DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314

REPLY TO
ATTENTION OF:

DAEN-CWP-G

MEMORANDUM FOR THE ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

SUBJECT: Lake Pontchartrain Hurricane Protection Project, Louisiana - INFORMATION MEMORANDUM

I am furnishing you, as indicated in my memorandum of 24 November 1982, a comparison of the post authorization changes involved in adopting the high level plan and guidance contained in our regulations regarding the Chief's discretionary authority. This comparison and the recently printed Draft Report/DEIS are inclosed. In accordance with your memorandum of 17 November 1982, the report documents will not be released for public coordination pending your review and further guidance.

My review indicates that adoption of the high level plan would not materially alter the functional intent of the project since the developed area afforded protection is essentially unchanged. The scope of the project in terms of tangible outputs (benefits) would increase by about 10 percent while costs would be reduced $236 million, a savings of 27 percent. Also, the high level plan would significantly reduce environmental concerns. I believe these parameters fall well within the limits of my discretionary authority. Therefore, I conclude that administrative approval of the proposed changes is appropriate.

When compared to a current reestimation of the Barrier Plan

2 Incl
As stated

J. K. BRATTON
Lieutenant General, USA
Chief of Engineers

It should be noted that Congress has not been informed of the cost nor benefits of the reestimated Barrier Plan. ~~has not been submitted to Congress~~

FACSIMILE HEADER SHEET
(ER 105-1-5)

FROM (Name)	OFFICE SYMBOL	TELEPHONE NO.	RELEASER'S SIGNATURE		
J. Davidson	DAEN-CWP-G	272-0154			
TO (Name)	OFFICE SYMBOL	TELEPHONE NO.	# PAGES	PRECEDENCE	DTG
Tom Campbell	LMVPD-P	(601) 634-5838	1		
SUBJECT					

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LAKE PONTCHARTRAIN AND VICINITY, LOUISIANA,
HURRICANE PROTECTION PROJECT
LMVD POSITION PAPER ON CHIEF'S DISCRETIONARY AUTHORITY
TO ADOPT THE HIGH LEVEL PLAN

1. References.

a. Flood Control Act of 27 October 1965 (PL 89-298).

b. Letter, 28 June 1965, from Secretary of the Army, Stephen Ailes, to Speaker of the House of Representatives, Honorable John C. McCormack.

c. Report of the Chief of Engineers, Department of the Army, LTC W. K. Wilson, Jr., 4 March 1964.

d. Report of the Board of Engineers for Rivers and Harbors, 24 July 1963.

e. ER 1105-2-10, Appendix A, Post Authorization Change, 5 February 1982.

f. EP 1105-2-15, Changes to Uncompleted Authorized Projects, 27 January 1982.

2. References 1a through 1 d contain the recommendations and authorization language which provide for construction of the project for hurricane-flood protection on Lake Pontchartrain, Louisiana, subject to such modifications as, in the discretion of the Chief of Engineers, may be advisable. Pertinent excerpts from these references are attached (Tab A). A map showing the location and general plan of the project is also attached.

3. Reference 1e contains the Chief's delegation of authority to Division Commanders to approve changes to authorized projects if such changes meet all of the criteria listed in Tab B.

4. Reference 1f contains the Chief's classification of post authorization changes, namely, (a) Those necessary for engineering or construction reasons to produce the full utility of the improvement envisioned by Congress, and (b) changes required to meet current engineering, economic, environmental or social conditions, within the intent of Congress in authorizing the project. A change from the barrier plan to the high level plan would fall in the latter category.

5. Project modifications which must be brought to the attention of Congress for authorization, according to reference 1f, include those that will:

a. Materially alter the function of the project, such as deletion or addition of a project purpose when not otherwise authorized by law,

b. Materially change the scope of the authorized plan of improvement, and

c. Change legal relationships, such as requirements of local cooperation.

Encl 3

6. The purpose of the barrier plan is to protect lives and property along the shore of Lake Pontchartrain with particular regard to the protection of densely populated south shore areas such as New Orleans, wherein 95 percent of the area available for residences and other purposes was occupied at the time of project authorization. The high level plan will accomplish this purpose. Hence its adoption would not materially alter the function of the project.

7. The barrier plan, according to current estimates, will cost approximately $874 million (Oct 1981 price levels) to complete and will provide average annual benefits of $87 million including $4 million in annual benefits to the sparsely populated north shore of Lake Pontchartrain where there is no potential for catastrophic loss of life such as exists along the south shore. The high level plan would utilize the same levee alinement as the barrier plan. It would cost $638 million to complete and would provide $95.7 million in benefits, excluding tangible benefits to the north shore. The tangible output (benefits) of the high level plan would be 110 percent of the output of the barrier plan, with a 27 percent decrease in required inputs. Hence its adoption would not materially change the scope of the authorized plan of improvement, when scope is defined as changes in outputs of the authorized purpose. A comparison of physical features and costs for the barrier plan and high level plan is given in Tab C.

8. Local interests are required to provide for the barrier plan the normal a, b, c's for flood protection projects, and to otherwise contribute in cash or equivalent work an amount sufficient to bring their share to 30 percent of the total construction cost of the authorized improvements. This requirement would apply equally to the high level plan. Hence, its adoption would not change legal relationships.

9. It is concluded from the observations in para 5 through 8 above that it would not be necessary to bring project modifications to adopt the high level to the attention of Congress for new authorization.

10. With regard to whether or not adoption of the high level plan falls within the approval authority delegated to Division Commanders, the following is observed:

a. The apparent change in project scope from adoption of the high level plan, as measured in terms of benefit output, would be a decrease of 59 percent compared to the scope last presented to Congress ($96 million by current estimates compared to $234 million presented to Congress in FY 1983). However, the actual change is an increase of 10 percent, based on comparable estimates (i.e., $87 million for barrier plan and $96 million for high level plan.

b. The high level plan would involve a change in the design of the project (i.e., elimination of barrier unit) to the extent that the location and magnitude of the impacts of the change are significant compared to the impacts assessed for the barrier plan. A comparison of impacts is given in Tab D.

c. There would be no increase in total project cost from adoption of the high level plan. The current estimate of cost (incremental) for the high level plan is $638 million (about $705 million fully funded, using ratio of fully

funded and incremental estimates in DTO for FY 84). Compared to the cost of the barrier plan last presented to Congress ($924 million fully funded), this is an apparent decrease of 24 percent. The actual change is a 27 percent decrease, using comparable cost estimates (i.e., $874 million for barrier plan and $638 million for high level plan).

d. Adoption of the high level plan would not add or delete a project purpose.

e. Adoption of the high level plan would not involve the addition of fish and wildlife mitigation measures requiring acquisition of additional lands.

11. It is concluded that a change from the barrier plan to the high level plan meets the criteria for Division Commander approval, except for the change in benefits and the change in location and magnitude of impact, which require approval of the Chief of Engineers. Also, because of the substantial controversial aspects of the project and because of the previous Congressional interest, LMVD considers it advisable to refer the change in plans to the Chief of Engineers for final determination on the use of his discretionary authority.

reports, and report processing requirements, as early as possible in preconstruction planning and engineering studies.

(1) Increase or decrease in scope no greater than 25 percent of the scope last authorized by Congress. If the scope can be defined by several parameters, and the change in any one parameter exceeds 25 percent, the change must be approved by the Commander, USACE.

(2) Change in the location or the design of the project to the extent that the location and magnitude of the impacts of the change are determined to be insignificant compared to the impacts assessed for the authorized project, unless HQ, USACE approval is required by ER 1110-2-1150.

(3) Increase in total project cost, or costs allocated to any one project purpose, no greater than 25 percent, exclusive of price level changes, from the estimate last presented to Congress regardless of the dollar amount; increases in total project costs no greater than $3 million, regardless of the percentage of the cost. (Note exception in paragraph 2-5c(4) for projects authorized under Section 201.)

(4) Change does not add or delete a project purpose, except deletion of water quality where the benefits attributed to that purpose are less than 15 percent of the total project benefits, pursuant to Section 65, PL 93-251 (See Appendix A).

(5) Addition of fish and wildlife mitigation measures which do not require acquisition of additional lands, or where the required lands will be acquired voluntarily by local interests; this delegation applies only to projects not substantially completed by August 12, 1958, pursuant to 16 U.S.C. 662(g).

b. Approval Authority Reserved by the Commander, USACE. Any change to an authorized, uncompleted project that does not meet all of the criteria listed in paragraph 2-5a, and which does not require authorization by Congress pursuant to one or more of the criteria in paragraph 2-5c, shall be approved by the Director of Civil Works, HQ, USACE.

c. Changes Requiring Authorization by Congress. The Chief of Engineers' discretionary authority to approve changes to authorized projects must be preserved and not abused. Changes in scope beyond those listed in paragraph 2-5a(1) should serve as an alert that the change may exceed the Chief of Engineers' discretionary authority. After review, the Commander, USACE will determine whether the change can be made under discretionary authority or whether additional Congressional authorization is required. In addition the following require authorization by Congress:

TAB B

LAKE PONTCHARTRAIN, LOUISIANA, AND VICINITY -
HURRICANE PROTECTION PROJECT
COMPARISON OF BARRIER PLAN AND HIGH LEVEL PLAN

Project Feature	Barrier Plan Length (miles)	Barrier Plan Height (feet)	Barrier Plan Cost 1/ ($1,000)	High Level Plan Length (miles)	High Level Plan Height (feet)	High Level Plan Cost 1/ ($1,000)
Barrier Unit						
Chef Menteur Pass 2/	-	-	109,301	-	-	N/A
The Rigolets 3/	-	-	195,501	-	-	N/A
Seabrook 4/	-	-	45,725	-	-	N/A
Subtotal			350,527			
New Orleans East Unit						
Citrus Lakefront Levee	5.0 5/	11-13.5	8,571	5.0 6/	13.5-15.0	46,854
New Orleans East Lakefront Levee	6.2 7/	14.0	12,185	6.2 8/	16.5	34,843
South Point to GIWW Levee	8.3 9/	12.5-14.0	585	8.3 10/	13.5-15.0	5,182
New Orleans East Back Levee	4.5 11/	17.5-22.0	17,087	4.5 12/	17.5-22.0	17,087
Citrus Bank Levee	4.1 13/	14.0	5,050	4.1 12/	14.0	5,050
IHNC East Bank Levee	3.0 14/	13.0-14.0	3,423	3.0 12/	13.0-14.0	3,423
Subtotal	31.1		46,901	31.1		112,439
New Orleans West Unit						
IHNC West Bank Levee	5.0 15/	13.0-14.0	33,324	5.0 12/	13.0-14.0	33,324
New Orleans Lakefront Levee	6.9 16/	10.5-12.0	188,150 17/	6.9 18/	18.0-14.5	215,813
Jefferson Parish Lakefront Levee	10.3	10.0	8,871 19/	10.3	14.0 20/	123,173
St. Charles Parish Levee	14.1 21/	11.5-12.0	46,746	14.1 22/	13.5-14.0	74,662
Subtotal	36.3		277,091	36.3		446,972
Mandeville Unit	1.5 23/	6.0	2,378	1.5 12/	6.0	2,378
Chalmette Unit	29.7 24/	14.0-17.5	65,925	29.7 12/	14.0-17.5	65,925
Totals	98.6		742,822	98.6		627,714

1/ First Cost to Complete, October 1981 price levels.
2/ Barrier complex consisting of closure dam, barrier levees, GIWW bypass channel, gated control structure (612 ft. long, providing 41 percent of natural cross-sectional area) and navigation structure with approach channels.
3/ Barrier complex consisting of closure dam, barrier levels, gated control structure (1,088 ft. long, providing 35 percent of natural cross-sectional areas), and navigation lock (110' x 800') with approach channels.
4/ Closure dam, gated control structure and navigation lock.
5/ Includes 4.3 miles of hauled clay fill levee (design grade 13.5) and 0.7 miles of floodwall (I-wall, design grade 11.0), which has been completed.
6/ Includes 4.3 miles of hauled clay fill levee with I wall on top (design grade 15.0) fronted by shell core wave berm (width 53 feet, design grade 12.0); and 0.7 miles of completed floodwall replaced by new floodwall, design grade 13.5).

TAB C

7/ Hauled clay fill levee on landside of Southern Railroad embankment. Design bottom width is 190 feet.

8/ Same as barrier plan levee except for increase in height and increase in design width to 272 feet.

9/ Hauled clay fill levee (enlargement of locally constructed levee). Design bottom width varies from 70 to 146 feet.

10/ Same as barrier plan levee except for increase in height and increase in design bottom width to 130-176 feet.

11/ Hydraulic fill levee under construction (enlargement of locally constructed levee paralleling GIWW). Incorporates floodwalls surrounding Michoud Canal (height 18-22 ft.). Bottom width of 17.5 ft. high levee varies from 300 to 500 feet.

12/ Same as barrier plan.

13/ Hydraulic fill levee (enlargement of locally constructed levee paralleling GIWW). Design bottom width 300 feet.

14/ Under construction. Consists of I-wall driven into hauled clay levee base with sections of all earthen levee. Levee bottom widths vary from 50 to 55 feet.

15/ Under construction, consists of I-wall driven into hauled clay levee base with short sections of all earthen levee. Levee bottom width is 20 feet.

16/ Under construction. All earthen levee (hauled clay) except for 1,000 feet of floodwall (completed I-wall, net grade 10.5) to the land side of the Municipal Yacht Harbor. Design bottom width of 12.0 ft. high levee is 60 feet. Some sections of levee raised by local interests to 16 feet for interim protection.

17/ Includes $124 million for solution to New Orleans outfall canal problem.

18/ Consists of replacing completed I-wall (1,000 ft.) with new I-wall to elevation 13.5. Levee section (6.9 miles) modified by increasing bottom width to 140 feet to provide large berm and by driving I-wall (net grade 14.5 feet) into levee.

19/ Existing levee height adequate. Costs for this feature are for frontage protection (rip-rap).

20/ Existing levee (raised from 10 to 14 feet in height by local interests; not to Corps standards) modified in height and bottom width by hydraulic fill to 14 feet and 686 feet, respectively, to meet Federal standards.

21/ Hauled clay fill levee/floodwall with bottom width varying from 147 to 180 feet.

22/ Same as barrier plan except for increase in height and increase in bottom width to 180-238 feet.

23/ Repair and rehabilitation of existing seawall.

24/ Under construction. Includes 5.6 miles of hydraulic fill levee fronting the GIWW (height 14 ft., bottom width 500 ft.); 14.0 miles of hydraulic fill levee fronting the Mississippi River-Gulf Outlet (height 17.5 feet, bottom width 500 feet); and 10.1 miles of combined hydraulic fill and hauled clay fill levee between the MR-GO and Mississippi River (height 16.5 to 17.5 feet, bottom width 250 to 500 feet).