

1973

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.

AUTHORIZATION: 1965 Flood Control Act

BENEFIT-COST RATIO: 11.5 to 1

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost	Estimated Non-Federal Cost	Cash Contribution	Other Costs	Total Estimated Project Cost	Allocations to 30 Juns 1971	Allocations for FY 1972	Allocations to Date	Appropriations Requested for FY 1973	Balance to Complete after FY 1973	Accumulated % of Est. Fed. Cost	STATUS (1 January 1972)	PERCENT COMPLETE	COMPLETION
													DATE
\$178,000,000	\$47,259,000 1/		29,741,000	\$255,000,000						77,000,000 1/2	Locks	0	Sep. 1976
											Roads	0	June 1977
											Channels and Canals	14	June 1977
											Levees and Floodwalls:	17	Dec. 1981
											New Orleans East Unit	0	Dec. 1981
											New Orleans West Unit	0	June 1975
											Mandeville Unit	19	June 1978
											Flood Control & Diversion Structures	0	June 1976
											Entire Project	18	Dec. 1981

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.

REGION: LOWER MISSISSIPPI VALLEY DISTRICT: NEW ORLEANS

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31 JAN 1972

PHYSICAL DATA

Levees: Average Height - 13 feet  
Length - 74 miles

Drainage Structures: St. Charles Parish-544 ft. wide with eight 5.0 ft. high by 9.0 ft. wide combination flap & vertical lift gates. Sill elevation -5.5 m.s.l.  
St. Bernard Parish-two 72 in. dia. CWP culverts with flap and vertical slide gates.

Channels:

	Size	Length (Mi.)
Bayou Bienvenue Navigation Channel	10 ft. by 125 ft.	0.5
Bayou Dupre Navigation Channel	10 ft. by 125 ft.	0.2

Floodgates: Chef Menteur - Sector-Gated - 84 ft. wide  
Bayou Bienvenue - Sector-Gated - 56 ft. wide  
Bayou Dupre - Sector-Gated - 56 ft. wide

Locks: Seabrook - 84 ft. by 800 ft. Chamber, Sector-Gated  
Rigolets - 84 ft. by 800 ft. Chamber, Sector-Gated

Dam Closures: Bayou Bienvenue - Earthen - 500 ft. long  
Bayou Dupre - Earthen - 500 ft. long  
Bayou Villere - Earthen - 500 ft. long  
Pipeline Canal - Earthen - 200 ft. long  
Seabrook - Rock - 1040 ft. long  
Chef Menteur - Earthen - 1600 ft. long  
Rigolets - Earthen - 3000 ft. long  
GIWW East - Earthen - 500 ft. long  
GIWW West - Earthen - 700 ft. long

Railroad Gate Structures:  
New Orleans East Unit:

Southern Railway at Seabrook, New Orleans East, IHNC West  
Southern Railway at Seabrook, Citrus Area, IHNC East  
Louisville and Nashville RR, New Orleans East, IHNC West

Channels:

	Size	Length (Mi.)
GIWW Relocation	12 ft. by 125 ft.	7.0
Chef Menteur Navigation Channel	12 ft. by 125 ft.	2.3
Chef Menteur Approach Channel	Depth: -25 ft. @ structure Width: 400 ft. @ structure	2.1
Rigolets Approach Channel	Depth: -30 ft. @ structure Width: 800 ft. @ structure	1.0
Rigolets Navigation Channel	14 ft. by 100 ft.	0.9

Control Structures:  
Chef Menteur - 1,200 ft. total width structure; Sill El. -25 ft., 8 Gate Bays, Vertical Lift Steel Gates, 14 ft. by 46 ft. each.  
Rigolets - 1,100 ft. total width structure; Sill El. -30 ft., 16 Gate Bays, Vertical Lift Steel Gates, 3 stacked per bay, 11.5 ft. by 46 ft. each.  
Seabrook - 116 ft. total width structure. Sill El. -15.8 ft.; 3 Gate Bays, Vertical Lift Steel Gates, 20 ft. by 32 ft. each.

Floodwalls:  
Rigolets  
Chef Menteur  
Bayou Dupre  
Bayou Bienvenue  
Verret Highway No. 46- I and/or T type wall - 170 ft. long  
I and/or T type wall - 590 ft. long  
I and/or T type wall - 390 ft. long  
I and/or T type wall - 375 ft. long  
I and/or T type wall - 255 ft. long  
I and/or T type wall - 275 ft. long  
Inner Harbor Navigation Canal, Westside - I and/or T type wall - 5.8 miles

Ballroom, Lake St. Charles (Cont'd)  
New Orleans East Unit (Cont'd)

Louisville and Nashville RR, Citrus Area, IHNC East  
Southern Railway at Florida Avenue, New Orleans East.  
IHNC West

Chalmette Unit:

Southern Railway at Florida Avenue, Chalmette.  
IHNC East

Floodwalls: (Cont'd)

Inner Harbor Navigation  
Canal, Eastside - I and/or T type wall - 4.1 miles  
Citrus Back Levee - I and/or T type wall - 3.2 miles

**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 future years 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 the 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 Lake Pontchartrain. 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 such 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. The Lake Pontchartrain hurricane protection project will provide the necessary protection. The Mississippi River-Gulf Outlet (MR-GO) via the Inner Harbor Navigation Canal (IHNC) provides a direct tidal route from the Gulf of Mexico to Lake Pontchartrain. Consistent with the rationale that lake levels can be controlled by limiting tidal inflow to the lake, a lock and control structure complex is to be constructed at the junction of the IHNC and Lake Pontchartrain at Seabrook. The complex will provide the multi-purposes of flood control, salinity control, and navigational benefit. The cost of the Seabrook Complex is allocated 50% to the hurricane protection project and 50% to the MR-GO project. The average annual benefits, all flood control, are estimated at \$117,296,300.

LAKE PONTCHARTRAIN AND VICINITY, LOUISIANA

01/22/62

FISCAL YEAR 1973: The requested amount of \$20,000,000 will be applied to:

Initiate:

- New Orleans East Unit
- N. O. East Lakefront Levee (Paris Road to South Point) 1st lift levee
- Chef Menteur Barrier Control Structure
- Rigolets Barrier Control Structure

\$ 800,000  
300,000  
400,000

Initiate and Complete:

- New Orleans East Unit
- Citrus Back Levee, Station 176 to 196, 1st lift levee
- N. O. East Back Levee, Station 874 to 882, floodwall

10,000  
400,000

Continue:

- New Orleans East Unit
- New Orleans East Back Levee, Station 775 to 1007, 1st lift levee
- Chef Menteur Barrier, East and West, 1st lift levee
- Rigolets Barrier, North, 1st lift levee
- New Orleans West Unit
- St. Charles Levee, Station 0 to 121, 1st lift levee
- St. Charles Levee, Station 129 to 294, 1st lift levee
- Chalmette Unit
- Bayou Bienvenue Control Structure
- Bayou Noye Control Structure
- Station 370 to 775, not continuous, 2d lift levee and Pipeline
- Canal Closure, 2d lift

2,100,000  
1,900,000  
1,190,000  
1,500,000  
1,400,000  
1,400,000  
400,000  
100,000

Engineering and Design  
Supervision and Administration

1,200,000  
1,300,000

Completes: New Orleans East Unit IHC, West Station 206 to 238, Floodwall Citrus Back Levee, Station 196 to 582, 2d lift levee Citrus Back Levee, Station 582 to 645, floodwall New Orleans East Back Levee, Station 645 to 775, floodwall Rigolets Barrier, South, 1st lift levee Chalmette Unit Vicinity Paris Road Bridge, Floodwall Verret to Caernarvon, Station 1121 to 1560, 1st lift levee	\$ 350,000 690,000 485,000 1,700,000 575,000 70,000 <u>1,730,000</u> \$20,000,000
Total	\$20,000,000

The funds requested for Fiscal Year 1973 are required to meet the scheduled completion date.

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	\$25,153,000
Relocations	4,588,000
Cash Contributions:	
Based on 30% of total project cost less Seabrook Lock	40,305,000
Based on 15/85 ratio for Seabrook Lock	3,138,000
Capitalization of O&M for Rigolets Lock	<u>3,816,000</u>
Total	\$77,000,000

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 material replacements \$167,600, a total of \$466,600.

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 systems 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 System	\$ 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
Fourth Drainage District of Jefferson Parish	3,000,000
Total	\$25,366,000

A very severe hurricane, "Betty," 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. Only work performed by local interests after project authorization which conforms to the project design criteria and alignment will be accepted by the United States as work-in-kind in lieu of cash contribution.

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

**STATUS OF LOCAL COOPERATION:** Formal request for assurances for the Barrier Plan was made by the Federal Government on 27 July 1966 and furnished by the Board of Commissioners of the Orleans Levee District on 28 July 1966. By executive order dated 5 March 1971, the Governor of the State of Louisiana designated the Louisiana Department of Public Works as the local coordinator for the Barrier Plan. Full assurances for the Barrier Plan have not yet been forwarded to the Government by that agency. Formal assurances for the Chalmette Area Plan and its modification were requested on 8 February 1966 and 6 June 1967, respectively, and were furnished jointly by the St. Bernard Parish Police Jury and the Board of Commissioners of the Lake Borgne Levee District on 16 August 1966 and 6 July 1967, respectively.

**COMPARISON OF FEDERAL COST ESTIMATES:** No change from the previous estimate (\$178,000,000) presented to Congress in connection with the Supplemental Appropriations Act, 1972.







