakes Pontchartrain and Borgne. The Corps maintains that

this would cost three times as much as the barrier plan. Even if it did, the cost-benefit ratio would still be a favorable one of 4 to 1.

Placing levees around marshes and swamps will increase the value of privately owned land. The Corps estimates this land enhancement value to be about \$5.7 million annually. Guess who is paying for this added value to private landowners? You guessed it--the good old taxpayer.

Why didn't the Corps favor the alternative of protecting populated areas only? We can only conclude that the Corps favors enrichment of a few landowners at the expense of us taxpayers.

(Applause)

Marshes have another very important value. They absorb, slow down, and dissipate hurricane tidal surges. This ability reduces or prevents flood damages to inland areas. This cushioning effect will be lost if levees are placed along shorelines. This can be economically significant for those who live in marshland that has been developed right up to the water's edge. A hurricane like Betsy of 1965 will create tides that will go right over the levees designed for this project.

There will be severe environmental damages from this project. Valuable, productive wetlands will be lost. Development around the perimeters of Lakes Maurepas, Pontchartrain, Catherine and Borgne will be induced. This will cause eventual collapse and death of the MPCB estuary. Tidal flows through the Chef and Rigolets Passes will be obstructed by the barriers hindering flushing actions by the tides. This could make Lake Pontchartrain a 640-square-mile cesspool. We strongly oppose the Chef and Rigolets barriers.

The Seabrook Complex is supposed to control salinity levels in Lake Pontchartrain. How is this going to be possible when the Corps doesn't even know what the proper salinity level should be or how it can be maintained and effectively monitored?

A previous Corps project, the Mississippi Gulf Outlet, caused the present salinity problem. The MR-GO was also

responsible for the flooding of St. Bernard Parish and eastern New Orleans during Hurricane Betsy.

(Applause)

With the Corps' proclivity to create more problems than it solves, we are very skeptical of the benefits attributed to this project.

In March 1974, the voters of Orleans Parish voted a 3-mill increase in property taxes to construct and maintain levees, levee drainage, flood protection, and all purposes thereto. Orleans Levee Board Officials said the money would not be used for the Chef-Rigolets barriers. Now we learn that they propose to use the money for just that purpose. Taxpayers had voted down such use of tax moneys three times previous to the 1974 election. Use of the 3-mill tax moneys for the barriers is not strictly illegal in the eyes of the law. But in the eyes of the taxpayers it is, and we've been had again. I hope the good old taxpayer remembers who his friends are at election time.

In case anyone doubts that a charade is being played here today, we wish to point out that certain portions of this project have been completed or are underway even though the final impact statement has not been approved by the President's Council on Environmental Quality. For example, the bypass channel at Chef Pass has been dredged. The control structures are in place at Bayous Bienvenue and Dupres. Levee construction is underway and dredging in New Orleans East is now in progress. The good old public is being duped again.

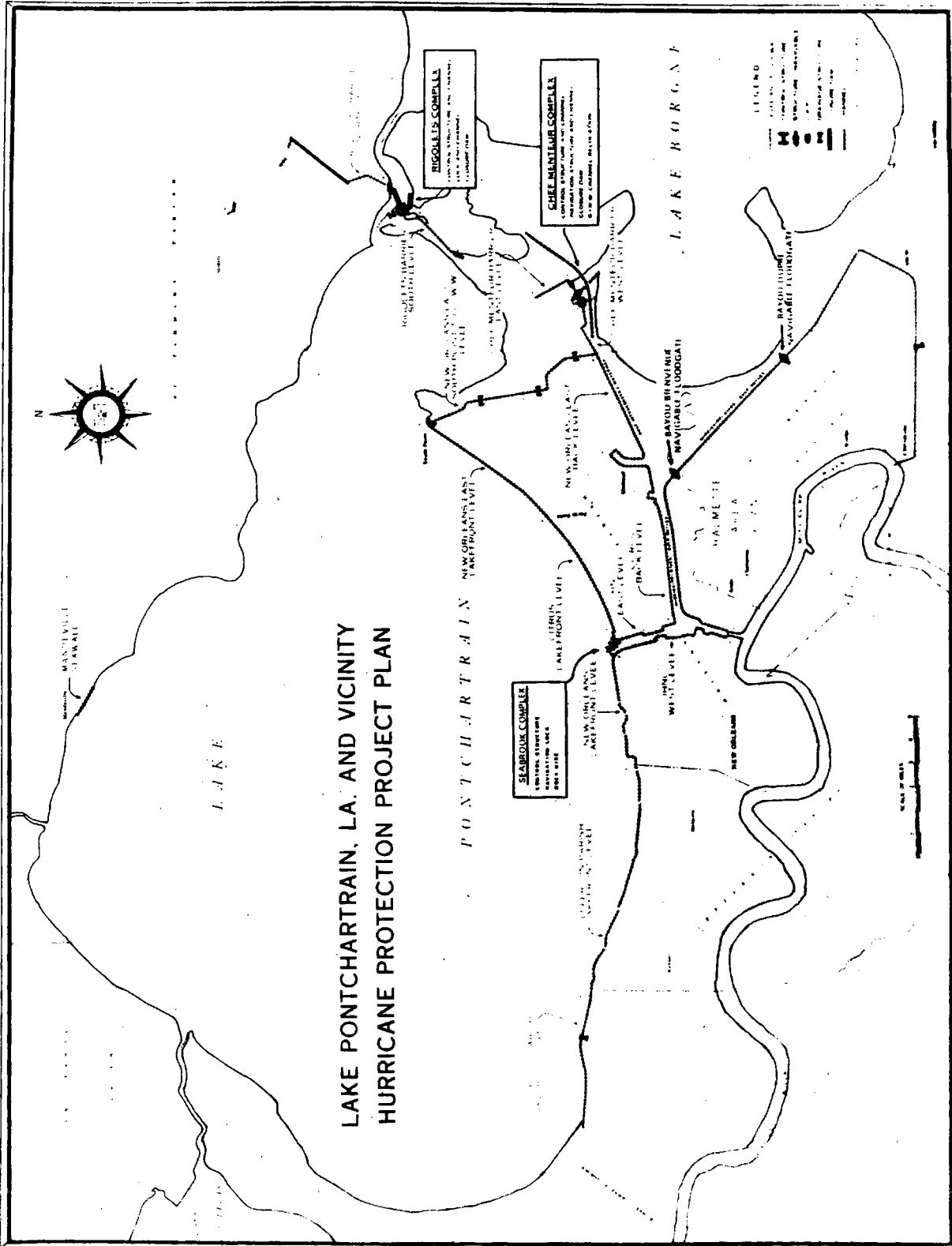
Concerning disposal of dredged material, we oppose disposal and ponding of dredged material in the marshes along the Chef and Rigolets Passes, along the MR-GO, and in New Orleans East. The material should be used for construction purposes, to fill borrow areas, or disposed of at approved offshore locations. Also, we object to the proposed borrow area on Apple Pie Ridge along US Highway 90. These disposal and borrow plans by the Corps will destroy valuable marshland that Louisiana cannot afford to lose.

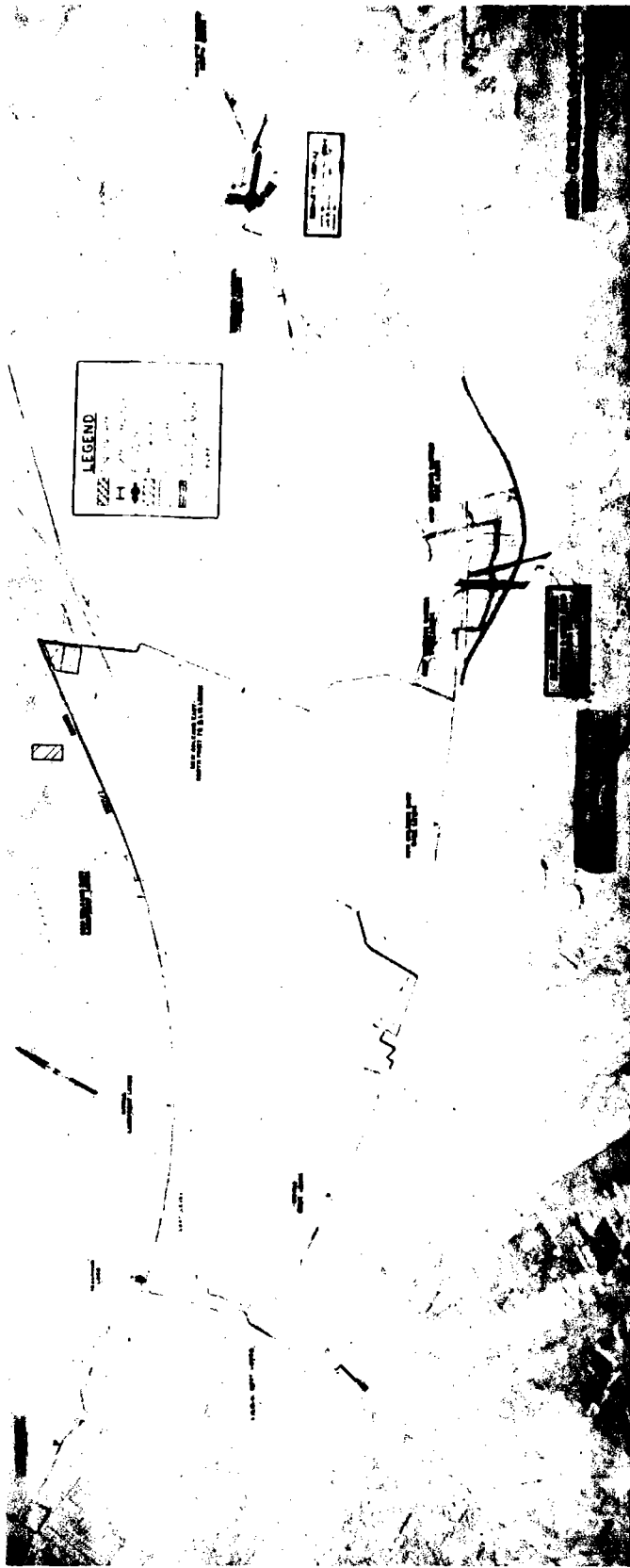
In summary, we feel this project can benefit the people of this area without being harmful to the environment. To do so, however, will require modification of the project to have a high levee system built around populated areas only, and to eliminate the barrier plan.

Thank you.

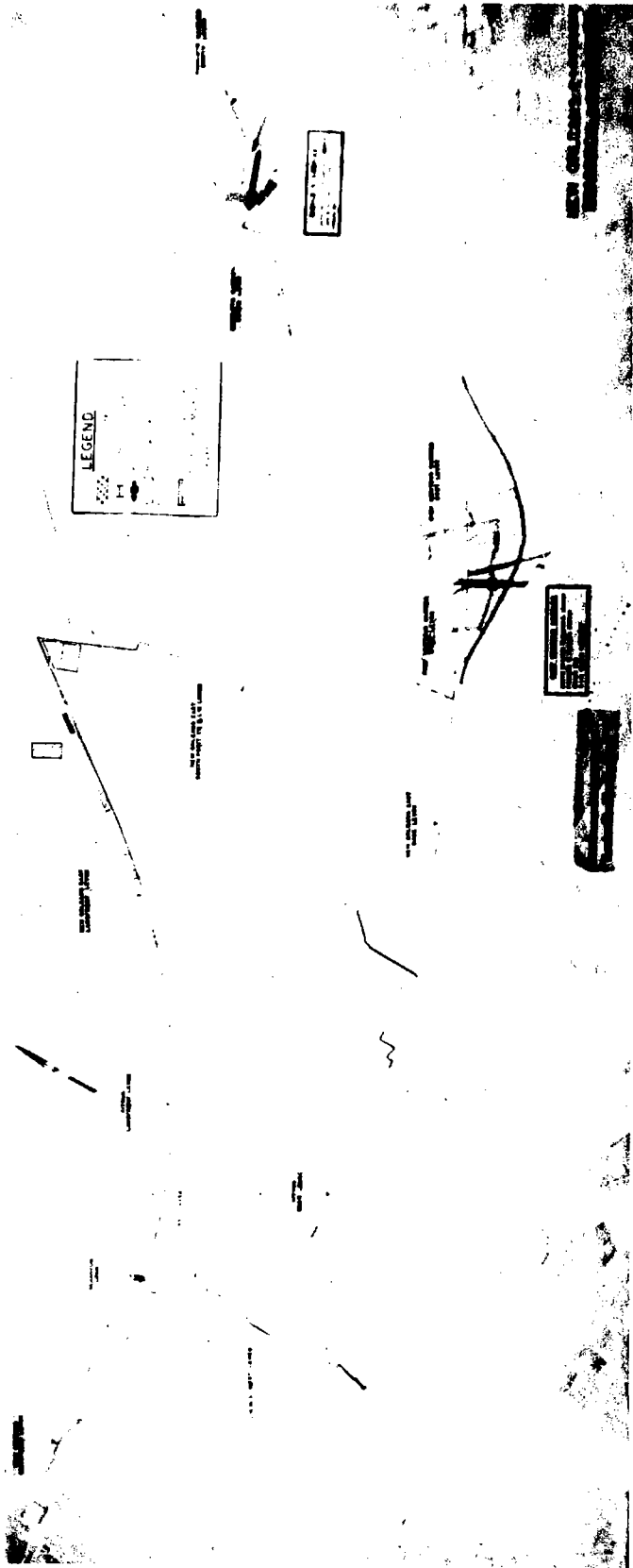
(Applause)

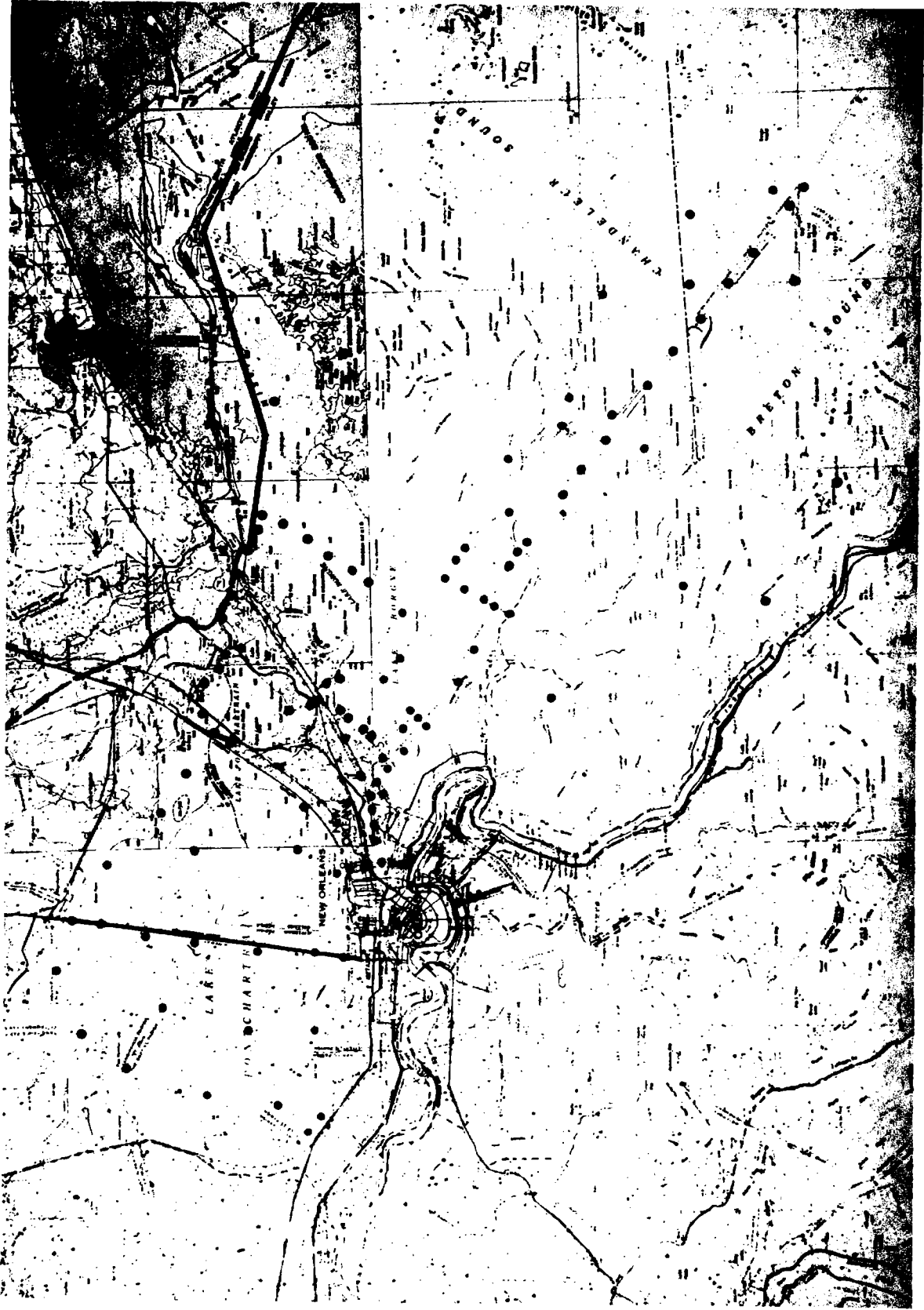
(Whereupon, the statement of the Orleans
Audubon Society was offered into evidence
and marked as Exhibit No. 35)



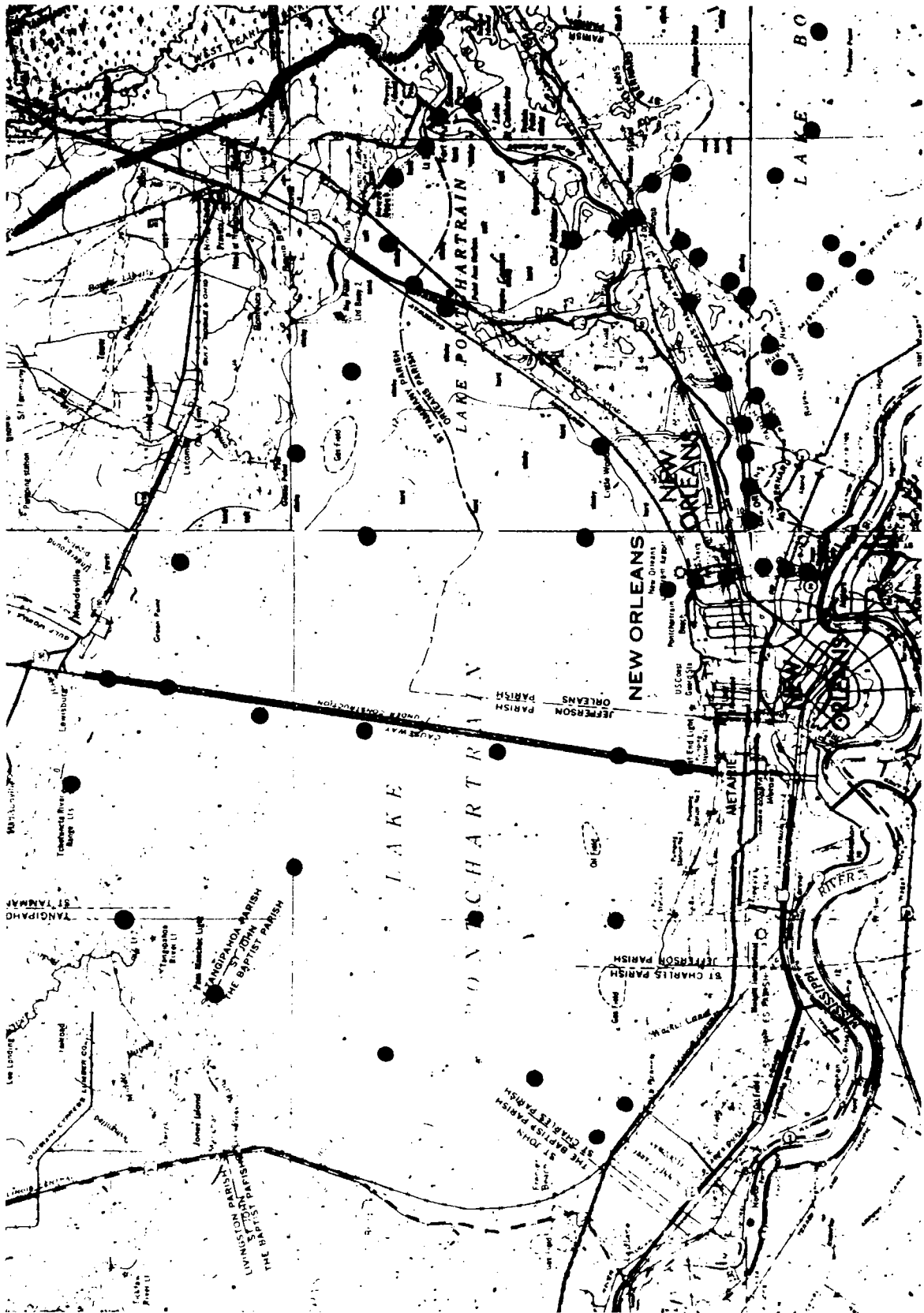








SLIDE 31



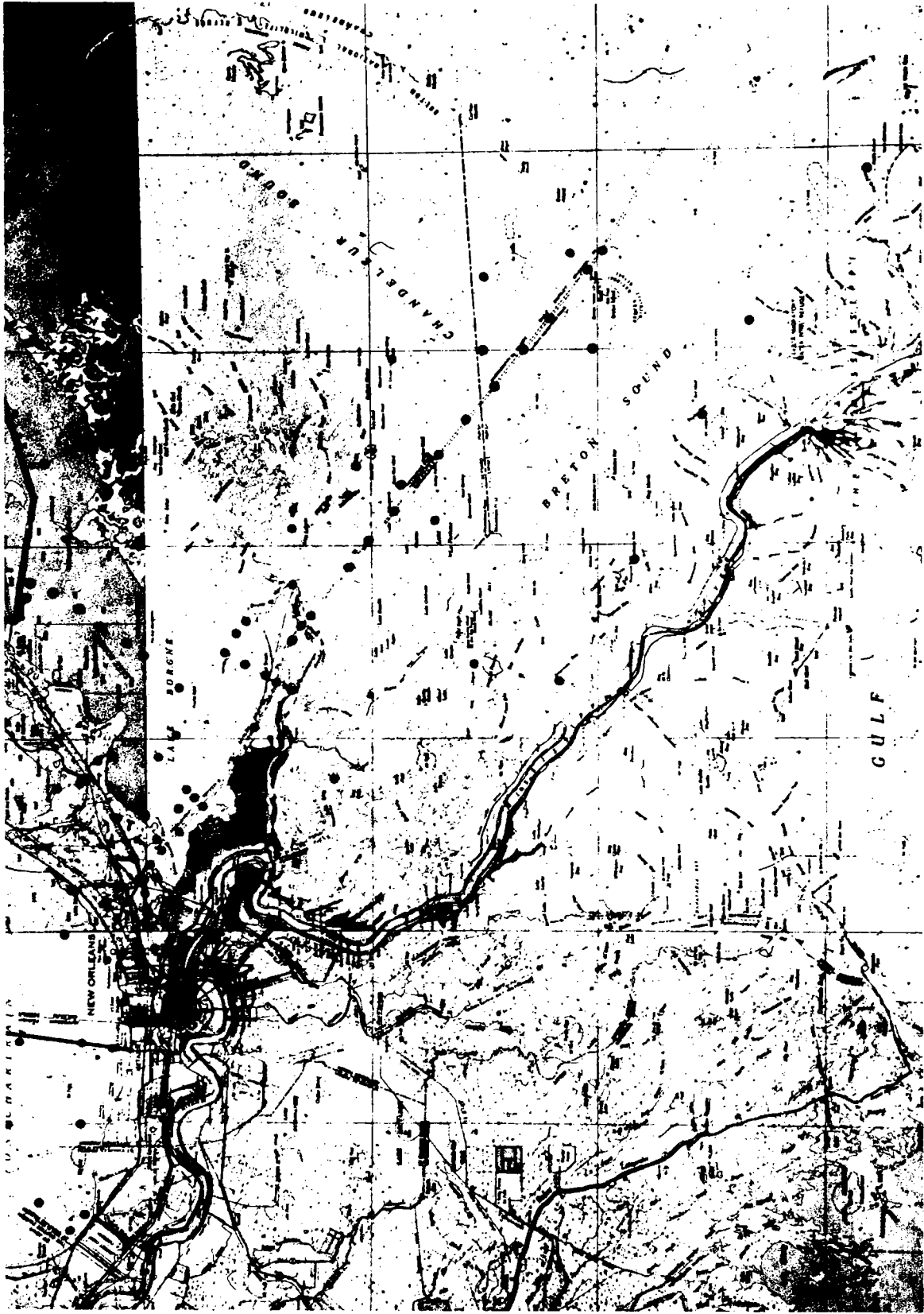


EXHIBIT LIST

<u>Description</u>	<u>Exhibit No.</u>
Public Notice dated 29 November 1974	1
Announcement of Public Meeting dated 22 January 1975	2
News Release by Corps of Engineers dated 23 January 1975	3
News Release by Corps of Engineers dated 19 February 1975	4
News Release by Corps of Engineers dated 26 March 1975	5

<u>Name</u>	<u>Organization Represented</u>	<u>Exhibit No.</u>
Roy Aguillard	Louisiana Department of Public Works	7
J. Burton Angelle	Louisiana Wild Life & Fisheries Commission	13
Kenneth E. Black	US Fish & Wildlife Service	17
Cliff Danby	Orleans Audubon Society	35
Walter L. Sentenn, Jr.	New Orleans City Planning Commission	95
William H. Stevenson	National Oceanic and Atmospheric Administration	98



DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 6026
NEW ORLEANS, LOUISIANA 70160

29 November 1974

LMNED-DL (Levee Construction, Lake Pontchartrain,
Louisiana and Vicinity Hurricane Protec-
tion Project)

PUBLIC NOTICE

This public notice is issued in accordance with provisions of established Federal regulations, Title 33 CFR 209.145, concerning the policy, practice, and procedures to be followed by the Corps of Engineers in connection with the disposal of dredged material in navigable waters or the transportation of dredged material for the purpose of dumping it in ocean waters associated with Federal projects.

This notice is being distributed to all interested state and Federal agencies and known interested persons in order to assist in developing facts and recommendations concerning the proposed continuation of levee construction by hydraulic dredging operations. Comments must be submitted to the District Engineer at the above address on or before 30 December 1974.

Laws under which the proposed dredging is to be reviewed:

Federal Water Pollution Control Act
Coastal Zone Management Act of 1972
National Environmental Policy Act of 1969
Fish and Wildlife Act of 1956
Migratory Marine Game-Fish Act
Fish and Wildlife Coordination Act
Endangered Species Act of 1973
National Historic Preservation Act of 1966

Project. Lake Pontchartrain, Louisiana and vicinity, hurricane protection.

Project location. The project is located in Southeastern Louisiana in the vicinity of Lake Pontchartrain and includes the city of New Orleans and surrounding areas.

Project description. The project is divided into five units. They are as follows:

- a. Barrier unit
- b. New Orleans east unit
- c. Chalmette unit

- d. New Orleans west unit
- e. Mandeville unit

This public notice will cover the barrier, the New Orleans east, and the Chalmette units. The dredging work within these units consists of constructing new levees, enlarging existing non-Federal levees, and constructing navigation and approach channels to the flood control structures within the barrier unit.

The purpose of the project is to provide improved protection from hurricane tides.

New levees will be constructed and existing non-Federal levees will be enlarged by first pumping dredged material to the levee fill areas and then shaping this material at a later date into a levee section.

Navigation and approach channels will be constructed by dredging these areas and pumping this material to the levee fill areas and/or ponding areas.

Disposal areas. The disposal areas for the subject units are as follows:

a. Barrier unit. The disposal areas are located in the vicinity of Chef Menteur Pass, Lake Borgne and the Gulf Intracoastal Waterway, and in the vicinity of the Rigolets, Lake St. Catherine, and Stump Lagoon. (See the attached drawing for specific locations.)

b. New Orleans east unit. The disposal areas are located on the north bank of the Gulf Intracoastal Canal from the Inner Harbor Navigation Canal to approximately Bayou Thomas, and along the landside of the railroad tracks along the south shore of Lake Pontchartrain from Paris Road to South Point. Unloading and stockpile sites for barged levee material and riprap are located along the south shore of Lake Pontchartrain. (See attached drawing for specific locations.)

c. Chalmette unit. The disposal areas are located on the south bank of the Mississippi River-Gulf Outlet from the Inner Harbor Navigation Canal to a point opposite Verret, Louisiana, and from there to Verret, Louisiana.

Method of dredging. Pipeline and bucket dredges will be utilized in the three subject units.

Quantity of Material to be removed.

- a. Barrier unit. Approximately 35,500,000 cubic yards.
- b. New Orleans east unit. Approximately 13,870,000 cubic yards.
- c. Chalmette unit. Approximately 20,000,000 cubic yards.

Composition of material to be removed. The material to be removed from the clay borrow areas consists of very soft clay with peat and organic matter, very soft to fat clays with layers of silt, sandy silt, sand, and Pleistocene clays.

The material to be removed from the sand borrow areas consists of sand, silt, and silty sand.

Proposed time schedule for dredging.

a. Barrier unit.

(1) Chef Menteur area. Dredging is presently scheduled to begin July 1975 and will be completed December 1990. The dredging will not be continuous within this time frame.

(2) Rigolets area. Dredging is presently scheduled to begin July 1976 and will be completed July 1977. The dredging will not be continuous within this time frame.

b. New Orleans east unit.

(1) Along north bank Gulf Intracoastal Canal. Dredging is presently scheduled to begin August 1975 and will be completed October 1980. This dredging will not be continuous.

(2) Along south shore of Lake Pontchartrain. Dredging is presently scheduled to begin March 1975 and will be completed June 1977. This dredging will be continuous.

c. Chalmette unit.

(1) Orleans Parish. Dredging is presently scheduled to begin November 1975 and will be completed January 1977. This dredging will be continuous.

(2) St. Bernard Parish. Dredging is presently scheduled to begin February 1975 and will be completed September 1981. This dredging will not be continuous.

Properties adjacent to disposal areas.

a. Barrier unit. The land adjacent to the disposal areas is mainly marsh lands used for hunting and trapping. Camps and commercial businesses are located on the protected side of the proposed new levees.

b. New Orleans east unit. The land adjacent to the disposal area between the Inner Harbor Navigation Canal and Michoud Canal on the protected side is commercial, industrial, and residential; on the flood

side of the disposal area is the Gulf Intracoastal Waterway. Between Michoud Canal and Bayou Thomas, the land on the protected side of the disposal area is partially drained marsh land subject to commercial, industrial, and residential development; on the flood side of the disposal area is the Gulf Intracoastal Waterway. The land adjacent to the disposal between Paris Road and South Point on the protected side is partially drained marsh land subject to commercial, industrial, and residential development; on the flood side of the disposal area is Lake Pontchartrain.

c. Chalmette unit. The land adjacent to the disposal areas (described above for this unit) on the protected side is marsh land used for hunting and trapping; on the flood side of the disposal areas is the Mississippi River-Gulf Outlet.

Related dredging by others. There is no related dredging to be performed by others in the project area.

Designation of disposal sites. The disposal sites have not been designated by the Administrator, Environmental Protection Agency.

Coordination. A copy of this Public Notice is being sent to the following Federal, state, and local agencies for coordination purposes:

Environmental Protection Agency
Fish and Wildlife Service, U. S. Department of the Interior
Federal Water Pollution Control Administration, U. S. Department
of the Interior
Louisiana Wild Life and Fisheries Commission
The Stream Control Commission of Louisiana
State of Louisiana, Department of Public Works
State of Louisiana, Department of Health
Orleans Levee District
Lake Borgne Basin Levee District
St. Bernard Parish Police Jury
St. Tammany Parish Police Jury

Environmental impact statement (EIS). The draft EIS was submitted to the President's Council on Environmental Quality (CEQ) in August 1972. The final statement is presently scheduled to be submitted to CEQ in November 1974.

General information. Details for the disposal of the dredged material are now on file in the office of the District Engineer, U. S. Army Engineer District, Foot of Prytania Street, New Orleans, Louisiana, and may be seen by anyone having interest in the matter. Protests to the disposal plan, suggestions for modification thereof or objections to it, stating reasons therefor, will be received in writing up to and including 30 December 1974.

Any person who has a demonstrated interest which may be affected by the disposal of the dredged material may request a public hearing. The request must be submitted in writing to the District Engineer not later than 30 December 1974 and must clearly set forth the interest which may be affected and the manner in which the interest may be affected by the activity.

Designation of the disposal site for dredged material associated with this Federal project shall be made through the application of guidelines promulgated by the Administrator, EPA in conjunction with the Secretary of the Army. If their guidelines alone prohibit the designation of these disposal sites, the potential economic impact on flooding of the project area will also be considered.

You are requested to communicate the information contained in this public notice to any other parties whom you deem likely to have interest in the matter.



E. R. HEIBERG III
Colonel, CE
District Engineer

- 3 Incl
1. Plan dwg of
Barrier Unit
 2. Plan dwg of
New Orleans east unit
 3. Plan dwg of
Chalmette unit

LAKE PONTCHARTRAIN, LA. & VICINITY
 HURRICANE PROTECTION
 PROJECT
BARRIER UNIT
 DATE: NOVEMBER, 1974

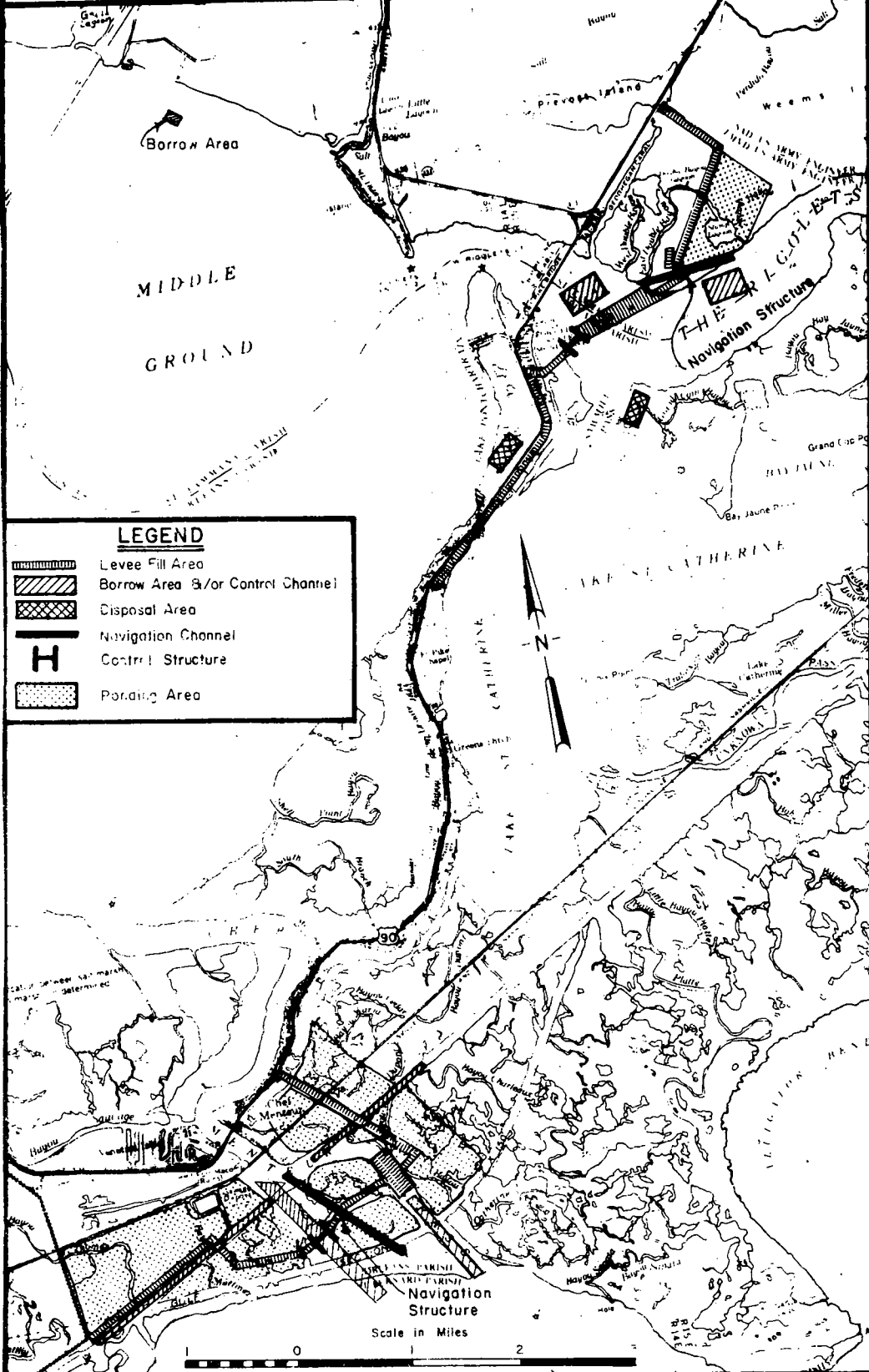


EXHIBIT T-6

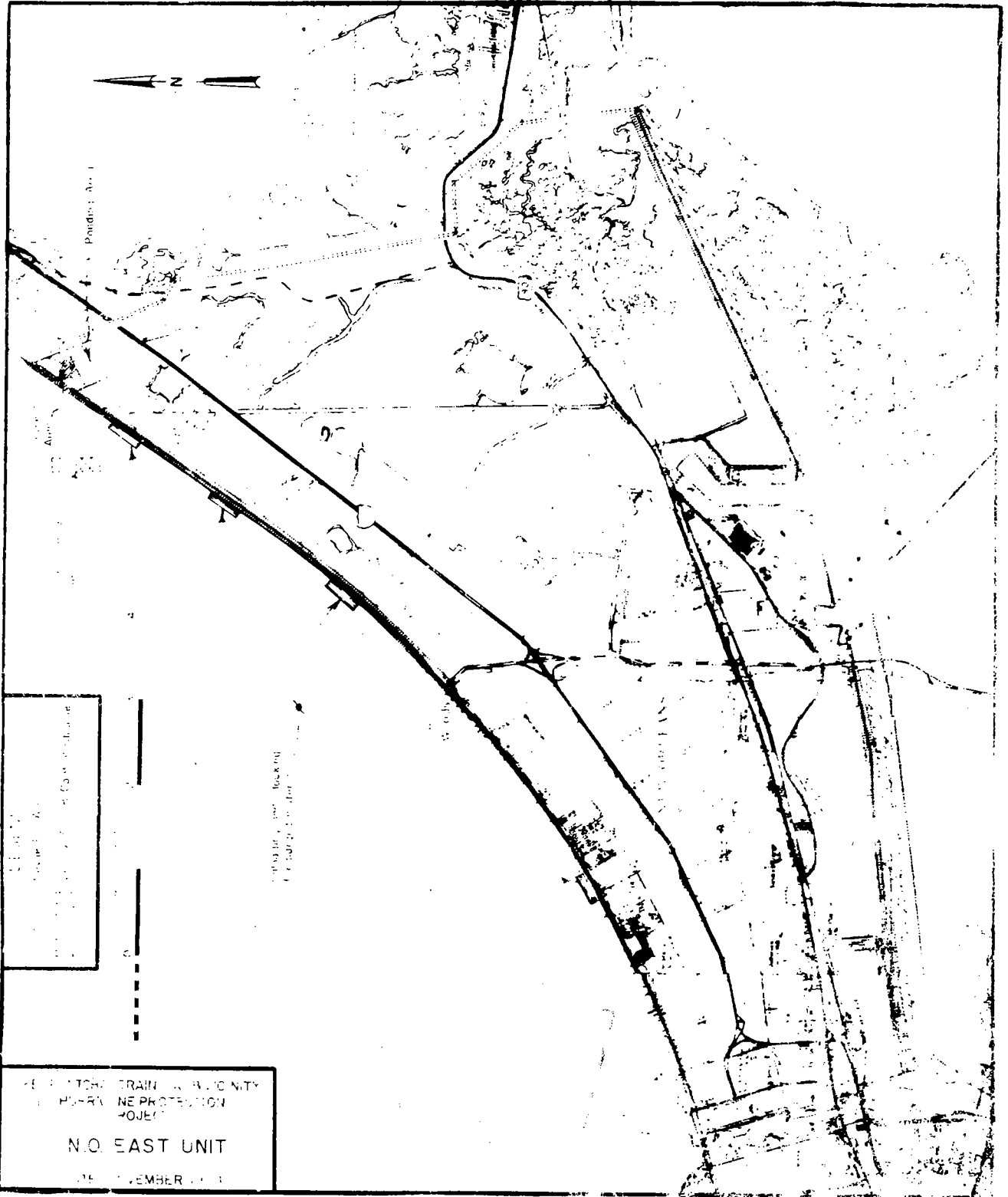


EXHIBIT I-7

LAKE PONTCHARTRAIN, LA. & VICINITY
HURRICANE PROTECTION
PROJECT
CHALMETTE UNIT
DATE: NOVEMBER 1974

LEGEND

- Level Fill Area
- Filling Area
- Control Structure
- Borrow Area
- Channel

Scale in Miles
0 1 2 3 4

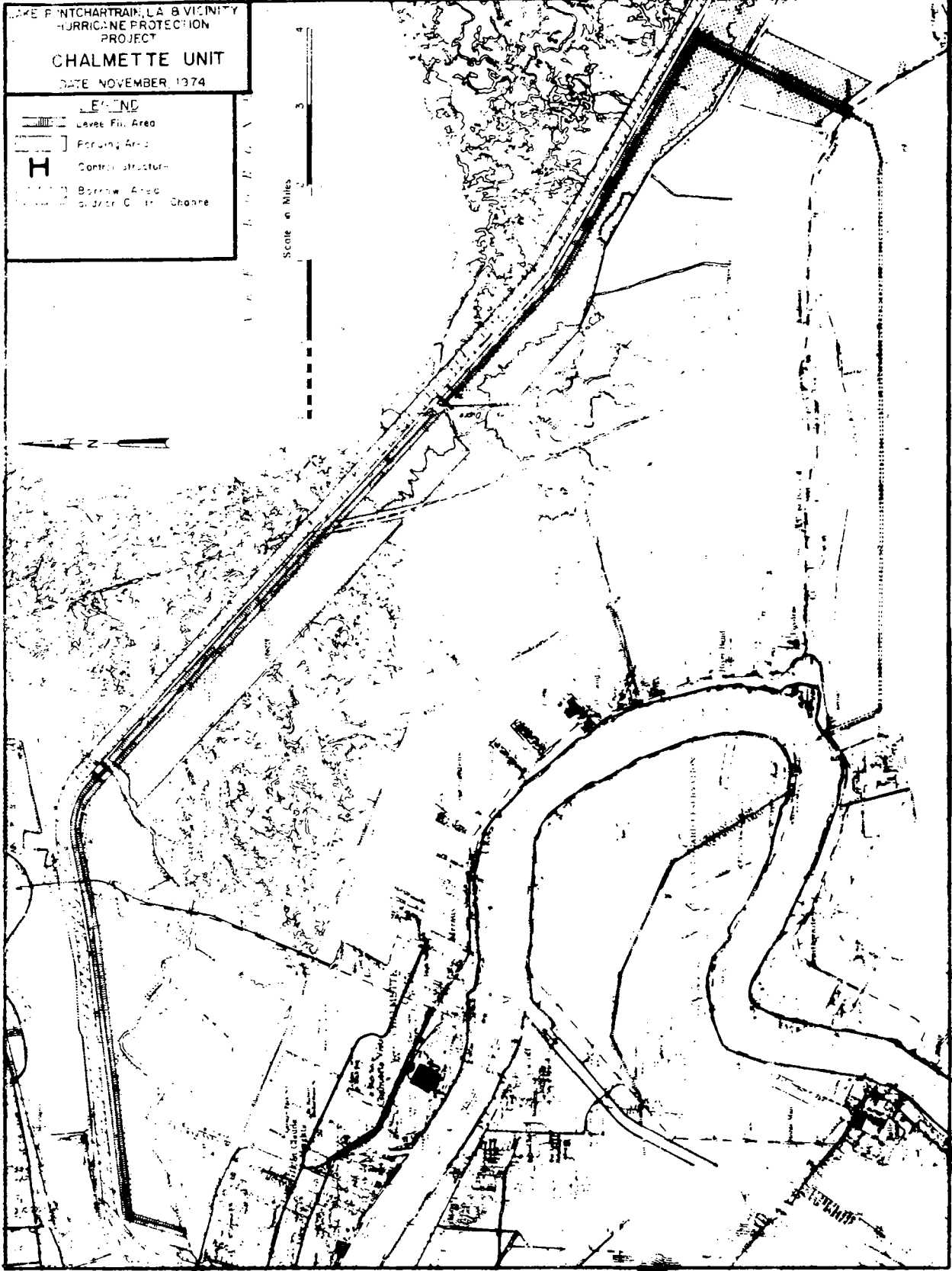


Figure 1-8



DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160

LMNED-MP

JANUARY 22, 1975

ANNOUNCEMENT OF PUBLIC MEETING

WHAT FOR?

- A. To discuss all aspects of the LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY HURRICANE PROTECTION PROJECT including the environmental effects of the project.
- B. Provide a HEARING on planned or alternative PROCEDURES FOR THE DISPOSAL OF DREDGED MATERIALS occasioned by the construction of certain project features, as required by SECTION 404 of the FEDERAL WATER POLLUTION CONTROL ACT of 1972.

WHERE?

In the University Center Ballroom (Room 203) at the University of New Orleans, New Orleans, Louisiana

WHEN?

On Saturday, 22 February 1975 at 9 A.M.

ALL INTERESTED PARTIES ARE INVITED

SEE ATTACHED SHEETS FOR ADDITIONAL INFORMATION AND MAP OF
THE PROJECT PLAN

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 6026
NEW ORLEANS, LOUISIANA 70160

22 January 1975

ANNOUNCEMENT OF PUBLIC MEETING
TO DISCUSS
THE LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
AND
PLANS FOR DISPOSAL OF DREDGED MATERIALS
(IN COMPLIANCE WITH SECTION 404 OF
THE FEDERAL WATER POLLUTION CONTROL ACT OF 1972)

MEETING TO BE HELD AT 9:00 A.M., SATURDAY
22 FEBRUARY 1975 IN THE UNIVERSITY CENTER BALLROOM
UNIVERSITY OF NEW ORLEANS, NEW ORLEANS, LOUISIANA

PURPOSE OF MEETING

The purpose of this meeting will be twofold.

Part A: To discuss all aspects of the Lake Pontchartrain, La., and Vicinity hurricane protection project including its environmental effects.

Part B: To provide a hearing on planned or alternative procedures for the disposal of dredged materials occasioned by the construction of certain project features, as required by Section 404 of the Federal Water Pollution Control Act of 1972. This section of the meeting relates to an earlier public notice of the disposal plans, dated 29 November 1974.

BACKGROUND

The Lake Pontchartrain, La., and Vicinity project was authorized by the Flood Control Act of 1965, approved 27 October 1965. The purpose of the project is to provide hurricane protection to the Greater New Orleans Metropolitan Area which includes portions of Orleans, Jefferson, St. Bernard, St. Tammany, and St. Charles Parishes.

Southeastern Louisiana is frequently exposed to the devastating effects of hurricanes which enter the Gulf of Mexico. Because of the physical characteristics of coastal Louisiana, our Metropolitan area is particularly vulnerable to hurricane forces consisting of high winds, high water and heavy rainfall. Since nature has not provided us with natural means to combat hurricane forces, we must rely on artificial means to protect ourselves from this annual hurricane threat. This hurricane protection project is designed to provide that protection.

In order to understand how the project is being designed and how it will function, it is important to understand how a hurricane affects the areas in the vicinity of Lake Pontchartrain, and also to be aware of certain hurricane characteristics which affect our project designs.

A hurricane is one of the most unpredictable forces in nature. It is impossible to predetermine either the magnitude or path of a hurricane. For this reason, any hurricane which enters the Gulf of Mexico is regarded as a potential threat to our metropolitan area. As a hurricane approaches the Louisiana coastline, certain effects are predictable. Initially, the hurricane generated tides along the coastline rise far above normal elevations. The range of these tides varies according to the characteristics of each particular storm. For instance, the tidal rise which accompanied "Hurricane Betsy" in September 1965 ranged from about 8 feet above mean sea level at Grand Isle, Louisiana and Biloxi, Mississippi, to better than 14 feet above mean sea level east of the Mississippi River at Pointe a la Hache, Louisiana.

As the hurricane moves inshore, its high winds and heavy rainfall further aggravate the areas previously subjected to the high tides. Sustained hurricane winds cause waves to be set up on open bodies of water, thereby creating a greater flood exposure to areas adjacent to those bodies of water. Heavy rainfalls may cause flooding in areas otherwise protected from the high hurricane tides and wave action.

The general pattern of hurricane effects described above may be narrowed for a discussion of hurricane effects on the metropolitan area. The area of this concern is essentially that which is adjacent to Lake Pontchartrain and Lake Borgne. A hurricane flood threat to the New Orleans Metropolitan Area will be generated from one or both of these lakes.

Under existing conditions, as a hurricane approaches the city from the Gulf of Mexico, the tides in advance of the hurricane would be elevated to above-normal heights as described above. The rate of this rise varies depending on the storm, but it is generally rather gradual. Due to the natural connections with the Gulf waters at Chef Menteur Pass, The Rigolets, and at Seabrook (junction of IHNC at Lake Pontchartrain), water levels in Lake Pontchartrain would rise above normal elevations. Levels in Lake Borgne would also be well above normal elevations. Low-lying unprotected areas adjacent to the lakes would be inundated. Greater New Orleans would be virtually surrounded by high waters. If the center of the storm passed in close proximity to the city, the high winds of the storm would produce large waves on top of the already elevated water levels in the lakes thereby worsening the flood threat. Since the storm drainage systems of adjacent communities discharge into Lake Pontchartrain, high water levels in the lake would deny adequate pumping and prevent relief against flooding from heavy rainfalls.

Although Lake Pontchartrain is a very large lake (surface area of about 640 square miles) it is relatively shallow. In a sense, it can be likened to a large saucer full of water. The large yet shallow nature of the lake causes it to respond very quickly to high winds; therefore, waves may develop very rapidly on the lake surface. Under sustained high winds, the lake also experiences a very unusual effect. This is termed the "tilting" effect because under sustained high winds the water surface in the lake tilts against the windward shore. The combined effects of high tides, waves, and the tilting phenomenon create a severe threat of flooding to shoreline areas.

The information presented above describes the problem of hurricane flooding that must be dealt with in order to prevent widespread property damage and possible loss of lives. *How can this problem best be solved? What type of protective plan will best serve the needs of this metropolitan area?*

DEVELOPING A PLAN OF PROTECTION

During engineering studies prior to project authorization in 1965, the New Orleans District of the Corps of Engineers was challenged with the task of formulating a suitable plan for hurricane protection. Recognizing the potential for severe flooding was rather simple; preventing such flooding was very complex.

One plan studied was termed the "high level" plan. On the surface, the plan was simple; just raise all of the existing hurricane protection levees, and, where necessary, construct new high level levees to a height that would prevent flooding in the developed areas. Detailed studies, however, revealed that such a plan had many serious drawbacks. Because we live in the Louisiana delta, the foundation soils in our area are not conducive to certain types of construction. A commonly experienced problem in levee construction is settlement, and due to poor foundation conditions, building levees to the high levels required for such a plan would require long periods of time, extending our exposure to more hurricane seasons without complete protection. In order to construct levees to high levels, it would be necessary to widen the base of each levee, thus requiring more land for rights-of-way. In an urban setting, a demand for more land means higher cost and additional displacement of homes.

and persons where land areas are congested. Another shortcoming of the high-level plan involves the problem of drainage. Due to the nature of our pumping system, a high level plan would prevent adequate drainage of the area during a hurricane unless all of the pumping stations which discharge into Lake Pontchartrain were extensively modified. Each of these problems may be translated into cost, and at the time comparative plans were being evaluated, the "high level" plan was estimated to cost approximately 50% more than the plan now recommended.

Another problem related to the "high level" concept would be the flooding of facilities along the IHNC. Since the industries along that waterway require direct access to the canal, many of the industrial facilities are outside of the protective system. With the "high level" plan there would be no feasible means to effect flood stage reductions in the IHNC with the result that many industries would suffer severe flooding. These industries play a very important role in our regional economy and any prolonged disruption of production from these concerns would severely impact the commerce of our area.

In recognition of the inherent drawbacks of a high level plan, the New Orleans District developed the "barrier concept." *What is the barrier? How does it function?*

THE BARRIER CONCEPT

The "barrier concept" is indeed the most distinguishing element of the recommended hurricane protection plan. The barrier consists of three basic features: namely, the Rigolets Complex, the Chef Menteur Complex and the Seabrook Complex. Each of these complexes includes a gated flood control structure, a navigation structure, and a closure embankment. A more detailed discussion of these complexes is presented later in this announcement.

The purpose of these structures is to control water level increases in Lake Pontchartrain when a hurricane threat is imminent. As described above, when a hurricane approaches the Louisiana coastline, the area in advance of the storm experiences a gradual rise in sea level generated by the storm. For the design hurricane, under natural conditions, this rise would elevate Lake Pontchartrain by 5 to 7 feet above normal lake levels. This rise, combined with the "tilting effect", could produce lake levels from 10 to 13 feet above normal elevations at any location adjacent to the lake. This phenomenon occurred during Hurricane Betsy in 1965.

The barrier structures are designed to prevent the lake from attaining such high levels. As a hurricane moves toward the city, the gated flood control structures at Chef Menteur Pass, The Rigolets and at Seabrook would be closed, thereby preventing the hurricane produced tides from entering and raising the lake to extreme heights. To the greatest extent possible, this closure would maintain the lake at near normal levels just prior to the passage of the storm.

The barrier concept has many important advantages over the high level plan. Firstly, it affords a higher degree of protection to all land areas adjacent to Lake Pontchartrain since the water level of the lake would be as much as 6 feet lower with the barrier plan than with the high level plan. This factor produces collateral benefits in several ways. Storm drainage pumped into the lake may be discharged more efficiently when lake levels are lower, thus benefiting interior drainage. Present and future levee systems adjacent to the lake can be built to lower elevations under the barrier concept with attending benefits of smaller rights-of-way requirements, less costly construction, and fewer and less costly relocations of utilities, property and persons.

Secondly, the Seabrook Complex feature of the barrier plan will provide a means for regulating the salinity level of the lake. Since the construction of the MR-GO, salinity levels in Lake Pontchartrain have risen. The MR-GO provides a direct connection between Breton Sound and Lake Pontchartrain via the IHNC at Seabrook, transporting the highly saline Gulf waters with little dilution. If the rise in the salinity level of the lake were allowed to continue without adequate controls, the environment of the lake could be detrimentally altered, and its value as an important nursery area for many aquatic species would be lost. The gated control structure at Seabrook Complex will allow the salinities in the lake to be regulated to beneficial levels.

Thirdly, the barrier complexes will afford a means of flood relief for the industries along the IHNC. In this respect, the Seabrook Complex functions as a safety valve to reduce high flood levels in the IHNC. When the IHNC water levels reach the top of the canal banks the gated flood control structure at Seabrook would be fully opened permitting flood relief to the industries along the IHNC. This relief would only be available with the lower water level in Lake Pontchartrain made possible by the barrier complexes. A high level plan would not prevent tidal rises in the lake, and such flood relief would not be available. Since the lake is very large with respect to the inlet at Seabrook, the flows which would be permitted into the lake at Seabrook under the recommended plan of operation would not appreciably affect the elevation of the lake and would not violate the concept of the barrier plan.

Fourthly, the barrier plan will require a shorter period for construction and will therefore reduce the number of years that the area is exposed to hurricane threats without adequate protection.

Lastly, and of great importance, is that the barrier plan will cost less than the high level plan. Comparative design estimates revealed that the high level plan would cost about 50% more than the barrier plan.

Now that the reasons for selecting the barrier plan are known, the next important question to be answered is "*Will the barrier plan work?*"

Realizing that the barrier concept could be more advantageous than a high level type of protection, the New Orleans District had to be certain that it would work. During early project planning, the New Orleans District engaged the services of the Waterways Experiment Station in Vicksburg, Mississippi to construct the entire hurricane protection project in model form. The major purpose of the model was to determine the effect of the barrier complexes on the salinity and flow characteristics of the lake and to develop structural designs for the complexes that would retain the existing ecological character of the lake. The barrier structures have been designed in conformance with the data from that model study and they have been planned to have negligible effect on the lake.

Detailed designs completed after early project studies showed that the structural complex at The Rigolets could be relocated to a more economical site. In order to be certain that this redesign did not affect the flow characteristics required for its function as part of the barrier, the services of the Waterways Experiment Station were again utilized. A hydraulic model of The Rigolets was recently constructed, and studies are now underway to assure the performance of the redesigned complex.

Today there is an urgent need for environmental awareness. In order for the barrier structures to be responsive to our needs, they must perform well not only during hurricane conditions, but also during normal weather conditions. They must be environmentally sound. We must be certain that they do not harm the natural ecological balance in the lake. For this reason, much time and effort has been devoted in planning the barrier portion of the project and the Corps of Engineers has required the detailed model studies, the services of environmental consultants and professional design consultants, and has performed, and is presently performing, the many detailed hydraulic design studies relating to the barrier complexes.

During all normal weather conditions, the gated flood control structures at the Chef Menteur Pass and at The Rigolets will remain fully opened. In this opened position, these structures are designed to preserve normal tidal exchanges. These structures will not be closed until a hurricane enters the Gulf of Mexico, threatening the Louisiana coastline. Only in this event will the structures function as a barrier to prevent flow into Lake Pontchartrain, remaining at all other times an artificial equivalent of the natural passes.

A more detailed discussion of the environmental effects of the project is included in the "Summary of Environmental Considerations" appended to this announcement as Attachment No. 1.

THE RECOMMENDED PLAN

The recommended project consists of two major protective systems - the Lake Pontchartrain Barrier Plan and the Chalmette Area Plan. Please refer to the map of the project plan appended to this announcement.

The Lake Pontchartrain Barrier Plan consists of the following features:

- a. The Rigolets Complex. This complex includes a gated flood control structure with approach channels, a navigation lock with approach channels, and a closure dam to link the control structure and lock across a portion of the natural pass. These structures are connected to the US Highway 90 embankment north and south of The Rigolets by earthen levees.
- b. The Chef Menteur Complex. This complex includes a gated flood control structure with approach channels, a navigation structure with approach channels, and a closure dam to close the natural pass. These structures are connected to the US Highway 90 embankment east of the complex and with the New Orleans East levee system west of the complex. A realignment of the Gulf Intracoastal Waterway (GIWW) at this location is required to provide uninterrupted navigation along that waterway.
- c. The Seabrook Complex. This complex includes a gated flood control structure to pass flows as desired, a navigation lock, and a connecting rock dike.
- d. Improvement of existing levees along the lakeshore of Jefferson Parish and New Orleans from the St. Charles - Jefferson Parish line to the IHNC.
- e. Construction of new levees along the lakeshore of Citrus and New Orleans East from the IHNC to South Point, La.
- f. Improvement of existing levees from South Point to the GIWW, continuing along the northern bank of the GIWW and the MR-GO in Citrus and New Orleans East to the IHNC.
- g. Construction of levees and floodwalls along both banks of the IHNC.
- h. Strengthening and repair of the existing floodwall in Mandeville, La. (Planning on this feature is currently inactive due to the lack of financial participation in the project by St. Tammany Parish sponsors.)
- i. Extension of the barrier to the east side of the junction of US Highways 90 and 190 and then northerly along US Highway 190.
- j. The barrier plan as initially authorized by Congress provided for construction of a new earthen levee along the St. Charles Parish lakeshore from the Bonnet Carre Floodway to the St. Charles-Jefferson Parish line. The inclusion of Bayous Trepagnier and La Branche in the Louisiana Natural and Scenic Rivers System currently forecloses the possibility of proceeding with the levee without contravening State law. Should the impediment imposed by the Natural and Scenic Rivers System be removed in the future, additional studies will be needed to fully evaluate the relationship of the marsh to the surrounding ecosystem, and provide a basis for a decision on whether the levee should be built. Accordingly, construction of the feature of the project has been indefinitely deferred.

The Chalmette Area Plan is a wholly independent protective system included in the overall hurricane protection project, since the Chalmette area is outside of the influence of the barrier complexes. This plan consists of the following features:

- a. Construction of a levee and floodwall system from the Mississippi River levee in New Orleans along the east bank of the IHNC and the south banks of the GIWW and MR-GO to the vicinity of Verret, La., with a return levee from Verret to the Mississippi River levee at Caernarvon, La.
- b. Construction of navigable floodgates on Bayous Bienvenue and Dupre near their junctions with the MR-GO.

NAVIGATION ACCESS

An integral part of the barrier system is navigation access for Lake Pontchartrain. With the barrier structures in place, adequate provisions for marine access must be incorporated into the overall project plan. Three avenues of marine access for Lake Pontchartrain will be included in the project. They are the Seabrook Lock, the Rigolets Lock, and the Chef Menteur Complex Navigation structure.

The currently approved dimensions for the Seabrook Lock are 800-foot usable chamber length, 84-foot chamber width with a sill depth of -15.0 mean low gulf (m.l.g.). This lock will serve navigation by reducing adverse current velocities and eddies in the IHNC. Such currents jeopardize marine safety, erode channel banks and undermine wharves and bridge foundations along that canal.

The normal daily operating procedure for this structure provides for the lock gates to remain in the opened position allowing unimpaired vessel transit through the chamber, until the current velocity through the structure exceeds 3 feet per second (ft/s). The lock gates would then be closed and vessels would require lockage. Studies show that lockage would be required for about 7 hours over each 24-hour period. The vessels which currently utilize the IHNC, and the future prime users of Seabrook Lock, are in vast majority industrially related. The lock will benefit these users by alleviating the adverse currents now causing hazardous conditions along the IHNC.

In advance of a hurricane, and throughout the storm, the lock gates will be closed. Locking operations will continue until safe lockages can no longer be accomplished. During such periods the flood control structure adjacent to the lock will provide flood relief to industrial concerns in the canal.

The currently planned dimensions for The Rigolets Lock are 800-foot usable chamber length, 110-foot chamber width, and a sill depth of -13.2 m.l.g. Like the Seabrook Lock, this structure will remain open during all normal conditions allowing free navigational transit, until the current velocities through the lock chamber become prohibitive for safe passage. Only then would vessels have to be locked through. Study reveals that locking would be required only for about 5 hours per day for 15 days of each month. During hurricane periods, the lock gates will be closed; however, lockages will be permitted until such operations can no longer be safely accomplished.

The dimensions planned for the Chef Menteur navigation structure are 84-foot width and a sill depth of -16.0 feet m.l.g. This structure will provide continuous uninterrupted access to the lake at Chef Menteur Pass. This structure will remain open at all times except when a serious storm or hurricane threatens from the Gulf. Under hurricane conditions, the structure would be closed coincident with the closure of the other barrier structures. Navigation would then be diverted through either the Seabrook Lock or the Rigolets Lock.

It is important that the dimensions of these structures adequately accommodate present and future requirements for marine craft. In order to assure their adequacy, the Corps of Engineers performed navigation studies assessing the anticipated uses of the structures with respect to the Gulf Intracoastal Waterway system, local shipbuilding and marine related concerns, controlling depths of adjacent waterways, and with the existing clearances of bridges and appurtenant facilities. The studies were thoroughly coordinated with local shipbuilding interests. The data compiled resulted in substantial increases in the original dimensions of the Chef Menteur Navigation Structure and the Rigolets Lock. The dimensions now planned are considered to be consistent with all present and future navigation needs of the area throughout the life of the structures.

In addition to the structures described above, two navigable floodgates have been incorporated into the Chalmette Area Plan portion of the project. These structures are located on Bayous Bienvenue and Dupre. Each of these structures is 56 feet wide with a sill depth of -10.0 feet m.l.g.

ENVIRONMENTAL CONSIDERATIONS

The final environmental statement has been filed with the President's Council on Environmental Quality as required by the National Environmental Policies Act of 1969. Interested persons may obtain a copy by request to the following address:

Environmental Resources Branch
ATTN: LMNPI-RE
New Orleans District, Corps of Engineers
P.O. Box 60167
New Orleans, Louisiana 70160

A summary of the contents of the environmental statement is contained in the "Summary of Environmental Considerations" appended hereto as Attachment No. 1.

DISPOSAL OF DREDGED MATERIAL ("SECTION 404")

The "Section 404" portion of the meeting will be conducted in accordance with provisions of established Federal regulations, Title 33 CFR 209.145, concerning the policy, practice, and procedures to be followed by the Corps of Engineers in connection with the disposal of dredged material in navigable waters or the transportation of dredged material for the purpose of dumping it in ocean waters, associated with Federal projects.

A public notice concerning the procedures for this project was distributed on 29 November 1974 to all interested state and Federal agencies and known interested persons in order to assist in developing facts and recommendations concerning the proposed continuation of project construction by hydraulic dredging operations.

The following are the laws under which the proposed dredging is to be reviewed:

Federal Water Pollution Control Act of 1972
Coastal Zone Management Act of 1972
National Environmental Policy Act of 1969
Fish and Wildlife Act of 1956
Migratory Marine Game-Fish Act
Fish and Wildlife Coordination Act
Endangered Species Act of 1973
National Historic Preservation Act of 1966
Marine Protection, Research, and Sanctuaries Act of 1972

The "Section 404" portion of the meeting will discuss plans and procedures for dredging operations associated with the construction of various project features. The proposed dredging work consists of constructing new levees and closure dams, enlarging existing levees, and constructing approach channels to the flood control and navigation structures included in the project. See Attachment No. 2 for details.

Comments regarding this portion of the meeting may be submitted to the District Engineer at the meeting or forwarded to the address at the beginning of this announcement before 24 March 1975.

LOCAL COOPERATION

The Governor of the State of Louisiana has designated the Louisiana Department of Public Works (DPW) as the local cooperating agency for the project. The DPW must coordinate the local responsibility for participation in the project.

COST OF THE PROJECT

The total cost of the project as of July 1974 is \$327,000,000 of which \$224,000,000 are Federal costs and \$103,000,000 are non-Federal costs. The benefit to cost ratio of the project is 12.6 to 1. This means that for every dollar spent to implement the project, about \$12.60 of flood protection or related benefits will be produced by the project after its completion.

GENERAL INFORMATION

All interested parties are invited to be present or be represented at the above time and place, including representatives of Federal, state, parish and municipal agencies, and those of commercial, industrial, civic, highway, railroad, water transportation, ecological, and environmental interests, as well as concerned property owners and other individuals. All will be afforded full opportunity to express their views concerning any and all aspects of the project, including the environmental statement.

Advocates of the project are urged to present pertinent factual material in support of their positions. Opposing interests are likewise urged to submit specific information backing their positions.

Oral statements will be heard, but for accuracy of the record, important facts and arguments should be submitted in writing, in five copies if possible, as the record of this meeting will be forwarded for consideration by the Department of the Army. Written statements may be handed to the undersigned at the meeting or mailed beforehand to the undersigned at the address at the beginning of this announcement.

An agenda of the proceedings is included with this announcement as Attachment No. 3.

It is requested that the foregoing be brought to the attention of persons known to be interested in the matter. Newspapers, periodicals, and radio and television stations are urged to use this announcement as a news item. Postmasters and other officials are requested to display this notice prominently.



Inclosures as follows:
Project map
Attachment No. 1 - Summary
of Environmental Considerations
Attachment No. 2 - Disposal
of Dredged Material
Attachment No. 3 - Agenda

E. R. HEIBERG III
Colonel, CE
District Engineer

SUMMARY OF ENVIRONMENTAL CONSIDERATIONS
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT

1. INTRODUCTION

The project is located in southeastern Louisiana in the general vicinity of the city of New Orleans, and its inherent function is to prevent or reduce loss of lives and property damage due to hurricane flooding. The project area includes the lowland and water areas between the natural levee deposits of the Mississippi River and the Pleistocene escarpment to the north and west. The main topographic feature of the project area is Lake Pontchartrain which covers approximately 640 square miles in area and averages 12 feet in depth. Lake Pontchartrain is connected to Lake Maurepas to the northwest and to Lake Borgne, the Mississippi Sound, and the Gulf of Mexico to the south and east. Approximately 4,700 square miles of tributary area drain into the lake. The project area consists of about 780 square miles of land area. The project is divided into two separate protective plans - the Lake Pontchartrain Barrier Plan and the Chalmette Area Plan. The benefit-cost ratio of the project is 12.6 to 1 as of July 1974.

2. DESCRIPTION OF ACTION

This project provides for the construction of a barrier along the east side of Lake Pontchartrain, a levee along the St. Charles Parish lakefront, a new levee along the Citrus and New Orleans East lakeshores, the improvement and enlargement of existing protective works on the south and north shores of the lake, along the Gulf Intracoastal Waterway (GIWW) and the Inner Harbor Navigation Canal (IHNC) including a dual-purpose lock at Seabrook and necessary modifications to roads, pipelines, pumping stations, and drainage facilities. In view of the inclusion of Bayous LaBranche and Trepagnier in the Louisiana Natural and Scenic Rivers System, the construction of the St. Charles Parish levee has been deferred. The Chalmette Area Plan provides for construction of a new levee along the south shore of the Mississippi River-Gulf Outlet (MR-GO) from the IHNC to the vicinity of Verret and thence to the Mississippi River at Caernarvon. Control structures at Bayous Bienvenue and Dupre and a drainage structure at Creedmore Canal are provided. The purpose of this project is to provide for protection of life and property for existing development and future improvement against flooding caused by hurricane waves and surges.

3. GEOLOGICAL ELEMENTS

The project area, known as the Pontchartrain Basin, is situated along the northeastern flank of the Mississippi River Deltaic Plain and is located within the Central Gulf Coastal Plain. The basin is a shallow depression which lies between the alluvial ridge of the Mississippi River and the gulfward-sloping uplands on the north and west. Except for short stretches along the northern shore of Lake Pontchartrain in the vicinity of Mandeville where the uplands border the lake, and behind the seawall along the south shore at New Orleans where sandfill has been placed, the lake is separated from the uplands and alluvial ridges by marsh and swamplands. The area is of extremely low relief. Dominant physiographic features are the swamps, marshes, natural levees, and abandoned distributaries.

4. HYDROLOGICAL ELEMENTS

Lake Pontchartrain is an oval-shaped low salinity estuary. It was formed from a remnant of an arm of the Gulf of Mexico which was impounded by deltaic deposits of the Mississippi River and gradually freshened. It is about 25 miles wide along its north-south axis and 40 miles long along its east-west axis. Lake Pontchartrain lies adjacent to and just north of the city of New Orleans, Louisiana, and is connected with Lake Maurepas on the west by Pass Manchac, with Lake Borgne on the east by Chef Menteur and Rigolets Passes, and with the MR-GO channel by the IHNC and Intracoastal Waterway.

The salinity in Lake Pontchartrain usually averages below 5 parts per thousand (p.p.t.) but considerable variation occurs in different areas of the lake and during different seasons of the year. Salinities below p.p.t. occur in the northwestern areas near freshwater inflow, and values as high as 18 p.p.t. have been reported after storms from eastern areas near the Chef Menteur and Rigolets Passes.

Generally, the salinity gradient in the lake is fairly uniform, increasing from near-fresh waters in Lake Maurepas progressively through Lake Pontchartrain to more saline conditions at the lake connection with Lake Borgne. Discharge of freshwater from the Pearl River acts to dilute Lake Borgne water; however, since the MR-GO opened in 1963, salinities have increased in Lake Pontchartrain and Lake Borgne due to the inflow of more saline waters from the gulf. Mean annual chlorides in samples from eastern Lake Pontchartrain for a 5-year period after the opening of the MR-GO average two to three times higher for a similar period before the opening of the outlet.

Tides are diurnal in Lake Pontchartrain and adjoining lakes. The mean tide range at Long Point, near the eastern end of Rigolets, is 1.0 foot. In Lake Pontchartrain the range decreases to about 0.6 foot and further decreases to about 0.3 foot in Pass Manchac and Lake Maurepas for conditions of mean freshwater discharge. The mean freshwater discharge into the lake system is about 18,000 cubic feet per second (c.f.s.) of which 60 percent is from the Pearl River and its branches. The main total prism at Rigolets is about 9 billion cubic feet. The approximate mean maximum current velocity in Rigolets is 1.9 feet per second (f.p.s.), in Chef Menteur 2.8 f.p.s., and in Pass Manchac 2.0 f.p.s., while current velocities in Lake Pontchartrain are of the order of 0.5 f.p.s. or less. The maximum velocities are about the same for both flood and ebb currents but the duration of the ebb currents is slightly longer.

Salinity in Lake Pontchartrain and connected lakes does not occur in stratified form, as is the case in many estuaries. Rather the lake system is in the category of well mixed estuaries in which salinities from surface to bottom are essentially uniform.

5. BOTANICAL ELEMENTS

Vegetation of the project area is very diverse, including pinelands on the terraces north of Lake Pontchartrain and second-growth swamp and marshland south of the lake. Swamps have an overstory of baldcypress, tupelogum, Drummond red maple, and pumpkin ash and an understory of palmetto, virginia willow, and buttonbush. Herbs and vines include shield fern, smartweed, water hyacinth, alligatorweed, duckweeds, blackberry, rattan vine, and poison ivy.

Marshes vary from fresh to brackish in the project area. Bulltongue, alligatorweed, and sedges dominate the fresh marshes, while wiregrass, three-cornered grass, and coco dominate the brackish marshes. Frontwoods near the river are covered with hackberry, sweetgum, American elm, willows, boxelder, oaks, and waxmyrtle.

Aquatic vegetation of Lake Pontchartrain was surveyed and approximately 2,000 acres of the lake bottom are vegetated with eelgrass (wild celery), widgeongrass, and southern naiad. The greatest concentration of these submerged aquatics exists from Green Point, just east of Montainbleau State Park, to Big Point, just west of Louisiana Highway 11. In the deeper waters of the interior of the lake, the vegetation consists primarily of phytoplankton.

Chabreck, Palmisano, and Joanen (1968) prepared a vegetative type map of marsh types in coastal Louisiana. Brown (1973) prepared a map of all vegetative types in Louisiana. These maps show the extent of habitat in the project area.

6. ZOOLOGICAL ELEMENTS

The forested swamp areas are used primarily by the raccoon, opossum, white-tailed deer, squirrels, and swamp rabbits. Portions of the wooded swamp are useful to waterfowl, primarily wood ducks and mallards. The American alligator occurs in the swamps and marshes and is listed by the US Department of the Interior, US Fish and Wildlife Service, as a rare and endangered species.

The marsh areas are used by rabbits, nutria, muskrat, mink, and migratory waterfowl. Migratory waterfowl using the area include the gadwall, widgeon, blue-winged and green-winged teal, lesser scaup, redhead, pintail, canvasback, mallard, shoveler, and a few blue and snow geese. Mottled ducks nest in the marshes and inhabit them year-round. Other birds present include the snipe, rails, gallinules, dowitches, egrets, herons, and hawks.

Freshwater commercial fishing is almost nonexistent in the project area. Commercial harvesting of brackish water fishery resources, including the brackish water clam, oyster, blue crab, brown and white shrimp, and sport fish, occurs in Lakes Borgne and Pontchartrain. The most important brackish water species of sport fish include the spotted seatrout, flounder, sheepshead, drum, Atlantic croaker, and gafftopsail catfish.

The aquatic fauna of Lake Pontchartrain is composed of typical brackish water species; however, the relatively low salinities allow the invasion of freshwater species. This factor, in turn, excludes many of the typically high salinity forms. Since most of the commercial species of fish and invertebrates are omnivorous, with organic detritus prominent in their diet, these species are dependent upon primary production which occurs in surrounding marshes and swamplands. The principal inflow of freshwater into Lake Pontchartrain is from the nutrient-poor acid soils of the pinelands to the north. Because of this, Lake Pontchartrain does not support the biomass and commercial fishery of other low salinity Louisiana estuaries which receive drainage from richer land areas; although it is an important fish and shellfish nursery area.

Darnell (1962) noted that only four organisms maintain large resident populations in Lake Pontchartrain. These include brackish water clams, a mud crab, and a calanoid copepod; and one vertebrate, the anchovy. According to Darnell, most of the remaining abundant species are migratory and spawn elsewhere, invading the lake as seasonal transients.

7. ARCHEOLOGICAL AND HISTORICAL ELEMENTS

Archeological evidence indicates that Indians were present in the Pontchartrain Basin by approximately 1800 B.C. (Saucier, 1963). Rangia cuneata have matured, spawned, and died for the past 9,000 years in Lakes Pontchartrain and Maurepas (Saucier, 1963). Numerous shell heaps in the area testify that mollusks were a basic part of their diet. The most widely utilized mollusks were a freshwater clam (Unio), a brackish-water clam (Rangia cuneata), and the oyster (Crassostrea virginica). At least 30 sites are known to have been destroyed and many others severely damaged in recent years, most of these in the New Orleans area. Residential and commercial establishments have damaged or destroyed these sites by construction on or near them.

Archeological sites on the south shore in St. Charles Parish and New Orleans East have been severely damaged by tidal action. Those sites which are directly on the lakeshore have been exposed to wave action and exhibit damage or truncation. In some cases, sites have been completely destroyed, but usually the shell and the more durable artifacts remain, concentrated by wave action along the nearby shore. Sites of this type, where none of the materials remain in their original location, are referred to as beach deposits. Since the collections from such an area include materials from all parts of the site and possibly several sites, there is a complete loss of stratigraphy.

In March, 1970, the Louisiana Archeological Survey, Department of Geography and Anthropology, Louisiana State University, Baton Rouge, contracted with the National Park Service in a concerted effort to determine, by way of a field survey, if any archeological remains exist along the paths of the hurricane protection project, one of several in Louisiana being directed by the Department of the Army, New Orleans District, Corps of Engineers. The archeological survey for sites in the proposed construction area of the hurricane protection project was conducted intermittently over a period of 7 days between June 8 and June 18, 1972 and resulted in a report (Neuman, 1970). The participants consisted of one archeologist and an assistant. Most of the survey was conducted by boat, but the areas in and around New Orleans and south of Bayou Terre aux Boeufs, in St. Bernard Parish, were surveyed by automobile and on foot. During the survey, two previously unrecorded sites were visited. Both sites are manifested as low-rise shell middens along the shore of Lake Pontchartrain, at the mouth of Bayou Piquant, in St. Charles Parish. Investigations at both sites would contribute substantial data to the relatively meager archeological record of this region.

8. ANTICIPATED ADVERSE ENVIRONMENTAL IMPACTS OF THE PLAN

Implementation of the project would involve the following types of adverse environmental impacts: (1) utilization and commitment of lands and water bottoms for project features, (2) conversion of natural habitats, including marshes, swamps, and woods to urban type uses, (3) loss of detrital input to the surrounding ecosystem and attendant loss in natural productivity of that ecosystem, (4) reduction of recreation opportunities, (5) loss of esthetic values (6) loss of, or damage to, archeological resources, and (7) deleterious alterations in water quality.

Adverse environmental impacts associated with the project are described, on a feature-by-feature basis, in the following paragraphs:

a. Lake Pontchartrain barrier. Construction, operation, and maintenance of the barrier will require the commitment of 2,056

acres of land in construction rights-of-way and spoil and borrow areas. The lands committed, which are predominantly marsh, will be permanently altered and the alteration will imply a loss of habitat and detrital impact to the associated estuarine ecosystem and a minor loss in the overall productivity of that system. Since the Seabrook complex may be operated to establish a fresher salinity regimen in Lake Pontchartrain than that which currently exists, there may be a reduction in those species of euryhaline fishes more tolerant of the higher salinities. Construction and maintenance operations will induce temporary increases in turbidity in surrounding water areas, with minor impact on water quality and flora and fauna. The imposition of structures, in particular the locks and control structures on the existing landscape will alter natural vistas.

Except for infrequent brief periods when approach and/or passage of a hurricane requires closure of the barrier structures, the only significant change in flow patterns in The Rigolets and Chef Menteur Passes which will be induced by the structures will be in the immediate vicinity of the structures and their associated transition channels, where flow velocities will be increased over those obtaining generally in the passes proper. Conditions elsewhere will remain the same and the cyclical reversals in flow induced by tidal action will continue to occur as they do now.

In the larval or very young stage, migrating species move with the flow, hence, the impact of the barrier structures on such organisms will be limited to increasing the rate at which they traverse a very small reach of the passes involved. Neither this effect, nor the interruption of flow occasioned by operation of the structures to prevent ingress of tidal surges will have any appreciable effect on the life patterns of larvae and very young migrating specimens.

More mature specimens will be subject to having their transits of the passes interrupted during periods of closure, and for the less mobile of these, during periods when velocities through the structures are too high for them to swim against, as well. Given the cyclical reversals of flow which will continue to occur, the delays involved have no significant implications insofar as these specimens are concerned.

b. St. Charles Parish levee. As previously explained, this feature is currently in a deferred status and additional studies would be required to adequately assess the environmental impacts. However, the following partial evaluation of adverse impacts associated with its construction are presented herein for information. The major adverse impacts resulting from this feature would derive from the alteration of 24,770 acres of marsh, swamp, and open-water bodies, inclusive of a total of 916 acres of rights-of-way which would be required for construction and maintenance of the levee. The levee would interdict tidal interchange in this area and establish the base conditions necessary for conversion of the area to urban-type uses. The loss of habitat, coupled with the drastic reduction in detrital input to Lake Pontchartrain, implies a significant loss in the natural productivity of the estuarine complex associated with Lake Pontchartrain. The natural esthetics of this large area would be permanently altered. Increased turbidity during construction and maintenance of the levee and associated drainage structure would disrupt the aquatic habitat and have temporary and minor effects on flora and fauna. Existing recreational opportunities in the area landward of the levee would be reduced. The area is extensively used for private hunting with 15 clubs having 250 members engaged in hunting ducks, deer, and squirrels. Annually, 18,000 ducks and coots are bagged. The area is extensively fished and crabbed. About 220,000 pelts of nutria, raccoon, mink, and otter are taken in the area each year. These activities would

decline rapidly after completion of the levee. Three Indian middens would be affected and require salvage. Two streams in the project area are included in the Natural and Scenic Rivers System of Louisiana - Bayous LaBranche and Trepagnier. Construction of the levee would necessitate closure of Bayou LaBranche near its mouth and rerouting of drainage flows therein to the outlet structures at Bayou Piquant, substantially altering the flow regimen in both Bayous LaBranche and Trepagnier. The project will result in development in the area and conversion to urban-type use. This, in turn, will cause a corresponding increase in environmental stresses associated with such use.

c. Orleans Parish - West of IHNC. Levee and floodwall construction will require the commitment of 75 acres of developed land to project use.

d. Orleans Parish - Citrus area. Levee and floodwall construction and maintenance will require the commitment of 370 acres of developed land to project use. Construction and maintenance activities will induce temporary increases in turbidity in Lake Pontchartrain, the MR-GO, and the GIWW, with attendant minor disruption to sport and commercial fishing and crabbing.

e. Orleans Parish - New Orleans East. Construction of levees and floodwalls will require the commitment of about 600 acres of leveed marsh for project use. Because tidal interchange in the area has already been interdicted by the existing system of embankments, the implications of this commitment to the overall natural productivity will be nominal. Excavation of borrow material from Lake Pontchartrain and the GIWW will result in temporary increases in turbidity in these water bodies with attendant minor disruption to sport and commercial fishing and crabbing. Provisions of higher degree of hurricane protection, as a result of the project, will tend to increase the rate of development in this area, engendering a corresponding increase in those environmental stresses associated with urban-type development.

f. Chalmette area. Construction, operation, and maintenance of the various features of the Chalmette Area Plan will require the commitment of 1,865 acres of lands for project use. Construction of the project will alter the condition of 16,312 acres of swamp and 2,322 acres of open water within the area to be protected. Initially, tidal interchange will be maintained. Conversion to urban-type uses will occur, however, and as it does, habitat will be lost as will detrital input to the associated estuarine ecosystem. These losses will impact adversely on the natural productivity of the estuarine complex. Construction and maintenance activities will induce temporary increases in turbidity in the MR-GO with minor impact on the commercial and sport fishery. Loss in recreational opportunity will result from the loss in natural productivity previously referred to. One Indian midden located south of the junction of the MR-GO and the GIWW already covered with spoil deposits, will be covered with additional spoil. The midden has been studied previously by archeologists.

Should the anticipated increase in rate of development in the protected areas occur, an increase in the quantities of solid and liquid wastes cannot be avoided. Disposal of these wastes will be accompanied by corresponding environmental stresses.

9. ANTICIPATED BENEFICIAL IMPACTS

The areas surrounding Lake Pontchartrain are susceptible to serious flooding from wind-driven hurricane tides from the lake.

This condition is aggravated by increases in lake level resulting from the influx of hurricane surges from Lake Borgne and the Gulf of Mexico. Overtopping of existing protective works along the south shore of the lake and flooding of developed areas have occurred several times in the past. Stages in Lake Pontchartrain resulting from a Standard Project Hurricane (SPH) would cause overtopping of all existing protective works by several feet resulting in ponding in developed areas, and the pumping system on which removal of all floodwaters is dependent, would be inoperable for an extended period of time.

The barrier levee, along with the barrier structures, when closed, will substantially reduce the inflow of hurricane tides into Lake Pontchartrain providing varying degrees of flood protection to 700 square miles of land. The Jefferson Parish area contains 21,500 acres which are subject to hurricane flooding from Lake Pontchartrain. The existing levee will be adequate after construction of the barrier structures. The New Orleans area consists of 16,800 acres located between the IHNC and the Jefferson Parish line. The area is protected on the east and west by levees and on the north by a seawall and adjacent back levee. The Citrus area consists of 14,800 acres bounded by New Orleans East, the IHNC, the MR-GO, and Lake Pontchartrain. This area has been drained for about 40 years and is protected from normal flooding by levees on the west, south, and east, and by a railroad embankment and levee along Lake Pontchartrain on the north. In New Orleans East 2,375 acres are partially drained marsh protected from normal flooding on the south, east, and west by levees along the GIWW and across the marsh and on the north by the Southern Railroad embankment.

About 348,000 acres of remaining land around Lake Pontchartrain, subject to flooding from hurricane tides, will have a reduction of flood stages as a result of construction of the barrier structures at The Rigolets and Chef Menteur Pass.

The Chalmette area consists of 49,050 acres subject to hurricane tidal overflow from the IHNC on the west and from Lake Borgne on the east. It is located in Orleans and St. Bernard Parishes along the left descending bank of the Mississippi River. Approximately 17,150 acres are partially protected at present.

The Seabrook control structure has the capacity to be variably regulated, allowing the management of a beneficial salinity regimen. The structure will be operated to provide a desirable salinity regimen in Lake Pontchartrain to the end that deleterious alterations in lake ecology will be avoided. This complex will allow salinities in Lake Pontchartrain to be adjusted as may be necessary for the maintenance of fish and wildlife resources. Since the outlet gates are of the vertical lift type and since the available flow area far exceeds the flow area needed for riparian users and for salinity control, the gates could be regulated to satisfy any flow requirements as would be necessary to satisfy these purposes.

The plan will provide for maintenance of the brackish water circulatory system. The openings in the Chef Menteur and Rigolets will not impede the movements of organisms between the Lake Pontchartrain-Lake Borgne complex. The hurricane protection project will not affect fish and wildlife resources to any major degree and sport

and commercial fish species will not experience extensive losses. The operation of the barrier at Seabrook will enhance long-term productivity in Lake Pontchartrain by increasing its viability as a nursery area in the form of improved nursery area. This enhancement will be accompanied by some reduction in harvest in the lake but, on balance, will substantially augment the productivity of the total estuarine complex in southeast Louisiana and Mississippi Sound.

Beneficial aspects of the Rigolets and Chef Menteur construction on and near the construction area are the formation of ponds for duck hunting and fishing in land area borrow excavations and the formation of deep fishing holes by removing borrow materials from the bottom of Lake Pontchartrain and other waterways. Spoil deposit results in higher ground elevations necessary for construction in this area. Higher elevations in spoil areas will lead to the invasion of these areas by trees, shrubs, and other upland plants. This increased elevation with associated vegetation will provide habitat in the form of food, shelter, and breeding sites for upland wildlife, including game species. The removing of bottom materials with the formation of deep holes creates desirable fishing spots for catfish, drum, and speckled trout.

10. ALTERNATIVES TO THE PROPOSED PLAN

Alternatives to the proposed action fall into three broad classes as follows:

- a. Fully responsive alternatives or those which would meet all major objectives of the proposed action.
- b. Partially responsive alternatives or those which would meet some, but not all, major objectives of the proposed action.
- c. No-action.

The available alternatives to the proposed action are discussed in the following paragraphs:

a. Lake Pontchartrain Barrier Plan - fully responsive alternatives

(1) Combine the Lake Pontchartrain Barrier Plan and the Chalmette Area Plan. Under such a plan, a controlling system of embankments and structures would be provided between Caernarvon and the Lake Pontchartrain barrier west of Chef Menteur Pass. This system would include a navigation gate in the MR-GO and a navigation lock in the GIWW. The navigation gate in the MR-GO would be operated in conjunction with the Lake Pontchartrain barrier, i.e., it would be closed only when it was necessary to close the barrier. The plan would permit reduced grades on the existing levee system along the MR-GO and the IHNC since these levees would no longer be required to confine hurricane surges, but only nonhurricane generated high tides. The plan would impede shallow-draft traffic in the GIWW during those periods when currents in the open lock would make passage hazardous or impossible. In addition, the restricted width of the lock would result in some delay to all traffic, even when the lock remained open, since it would be necessary to proceed slowly and with caution when transiting the open lock. Seagoing traffic in the MR-GO would be interrupted during periods when the barrier was closed. The plan would alter a 8,100-acre tract of prime estuarine marsh located between the western shore of Lake Borgne and the intersection of the MR-GO and the GIWW. Because of its severe impact on navigation, the plan would produce little incremental economic benefit over the proposed action, while the additional costs involved would be substantial - about four times

as great as the additional benefits. Beyond this, the plan would have negated any credit to local interests for the substantial expenses incurred by them in improving existing levee systems along the IHNC, MR-GO, and GTW.

(2) Eliminate the Lake Pontchartrain barrier and modify the levee system to retain the same extent and degree of protection provided by the proposed action. Under this plan, the barrier system would not be constructed and Lake Pontchartrain would remain open to the ingress of tidal surges. The grades of the levees included in the proposed action would be increased and new levee systems along the shores of Lake Pontchartrain would be included to provide protection to unleveed areas equivalent to that which they would receive from the reduction in hurricane stages in Lake Pontchartrain which the barrier would produce. Such a plan would cost on the order of three times as much as the proposed plan without any increase in economic benefits. The environmental disruption attendant to providing the additional levee systems along the shores of Lake Pontchartrain would be of major proportions.

b. Lake Pontchartrain Barrier Plan - partially responsive alternatives. The following partial alternatives are available:

(1) High level plan. Under this plan, the barrier would be eliminated and the grades of the levees included in the proposed plan raised sufficiently to accommodate the higher surge heights in Lake Pontchartrain which would result therefrom. Because of the extreme height of levees required and generally adverse foundation conditions, construction would have to be extended over a very long period of time to prevent failure by excessive subsidence. The high-level plan would be more costly than the recommended barrier plan and, in addition, was strongly opposed by local interests due to esthetic reasons. In addition, the recommended plan would lower the flood stages for all areas around the lake, thus providing some protection to many unleveed areas around the lakeshore.

(2) Eliminate St. Charles Parish levee. Under this alternative, all of the features of the proposed action other than the St. Charles Parish levee would be constructed. The environmental disruption attendant to construction of the levee and alteration of 23,770 acres of marsh and swamp habitat would be avoided. Conversely, the opportunity to develop that marsh and swamp for urban-type uses would be foregone. All impacts on those streams included in the Louisiana Natural and Scenic Rivers System, Bayous Trepagnier and LaBranche, would be avoided. As indicated elsewhere herein, the present state of knowledge will not permit definitive determination of the overall impact of the alteration of the large area of marsh and swamp on the associated ecosystem.

(3) Relocate St. Charles Parish levee to vicinity of Airline Highway (US Highway 61). Under this alternative, the proposed action would be modified by locating the St. Charles levee from the lakefront to near the Airline Highway. This action would provide protection from tidal flooding to presently developed areas. It would approach the effectiveness of the alternative discussed previously in avoiding adverse environmental impacts. It would greatly reduce the opportunities for additional urban-type development as compared with the proposed action, and would, as a result, lack economic justification. It would eliminate any direct impact on Trepagnier and LaBranche.

(4) Eliminate New Orleans East levees. Unlike St. Charles Parish, the New Orleans East area currently has a substantial degree of protection from tidal flooding, hence the environmental impact of the proposed action in this area would be minor. Elimination of those features of the proposed action intended

to increase the protection extent - the New Orleans East lakefront levee, improvements to the New Orleans East back levee, and the South Point to GIWW levee - would avoid the commitments of land necessary for providing those features. It would probably lead to some reduction in the rate of development of the area. It would leave the area subject to massive overflow by major hurricane occurrences and the development now located therein subject to major hurricane damage.

(5) Eliminate all features of the proposed action except the Lake Pontchartrain barrier. Under this alternative, areas now protected by levees would have increased degrees of protection. Areas not protected by levees would have increased degrees of protection, since they would sustain a reduction of the incidence of hurricane overflow. The existing protected areas would remain under a substantial threat of massive overflow by major tidal storms which would cause major damage and probable loss of life. This alternative would, since the barrier involves only minor adverse impacts, approach the alternative of no action in this regard.

c. Chalmette Area Plan - fully responsive alternatives. Other than the combined Lake Pontchartrain Barrier-Chalmette Area Plan previously described, there are no practicable alternatives which would meet all of the major objectives of the proposed action.

d. Chalmette Area Plan - partially responsive alternatives

(1) Locate the levees to follow alignments of existing levees wherever practicable. This alternative would involve essentially the improvement of existing levee systems from the IHNC to near Caernarvon. It would avoid the potential alteration of 31,000 acres of swamp and estuarine marsh inherent in the proposed action and preserve the contribution that the area makes to the productivity of the associated estuarine ecosystem. Conversely, it would forego the opportunity for converting the area to urban-type use.

e. No action. The alternative of no action would preserve, for a time, the existing environmental dynamics of the area. It would leave the area subject to massive overflow from hurricanes, with attendant major economic loss, social disruption, and a potential for extensive loss of life.

The project area has experienced many severe hurricanes and lesser storms which have caused loss of life and damage to property. Official National Weather Service meteorological records are not available prior to 1893 and most accounts of storms prior to 1893 are obtained from newspapers and historical documents. Because a large portion of the area was relatively uninhabited, it can be assumed that some historical flooding went unobserved.

The project area surrounding Lake Pontchartrain is susceptible to flooding from wind-driven hurricane tides from the lake. This condition is aggravated by increases in lake level resulting from the influx of surges from Lake Borgne and the Gulf of Mexico that accompany hurricanes from the southeast, south, and southwest. Historical hurricanes have produced recorded stages up to 13 feet on the southwest shore of the lake, 6.2 feet on the south shore, 7.1 feet at the southeast shore, and 7.7 feet at the north shore. Overtopping of protective works and flooding of developed areas have occurred several times during recent hurricanes. On several occasions, the marsh area between Lake Pontchartrain and Lake Borgne has been flooded by stages up to 11 feet. Much of the developed area in Orleans and Jefferson Parishes is below lake

level, some land being as low as -7 feet, with a considerable portion lower than -2 feet. In some areas, flooding as deep as 16 feet above ground level could result from severe overtopping. Stages attending an SPH would cause overtopping of all existing areas. The pumping system on which removal of all flood waters is dependent would be inoperable for an extended period of time. This prolonged inundation would cause enormous damage to private and public property, create serious hazards to life and health, disrupt business and community life, and require immense expenditure of public and private funds for evacuation and subsequent rehabilitation of local residents. The potential for damage and disruption was well demonstrated in September 1965 when Hurricane Betsy passed west of New Orleans. Although this is not the most critical path for a project design hurricane, 18,260 homes and 837 commercial establishments were flooded in the project area, and some 80 persons lost their lives.

Urbanization of the project area would proceed at a reduced pace if the hurricane protection plan were not implemented. The no-action alternative would retard the environmental changes that would, under the proposed action, convert marsh-swamp ecosystems in St. Charles Parish and New Orleans East to urbanization. While the role of New Orleans East area as an important contributor to the associated ecosystem has been effectively negated by existing protective works and development, the St. Charles Parish area remains an important part of the large estuarine ecosystem of the Lake Pontchartrain Basin. The marsh-swamp complex which would be irretrievably lost to urbanization through the project, would likely be lost at a lesser rate in any event from expansion of the metropolitan New Orleans area in the future. This will slowly occur in the less densely populated areas, regardless of implementation of the hurricane protection project. Landfill through garbage disposal is presently occurring in the St. Charles Parish swamp north of the Airline Highway (US Highway 61). Construction of Interstate 10 through New Orleans East has greatly enhanced the potentials for land development in that area. The increasing population of the New Orleans area is restricted in expansion to the north by Lake Pontchartrain and to the south by the Mississippi River. The inevitable expansion will be to the east and west; namely, New Orleans East and St. Charles Parish.

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DISPOSAL OF DREDGED MATERIAL

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT

The "Section 404" portion of this meeting is being conducted in accordance with provisions of established Federal regulations, Title 33 CFR 209.145, concerning the policy, practice, and procedures to be followed by the Corps of Engineers in connection with the disposal of dredged material in navigable waters or the transportation of dredged material for the purpose of dumping it in ocean waters, associated with Federal projects.

A public notice was distributed on 29 November 1974 to all interested state and Federal agencies and known interested persons in order to assist in developing facts and recommendations concerning the proposed continuation of project construction by hydraulic dredging operations. Comments regarding this portion of the meeting should be submitted to the District Engineer at the meeting or forwarded to the address at the beginning of this announcement before 24 March 1975.

Laws under which the proposed dredging is to be reviewed:

Federal Water Pollution Control Act of 1972
Coastal Zone Management Act of 1972
Fish and Wildlife Act of 1956
Migratory Marine Game-Fish Act
Fish and Wildlife Coordination Act
Endangered Species Act of 1973
National Historic Preservation Act of 1966
Marine Protection, Research and Sanctuaries Act of 1972

Project. Lake Pontchartrain, Louisiana and Vicinity hurricane protection.

Project location. The project is located in Southeastern Louisiana in the vicinity of Lake Pontchartrain and includes the City of New Orleans and surrounding areas.

Project description. The project is divided into five units. They are as follows:

- a. Barrier unit.
 - (1) Chef Menteur Complex
 - (2) Rigolets Complex
 - (3) Seabrook Complex
- b. New Orleans East unit.
 - (1) Citrus Back Levee
 - (2) New Orleans East Back Levee
 - (3) New Orleans East South Point to GIWW Levee
 - (4) New Orleans East Lakefront Levee
 - (5) Citrus Lakefront Levee
 - (6) IHNC East Levee and Floodwalls
 - (7) IHNC West Levee and Floodwalls
 - (8) New Orleans Lakefront Levee
- c. Chalmette unit - Chalmette Area Plan
- d. New Orleans West unit
 - (1) Jefferson Parish Lakefront Levee

(2) St. Charles Parish Lakefront Levee (Deferred)

e. Mandeville unit - Mandeville Seawall

"Section 404" will cover the Barrier, the New Orleans East, and the Chalmette units.

The dredging work within these units consists of constructing new levees and closure dams, enlarging existing non-Federal levees, and constructing flood control structures, navigation structures and connecting navigation and approach channels.

New levees will be constructed and existing non-Federal levees will be enlarged by first pumping dredged material to the levee fill areas and then shaping this material at a later date into a levee section.

Navigation and approaching channels will be constructed by dredging these areas and pumping this material to the levee fill areas and/or ponding areas.

The Chef Menteur closure dam will be constructed in the existing Chef Menteur Pass by means of hydraulic fill. This fill material will be obtained from the borrow area within the channel of the pass.

The Rigolets closure dam will be constructed of a cellular sheetpile wall topped with hydraulic sand fill from borrow areas in the Rigolets.

Disposal areas. The disposal areas for the subject units are as follows:

a. Barrier unit. The disposal areas are located in the vicinity of Chef Menteur Pass, Lake Borgne and the Gulf Intracoastal Waterway, and in the vicinity of the Rigolets, Lake St. Catherine, and Stump Lagoon. (See attached drawing for specific locations.)

b. New Orleans East unit. The disposal areas are located on the north bank of the Gulf Intracoastal Waterway from the Inner Harbor Navigation Canal to approximately Bayou Thomas, and along the landside of the railroad tracks along the south shore of Lake Pontchartrain from Paris Road to South Point. Unloading and stockpile sites for barged levee material and riprap are located along the south shore of Lake Pontchartrain. (See attached drawing for specific locations.)

c. Chalmette unit. The disposal areas are located on the south bank of the Mississippi River-Gulf Outlet from the Inner Harbor Navigation Canal to a point opposite Verret, Louisiana, and from there to Caernarvon Louisiana.

Method of dredging. Pipeline and bucket dredges will be utilized in the three subject units.

Quantities of material to be removed.

- a. Barrier unit. Approximately 36,000,000 cubic yards.
- b. New Orleans East unit. Approximately 14,000,000 cubic yards.
- c. Chalmette unit. Approximately 20,000,000 cubic yards.

Composition of material to be removed. The material to be removed from the clay borrow areas consists of very soft clay with peat and organic matter, very soft to fat clays with layers of silt, sandy silt, sand, and Pleistocene clays.

The material to be removed from the sand borrow areas consists of sand, silt, and silty sand.

Proposed time schedule for dredging.

a. Barrier unit.

(1) Chef Menteur Complex. Dredging is presently scheduled to begin in September 1975 and will be completed in 1990. The dredging will not be continuous within this time frame.

Aquatic vegetation of Lake Pontchartrain was surveyed and approximately 2,000 acres of the lake bottom are vegetated with eelgrass (wild celery), widgeongrass, and southern naiad. The greatest concentration of these submerged aquatics exists from Green Point, just east of Fontainebleau State Park, to Big Point, just west of Louisiana Highway 11. In the deeper waters of the interior of the lake, the vegetation consists primarily of phytoplankton.

Chabreck, Palmisano, and Joanen (1968) prepared a vegetative type map of marsh types in coastal Louisiana. Brown (1973) prepared a map of all vegetative types in Louisiana. These maps show the extent of habitat in the project area.

6. ZOOLOGICAL ELEMENTS

The forested swamp areas are used primarily by the raccoon, opossum, white-tailed deer, squirrels, and swamp rabbits. Portions of the wooded swamp are useful to waterfowl, primarily wood ducks and mallards. The American alligator occurs in the swamps and marshes and is listed by the US Department of the Interior, US Fish and Wildlife Service, as a rare and endangered species.

The marsh areas are used by rabbits, nutria, muskrat, mink, and migratory waterfowl. Migratory waterfowl using the area include the gadwall, widgeon, blue-winged and green-winged teal, lesser scaup, redhead, pintail, canvasback, mallard, shoveler, and a few blue and snow geese. Mottled ducks nest in the marshes and inhabit them year-round. Other birds present include the snipe, rails, gallinules, dowitches, egrets, herons, and hawks.

Freshwater commercial fishing is almost nonexistent in the project area. Commercial harvesting of brackish water fishery resources, including the brackish water clam, oyster, blue crab, brown and white shrimp, and sport fish, occurs in Lakes Borgne and Pontchartrain. The most important brackish water species of sport fish include the spotted seatrout, flounder, sheepshead, drum, Atlantic croaker, and gafftopsail catfish.

The aquatic fauna of Lake Pontchartrain is composed of typical brackish water species; however, the relatively low salinities allow the invasion of freshwater species. This factor, in turn, excludes many of the typically high salinity forms. Since most of the commercial species of fish and invertebrates are omnivorous, with organic detritus prominent in their diet, these species are dependent upon primary production which occurs in surrounding marshes and swamplands. The principal inflow of freshwater into Lake Pontchartrain is from the nutrient-poor acid soils of the pinelands to the north. Because of this, Lake Pontchartrain does not support the biomass and commercial fishery of other low salinity Louisiana estuaries which receive drainage from richer land areas; although it is an important fish and shellfish nursery area.

Darnell (1962) noted that only four organisms maintain large resident populations in Lake Pontchartrain. These include brackish water clams, a mud crab, and a calanoid copepod; and one vertebrate, the anchovy. According to Darnell, most of the remaining abundant species are migratory and spawn elsewhere, invading the lake as seasonal transients.

7. ARCHEOLOGICAL AND HISTORICAL ELEMENTS

Archeological evidence indicates that Indians were present in the Pontchartrain Basin by approximately 1800 B.C. (Saucier, 1963). Rangia cuneata have matured, spawned, and died for the past 9,000 years in Lakes Pontchartrain and Maurepas (Saucier, 1963). Numerous shell heaps in the area testify that mollusks were a basic part of their diet. The most widely utilized mollusks were a freshwater clam (Unio), a brackish-water clam (Rangia cuneata), and the oyster (Crassostrea virginica). At least 30 sites are known to have been destroyed and many others severely damaged in recent years, most of these in the New Orleans area. Residential and commercial establishments have damaged or destroyed these sites by construction on or near them.

Archeological sites on the south shore in St. Charles Parish and New Orleans East have been severely damaged by tidal action. Those sites which are directly on the lakeshore have been exposed to wave action and exhibit damage or truncation. In some cases, sites have been completely destroyed, but usually the shell and the more durable artifacts remain, concentrated by wave action along the nearby shore. Sites of this type, where none of the materials remain in their original location, are referred to as beach deposits. Since the collections from such an area include materials from all parts of the site and possibly several sites, there is a complete loss of stratigraphy.

In March, 1970, the Louisiana Archeological Survey, Department of Geography and Anthropology, Louisiana State University, Baton Rouge, contracted with the National Park Service in a concerted effort to determine, by way of a field survey, if any archeological remains exist along the paths of the hurricane protection project, one of several in Louisiana being directed by the Department of the Army, New Orleans District, Corps of Engineers. The archeological survey for sites in the proposed construction area of the hurricane protection project was conducted intermittently over a period of 7 days between June 8 and June 18, 1972 and resulted in a report (Neuman, 1970). The participants consisted of one archeologist and an assistant. Most of the survey was conducted by boat, but the areas in and around New Orleans and south of Bayou Terre aux Boeufs, in St. Bernard Parish, were surveyed by automobile and on foot. During the survey, two previously unrecorded sites were visited. Both sites are manifested as low-rise shell middens along the shore of Lake Pontchartrain, at the mouth of Bayou Piquant, in St. Charles Parish. Investigations at both sites would contribute substantial data to the relatively meager archeological record of this region.

8. ANTICIPATED ADVERSE ENVIRONMENTAL IMPACTS OF THE PLAN

Implementation of the project would involve the following types of adverse environmental impacts: (1) utilization and commitment of lands and water bottoms for project features, (2) conversion of natural habitats, including marshes, swamps, and woods to urban type uses, (3) loss of detrital input to the surrounding ecosystem and attendant loss in natural productivity of that ecosystem, (4) reduction of recreation opportunities, (5) loss of esthetic values (6) loss of, or damage to, archeological resources, and (7) deleterious alterations in water quality.

Adverse environmental impacts associated with the project are described, on a feature-by-feature basis, in the following paragraphs:

a. Lake Pontchartrain barrier. Construction, operation, and maintenance of the barrier will require the commitment of 2,056

LAKE PONTCHARTRAIN, LA & VICINITY
 HURRICANE PROTECTION
 PROJECT
BARRIER UNIT
 DATE NOVEMBER, 1974

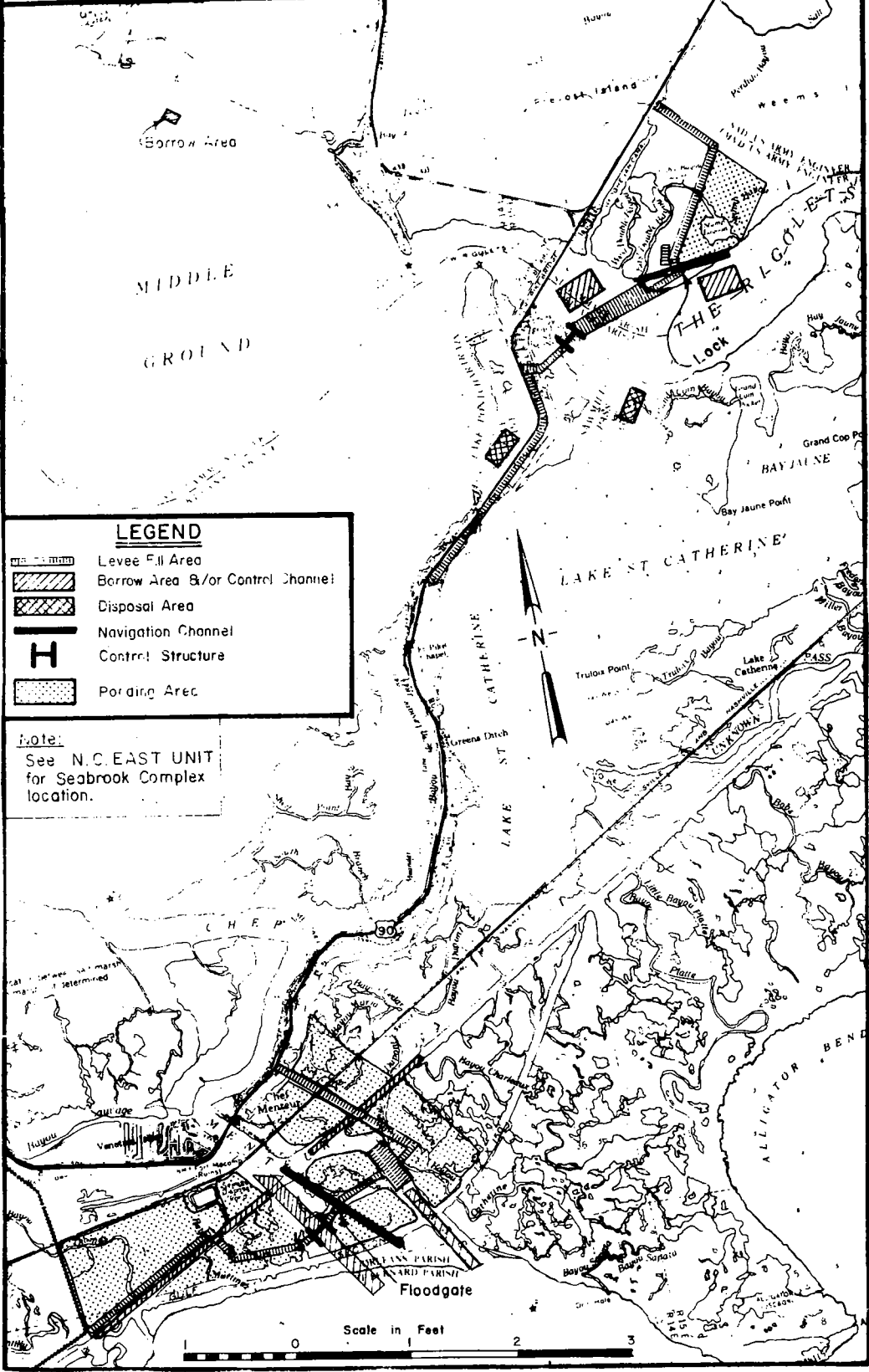
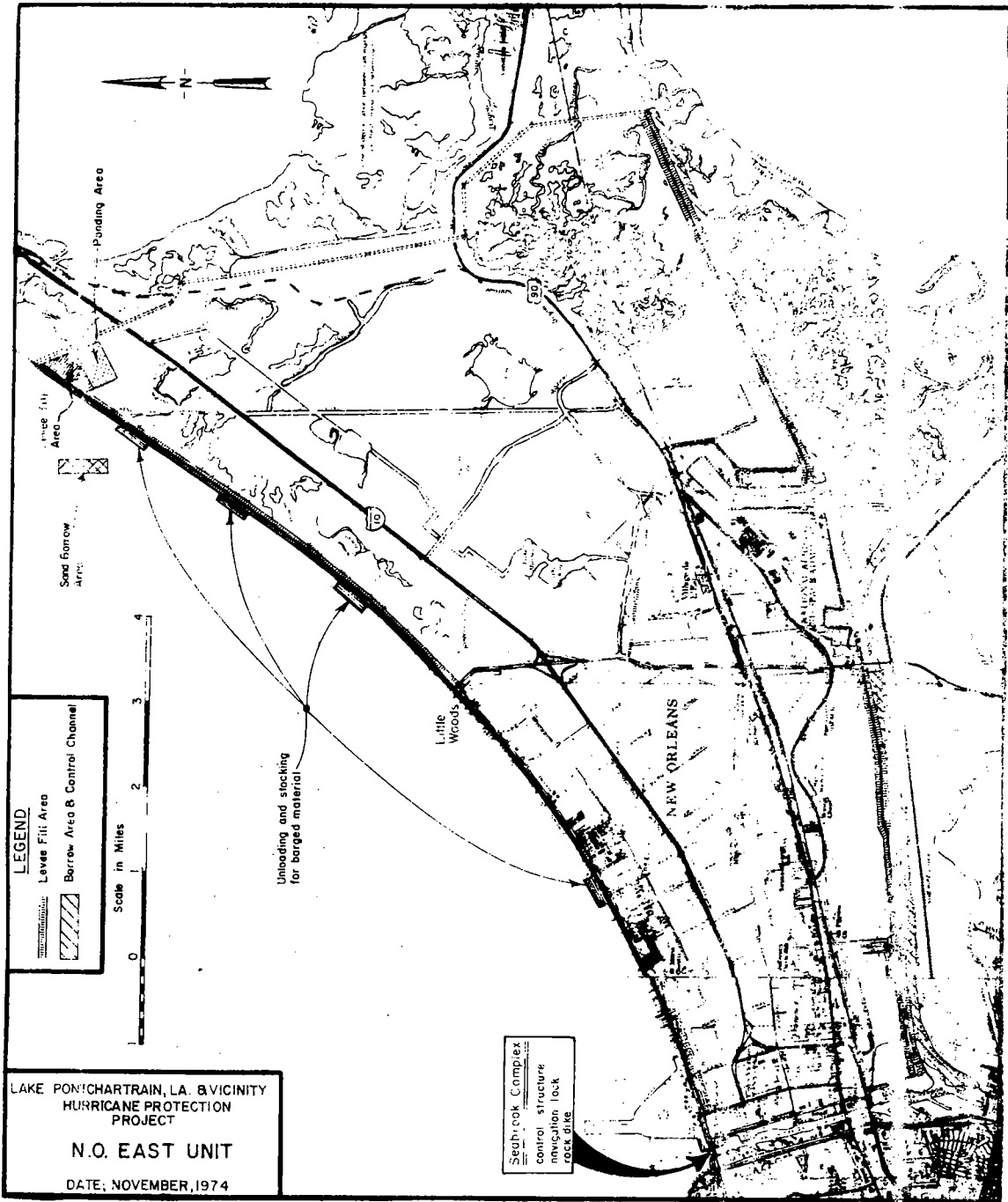
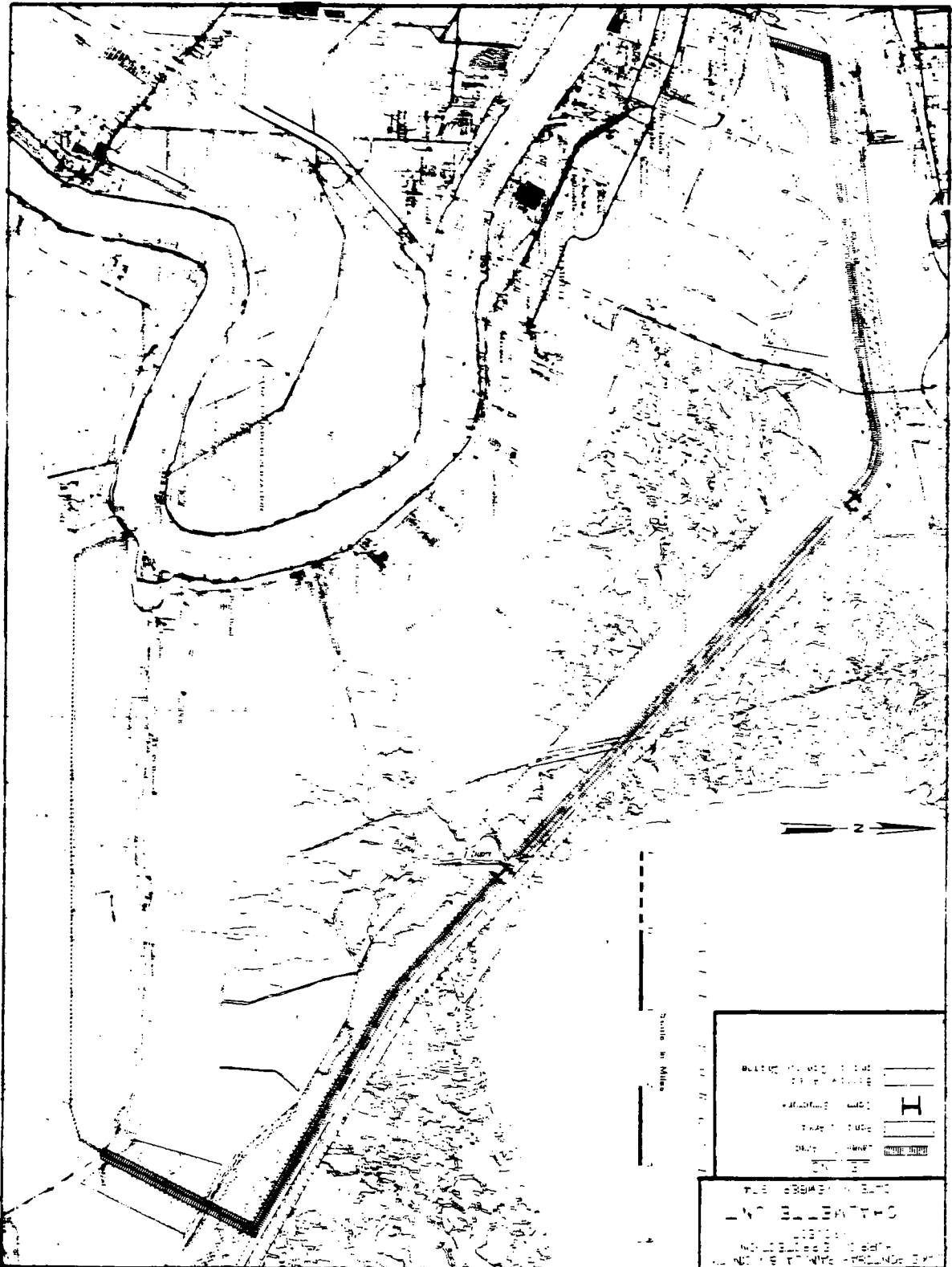


EXHIBIT 2-26





AGENDA

PUBLIC MEETING TO DISCUSS
THE LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
AND
PLANS FOR DISPOSAL OF DREDGED MATERIALS
(IN COMPLIANCE WITH SECTION 404 OF
THE FEDERAL WATER POLLUTION CONTROL ACT OF 1972)

University Center Ballroom
University of New Orleans
New Orleans, Louisiana

Saturday, 22 February 1975
9 a.m.

Expected Time
Schedule

REGISTRATION 8:30-9:00 a.m.

INTRODUCTORY REMARKS 9:00 a.m.

Mr. Daniel V. Cresap, P.E., Chief Engineer
State of Louisiana Department of Public Works

Col. E. R. Heiberg III, District Engineer
US Army Engineer District, New Orleans

BACKGROUND INFORMATION AND DESCRIPTION OF PROJECT PLAN 9:15 a.m.

Mr. Richard P. Richter, Project Engineer
Mr. Stanley C. Shelton, Project Engineer
Design Memo Branch
US Army Engineer District, New Orleans

PRESENTATION OF ENVIRONMENTAL CONSIDERATIONS 9:45 a.m.

Glen N. Montz, Ph.D.
Environmental Resources Branch
US Army Engineer District, New Orleans

DISCUSSION OF THE DISPOSAL OF DREDGED MATERIALS (SECTION 404 10:00 a.m.
OF THE FEDERAL WATER POLLUTION CONTROL ACT OF 1972)

Mr. C. Harold Hart, Chief of Levees Section
Design Branch
Mr. Billy J. Garrett, Chief of Hydrologic Engineering Section
Hydraulics and Hydrologic Branch
US Army Engineer District, New Orleans

*PRESENTATION OF STATEMENTS BY PUBLIC OFFICIALS 10:15 a.m.

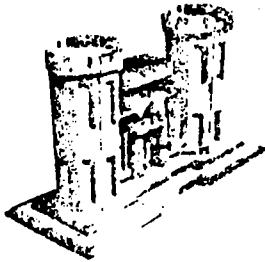
LUNCH BREAK 12:00 noon

*PRESENTATION OF STATEMENTS BY ORGANIZATIONS AND INDIVIDUALS 1:00 p.m.

Anyone desiring to make an oral presentation

SUMMARY AND CLOSE After
Colonel Heiberg presentation
of all
statements

*NOTE: There is expected to be a large amount of public interest in this meeting/
hearing. In order to be fair to all who desire to make oral presentations,
and in view of the fact that all written presentations will be considered
and made part of the official record, the presiding officer will limit
individual oral presentations to five minutes maximum. Elected officials,
officials representing bodies, and prominent groups with comprehensive
statements may, by prior arrangement, make longer statements orally.



NEWS RELEASE

NEW ORLEANS DISTRICT, U. S. ARMY CORPS OF ENGINEERS
FOOT OF PRYTANIA STREET, POST OFFICE BOX 60267
NEW ORLEANS, LOUISIANA 70160

FOR IMMEDIATE RELEASE

January 23, 1975

A public meeting to discuss all aspects of the Lake Pontchartrain and Vicinity hurricane protection project, and a hearing on procedures for the disposal of project-related dredged materials, as required by Section 404 of the Federal Water Pollution Control Act of 1972, will be held in New Orleans on Saturday, February 22. It will be held at the University of New Orleans in the University Center Ballroom (room 203) beginning at 9 a.m., according to Colonel E. R. "Vald" Heiberg III, New Orleans District Engineer, who will conduct the combined meeting.

The hurricane protection project was authorized by Congress in 1965, following the extensive loss of life and property damage of over \$100 million in the Greater New Orleans area from hurricane Betsy.

The project is designed to provide flood protection against the forces of hurricanes of a size and intensity that have occurred in the area or that US Weather Service data

MORE

EXHIBIT 3-1

add 1

indicates can occur. A variety of possible hurricane tracks are considered in the plan.

There are two major independent systems in the project; the Lake Pontchartrain Barrier Plan and the Chalmette Area Plan.

The elements of the basin plan include:

1. Improvement of existing levees along the lakeshore of Jefferson Parish and New Orleans from the St. Charles-Jefferson Parish line to the Inner Harbor Navigation Canal (IHNC).

2. Construction of new levees along the lakeshore of Lake Forest and New Orleans East from the IHNC to South Point.

3. Improvement of existing levees from South Point to the Gulf Intracoastal Waterway (GIWW), continuing along the northern bank of the GIWW and the Mississippi River-Gulf Outlet (MR-GO) from a point near Chef Menteur Pass to the IHNC.

4. Construction of levees and floodwalls along both banks of the IHNC.

5. The Rigolets Complex. This complex includes a gated flood control structure with approach channels, a navigation lock with approach channels, and a closure dam to link the control structure and lock across a portion of the natural

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pass. These structures are connected to the US Highway 90 embankment north and south of the Rigolets by earthen levees.

6. The Chef Menteur Complex. This complex includes a gated flood control structure with approach channels, a navigation structure with approach channels, and a closure dam to close the natural pass. These structures are connected to the US Highway 90 embankment east of the complex and with the New Orleans East levee system west of the complex. A realignment of the Gulf Intracoastal Waterway at this location is required to provide uninterrupted navigation along that waterway.

7. The Seabrook Complex. This complex includes a gated flood control structure to pass flows as desired, a navigation lock, and a connecting rock dike.

8. Strengthening and repair of the existing floodwall in Mandeville, La. (Planning on this feature is currently inactive due to the lack of financial participation in the project by St. Tammany Parish sponsors.)

9. Extension of the barrier to the east side of the junction of US Highways 90 and 190 and then northerly along US Highway 190.

10. The barrier plan as initially authorized by Congress provided for construction of a new earthen levee along the St. Charles Parish lakeshore from the Bonnet Carre Floodway to

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the St. Charles-Jefferson Parish line. The inclusion of Bayous Trepagnier and La Branche in the Louisiana Natural and Scenic Rivers System currently forecloses the possibility of proceeding with the levee without contravening State law. Should the impediment imposed by the Natural and Scenic Rivers System be removed in the future, additional studies will be needed to fully evaluate the relationship of the marsh to the surrounding ecosystem, and provide a basis for a decision on whether the levee should be built. Accordingly, construction of the feature of the project has been indefinitely deferred.

The Chalmette Area Plan is a wholly independent protective system included in the overall hurricane protection project, since the Chalmette area is outside of the influence of the barrier complexes. This plan consists of the following features:

1. Construction of a levee and floodwall system from the Mississippi River levee in New Orleans along the east bank of the IHNC and the south banks of the GIWW and MR-GO to the vicinity of Verret, La., with a return levee from Verret to the Mississippi River levee at Caernarvon, La.

2. Construction of navigable floodgates on Bayous Bienvenue and Dupre near their junctions with the MR-GO.

Colonel Heiberg noted that he considered a combined meeting and hearing to be clearly in the public interest. This dual

MORE

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meeting will allow citizens interested in both larger project issues, and who also desire to provide comments on the narrower issue of dredged material disposal, to come one time. After listening to a general discussion, they may provide comments, if desired, on either the overall project or on the narrower issue of dredged material.

The "Section 404" portion of the meeting will be conducted in accordance with provisions of established Federal regulations, Title 33 CFR 209.145, concerning the policy, practice, and procedures to be followed by the US Army Corps of Engineers in connection with the disposal of dredged material in navigable waters or the transportation of dredged material for the purpose of dumping it in ocean waters, associated with Federal projects.

Also, the "Section 404" portion of the meeting will discuss plans and procedures for dredging operations associated with the construction of various project features. The proposed dredging work consists of constructing new levees and closure dams, enlarging existing levees, and constructing approach channels to the flood control and navigation structures included in the project.

All interested parties are invited to be present or be represented at the meeting. All will be afforded full opportunity to express their views concerning any and all

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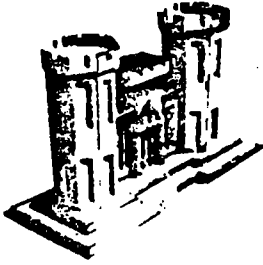
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aspects of the project, including the environmental statement which is now on file with the President's Council on Environmental Quality as required by the National Environmental Policies Act of 1969. Interested persons may obtain a copy by written request to the Corps of Engineers.

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Released by BRUCE A. SOSSAMAN, Public Affairs Office,
865-1121, Ext. 201.

EXHIBIT 3-6



NEWS RELEASE

NEW ORLEANS DISTRICT, U. S. ARMY CORPS OF ENGINEERS
FOOT OF PRYTANIA STREET, POST OFFICE BOX 60267
NEW ORLEANS, LOUISIANA 70160

FOR IMMEDIATE RELEASE

February 19, 1975

REMINDER: LAKE PONTCHARTRAIN PUBLIC MEETING

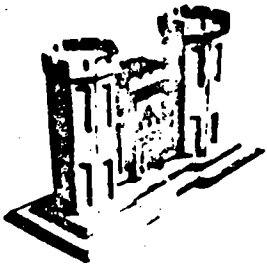
A public meeting to discuss the Lake Pontchartrain and Vicinity hurricane protection project, and a hearing on procedures for the disposal of project-related dredged materials, as required by Section 404 of the Federal Water Pollution Control Act of 1972, will be held in New Orleans this Saturday, February 22. The meeting will begin at 9 a.m. at the University of New Orleans in the University Center Ballroom (Room 203). Col. E.R. "Vald" Heiberg III, New Orleans District Engineer for the U.S. Army Corps of Engineers, will conduct the combined meeting.

Registration will begin at 8:30 a.m. The meeting will begin at 9 a.m. with a Corps presentation of background information, environmental considerations, a description of the project plan, and the purpose of the meeting. Elected officials and representatives of Governmental agencies will also make presentations prior to the luncheon break. Presentations by the public will begin at 1 p.m.

-30-

Released by BRUCE A. SOSSAMAN, Public Affairs Office, 865-1121, Ext. 201.

EXHIBIT 4



NEWS RELEASE

NEW ORLEANS DISTRICT, U. S. ARMY CORPS OF ENGINEERS
FOOT OF PRYTANIA STREET, POST OFFICE BOX 60267
NEW ORLEANS, LOUISIANA 70160

FOR IMMEDIATE RELEASE

March 26, 1975

The time period for submitting written testimony to be included in the record of the Lake Pontchartrain and Vicinity Hurricane Protection Project public meeting held on February 22, 1975 has been extended to Monday, April 7, 1975.

New Orleans District Engineer Colonel E. R. "Vald" Heiberg III, U.S. Army Corps of Engineers, said the two-week extension, based on a request by the State of Louisiana, is being made to allow all possible testimony to be included in the public record of the meeting. "This will help in the decision-making process, particularly in a project of the significance and impact of the Lake Pontchartrain project," he said.

The meeting, held at the University of New Orleans, combined discussions on both the hurricane protection project, and procedures for the disposal of project-related dredged materials, as required by the Federal Water Pollution Control Act of 1972.

Written statements may be mailed to the Office of the District Engineer, U.S. Army Engineer District, New Orleans, P.O. Box 60267, New Orleans, La. 70160.

- 30 -

Released by BRUCE A. SOSSAMAN, Public Affairs Office, 865-1121, ES

EXHIBIT 5



ROY AGUILLARD
DIRECTOR

State of Louisiana

DEPARTMENT OF PUBLIC WORKS

P. O. BOX 44155, CAPITOL STATION
BATON ROUGE, LOUISIANA 70804

BOARD OF PUBLIC WORKS

GEORGE CHANEY, CHAIRMAN
EMMETT A. EYMARD
P. P. VERRETT, SR.
RICHARD P. GIBSON
ROLAND CARTER

February 20, 1975

Colonel Elvin R. Heiberg, III
New Orleans District Engineer
Corps of Engineers, U. S. Army
Post Office Box 61267
New Orleans, Louisiana 70160

Dear Colonel Heiberg:

This is in response to your announcement dated January 22, 1975, of a public meeting to discuss the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project and plans for disposal of dredged materials as required by the Federal Water Pollution Control Act of 1972.

The Louisiana Department of Public Works has been designated as the state agency responsible for the coordination of all Federal projects in Louisiana related to the control, navigation, hurricane protection, and related water resources projects. In addition, the Governor of Louisiana has also designated this Department as the coordinator for the Lake Pontchartrain and Vicinity Hurricane Protection Project. In this role, we are responsible for coordinating the Federal Project with the affected State and local interest to insure the best possible protection system for this area of the State of Louisiana. It is in this position, that we present these comments today for your consideration on this project.

The Lake Pontchartrain and Vicinity Project was authorized by the Flood Control Act of 1965. The purpose of this project is to provide adequate hurricane protection to the Greater New Orleans Metropolitan Area including all or portions of some ten (10) parishes, the principal beneficiaries being Jefferson, Orleans, St. Bernard, and St. Tammany Parishes. The project as you have outlined today consists of a series of levees, flood walls, control structures and locks to provide protection of this area against hurricane generated tides.

The need for this type project in this area has been dramatically indicated in the passage of several major hurricanes, such as Betsy in 1965, and Carmen in 1969. A considerable portion of the

EXHIBIT 7-1

Colonel Elvin R. Heiberg, III

February 20, 1975

Page 2

damages suffered by this area could have been alleviated had the project been completed at this time. The New Orleans Metropolitan Area is the major urban area of Louisiana and in fact, this entire region of the United States. This highly populated and industrialized section deserves the best available protection that can be devised in order to insure the continued and orderly development of our economy, as well as, protecting the lives and properties of its citizens. We believe the proposed plan of development provides this protection and the completion of this project at the earliest possible date is urgently needed. The existing protective facilities are inadequate to insure the protection of this area.

The environmental aspects of this project have already been thoroughly documented and commented on by interested local, state, and national agencies, as well as, the general public. The Environmental Impact Statement for this project has been filed with the President's Council on Environmental Quality as required by the NEPA Act of 1969. Therefore, no further comments are considered necessary as pertains to this statement.

Section 404 of the Federal Water Pollution Act of 1972, requires public meetings, when appropriate, to consider the dredging and disposal of material in navigable waters as associated with Federal projects. The term "spoil disposal" is inappropriate in regard to this project since we are discussing the construction of earth embankments for hurricane protection to this area. The dredging is, of course, necessary in order to obtain material to construct the embankments required.

The areas designated as spoil disposal areas are coincidental with and pertain directly to the embankment location. These areas are adequately defined on the project plans and also indicated on drawings furnished with your hearing notice. In most cases, these areas have already been utilized in the construction of the hurricane levees, and land use will not be changed from that already established. Primary consideration, in regard to spoil disposal, dredging operations and effluent discharges, should be directed toward the establishment of locations which will provide the least disturbance to the existing ecological balance of this area. Since this area of our State is a highly productive shell fish and sea food area, care should be exercised in all operations near existing oyster levees and other productive sites. We will work very closely with your District and with other appropriate state and local agencies in the development of satisfactory plans to accommodate these features.

DEPARTMENT OF PUBLIC WORKS


Colonel Elvin R. Heiberg, III

February 20, 1975

Page 3

It is hoped that today's meeting will provide additional impetus to proceeding with this project as rapidly as funding will permit. We appreciate the opportunity to participate and comment on these features of the project and look forward to a continued and early completion of this project.

Sincerely yours,


ROY AGUIARD
DIRECTOR

ART:sls

EXHIBIT 7-3

STATEMENT OF THE LOUISIANA WILD LIFE AND FISHERIES COMMISSION

LAKE PONTCHARTRAIN HURRICANE PROTECTION PLAN

PUBLIC MEETING, SATURDAY, FEBRUARY 22, 1975

NEW ORLEANS, LOUISIANA

THE LOUISIANA WILD LIFE AND FISHERIES COMMISSION APPRECIATES THE OPPORTUNITY TO APPEAR AT THIS MEETING AND PROVIDE OUR COMMENTS AS THEY RELATE TO THE FISH AND WILDLIFE INTERESTS WITHIN THE PROJECT AREA.

THE COMMISSION HAS BEEN INTERESTED IN THIS PROJECT SINCE THE DISCUSSIONS OF A PROPOSED HURRICANE PROTECTION SCHEME WHICH PRECEDED THE ACTUAL AUTHORIZATION OF THIS PROJECT BY THE CONGRESS IN 1965. IT WAS OUR INTEREST AND CONCERN, ALONG WITH THAT OF THE U. S. FISH AND WILDLIFE SERVICE, THAT PUSHED FAR AND PARTICIPATED IN A MODEL STUDY OF THE LAKE.

THIS MODEL STUDY ALLAYED SOME OF OUR FEARS REGARDING THE INTERDICTION OF FLOWS BY THE CONSTRUCTION OF THE BARRIER STRUCTURES AT THE RIGOLETS AND AT CHEF MENTEUR PASSES. IF THE DATA PRODUCED BY THE MODEL STUDY PROVES VALID, THE INTERCEPTION OF NUTRIENT WATERS, THE MOVEMENT OF ORGANISMS INTO AND FROM THE LAKE AND THE INTERCHANGE OF SALINE AND FRESH WATERS WILL NOT BE SIGNIFICANTLY ALTERED BY THESE STRUCTURES.

WE DO HAVE SOME SERIOUS CONCERN REGARDING DAMAGES TO PRODUCTIVE OYSTER BEDS, ESPECIALLY IN LAKE BORGNE, NEAR THE CHEF MENTEUR BARRIER STRUCTURE. DREDGING NEAR AND CONSTRUCTION OF THE WING-WALLS HAVE A POTENTIAL FOR CONSIDERABLE HARM TO THE EXISTING HIGHLY VALUABLE OYSTER BEDS.

TWO IMPORTANT FACTORS HERE ARE THE PLANS FOR THE CONTAINMENT OF SEDIMENT WHICH RESULTS FROM PROJECT WORKS, AS WELL AS THE APPARENT LENGTHY DURATION OF THE CONSTRUCTION. WE WOULD LIKE MORE INFORMATION ON EACH OF THESE AND WOULD LIKE AN OPPORTUNITY TO WORK WITH YOU IN PLANNING TO ELIMINATE OR REDUCE, TO THE GREATEST EXTENT POSSIBLE, THE DAMAGES TO THIS OYSTER PRODUCING AREA. WE FEEL THAT OYSTER MORTALITIES AND CLOSURES OF PRIVATELY LEASED BEDDING GROUNDS SHOULD BE FULLY COMPENSATED BY THE PROJECT.

THE PROPOSED SEABROOK STRUCTURE WAS DESIGNED FOR ADDITION TO THE MISSISSIPPI GULF OUTLET TO PARTIALLY CORRECT THE HIGH SALINITIES THAT ARE OCCASIONED IN THE LAKE BY WATERS FROM THAT NAVIGATION CHANNEL. THIS STRUCTURE WILL PROVIDE THE CAPABILITY FOR MANAGING SALINITIES WITHIN THE LAKE. EXCESSIVE SALINITIES IN THE UPPER PART OF THE LAKE, WHICH WERE HISTORICALLY FRESHER, HAVE CAUSED CONSIDERABLE MARSH DETERIORATION AND MORTALITY OF FRESH WATER VEGETATION. THE MOST SPECTACULAR EVIDENCE OF THIS IS THE DEAD CYPRESS TREES VISABLE FROM INTERSTATE 10.

THE DAMAGES DUE TO PRIOR URBAN DEVELOPMENT ARE NOTED IN YOUR ANNOUNCEMENT OF JANUARY 22, 1975. THE INVESTMENT OF VALUABLE WETLANDS THAT FORMERLY SUPPORTED THIS IMPORTANT ECOSYSTEM, FOR PREVIOUS DEVELOPMENTS (AN ESTIMATED 50,000 ACRES SINCE 1900) HAS DOUBTLESSLY

CONTRIBUTED TO A DECLINE IN PRIMARY PRODUCTIVITY.


WE NOTE THE SUSPENSION OF PLANNING FOR THE ST. CHARLES PARISH PORTION OF THE HURRICANE LEVEE. YOU CORRECTLY STATE THAT THE DISRUPTION OF FLOWS FROM THIS WETLAND WOULD HAVE SERIOUS ADVERSE AFFECTS ON THE PRODUCTIVITY OF THE LAKE. YOU FURTHER CONCLUDE THAT IMPLEMENTATION OF THIS PART OF THE ORIGINAL PROTECTION PLAN WOULD LEAD TO URBAN TYPE DEVELOPMENT OF THIS STILL PRODUCTIVE WETLAND. THE REALIGNMENT OF THE HURRICAN LEVEE ALONG U. S. HIGHWAY 61, AS YOU DISCUSS ON PAGE 9, WOULD MINIMIZE DAMAGES TO FISH AND WILDLIFE INTERESTS.

SINCE THE PROPOSED CONSTRUCTION IS FOR THE PERIOD 1975 THROUGH 1990, A PERIODIC REVIEW AND EVALUATION REGARDING THE EFFECTS ON FISH AND WILDLIFE RESOURCES, IN LIGHT OF OTHER PREVAILING FACTORS, SHOULD BE SCHEDULED. IT IS SUGGESTED THAT SUCH A REVIEW INVOLVING APPROPRIATE STATE AND FEDERAL FISH AND WILDLIFE AGENCIES BE HELD AT LEAST EVERY THREE OR FOUR YEARS.

WE WILL CONTINUE TO MAINTAIN A HIGH INTEREST IN LAKE PONTCHARTRAIN BECAUSE OF ITS PRODUCTIVITY AND THE VERY HIGH DEGREE OF UTILIZATION BY THE POPULAS PURSUING WATER RELATED ACTIVITIES. ITS PROXIMITY TO AN URBAN POPULATION IN EXCESS OF 1,000,000 PEOPLE, PROVIDE AMPLE INCENTIVE FOR ALL AGENCIES TO WORK TOGETHER TO ASSURE ITS CONTINUATION AS A VIABLE RECREATION AND COMMERCIAL FACILITY.

THIS STATEMENT SHOULD BE CONSIDERED AS AN INTERIM STATEMENT AND MAY BE AMENDED AFTER A CAREFUL REVIEW OF THE PROPOSED PROJECT WORKS BY THE BOARD OF THE LOUISIANA WILD LIFE AND FISHERIES COMMISSION. THE NEXT REGULAR MEETING OF THIS BOARD IS TUESDAY, FEBRUARY 25, 1975.

OUR COMMENTS ON THE SPOIL DISPOSAL PORTION OF THE MEETING WILL BE FORWARDED DURING THE PERIOD THAT THE RECORD IS KEPT OPEN FOR COMMENTS. WE WILL BE SOLICITING MORE INFORMATION FROM YOUR STAFF IN ORDER TO PROPERLY EVALUATE THE PLACEMENT OF SPOILS.


J. BURTON ANGELLE, DIRECTOR
LA. WILD LIFE & FISHERIES COMMISSION



United States Department of the Interior

FISH AND WILDLIFE SERVICE

17 EXECUTIVE PARK DRIVE, N. E.
ATLANTA, GEORGIA 30329

Colonel E. R. Heiberg, III
District Engineer
U.S. Army Corps of Engineers
P.O. Box 50267
New Orleans, Louisiana 70160

Dear Colonel Heiberg:

Enclosed are five copies of the public hearing statement concerning the Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection project which was presented by Mr. Joseph E. Burgess at the February 22, 1975, public meeting in New Orleans, Louisiana.

As you are aware, projects of this magnitude can and frequently do result in significant adverse impacts on fish and wildlife resources. While we appreciate the numerous and sometime difficult problems encountered by your agency in having to weigh all facets of a project and determine what is, in fact, in the best public interest, we feel that public fish and wildlife resources are an essential part of this consideration. It was within this context that our recommendations were made to alleviate project impacts on fish and wildlife resources and at the same time provide hurricane protection for the developed areas of metropolitan New Orleans. If in your opinion further discussion concerning this project is warranted, we will be pleased to participate.

I feel that our February 26 meeting was helpful in reaching a better understanding of our respective problems associated with water-resource development projects and would welcome any future meetings of this type that you deem appropriate.

If you have any questions, please contact me at your convenience.

Sincerely yours,

Regional Director

Enclosures 5

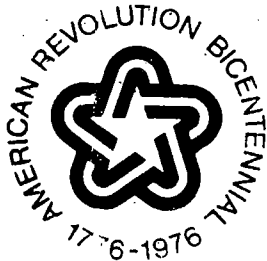


EXHIBIT 17-1



United States Department of the Interior

FISH AND WILDLIFE SERVICE

17 EXECUTIVE PARK DRIVE, N. E.
ATLANTA, GEORGIA 30329

PUBLIC HEARING STATEMENT
OF
FISH AND WILDLIFE SERVICE AND DEPARTMENT OF THE INTERIOR
REGARDING
LAKE PONTCHARTRAIN, LOUISIANA, AND VICINITY HURRICANE PROTECTION PROJECT
SATURDAY, FEBRUARY 22, 1975

Colonel Heiberg, distinguished guests, ladies and gentlemen, my name is Joseph E. Burgess, Jr., and I am presenting this statement on behalf of Regional Director Kenneth E. Black of the U.S. Fish and Wildlife Service. This statement represents the official position of the Fish and Wildlife Service on the Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection project.

Four major project features of the proposed hurricane protection plan are of particular concern to the Fish and Wildlife Service. These are: Chalmette Area Plan, the New Orleans East Area, the barrier structures to be located in Chef Menteur and Rigolets Passes, and the St. Charles Levee.

Completion of the Chalmette Area Plan will enclose approximately 18,000 acres of swamp, intermediate to brackish marsh, and open water. The open tidal ponds and creeks and the adjacent intertidal marsh located within this project segment constitute important nursery habitat for numerous sport and commercial fishes and shellfishes such as Atlantic croaker, spot, spotted seatrout, red drum, black drum, silver perch, southern flounder, gulf menhaden, striped mullet, blue crab, white and brown shrimp. This area also provides suitable habitat for migratory waterfowl including lesser scaup, merganser, American wigeon, gadwall and coots, and other wildlife species including egrets, herons, bitterns, rails, muskrat, white-tailed deer, swamp rabbit, raccoon, and nutria. This area supplies nutrient and detritus material valuable to the continued high levels of productivity of adjacent estuarine areas.



EXHIBIT 17-2

The New Orleans East portion of the project, which encompasses approximately 21,000 acres, has an estimated 14,000 acres of marshes and associated water bodies which have not been drained or developed. Although these wetlands have been separated from tidal influence, they still provide important habitat for numerous wetland wildlife species including waterfowl, furbearers, and game and nongame mammals.

The final environmental impact statement (EIS) contains a response by the District Engineer to a comment on the draft EIS by New Orleans East, Inc. He noted that there is an exchange of water between the marsh and the lake at South Point, and that this exchange would tend to preserve the estuarine nursery by providing for the release of detritus and the ingress and egress of juvenile and larval forms of marine species.

We wholeheartedly concur and strongly recommend that the four drainage structures which are part of the New Orleans East, South Point to Gulf Intracoastal Waterway (GIWW) Levee be modified to allow the restoration of the estuarine character of the approximately 14,000 acres of undeveloped and essentially unaltered wetlands located within the New Orleans East segment.

Another area of concern to the Service is the barrier structures to be located in Chef Menteur and Rigolets Passes. Lake Pontchartrain is an integral part of a vast estuarine complex in southeastern Louisiana. The value of the area has been well documented in the final EIS and previous Fish and Wildlife Service reports. The Fish and Wildlife Service is concerned that there is an insufficient amount of biological information available to accurately predict the effects of the barrier structures on the movement of organisms into and out of the lake. Contingency plans related to modification of the barrier structures should be developed if it becomes apparent that salinity regimens and/or movement of organisms are adversely affected by the structures. This determination could be made utilizing data obtained during a preconstruction and postconstruction study of the movement of marine and estuarine organisms through Chef Menteur and Rigolets Passes. In the event that adverse effects exist, the causes could be identified and the barriers modified to eliminate these problems.

The final major area of concern relates to the St. Charles Parish Levee portion of the proposed project. Prior Fish and Wildlife Service comments and the final EIS document the value of the area and the project-induced effects of the proposed work on the approximately 25,000 acres of marsh, swamp, and open water areas in St. Charles Parish.

According to the final EIS, "Two streams in the St. Charles Parish areas have recently been added to the Natural and Scenic River System of Louisiana. Construction of the St. Charles Parish Levee, as currently

planned, would involve alteration of either or both of these bayous. Because this would contravene State law, this feature of the project is currently in a deferred status." We support this decision but wish to point out that this action should not be based on the alteration of scenic streams alone. Recently published research regarding the extraordinary fish and wildlife productivity of wetlands, coupled with public concern for losses of these vital resources, has compelled many natural resource agencies to establish policies of wetland preservation. The Fish and Wildlife Service is opposed to needless destruction of wetland areas associated with the proposed St. Charles Parish Levee feature.

In view of the above considerations, the Fish and Wildlife Service recommends that the following items be accomplished:

1. The St. Charles Parish segment of the project not be constructed as currently proposed.
2. The navigable floodgates located at Bayous Bienvenue and Dupre continue to be operated to allow maximum tidal exchange of waters on either side of the Chalmette Area Levees except immediately prior to and during hurricanes.
3. The drainage structures associated with the New Orleans East segment be modified and operated to allow maximum tidal interchange between waters located on either side of the protection levees. This action would restore the estuarine character of the enclosed marshes, and would help mitigate the project-induced losses of valuable fish and wildlife habitat.
4. Ponding dikes associated with the New Orleans East Barrier Plan be segmented following revegetation of the ponded areas in order to restore tidal interchange. The timing and extent of this action should be determined through consultation with representatives of the Fish and Wildlife Service, National Marine Fisheries Service, and the Louisiana Wild Life and Fisheries Commission.
5. The planned spoil disposal areas near the Rigolets Pass be moved to previously utilized sites located on the north side of this pass between U.S. Highway 90 and Rigolets Entrance Light No. 2 or to upland sites north of Lake Pontchartrain.
6. Studies be initiated to determine the effects of the barrier structures on salinity regimes, and on ingress and egress of marine and estuarine organisms through the Chef Menteur and the Rigolets Passes. If these studies indicate that the structures are detrimental to this estuarine ecosystem, the structures should be modified to

rectify this problem. This study should consist of at least 1 year of preconstruction inventories, extend throughout the construction period, and include 2 years of postconstruction inventories. It should be designed in consultation with the Fish and Wildlife Service, the National Marine Fisheries Service, and the Louisiana Wild Life and Fisheries Commission. This would permit verification of the results of the model studies conducted at the Corps' Waterways Experiment Station at Vicksburg, Mississippi.

We note references in the Announcement of Public Meeting to losses in benefits if the wetlands within the protective levees are not converted to urban development. The structures proposed for hurricane protection obviously make possible the conversion and development of wetlands that would be left in the natural state without the project. The Fish and Wildlife Service does not object to the project features designed to protect the developed areas of metropolitan New Orleans from damaging hurricanes. However, we cannot concur with the construction and operation of those features which will cause or accelerate the development of valuable wetlands. We believe that the intent of Congress regarding the conversion of wetland areas into urban development was clearly established in House Report No. 91-917 (page 3) when it said, "The Corps' obligation to consider all facets of the public interest in protecting estuaries, rivers, lakes, and other navigable waters also arises from the national policy and directives expressed in many other statutes and Executive orders designed to minimize pollution, maximize recreation, protect aesthetics, preserve natural resources, and promote the comprehensive planning and use of water bodies to enhance the public interest rather than private gain."

We must also strive to preserve these highly productive ecosystems for future generations and strongly urge the Corps of Engineers to adopt our previously discussed recommendations, so that the destructive features of the Lake Pontchartrain, Louisiana, and Vicinity Hurricane Protection project can be minimized.

Thank you.



Orleans Audubon Society

A CHAPTER OF THE NATIONAL AUDUBON SOCIETY

AUDUBON SOCIETY STATEMENT
HEARING ON LAKE PONCHARTRAIN, LOUISIANA
AND VICINITY HURRICANE PROTECTION PROJECT
February 22, 1975

My name is Cliff Danby. I live in New Orleans, and I am here today to speak for the nearly one thousand members of the Orleans ^{Audubon} Society.

The Orleans Audubon Society wants it clearly understood that we favor hurricane protection for areas presently populated.

On the other hand, we completely oppose hurricane protection for unoccupied marshes and swamps. This Corps project proposes to levee or fill in more than 50,000 acres of undeveloped swamps and marshes, excluding the 25,000 acres in St. Charles Parish. To do so would be economically unsound, ecologically disastrous, and a monetary windfall to owners of the land. Furthermore, the Corps can easily avoid placing levees around marshes and swamps while still protecting populated areas.

Let's examine the economics of the Corps plans. Placing levees around swamps and marshes will lead to drainage and urban development of the lands. These lands are essential to fisheries, aquaculture, waste assimilation, and total life support values. Do you know what an acre of marshland is worth in terms of these values? From \$2,000 to \$83,000 an acre per year. Applying the lowest value of \$2,000 to the 50,000 plus acres of marshes to be lost immediately to this project, we get \$102 million annually. This is the environmental value that would be a loss to us and, therefore, a cost to the project.

If we incorporate the \$102 million into the Corps' cost-benefit analysis, the heavily favorable ratio of 12.6 to 1.0 drops to 1.4 to 1.0, a ratio that is barely favorable. A value of \$3,000 per acre causes the cost-benefit ratio to be unfavorable. No wonder the Corps did not quantify environmental costs for their cost-benefit determination!

Should we allow these valuable marshes to be destroyed when they can return so much to us -- economically and environmentally? We think not.

The Corps could exclude these marshes and swamps from their plans. To do so would require placement of levees adjacent to populated areas and not adjacent to the shorelines of Lakes Pontchartrain and Borgne. The Corps maintains that this would cost three times as much as the barrier plan. Even if it did, the cost-benefit ratio would still be a favorable one of 4.0 to 1.0.

Placing levees around marshes and swamps will increase the value of privately owned land. The Corps estimates this land enhancement value to be about \$5.7 million annually. Guess who is paying for this added value to private landowners? You guessed it. The good old taxpayer.

Why didn't the Corps favor the alternative of protecting populated areas only? We can only conclude that the Corps favors enrichment of a few landowners at the expense of us taxpayers.

Marshes have another very important value. They absorb, slow down, and dissipate hurricane tidal surges. This ability reduces or prevents flood damages to inland areas. This cushioning effect will be lost if levees are placed along shorelines. This can be economically significant for those who live in marshland that has been developed right up to the water's edge. A hurricane like Petsy of 1965 will create tides that will go right over the levees designed for this project.

There will be severe environmental damage from this project. Valuable, productive wetlands will be lost. Development around the perimeters of Lakes Maurepas, Pontchartrain, Catherine, and Borgne will be induced. This will cause eventual collapse and death of the MFCB estuary. Tidal flows through the Chef and Rigolets Passes will be obstructed by the barriers hindering flushing actions by the tides. This could make Lake Pontchartrain a 640 square mile cesspool. We strongly oppose the Chef and Rigolets barriers.

The Seabrook Complex is supposed to control salinity levels in Lake Pontchartrain. How is this going to be possible when the Corps doesn't even know what the proper salinity level should be, or how it can be maintained and effectively monitored?

A previous Corps project, the Mississippi River-Gulf outlet, caused the present salinity problem. The MR-GO was also responsible for the flooding in St. Bernard Parish and in eastern New Orleans during Hurricane Petsy. With the Corps' proclivity to create more problems than it solves, we are very skeptical of the "benefits" attributed to this project.

In March 1974, the voters of Orleans Parish voted a three mill increase in property taxes to construct and maintain levees, levee drainage, flood protection, and all other purposes thereto. Orleans Levee Board officials said the money would not be used for the Chef-Rigolets barriers. Now we learn that they propose to use the money for just that purpose. Taxpayers had voted down such use of tax monies three times previous to the March 1974 election.

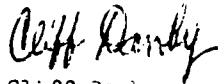
Use of the three mill tax monies for the barriers is not strictly illegal in the eyes of the law. But in the eyes of us taxpayers it is, and we've been had again. I hope the good old taxpayer remembers who his friends are at election time.

In case anyone doubts that a charade is being played here today, we wish to point out that certain portions of this project have been completed or are underway even though the final impact statement has not been approved by the President's Council on Environmental Quality. For example, the by-pass channel at Chef Pass has been dredged, the control structures are in place at Bayous Plenvenue and Dupre, levee construction is underway, and dredging in New Orleans East is now in progress. The good old public is being duped again.

Concerning disposal of dredged material, we oppose disposal and ponding of dredged material in the marshes along the Chef and Rigolets Passes, along the MR-GO, and in New Orleans East. The material should be used for construction purposes, to fill borrow areas, or disposed of at approved offshore locations. Also, we object to the proposed borrow area on Apple Pie Ridge along U.S. Highway 90. These disposal and borrow plans by the Corps will destroy valuable marshland that Louisiana cannot afford to lose.

In summary, we feel this project can benefit the people of this area without being harmful to the environment. To do so, however, will require modification of the project to have a high levee system built around populated areas only, and to eliminate the barrier plan.

Thank you.



Cliff Danby
Chairman, Conservation Committee

Semi-Monthly Planning Meeting
Wednesday, February 5, 1975

ANY OTHER PLANNING MATTERS - HURRICANE FLOOD PROTECTION PLAN

ACTION:

The City of New Orleans has received from the U. S. Corps of Engineers an "Announcement of Public Meeting" to both "discuss all aspects of the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project including the environmental effects of the project" and "Provide a hearing on planned or alternative procedures for the disposal of Dredge Materials occasioned by the construction of certain project features, as required by Section 404 of the Federal Water Pollution Control Act of 1972" to be held on February 22, 1975 at the University of New Orleans.

There are two separate, though related, aspects of this public meeting. The first is proposed as informational and without legal purpose in order to further inform the general public as to the proposed hurricane protection plan including the barrier system. The Corps considers this to be important in view of both the general interest already expressed concerning the plan and the fact that the Final Environmental Impact Statement on the plan has recently been filed with the Federal Council on Environmental Quality. The second aspect concerns the specific legal requirement of the Federal Water Pollution Control Act of 1972 and, particularly, Section 404 thereof which relates to procedures for disposal of the dredged materials generated by the construction of certain elements of the aforementioned hurricane protection project.

The City of New Orleans has been requested by the Corps of Engineers by letter to Mayor Moon Landrieu of January 21, 1975 to participate in these public hearings. The Mayor, on behalf of the City, has previously commented favorably upon the plan by letter of May 12, 1972 wherein he urges "that this project be pursued with all deliberate speed, because the benefits to the more than million people in the New Orleans area far outweigh any deleterious effects."

PROBLEM:

Hurricanes which enter the Gulf of Mexico frequently expose southeastern Louisiana to their devastating effects. The physical characteristics of coastal Louisiana pose particular vulnerability to hurricane forces consisting of high winds, high water, and heavy rainfall. The lack of adequate natural protection against such forces has fostered complex artificial devices to combat this annual hurricane threat. The hurricane protection project herein examined was

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authorized by the Flood Control Act of 1965 approved October 27, 1965 and is designed to provide hurricane protection to the Greater New Orleans Metropolitan Area which includes portions of Orleans, Jefferson, St. Bernard, St. Tammany, and St. Charles Parishes.

Under existing conditions, as a hurricane approaches the Gulf from the Gulf of Mexico, the tides in advance of the hurricane would be elevated to above-normal heights. The rate of this rise varies depending on the storm, but it is generally rather gradual. Due to the natural connections with the Gulf waters at Chef Menteur Pass, The Rigoles, and at Scabrook Junction of HINC at Lake Pontchartrain, water levels in Lake Pontchartrain would rise above normal elevations. Levels in Lake Borgne would also be well above normal elevations. Low-lying unprotected areas adjacent to the lakes would be inundated. Greater New Orleans would be virtually surrounded by high waters. If the center of the storm passed in close proximity to the City, the high winds of the storm would produce large waves on top of the already elevated water levels in the lakes thereby worsening the flood threat. Since the storm drainage systems of adjacent communities discharge into Lake Pontchartrain, high water levels in the lake would delay adequate pumping and prevent relief against flooding from heavy rainfalls.

The "barrier concept" is the most distinguishing element of the recommended hurricane protection plan. The barrier consists of three basic features: namely, the Rigoles Complex, the Chef Menteur Complex, and the Scabrook Complex. Each of these complexes includes a gated flood control structure, a navigation structure, and a closure embankment.

The purpose of these structures is to control water level increases in Lake Pontchartrain when a hurricane threat is imminent. When a hurricane approaches the Louisiana coastline, the area in advance of the storm experiences a gradual rise in sea level generated by the storm. For the design hurricane, under natural conditions, this rise would elevate Lake Pontchartrain by 5 to 7 feet above normal lake levels. This rise, combined with the "tilting effect" could produce lake levels from 10 to 13 feet above normal elevations at any location adjacent to the lake. This phenomenon occurred during Hurricane Betsy in 1965.

The barrier structures are designed to prevent the lake from attaining such high levels. As a hurricane moves toward the City, the gated flood control structures at Chef Menteur Pass, The Rigoles, and at Scabrook would be closed, thereby preventing the hurricane produced tides from entering and raising the lake to extreme heights. To the greatest extent possible, this closure would maintain the lake at near normal levels just prior to the passage of the storm.

Eliminate the Lake Pontchartrain barrier and modify the levee system to retain the same extent and degree of protection provided by the proposed action. Under this plan, the barrier system would not be constructed and Lake Pontchartrain would remain open to the ingress of tidal surges. The grades of the levees included in the proposed action would be increased and new levee systems along the shores of Lake Pontchartrain would be included to provide protection to unleveed areas equivalent to that which they would receive from the reduction in hurricane stages in Lake Pontchartrain which the barrier would produce. Such a plan would cost on the order of three times as much as the proposed plan without any increase in economic benefits. The environmental disruption attendant to providing the additional levee systems along the shores of Lake Pontchartrain would be of major proportions.

No Action. The aforementioned alternatives are the most prominent among the many alternatives examined by the Corps. In addition the Corps reviewed, as it must, the consequences of no action.

The no action alternative would induce, preserve, for a time, the existing environmental dynamics of the area. The Corps believes that it would leave the area subject to massive overflow from hurricanes, with attendant major economic loss, social disruption, and a potential for extensive loss of life.

The area to be protected under the proposed plan has experienced many severe hurricanes and lesser storms which have caused loss of life and damage to property. Official National Weather Service meteorological records are not available prior to 1893 and most accounts of storms prior to 1893 are obtained from newspapers and historical documents. Because a large portion of the area was relatively uninhabited, it can be assumed that some historical flooding went unobserved.

The project area surrounding Lake Pontchartrain is susceptible to flooding from wind-driven hurricane tides from the lake. This condition is aggravated by increases in lake level resulting from the influx of surges from Lake Borgne and the Gulf of Mexico that accompany hurricanes from the southeast, south, and southwest. Historical hurricanes have produced recorded stages up to 13 feet on the southwest shore of the lake, 6.2 feet on the south shore, 7.1 feet at the southeast shore, and 7.7 feet on the north shore. Overtopping of protective works and flooding of developed areas have occurred several times during recent hurricanes. On several occasions, the marsh area between Lake Pontchartrain and Lake Borgne has been flooded by stages up to 11 feet. Much of the developed area

The total cost of the project as of July 1974 is \$327,000,000 of which \$224,000,000 are Federal costs and \$103,000,000 are non-Federal costs. The proposed 1976 Federal budget includes a \$22,000,000 allocation for the project. With that amount and the \$3,300,000 carried over from fiscal 1975, it would increase the federal funds allocated to \$22,339,000. The Corps has projected that the benefit to cost ratio of the project is 12.6 to 1. This means that for every dollar spent to implement the project, about \$12.60 of flood protection or related benefits will be produced by the project after its completion.

The project in this form was authorized by the Flood Control Act of 1965 (Public Law 89-298), approved October 27, 1965, described in House Document No. 231, 89th Congress, 1st Session, and, in May 1967, the first Congressional construction appropriation was made and work on the levee phase of the project was begun.

POSSIBLE ALTERNATIVES:

Higher Levees: The "high level" plan was one alternative studied. The plan simply proposed raising all of the existing hurricane protection levees, and, where necessary, constructing new high level levees to a height that would prevent flooding in the developed areas. Detailed studies, however, revealed to the Corps that such a plan had many serious drawbacks. The foundation soils in the Louisiana delta area are not conducive to certain types of construction. A commonly experienced problem in levee construction is settlement, and due to poor foundation conditions, building levees to the high levels required for such a plan would require long periods of time, extending exposure to more hurricane seasons without complete protection. In order to construct levees to high levels, it would be necessary to widen the base of each levee, thus requiring more land for rights-of-way. In an urban setting, a demand for more land means higher cost and additional displacement of homes and persons where land areas are congested. Another shortcoming of the high level plan involves the problem of drainage. Due to the nature of the pumping system, a high level plan would prevent adequate drainage of the area during a hurricane unless all of the pumping stations which discharge into Lake Pontchartrain were extensively modified. Each of these problems may be translated into cost, and at the time comparative plans were being evaluated, the "high level" plan was estimated by the Corps to cost approximately 50% more than the plan now recommended.

Semi-Monthly Planning Meeting
Wednesday, February 5, 1975

ANY OTHER PLANNING MATTERS - HURRICANE FLOOD PROTECTION PLAN

in Orleans and Jefferson Parishes is below lake level, some land being as low as -7 feet, with a considerable portion lower than -2 feet. In some areas, flooding as deep as 16 feet above ground level could result from severe overtopping. Stages attending a Standard Project Hurricane (SPH) would cause overtopping of all existing areas. The pumping system on which removal of all flood waters is dependent would be inoperable for an extended period of time. This prolonged inundation would cause enormous damage to private and public property, create serious hazards to life and health, disrupt business and community life, and require immense expenditure of public and private funds for evacuation and subsequent rehabilitation of local residents. The potential for damage and disruption was well demonstrated in September 1965 when Hurricane Betsy passed west of New Orleans. Although the Corps states that this is not the most critical path for a project design hurricane, 18,260 homes and 837 commercial establishments were flooded in the project area, and some 80 persons lost their lives.

EFFECT ON CITY'S HURRICANE PROTECTION:

The Corps estimates that the occurrence of a Standard Project Hurricane wind tide for any location in the area would produce maximum wind tides of 11.5 feet along the south shore of Lake Pontchartrain, 12.8 feet at Mandeville, 13.0 feet in the Chalmette area, along the Citrus and New Orleans East back levees, and at the Chef Menteur and The Rigolots areas. The SPII would inundate a land area of approximately 700,000 acres to depths of up to 16 feet in the proposed protection area in the absence of the proposed project. The estimated damage within the area that would result from an occurrence of the SPII under preproject conditions is between one-half and three-quarters of a billion dollars (\$500,000,000 - \$750,000,000). A prolonged inundation would cause enormous damage to private and public property, create serious hazards to life and health, disrupt business and community life, and require immense expenditure of public and private funds for evacuation and subsequent rehabilitation of local residents.

Similarly, damages and expenditures related to Hurricane Betsy in September 1965 were estimated by the Corps at over \$2 billion. More than 2.5 million acres of land were flooded; approximately 300,000 persons were evacuated or changed living quarters;

and more than 27,000 homes were destroyed or flooded. In addition, offshore and coastal oil installations and public utilities reported unprecedented damage. Significant pecan, and fall crop were heavily damaged and much livestock drowned. Severe damage resulted to all types of fish and wildlife. Deaths in Louisiana resulting from Hurricane Betsy are listed at some 80 persons. The residents of the low-lying areas heeded the warnings of the National Weather Service and local responsible agencies and evacuated promptly. Otherwise, it is conceivable that the death toll may have exceeded the record high of more than 556 persons caused by Hurricane Audrey in June 1957 which struck southwest Louisiana.

This proposed protection plan will combat such destructive occurrences in the future against a Standard Project Hurricane which is one that may be expected from the most severe combination of meteorological conditions that are reasonably characteristic of the region and corresponds to one having a frequency of one in about 200 years in the area.

SECTION 404 HEARING:

An integral part of the February 22, 1975 public meeting is the hearing required by Section 404 of the Federal Water Pollution Control Act of 1972 regarding planned or alternative procedures for the disposal of dredged materials occasioned by the construction of certain features of the hurricane protection project. The hearing on "Section 404" covers the Barrier, the New Orleans East, and the Chalmette units.

The dredging work within these units consists of constructing new levees and closure dams, enlarging existing non-Federal levees, and constructing flood control structures, navigation structures and connecting navigation and approach channels. New levees will be constructed and existing non-Federal levees will be enlarged by first pumping dredged material to the levee fill areas and then shaping this material at a later date into a levee section. Navigation and approaching channels will be constructed by dredging these areas and pumping this material to the levee fill area and/or ponding areas.

The disposal areas for these units are as follows:

- a. Barrier Unit. The disposal areas are located in the vicinity of Chef Menteur Pass, Lake Borgne and the Gulf Intracoastal Waterway, and in the vicinity of the Rigolots, Lake St. Catherine, and Stump Lagoon.

b. New Orleans East Unit. The disposal areas are located on the north bank of the Gulf Intracoastal Waterway from the Inner Harbor Navigation Canal to approximately Bayou Thomas, and along the land-side of the railroad tracks along the south shore of Lake Pontchartrain from Paris Road to South Point. Unloading and stockpile sites for barged levee material and riprap are located along the south shore of Lake Pontchartrain.

c. Chalmette Unit. The disposal areas are located on the south bank of the Mississippi River-Gulf Outlet from the Inner Harbor Navigation Canal to a point opposite Verret, Louisiana, and from there to Caernarvon, Louisiana.

The land adjacent to the barrier unit disposal areas is mainly marsh lands used for hunting and trapping. Camps and commercial businesses are located on the protected side of the proposed new levees. The Scabrook Complex is adjacent to the areas referred to as the New Orleans East Unit.

The land adjacent to the New Orleans East unit disposal area, between the Inner Harbor Navigation Canal and Michoud Canal on the protected side is commercial, industrial, and residential; on the flood side of the disposal area is the Gulf Intracoastal Waterway. Between Michoud Canal and Bayou Thomas, the land on the protected side of the disposal area is partially drained marsh land subject to commercial, industrial, and residential development; on the flood side of the disposal area is the Gulf Intracoastal Waterway. The land adjacent to the disposal area between Paris Road and South Point on the protected side is partially drained marsh land subject to commercial, industrial, and residential development; and on the flood side of the disposal area is Lake Pontchartrain.

The land adjacent to the Chalmette unit disposal areas between Florida Avenue and the intersection of the Inner Harbor Navigation Canal and the Mississippi River-Gulf Outlet is industrialized on the flood side and is marsh land on the protected side used for hunting and trapping. From the intersection of the Inner Harbor Navigation Canal and the Mississippi River-Gulf Outlet to Verret, Louisiana, the land adjacent to the disposal areas is marsh land used for hunting and trapping.

The concern of the City in regard to this hearing would be whether any of these proposed plans would be in conflict with the Coastal Zone Management Plans being formulated or with the existing archaeological sites prevalent in the area. This plan has been reviewed for these purposes and particular attention should be directed toward the levee fill areas in the New Orleans East unit which could impact the following archaeological sites:

1. 16 OR 12 - South Point: (South Point Quadrangle, 30°08'34" N, 89°53'02" W) partially destroyed shell midden (concentration of various kinds of refuse built up over a period of years which represent habitation sites and often contain burials that may or may not have attendant grave goods) of Colcs Creek and historic affinities.

2. 16 OR 11 - Dwyer Canal: (Chef Monteur Quadrangle, 30°04'28"N, 89°56'25"W) dredged shell midden mostly covered by marsh.

3. 16 OR 28 - Ilaughs Canal: (Little Woods Quadrangle) destroyed or buried site about 300 yards east of the junction of Paris Road and Hayne Blvd.

Finally, further attention should be given to the location of the disposal areas west and east of Sawmill Pass in the Barrier unit since the adjacent marsh and their impact on the provisions of the developing Coastal Zone Management Plan which seeks to protect such marsh areas from further erosion and degradation.

EVALUATION:

Although the Commission has taken no formal action on this plan in the ten years that it has been developed and reviewed, it may wish to do so at this time considering the growing importance of environmental elements in planning decision making and the significance of the project to the metropolitan area.

Since the project was authorized by Congress in 1965 it has not yet been subject to the environmental reviews contained in the National Environmental Policy Act of 1969 (NEPA) and, as such, the Corps has been proceeding with the upgrading of levees and similar public works projects under its original authorization.

However, the barrier segment of the plan has undergone sufficient design revision as to warrant an Environmental Impact Statement (EIS) under NEPA prior to its actual construction.

The Commission staff's environmental and engineering resources are currently so limited as to severely impact its ability to comment upon the technical aspects of the plan but the Commission could reinforce its recognition of the need for proper hurricane flood protection by recommending to the Corps of Engineers that:

1. It concurs that proper hurricane flood protection is a vital element in the welfare and safety of the citizens of New Orleans and its neighbors.

Semi-Monthly Planning Meeting
Wednesday, February 5, 1975

ANY OTHER PLANNING MATTERS - HURRICANE FLOOD PROTECTION
PLAN

2. It recognizes that the Corps of Engineers has devised, tested, and recommended this plan as the best system for hurricane flood protection in New Orleans.
3. This plan should be supported and encouraged in the absence of a more feasible system.
4. Without regard to the other considerations involved, the Corps of Engineers should be encouraged to proceed with the implementation of this plan with an abundance of caution for the vitality of the surrounding natural resources.

As to the Section 404 Public Hearing, the Commission could respond by directing attention to proper surveillance of the aforementioned archaeological sites and further evaluation of the Sawmill Pass disposal areas while still concurring in the procedures otherwise proposed for review in the Section 404 Public Hearing.

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160



IN REPLY REFER TO
LAWED-MP

21 January 1975

Honorable Moon Landrieu
Mayor of New Orleans
City Hall
New Orleans, LA 70112

Dear Mayor Landrieu:

I will soon announce a comprehensive public meeting to discuss the Lake Ponchartraine, Louisiana and Vicinity Hurricane Protection Project. The purpose of the meeting is twofold: to discuss all aspects of the project, including its environmental effects, and, to provide a "hearing" on planned or alternative procedures for the disposal of dredged materials conjunctive with certain features of the project. This hearing portion of the meeting is required by "Section 404" of the Federal Water Pollution Control Act of 1972.

I have recently been in contact with Louisiana's Representative Edward Scopin regarding this project, in particular, respecting my plans for the conduct of the public session described above. Representative Scopin strongly holds the view that I should not combine a general public meeting with a "Section 404" hearing regarding the disposal of dredged material.

The portion of the combined meeting which provides a general discussion of all aspects of the project is "my meeting," it is not required by law or regulation. The "Section 404" hearing is required by law to specifically examine the plans and alternatives for the disposal of dredged materials, and is necessary in order to inform the Federal decision makers of public views in this regard. There are several reasons why I have elected to broaden the base of the meeting by combining the discussions into one comprehensive session. Primarily, I feel that a general discussion of the project is a requisite for a meaningful and constructive public response to the narrow "Section 404" issue. The public will be allowed to respond to the "Section 404" portion of the meeting up to 30 days after the meeting date.

LANNED-VP
Mayor Moon Landrieu

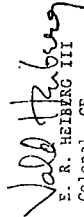
21 January 1975

Further, because of the far reaching area of influence of the project, some interested individuals may have to travel a considerable distance to attend the meeting. Separating the meeting into two sessions would unnecessarily inconvenience these individuals.

I firmly believe that by combining these sessions, I am best serving the public. This format will allow citizens interested in basic project issues as well as the limited area of disposal of dredged material to attend one presentation and direct their comments to any or all of the topics discussed.

There is a good deal of public and political interest in the project. I am very confident that one recommended plan will serve the area well. I hope you share my views and that you will be able to attend the upcoming meeting.

Sincerely yours,


E. R. HEIBERG III
Colonel, CE
District Engineer

HURRICANE FLOOD PROTECTION PLAN

DISCUSSION:

The Staff Planner presented the report and suggested that the City Planning Commission could recommend the following to the Corps of Engineers:

1. That the City Planning Commission concurs that proper hurricane flood protection is a vital element in the welfare and safety of the citizens of New Orleans and its neighbors.
2. That the City Planning Commission recognizes that the Corps of Engineers has devised, tested and recommended the barrier plan as the best system for hurricane flood protection in New Orleans.
3. That this plan should be supported and encouraged in the absence of a more feasible system.
4. That without regard to the other considerations involved, the Corps of Engineers should be encouraged to proceed with the implementation of this plan with an abundance of caution for the vitality of the surrounding natural resources.

With regard to the Section 404 Public Hearing, the Commission could respond by directing attention to proper surveillance of the aforementioned archaeological sites and further evaluation of the Sawmill Pass disposal areas while still concurring in the procedures otherwise proposed for review in the Section 404 Public Hearing.

Upon receipt and discussion of the foregoing information, the following motion was made by Mr. Saputo, seconded by Mr. Grandbouché, and adopted.

MOTION:

Be it moved by the City Planning Commission that the foregoing report be and is hereby approved and further that the staff is authorized and directed to transmit said report to the Mayor and City Council and further to present said report and recommendations at the public hearing scheduled on February 22, 1975.

YEAS: Colbert, Dent, Favors, Grandbouche, Montelepre, Perez,
Saputo

NAYS: None

RECUSALS: None

ABSENT: None

The Chairman, Mr. Barnett, not voting.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Duval Building
9450 Gandy Boulevard
St. Petersburg, Florida 33702

March 21, 1975

FSE21/DM

Colonel E.R. Heiberg III
District Engineer, New Orleans District
Department of the Army, Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160

Dear Colonel Heiberg:

The National Marine Fisheries Service (NMFS) has reviewed Public Notice LMNED-DL (Levee Construction, Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project) dated November 29, 1974, wherein the Corps of Engineers requested comments regarding the proposed continuation of levee construction by hydraulic dredging operations relating to the above mentioned hurricane protection plan. An Announcement of Public Meeting, referenced LMNED-MP and dated January 22, 1975, also requested comments regarding this proposed hurricane protection plan. The comments contained in this letter are in response to both public notices.

The NMFS supports and concurs in the comments expressed by the Fish and Wildlife Service (FWS) at the public meeting in New Orleans, Louisiana, on February 22, 1975. We now wish to emphasize the aspects of this proposed project which are of greatest concern to the NMFS.

Approximately 18,000 acres of swamp, intermediate and brackish marsh, and numerous open water areas are being enclosed by the Chalmette Area Plan portion of this proposed project. These areas serve as valuable nursery habitat for many important fishes and crustaceans and also contribute nutrients and detrital materials which help sustain the highly productive nature of adjacent estuarine areas. To maintain these conditions, the NMFS recommends that full tidal exchange be maintained at all times through the floodgates at Bayou Bienvenue and Bayou Dupre except when excessively high storm-induced tides are forecasted or experienced. We recommend this for the life of the project, not just "initially," as stated in your Announcement of Public Meeting. Of the 21,000 acres enclosed by the New Orleans East portion of this proposed project, 14,000 acres, that have not been drained

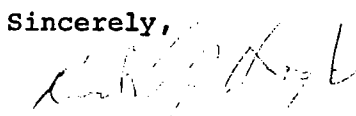
and/or otherwise developed, are still marsh and shallow open water areas. However, these 14,000 acres, which functioned as an excellent nursery area for fishes and crustaceans, is now segregated from the adjacent estuary by the levee. This area could be restored to its previously productive condition as an estuarine nursery if it were again made subject to tidal exchange for the life of the project. The NMFS, therefore, recommends that the four drainage structures between South Point and the Gulf Intracoastal Waterway be modified to allow this undeveloped, but enclosed, 14,000-acre wetland area to again be subject to the normal tidal ebb and flow. In addition, the dikes around the ponding areas created for construction of the Chef Menteur and Rigolets Complexes should be breached or otherwise segmented, following revegetation, to permit re-establishment of tidal exchange to the ponding areas: The FWS, the Louisiana Wild Life and Fisheries Commission (LWLFC), and the NMFS should be consulted regarding the timing and location of the suggested breaching.

At the public meeting, the FWS also recommended that, "Studies be initiated to determine the effects of the barrier structures on salinity regimes, and on ingress and egress of marine and estuarine organisms through the Chef Menteur and the Rigolets Passes." The NMFS believes that such studies should definitely be conducted, and would be pleased to discuss their detailed design. The final design of the project should incorporate the size of openings determined necessary to maintain the present estuarine characteristics of Lake Pontchartrain. The proposed location of spoil disposal associated with the Rigolets Complex also concerns us. Destruction of valuable wetlands adjacent to the Rigolets could be avoided if an existing spoil disposal area on the north side of the Rigolets between U.S. 90 and the Rigolets Entrance Light No. 2 were used. We strongly recommend that either this or some other upland area be used for disposal of spoil generated in the construction of the Rigolets Complex.

If the levee construction along the St. Charles Parish lakeshore from the Bonnet Carre Floodway to the St. Charles-Jefferson Parish line were to be implemented, approximately 25,000 acres of swamp, marsh and numerous open water areas in St. Charles Parish would be impacted. The NMFS is, therefore, pleased to note that you have indefinitely deferred construction of this segment of the proposed hurricane protection plan.

Thank you for the opportunity to provide these comments. Please advise us of your subsequent decisions regarding this proposed project.

Sincerely,


William H. Stevenson
Regional Director