

1971

APPROPRIATION TITLE: CONSTRUCTION GENERAL CLASSIFICATION: LOCAL PROTECTION (FLOOD CONTROL PROJECTS)		PROJECT: CADDO DAM, LOUISIANA (REPLACEMENT OF DAM)			
SUMMARY CONSTRUCTION PROGRAM (PB-1)					
FISCAL YEARS 1970 & 1971					
ITEM	PROJECT COST ESTIMATE	TOTAL TO 30 JUNE 1969	CURRENT FISCAL YEAR 1970	BUDGET FISCAL YEAR 1971	BALANCE TO COMPLETE AFTER FY 1971
(1)	(2)	(3)	(4)	(5)	(6)
RELOCATIONS	1,000			1,000	
DAMS	2,582,000	1,026,000	1,090,000	466,000	
RECREATION FACILITIES	170,000			170,000	
ENGINEERING AND DESIGN	258,000	222,700	13,300	22,000	
SUPERVISION AND ADMINISTRATION	259,000	131,000	100,000	28,000	
TOTAL APPLIED COST (Fed. Funds Only)	3,270,000	1,379,700	1,203,300	687,000	
Undistributed Cost (None)					
TOTAL PROJECT COST (Fed. Funds Only)	3,270,000	1,379,700	1,203,300	687,000	
Pending Adjustments (None)					
TOTAL COST (Fed. Funds Only)	3,270,000	1,379,700	1,203,300	687,000	
Undelivered Orders		41,100	-1,100		
TOTAL OBLIGATIONS		1,380,800	1,202,200	687,000	
METHOD OF FINANCING					
Allocations		1,383,000	1,200,000		
Unobligated Carryover from Prior Year			2,200		
Total Funds Available for Obligation			1,202,200		
Appropriations Required				687,000	
1/ Includes \$2,500 for Real Estate Activities.					

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APPROPRIATION TITLE: Construction, General - Local Protection Projects (Flood Control)

PROJECT: Lake Pontchartrain and Vicinity, Louisiana (Hurricane Protection) (Continuing)

LOCATION: The project is located in St. Charles, Jefferson, Orleans, St. Bernard and St. Tammany Parishes in southeast Louisiana in the general vicinity of New Orleans adjacent to Lake Pontchartrain. The project area comprises the lowland and water areas from the Mississippi River and west and north shores of Lake Borgne to the Pleistocene escarpment to the north and west.

AUTHORIZATION: 1965 Flood Control Act

BENEFIT-COST RATIO: 12.4 to 1

SUMMARIZED FINANCIAL DATA		Accumulated % of Est. Fed. Cost	STATUS (1 January 1970)	PERCENT COMPLETE	COMPLETION SCHEDULE
Estimated Federal Cost	\$124,925,000		Locks	0	June 1975
Estimated Non-Federal Cost:	57,075,000	1/2/	Roads	0	June 1974
Cash Contribution	\$33,462,000		Channels and Canals	0	June 1977
Other Costs	23,613,000		Levees and Floodwalls:		
Total Estimated Project Cost	\$182,000,000		New Orleans East Unit	13	June 1978
Allocations to 30 June 1969	\$ 12,493,000		New Orleans West Unit	0	June 1978
Allocation for FY 1970	8,070,000	3/	Mandeville Unit	0	June 1978
Allocations to Date	\$ 20,543,000	16	Chalmette Unit	7	June 1978
Appropriation Requested for FY 1971	8,250,000	23	Flood Control & Diversion Structures	0	June 1976
Balance to Complete After FY 1971	\$ 96,132,000		Entire Project	9	Dec. 1978

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- 1/ Includes \$3,816,000 capitalized cost of O&M for Rigolets Lock.
- 2/ In addition, local interests, through the combined efforts of the State of Louisiana, local levee and drainage districts, and parish police juries have spent, through the years, an estimated \$25,000,000 to effectuate and maintain the hurricane protection systems existing prior to project authorization.
- 3/ Includes \$2,790,000 placed in budgetary reserve. This amount to be allocated in FY 1971.

PHYSICAL DATA

Levees:	Channels:	Size	Length (Mi.)
Average Height - 13 feet	G.I.W.W. Relocation	12'X150'	5.7
Length - 64 miles	Chef Navigation Canal	12'X100'	1.7
Drainage Structures:	Chef Approach Channel	25'-60'X400'-1000'	1.5
St. Charles Parish - 8 Rectangular Flapgates	Rigolets Approach Channel	20'-32.5'X1150'-2500'	2.5
5.0' X 9.0' 580 feet long	Rigolets Navigation Channel	14'X100'	.9
St. Bernard Parish - 2 - 72" culverts			

Floodgates: Chef Menteur - Sector-Gated - 56' wide
 Bayou Bienvenue - Sector-Gated - 56' wide
 Bayou Dupre - Sector-Gated - 56' wide

Locks: Seabrook - 84'x800' Chamber, Sector-Gated
 Rigolets - 84'x800' Chamber, Sector-Gated

Dam Closures: Bayou Bienvenue - Earthen - 500' long
 Bayou Dupre - Earthen - 500' long
 Bayou Villere - Earthen - 500' long
 Pipeline Canal - Earthen - 200' long
 Seabrook - Rock - 750' long
 Chef Menteur - Earthen - 2,000' long
 Rigolets - Earthen - 3,000' long
 GIWW - Earthen - 250' long
 GIWW - Earthen - 250' long

Control Structure:

Chef Menteur - 8 Bays, Vertical Lift Steel Gates, 14'x46' each; 700 feet total width
 Rigolets - 23 Bays, Vertical Lift Steel Gates, 2 stacked per bay, 11.5'x46' each; 1,450 feet total width

Floodwalls:

Rigolets - I or T type wall - 170' long
 Chef Menteur - I or T type wall - 200' long
 Bayou Dupre - I or T type wall - 240' long
 Bayou Bienvenue - I or T type wall - 240' long
 Inner Harbor Navigation Canal, Westside - I or T type wall - 5.8 miles
 Inner Harbor Navigation Canal, Eastside - I or T type wall - 4.1 miles
 Citrus Back Levee - I or T type wall - 1.8 miles

Railroad Gate Structures:

Southern Railway at Seabrook, New Orleans East, IHNC West
 Southern Railway at Seabrook, Citrus Area, IHNC East
 Louisville & Nashville R.R., New Orleans East, IHNC West
 Louisville & Nashville R.R., Citrus Area, IHNC East
 Southern Railway at Florida Avenue, New Orleans East, IHNC West
 Southern Railway at Florida Avenue, Chalmette, IHNC East
 Southern Railway Entrance to Lincoln Beach, Citrus Area

JUSTIFICATION: The lowlands in the Lake Pontchartrain tidal basin are subject to tidal overflow. The Greater New Orleans Metropolitan area which lies in this basin will continue its rapid economic development in the near future even though severe damages have resulted from several hurricanes in the recent past. Hurricane damages result from surges entering Lake Pontchartrain from Lake Borgne through natural tidal passes at Rigolets and Chef Menteur Pass and through improved channels of the Mississippi River-Gulf Outlet and Inner Harbor Navigation Canal. The surges are intensified by local wind effects, and the combination of waves and surges causes overtopping of the protective works along the shores of the lake. The eastern portion of the area is also subject to flooding by surges and waves that move directly from Lake Borgne and

overtop the existing inadequate protective system seaward of the developed land areas. As a result, residences and industrial and commercial establishments suffer damage, business activities are disrupted, lives endangered, and hazards to health created. Hurricanes much more severe than any of record are possible. In the event of the occurrence of such a severe hurricane, catastrophic property damage and loss of human life would be experienced. Local interests have requested protection against these threats to life and property. Another and related problem exists in the area. The Mississippi River-Gulf Outlet provides a deep, direct route for the inflow of saline currents from the Gulf of Mexico to the area along its channel and to Lake Pontchartrain, with resultant adverse effect on fishery resources in the area. The Gulf Outlet channel also will produce high velocity currents in the Inner Harbor Canal, creating a hazard to navigation and causing serious scour and damage, particularly in constricted areas at bridge crossings. These adverse effects will be greatly alleviated by construction of the lock for navigation and salinity control at the lake end of the Inner Harbor Navigation Canal (IHNC) at Seabrook.

The average annual benefits, all flood control, are estimated at \$91,446,800.

FISCAL YEAR 1971: The requested amount of \$8,250,000 will be applied to:

Initiate:

New Orleans East Unit

✓ New Orleans East Back Levee (Sta. 664 to 695 & 722 to 763) 1st lift levee	\$200,000
✓ New Orleans East Back Levee (Sta. 763 to 1006) 1st lift levee	200,000
✓ Chef Menteur Barrier Levee (East & West of Chef Menteur) 1st lift levee	600,000
✓ Rigolets Barrier (North of Rigolets) 1st lift levee	600,000
✓ Rigolets Barrier (South of Rigolets) 1st lift levee	70,000

New Orleans West Unit

✓ St. Charles Levee (Sta. 0+00 to 140+00) 1st lift levee	270,000
✓ St. Charles Levee (Sta. 140+00 to 298+61) 1st lift levee	450,000

Chalmette Unit

✓ Chalmette (Verret to Caernarvon, Sta. 1121 to 1559) 1st lift levee	690,000
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Initiate and Complete:

New Orleans East Unit

✓ Chef Menteur Barrier - GIWW Relocation	1,000,000
✓ IHNC - West (Vicinity Florida Ave., Sta. 0+00 to 27+70) Floodwall	670,000

Chalmette Unit

✓ Pipeline Canal Closure, 1st lift & Bayou Villere Closure, 2nd lift levee	600,000
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Continue:

Chalmette Unit

Chalmette (IHNC to Bayou Bienvenue, Sta. 65 to 355) 1st lift levee	\$537,000
Engineering and Design	1,400,000
Supervision and Administration	963,000
Total	<u>\$8,250,000</u>

The funds requested for Fiscal Year 1971 are required to continue construction at an orderly and economical rate to meet the scheduled completion date and to assure maximum incremental benefits from the funds expended.

NON-FEDERAL COSTS: Local interests are to bear 30% of the first cost to consist of the fair market value of all lands, easements, and rights-of-way, including borrow and spoil disposal areas necessary for construction of the hurricane features, and to accomplish all necessary alterations and relocations to roads, railroads, pipelines, cables, wharves, drainage structures, and other facilities made necessary by the construction works. They are required to share in only 1/2 the cost of Seabrook Lock; the other half being constructed for navigation purposes at Federal expense. In addition, local interests are required to contribute the capitalized cost of operation and maintenance for Rigolets Lock. The current estimate of project costs to be borne by local interests follows:

Lands and Damages	\$19,922,000
Relocations	3,691,000
Cash Contributions:	
Based on 30% of total project cost less Seabrook Lock	28,305,000
Based on 15/85 ratio for Seabrook Lock	1,341,000
Capitalization of O&M for Rigolets Lock	3,816,000
Total	<u>\$57,075,000</u>

Local interests are required to operate and maintain all features of the project works, excluding the Rigolets Navigation Lock and channel and modified dual-purpose Seabrook Lock. The annual cost to local interests for maintenance and operation is estimated at \$299,000 and replacements \$137,300, a total of \$436,300.

In addition, local interests, through the combined efforts of the State of Louisiana, local levee and drainage districts, and parish police juries have spent an estimated \$25,000,000 between 1930-1963, based on the best cost records available, to effectuate and maintain the hurricane protection system existing prior to project authorization. Available costs of record are tabulated below:

Combination of State of Louisiana, Lake Borgne Levee District and Chalmette Back Levee District on the Chalmette Back Levee Protection Systems	\$ 4,410,000
Orleans Levee District Board	12,010,000
Port of New Orleans (Levees along Industrial Canal)	924,000
Pontchartrain Levee District	5,022,000 1/
Fourth Drainage District of Jefferson Parish	3,000,000 2/
Total	<u>\$25,366,000</u>

- 1/ Cash contribution, furnishing rights-of-way, relocations and maintenance of FCMR&T Lake Pontchartrain, Louisiana project, which protects East Jefferson Parish from Lake Pontchartrain inundations.
- 2/ For interior drainage improvements required by the FCMR&T Lake Pontchartrain, Louisiana, project.

A very severe hurricane, "Betsy", occurred in the project area in September 1965 just prior to authorization of the project in October 1965. Considerable damage was done to many of the existing levees and local interests immediately instituted an accelerated rehabilitation program with the view of restoring and strengthening existing protection prior to succeeding hurricane seasons. Some of this work will conform to the project design criteria and alignment and will be accepted by the United States as work-in-kind in lieu of cash contribution, but some portions of work will not meet project requirements. The expenditures on the portion that will not meet project requirements will be, in effect, an additional amount spent by local interests prior to authorization. This amount could range upward to a million dollars or more.

Hurricane "Camille" occurred in the project area in August 1969 and flooded areas along the Inner Harbor Navigation Canal.

STATUS OF LOCAL COOPERATION: The Governor of Louisiana has appointed the State Department of Public Works to act as coordinator in resolving all questions that may arise and to expedite the furnishing of assurances. The Corps of Engineers is continually engaged with the State Department of Public Works in clarifying requirements of local cooperation, as necessary. Formal request for assurances for the Barrier Plan were requested on 27 July 1966 and furnished by the Board of Commissioners, Orleans Levee District, on 28 July 1966. Formal assurances for the Chalmette Area Plan and its modification were requested respectively on 8 February 1966 and 6 June 1967 and were furnished jointly by the St. Bernard Police Jury and the Board of Commissioners, Lake Borgne Levee District on 16 August 1966 and 6 July 1967. This completes all the assurances necessary for the construction of Lake Pontchartrain and Vicinity, Hurricane Protection.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$124,925,000 is an increase of \$11,363,000 over the latest estimate (\$113,562,000) submitted to Congress. This change includes increases of \$10,582,000 for higher price levels and \$781,000 for Engineering and Design based on reanalysis of requirements.

APPROPRIATION TITLE: CONSTRUCTION GENERAL		PROJECT: LAKE PONTCHARTRAIN AND VICINITY, LA.			
CLASSIFICATION: LOCAL PROTECTION (FLOOD CONTROL PROJECTS)		(HURRICANE PROTECTION)			
SUMMARY CONSTRUCTION PROGRAM (PB-1)					
FISCAL YEARS 1970 & 1971					
ITEM	PROJECT COST ESTIMATE	TOTAL TO 30 JUNE 1969	CURRENT FISCAL YEAR 1970	BUDGET FISCAL YEAR 1971	BALANCE TO COMPLETE AFTER FY 1971
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL PROJECT					
LANDS AND DAMAGES	19,222,000				19,222,000
RELOCATIONS	3,691,000				3,691,000
LOCKS	13,760,000				13,760,000
ROADS	470,000				470,000
CHANNELS AND CANALS	9,330,000			1,000,000	8,330,000
LEVEES AND FLOODWALLS	102,065,000	9,435,500	2,402,200	14,370,800	75,856,500
FLOOD CONTROL & DIVERSION STRUCTURES	12,327,000				12,327,000
ENGINEERING AND DESIGN	11,494,000	3,942,400	1,516,000	1,400,000	4,635,600
SUPERVISION AND ADMINISTRATION	8,941,000	915,000	339,100	963,000	6,723,900
TOTAL APPLIED COST (C of E & Non-Fed Funds)	182,000,000	14,292,900	4,257,300	17,733,800	145,716,000
Undistributed Cost (None)					
TOTAL PROJECT COST (C of E & Non-Fed Funds)	182,000,000	14,292,900	4,257,300	17,733,800	145,716,000
Pending Adjustments (None)					
TOTAL COST (C of E & Non-Fed Funds)	182,000,000	14,292,900	4,257,300	17,733,800	145,716,000
Undelivered Orders					
TOTAL OBLIGATIONS		14,484,200	4,066,000	17,733,800	145,716,000
1/ Includes \$11,100 for Real Estate Activities					
CORPS OF ENGINEERS FUNDS					
LOCKS	8,027,000				8,027,000
ROADS	387,000				387,000
CHANNELS AND CANALS	7,687,000			1,000,000	6,687,000
LEVEES AND FLOODWALLS	82,139,000	5,220,300	1,402,200	12,520,000	62,996,500
FLOOD CONTROL AND DIVERSION STRUCTURES	10,157,000				10,157,000
ENGINEERING AND DESIGN	9,311,000	3,834,400	1,500,000	1,400,000	2,576,600
SUPERVISION AND ADMINISTRATION	7,217,000	664,000	289,100	693,000	5,300,900
TOTAL APPLIED COST (C of E Funds Only)	124,925,000	9,718,700	3,191,300	15,883,000	96,132,000
Undistributed Cost (None)					
TOTAL PROJECT COST (C of E Funds Only)	124,925,000	9,718,700	3,191,300	15,883,000	96,132,000
Pending Adjustments (None)					
TOTAL COST (C of E Funds Only)	124,925,000	9,718,700	3,191,300	15,883,000	96,132,000
Undelivered Orders					
TOTAL OBLIGATIONS		9,910,000	3,000,000	15,883,000	96,132,000

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APPROPRIATION TITLE: CONSTRUCTION GENERAL		PROJECT: LAKE PONTCHARTRAIN AND VICINITY, LA.			
CLASSIFICATION: LOCAL PROTECTION (FLOOD CONTROL PROJECTS)		(HURRICANE PROTECTION)			
SUMMARY CONSTRUCTION PROGRAM (PB-1)					
FISCAL YEARS 1970 & 1971					
ITEM	PROJECT COST ESTIMATE	TOTAL TO 30 JUNE 1969	CURRENT FISCAL YEAR 1970	BUDGET FISCAL YEAR 1971	BALANCE TO COMPLETE AFTER FY 1971
(1)	(2)	(3)	(4)	(5)	(6)
NON-FEDERAL CONTRIBUTION					
LANDS AND DAMAGES	19,922,000				19,922,000
RELOCATIONS	3,691,000				3,691,000
LOCKS	5,733,000				5,733,000
ROADS	83,000				83,000
CHANNELS AND CANALS	1,643,000				1,643,000
LEVEES AND FLOODWALLS	19,926,000	4,215,200	1,000,000	1,850,800	12,860,000
FLOOD CONTROL AND DIVERSION STRUCTURES	2,170,000				2,170,000
ENGINEERING AND DESIGN	2,183,000	108,000	16,000		2,059,000
SUPERVISION AND ADMINISTRATION	1,724,000	251,000	50,000		1,423,000
TOTAL APPLIED COST (Non-Federal Only)	57,075,000	4,574,200	1,066,000	1,850,800	49,584,000
Undistributed Cost (None)					
TOTAL PROJECT COST (Non-Federal Only)	57,075,000	4,574,200	1,066,000	1,850,800	49,584,000
Pending Adjustments (None)					
TOTAL COST (Non-Federal Only)	57,075,000	4,574,200	1,066,000	1,850,800	49,584,000
Undelivered Orders (None)					
TOTAL OBLIGATIONS		4,574,200	1,066,000	1,850,800	49,584,000
METHOD OF FINANCING					
Corps of Engineers Funds					
Allocations		12,493,000	8,050,000		
Unobligated Carryover from Prior Year			2,583,000	7,633,000	
Total Funds Available for Obligation			10,633,000	15,883,000	
Appropriations Required				8,250,000	96,132,000
Non-Federal Contributions		4,600,000	1,066,000		
Contributions			+25,800		
Unobligated Carryover from Prior Year			1,091,800	1,850,800	
Total Funds Available for Obligation				1,825,000	49,584,000
1/ Includes \$2,790,000 placed in budgetary reserve. This amount to be allocated in FY 1971.					

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