

**U.S. Army Corps of Engineers
Hurricane Protection Office
ATTN: CEMVN-HPO**

**Project Information Report
Rehabilitation Hurricane or Shore Protection
Projects Damaged by
Hurricane Katrina**

**Lake Pontchartrain, Louisiana and Vicinity,
Hurricane Protection Project**

Orleans Parish, Louisiana

Orleans East Bank

Revision #04

October 2006

**Prepared by the U.S. Army Corps of Engineers
Hurricane Protection Office**

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- N. CECW-HS, MEMORANDUM FOR ASSISTANCE SECRETARY OF THE ARMY FOR CIVIL WORKS (ASA(CW)), SUBJECT: RECOMMENDATIONS FOR ONE-TIME DEVIATIONS TO CERTAIN POLICIES REGARDING USE OF PL 84-99 (33 U.S.C. 701N) IN NEW ORLEANS AND VICINITY FOLLOWING HURRICANE KATRINA – FOR APPROVAL, DATED OCTOBER 7, 2005 -----
- O. LETTER FROM OFFICE OF ASSISTANT SECRETARY OF THE ARMY FOR CIVIL WORKS (ASA(CW)) JOHN PAUL WOODLEY, JR. TO DIRECTOR OF OFFICE OF MANAGEMENT AND BUDGET, JOSHUA BOLTEN, DATED OCTOBER 12, 2005 -----
- P. PIR POINTS OF CONTACT ----- NO CHANGE
- Q. Post Hurricanes Katrina, Wilma, Ophelia Expenditure of Flood Control and Coastal Emergency (FCCE) Funds for Restoration and Rehabilitation, and for Accelerated Work to Complete Authorized Projects, in Accordance With the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico and Pandemic Influenza Act, 2006 (Public Law 109-148), Dated February 14, 2006, Signed by Don Riley, Major General, Director of Civil Works -----
- R. NOT USED -----
- S. NOT USED -----
- T. NOT USED -----
- U. NOT USED -----
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- W. NOT USED -----
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Executive Summary

The purpose of this revision to the Lake Pontchartrain, Louisiana and Vicinity, Hurricane Protection Project, Orleans East Bank PIR is to identify requirements to remove storm water at the three outfall canals (17th Street, Orleans Avenue, and London Avenue). This revision follows the outline of the original PIR and Revision 1, 2, and 3. Only the sections changed are included in this revision. The sections that have not been changed will be identified and a reference to the original PIR will be included.

Hurricane Katrina weakened portions of the Orleans East Bank (OEB) outfall canal levee foundations causing catastrophic breaches at the 17th Street and London Avenue Outfall Canals. Because of the extensive amount of damage caused by Hurricane Katrina, interim gated structures with temporary pumps were installed at the mouth of the three outfall canals. The capacity of the temporary pumps at the closure structures on the 17th Street Canal and London Avenue Canal is less than the capacity of the existing pumps stations that discharge into these canals. During a storm event when the gates are closed, the existing pump stations will be limited to the capacity of the temporary pumps. Adding additional temporary pumps at the closure structures will insure the integrity of the parallel protection levees and floodwalls.

The capacity of the temporary pumps approved in Revision No. 1 was limited to what could be physically put in place at the beginning of the 2006 hurricane season. Revision No. 2 identified the need for additional pumping capacity and contingency measures in the event that interim gated structures and temporary pumps were not installed by 1 June 2006. Revision No. 3 identified a pump capacity implementation strategy for the 17th Street Canal during the 2006 season.

This revision to the PIR recommends that the total capacity of the temporary pumps, at the interim gated closure structures, will be increased from 6,000 cfs to 7,700 cfs at the 17th Street Canal closure structure and decreased from 5,600 cfs to 5,000 cfs at the London Avenue Canal closure structure. If 7,700 cfs capacity is not achieved by the required date, other measures may be used, including portable pumps, until the capacity is achieved. The current cost estimate for repairs is approximately [REDACTED]

1. through 11.

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

12. Proposed Work

For 'No Change' items, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

a. Description

(1) No Change

(2) No Change

(3) The original PIR recommended repairing the hurricane flood control protection to pre-storm authorized height. Construct outfall canal closure structures for the 17th Street, London Avenue and Orleans Avenue Canals to prevent storm surge from entering the canals.

The alternative was amended by Revision #1 to the PIR(20 January 2006). This amended alternative consisted of building interim gates closure structures with temporary pumps at each of the canals near Lake Pontchartrain and any modifications to the levees north of the proposed structure to tie into the Lake Pontchartrain levee system. Measures would also be taken to increase the safe operating stages in the canals.

The alternative was amended in Revision #2 (17 May 2006) to increase temporary pumping capacity at the 17th Street Canal to 6,000 cfs and London Avenue Canal to 5,600 cfs by adding additional pumps at the interim gated closure at 17th Street and London Avenue Canals. Because the interim gated closure structures and initial temporary pumping capacity approved by Revision #1 to the PIR were not fully in place by 1 Jun 06, interim sheet pile closures with portable pumps with a capacity of approximately 1,000 cfs capacity were added at the 17th Street and London Avenue Canals.

The alternative was amended in Revision #3 (July 2006) to describe implementing the increased capacity at 17th Street Canal to a total of 5,200 cfs during the 2006 hurricane season. The amended PIR also included using portable pumps with an approximate capacity of 1,000 cfs on the interim control structure at the 17th Street Canal.

The alternative is further amended to revise the required capacity at the interim gated closure structures at the 17th Street Canal to 7,700 cfs and 5,000 cfs at London Avenue Canal to maintain the safe water level in the outfall canals during the operation of the interior drainage pumping stations during an event that will require a gate closure.

b. Discussion

(1) No Change

(2) No Change

(3) In order to restore hurricane protection to the outfall canals, insure the integrity of the parallel protection levees and floodwalls, and provide for access and maintenance, the gated closure structures and temporary pumps were approved as part of Revision No. 1, dated 20 Jan 2006. The capacity of the temporary pumps approved in Revision No. 1 was limited to what could physically put in place by 1 June 2006. Revision No. 2 recommended increasing the temporary pumping capacity at 17th Street and London Avenue Canals and Revision No. 3 provided an implementation schedule. A discussion of the need to revise to approved capacities at 17th Street and London Avenue Canals is provided below.

Introduction

The three outfall canals (17th Street, Orleans Avenue, and London Avenue) convey rainfall runoff from a total of six pump stations to Lake Pontchartrain. On the 17th Street Canal, three pump stations discharge rainfall runoff into the canal. The three stations are Pump Station No. 6, the I-10 Pump Station, and the Canal Street Pump Station. On Orleans Avenue Canal, only Pump Station No. 7 discharges into the canal. Finally, on London Avenue, two stations, Pump Station No. 3 and Pump Station No. 4, discharge into the canal. All the pump stations discharging into the 17th Street, London Avenue and Orleans Avenue Canals, with exception to the Canal Street Pump Station, are operated by the New Orleans Sewerage and Water Board. The Canal Street Pump Station is operated by Jefferson Parish. The rated discharges of the stations are shown in Table 1. With the exception of the Canal Street Pump Station, all of the existing pump stations that discharge into the outfall canals were damaged by Hurricane Katrina.

**Table 1
Rated Capacities**

Pump Station	Nominal Capacity (cfs)
London Ave	
PS 3	4,260
PS 4	<u>3,720</u>
Total London	7,980
Orleans Ave	
PS 7	<u>2,690</u>
Total Orleans	2,690
17 Street	
PS 6	9,480
I-10	860
Canal Street	<u>160</u>
Total 17th Street	10,500

Safe Water Levels

The analysis of the walls along the three outfall canals has identified the safe water level in the canals. The safe water level is the water elevation in the canal that provides a stable wall with the appropriate factors of safety. Currently, the safe water level in the 17th Street Canal is elevation 6.0 NAVD88 2004, in the Orleans Avenue Canal elevation 8.0 NAVD88 2004, and in the London Avenue Canal 4.0 NAVD88 2004. MVN anticipates testing of the London Avenue Canal to collect data to be used in a continued evaluation of the safe water level.

Affects of Safe Water Levels on Existing Temporary Pumps

The original design of the temporary pumps included start elevation of 4.0 in the canals. Once pump priming occurred the pumps could pump down to elevation 2.0. Modifications have been made to the discharge pipes at the three outfall canals. These modifications include inverting the discharge pipe and cutting the pipe at an optimum angle to allow the pumps to prime at lower canal elevations. Field test of the pumps indicate that with the modifications to the discharge pipes, the pumps can prime at elevation 2.0. With these modifications, operating the pumps within the safe water level may be accomplished.

Pump Station Capacities

The pump stations use the canals to evacuate storm water from the city to the lake. In the event of a gate closure, pumped storm water cannot flow freely into Lake Pontchartrain. The US Army Corps of Engineers, Hydroelectric Design Center (HDC) estimated the rate at which water can be pumped into canals by the existing pump stations at an elevated canal levels. The calculations are intended to estimate the rate at which the existing pump stations can discharge water into the canals when the water elevation in the canals is +5 feet NAVD88 2004.65, and the intake water elevation at the pump stations is -7.5 feet NAVD88 2004.65, producing a 12.5 static head.

Table 2 compares the rated discharge and the pool to pool discharge for the London Ave. canal.

Table 2
London Avenue Canal

Pump Station	Rated Capacity	Calculated Capacity at 12.5 feet of Static Head
Pump Station No. 3	4,100 cfs	3,584 cfs
Pump Station No. 4	3,640 cfs	3,600 cfs
Total	7,740 cfs	7,184 cfs
Percent of rated capacity		93%

Based on discussions with the Orleans S&WB, the 2-80 cfs constant duty pumps at Pump Station 3 and the 1-80 cfs constant duty pump at Pump Station 4 do not contribute during substantial rainfall event and therefore are not include in the rated capacity. Constant duty pumps are used to discharge dry weather flow from the city.

Table 3 compares the rated discharge and the pool to pool discharge for the 17th Street Canal.

Table 3
17th Street Canal

Pump Station	Rated Capacity	Calculated Capacity at 12.5 feet of Static Head
Pump Station No. 6	9,300 cfs	8,115 cfs
I-10 Pumping Station	750 cfs	633 cfs
Canal Street Pumping Station	160 cfs	152 cfs
Total	10,210 cfs	8,900cfs
Percent of rated capacity		87%

Based on discussions with the Orleans S&WB, the 2-90 cfs constant duty pumps at Pump Station 6 and 1-100 cfs constant duty pump at the I-10 Pump Station do not contribute during substantial rainfall event and therefore are not used.

Table 4 compares the rated discharge and the pool to pool discharge for the Orleans Ave. canal.

Table 4
Orleans Avenue

Pump Station	Rated Capacity	Calculated Capacity at 12.5 feet of Static Head
Pump Station No. 7	2,550 cfs	2,350 cfs
Total	2,550 cfs	2,350 cfs
Percent of rated capacity		92%

Based on discussions with the Orleans S&WB, the 2-70 cfs constant duty pumps at Pump Station 7 do not contribute during substantial rainfall event and therefore are not used.

Temporary Pumping Requirements

When the gated structures are closed and the city uses the canal to discharge rainfall runoff from the city, floodwaters would build up in the canal, quickly exceeding the safe water level. Therefore, temporary pumps are necessary to evacuate this water to maintain the integrity of the parallel protection system.

Analysis of Needed Capacity

In order to maintain the adequate function of the hurricane protection project and the structural integrity of the outfall canal floodwalls, the water elevation in the canal must be maintained at or below the safe water levels.

Early in the project, only one hydraulic numerical model was available. The model, Storm Water Management Model (SWMM), was originally created to evaluate the city's interior drainage system for the Southeast Louisiana (SELA) project. Based on the analysis of that model, many alternatives were recommended and implemented. However, SWMM is limited in its surface water transport analyses and its interaction with the sub-surface system. Many strides have been made lately to bring those two, very different phenomena, together.

Because of Hurricane Katrina and the failures of the hurricane protection system, the Corps put together a team of engineers, scientists, academia, and distinguished fellows to form the Interagency Performance Evaluation Team (IPET) to investigate and come up with solutions to the hurricane protection system failures. Included within the large IPET team, were sub-teams, one of which studied interior hydraulics and hydrology. A part of the interior hydraulics and hydrology sub-team was the Corp's Hydrologic Engineering Center.

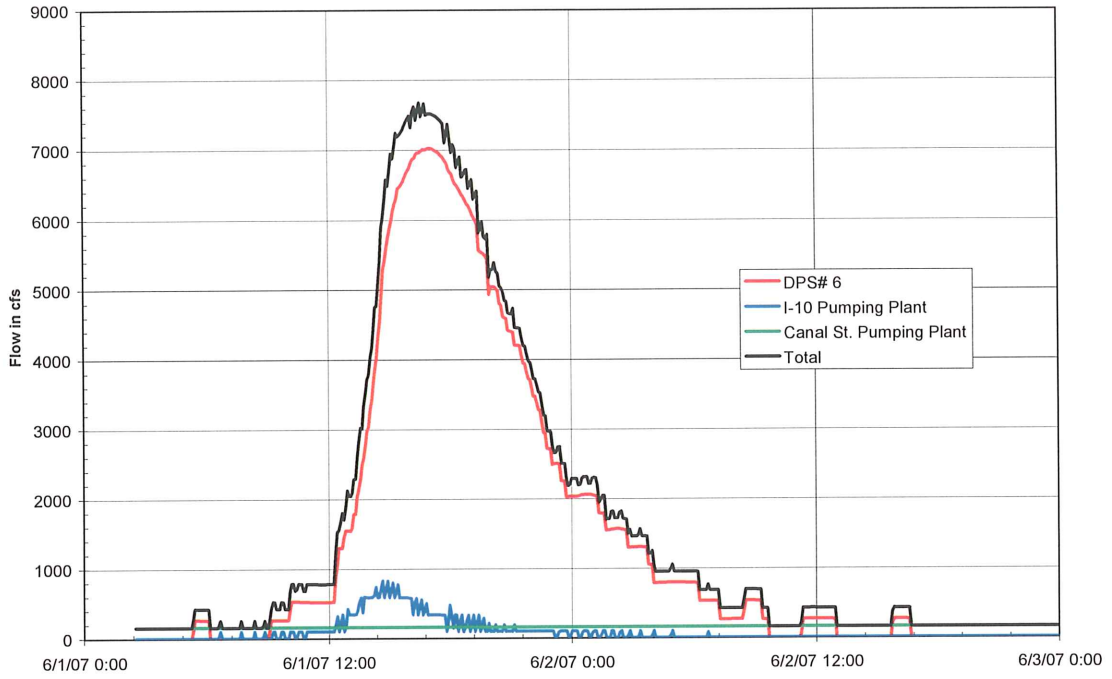
HEC-RAS was evaluated on all levels and was determined to be most useful in evaluating the interior flooding due to rainfall and storm surge from Hurricane Katrina. Many algorithms were modified within HEC-RAS to accurately model the city's sub-surface drainage system. Once modifications were complete, the entire three basin model was put together, run, and verified for the Hurricane Katrina event. Subsequently, the model has been updated to include all post-Katrina canal surveys and additional drains entering those canals. The model was run for the 10-, 50-, and 100-year synthetic rainfall with the corresponding Lake Pontchartrain stage hydrograph. The total rainfall amount associated with each of these are, 9", 11.5", and 12.1" respectively for 24 hours.

Based on results from the SWMM model, and prior to the IPET interior drainage model, 7,300 cfs capacity at the interim gated closure structure at the 17th Street Canal and 4,800 cfs capacity at the interim gated closure structure at London Avenue were determined to be the capacities required to insure the integrity of the parallel protection levees and floodwalls, and provide for access and maintenance during a 10-year rainfall event. One shortcoming of the SWMM Model was it did not address the I-10 and Canal Street stations directly as these two stations were not included in the original model geometry. Therefore, the watershed peaks were added directly to Pumping Station No. 6 discharge for a total of 7,300 cfs. This is a very conservative approach since the watersheds are relatively very small and peak before Pumping Station No. 6 peaks.

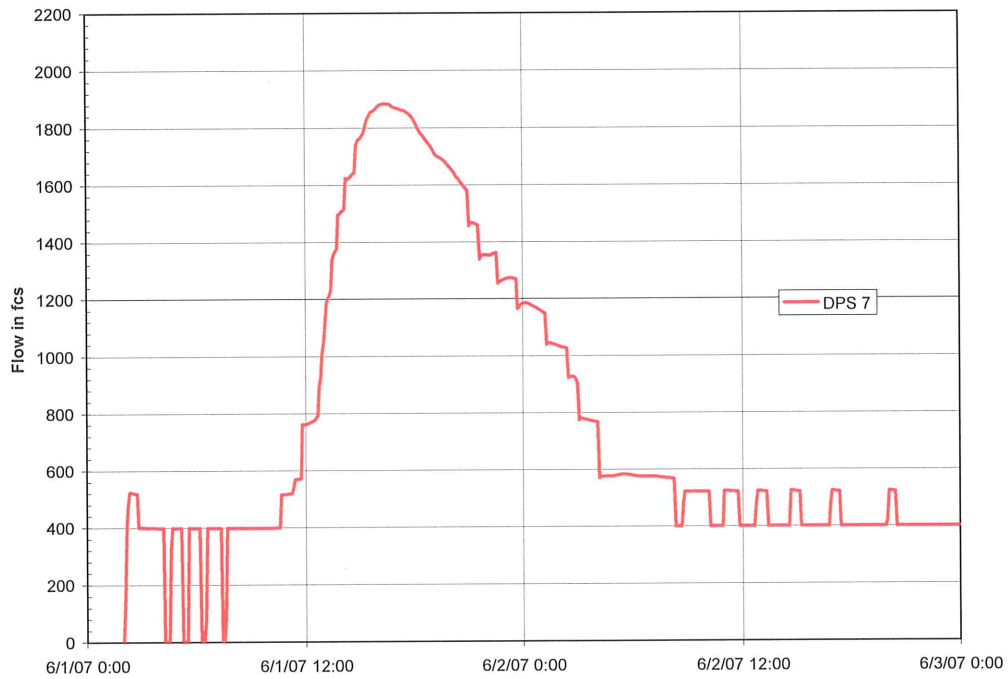
Since that time, the Corps' Mississippi Valley Division (MVD), the New Orleans District (MVN), and the Hurricane Protection Office (HPO) have adopted the IPET interior drainage model as the most representative and accurate.

The IPET model shows that at the 17th Street Canal the peak discharge for the 10-year event is 7,673 cfs. The model also shows that the 10-year peak discharge for London Avenue and Orleans Avenue is 4,961 cfs and 1,883 cfs, respectively. Therefore, the amount of pumping capacity needed at the interim gated structure, to insure the integrity of the parallel protection levees and floodwalls, and provide for access and maintenance, should be at least equal to that required for the 10-year event.

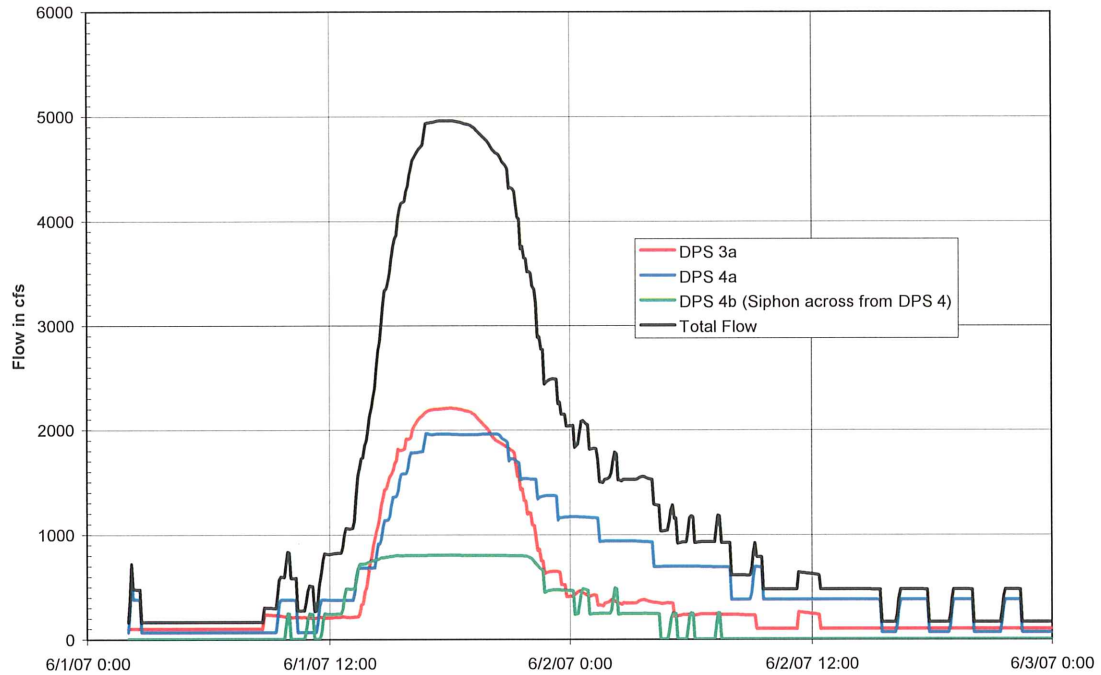
17th Street Canal
Pump Station Flow Hydrographs



Orleans Avenue Canal
Pump Station Flow Hydrograph



**London Avenue Canal
Pump Station Flow Hydrographs**



**Table 5
10-Year Peak Discharges**

Outfall Canal	10-Year Peak	10-Year Peak Rounded
17 th Street	7,673 cfs	7,700 cfs
Orleans Avenue	1,883 cfs	1,900 cfs
London Avenue	4,961 cfs	5,000 cfs

At London Avenue Canal with a 10-year discharge at the interim gated structure of 5,000 cfs, the maximum water surface elevation in the canal is 4.1 feet, slightly above the safe water elevation. Within the accuracy of numerical analysis, this may not be significant. Additionally, MVN anticipates testing the London Avenue Canal to collect data to be used in a continued evaluation of the safe water level. At 17th Street Canal with a 10-year discharge at the interim gated structure of 7,700 cfs, the maximum water surface elevation will not exceed the safe water elevation of 6.0.

Additional model runs were performed with the 100-year event. The peak discharges in the canals are shown in Table 6. Additional time and engineering would be required to provide a design to accommodate the 100-year event.

Table 6
100-Year Peak Discharges

Outfall Canal	100-Year Peak
17 th Street	8,400 cfs
Orleans Avenue	2,000 cfs
London Avenue	5,400 cfs

Current Status

The currently approved capacities at the three outfall canals are:

17th Street 6,000 cfs;
 Orleans Ave 2,000 cfs; and
 London Ave 5,600 cfs

The scheduled capacities to be installed during the 2006 hurricane season are:

17th Street 3,600 cfs (Temporary Pumps--1,260 in portable pumps not included)
 Orleans Ave 2,000 cfs
 London Ave 2,400 cfs

These capacities have been modified based on changes made to the discharge pipes and actual measured discharge rates taken in the field. Changes to the discharge pipes were recommended by ERDC to enable the pump system to achieve prime at lower canal elevations. By achieving prime at lower canal elevations, the pump start elevation can be lowered allowing for more flexibility in operating the pumps during an event and for exercising the pumps as part of the maintenance of the system.

Sub-alternatives

Sub-alternative 1: Add additional pumps at the interim gated closure structures at 17th Street and London Avenue Canals near Lake Pontchartrain, to insure the integrity of the parallel protection levees and floodwalls, and provide for access and maintenance during a 10-year rainfall event. The total capacity of the temporary pumps will be increased from 6,000 cfs to 7,700 cfs at the 17th Street Canal closure structure and decreased from 5,600 cfs to 5,000 cfs at the London Avenue Canal closure structure.

17 th Street	7,700 cfs (7,700-6,000=1,700 for cost)
Orleans Ave	no additional capacity required; and
London Ave	5,000 cfs (5,000-5,600=-600 for cost))
Total	



Sub-alternative 2: DMJM Recommendations. DMJM Harris | AECOM was retained to compile an Alternatives Analysis Report to identify interim alternatives to the emergency temporary pumping at the interim closure structures for each of the three outfall canals discharging into Lake Pontchartrain. Twenty projects and various combinations were identified and evaluated to reduce the required pumping capacities at each of the interim closure structures. The report could not identify any alternative that could meet the capacity requirements of the outfall canals and

become operational prior to June 2007. Alternative Projects considered included adding supplemental pump stations at the head of the three outfall canals adjacent to the interim closure structures, redirecting interior drainage from the London Avenue Canal Pump Station Interior Drainage Basins (DPS 3 & DPS 4) to the Inner Harbor Navigational Canal via the Dwyer Road and Florida Avenue Canals, redirecting interior drainage from the London Avenue and Orleans Canal Pump Station Interior Drainage Basins (DPS 2) to Bayou St. John and redirecting interior drainage from the Monticello Canal and the Hoey's Canal Interior Drainage Basins to the Mississippi River.

13. Recommended Alternative

The recommended alternative is sub-alternative 1—Provide capacity equivalent to the 10 year peak discharge of the canals consisting of 7,700 cfs at the 17th Street Canal and 5,000 cfs at London Avenue Canal. Additional time and engineering would be required to provide for the 100-year design event.

ERDC Model Evaluations

The Engineering Research and Development Center (ERDC) is building physical models of the London Ave and 17th Street canals temporary pumping stations. To date, a ½ model of London Ave is complete with recommendations. In November, a complete model of London Avenue with 5,000 cfs capacity will be complete with optimization recommendations. By mid-November the 17th Street canal model will be complete with preliminary runs addressing recommendations to the existing hydraulic pumps. In December, full recommendations will be made for the additional pumps.

Based on a cursory review by ERDC, their belief is that large discharge capacities required at 17th Street and London Avenue canals may be difficult to achieve. This concern is based on a large number of pumps installed in a very small canal area with an erratic distribution of flow. A definite recommendation can not be made at this time by ERDC. This PIR may require amendment to accommodate these model results.

14. Economics

(a) Benefit Analysis

The total average annual benefits associated with the New Orleans Eastbank reach of the Lake Pontchartrain Hurricane Protection Project are [REDACTED]. The source of this estimate is the "Lake Pontchartrain, La. and Vicinity Hurricane Protection Project Reevaluation Study (July 1984), the latest approved decision document, as updated in June 2005 in support of the FY 2007 Congressional budget submission. Inundation damage reduction benefits include those associated with avoided losses to residential, commercial, and industrial structures, their contents, and vehicles associated with these structures. This figure is estimated using 2006 price levels and an FY 2006 current Federal discount rate of 5.125 percent. These benefits are based upon an expectation that all damaged or destroyed facilities will be fully restored and is consistent with current planning guidance that requires adjustments if there is specific information that indicates such restoration will not occur. No adjustments thus far were made to account for partial replacement in kind of structures that have been damaged or destroyed by Hurricane Katrina.

(b) Cost Analysis

The total first cost for all work to be performed is [REDACTED] with a total average annual cost of [REDACTED]. This estimate includes levee repairs, tree removal, pumps at the interim gated structure, pumps at London Avenue Canal, contingencies, engineering and design costs, and construction management costs. The total first costs reflect October 2006 price levels and were amortized at the FY 2006 Federal discount rate of 5.125 percent over a 50-year period of analysis. Since the repair is expected to be completed within one year, no interest during construction accrues. No incremental operations and maintenance costs are expected since the scope of the original project design has not changed.

Table 6, is a summary of project costs.

**Table 7
Summary of Overall Project Costs**

Reach	Total Cost
OEB01 - Phase I Floodwall Repairs - 17 St. Canal	
OEB02 - Phase II Floodwall Repairs - 17 St. Canal	
OEB03 - Phase I Floodwall Repairs - London Ave Canal at Mirabeau Ave	
OEB04 - Phase II Floodwall Repairs - London Ave Canal at Mirabeau Ave	
OEB05 - Phase I Floodwall Repairs - London Ave Canal at Robert E. Lee Blvd	
OEB06 - Phase II Floodwall Repairs - London Ave Canal at Robert E. Lee Blvd	
OEB07 - Lake Pontchartrain-Scour Repair and Slope Paving at Orleans Canal Pump Station; Floodwall Repair; East Bank	
OEB09 - Closure Structure at 17th Street Canal	
OEB10 - Closure Structure at London Avenue Canal	
OEB11 - Closure Structure at Orleans Avenue Canal	
OEB12 - Bank Stabilization for 17th Street Canal	
OEB13 - Bank Stabilization for London Avenue Canal	
IHNC02 - West Side Floodwall Repairs - France Rd to Benefit Rd	
IHNC04 - West Side Floodwall Repairs - Hwy 90 To Lake	
IHNC05 - West Side Floodwall Repairs - France Rd to IHNC	
IHNC08 - West Side Floodwall and Minor Scour Repairs - Benefit Rd. to Almonaster Blvd.	
IHNC09 - West Side Floodwall and Minor Scour Repairs - IHNC Lock to Florida Ave.	
Subtotal	
Contingency (Awarded Contracts = [REDACTED])	
Demolition of Interim Gates and Temporary Pumps	
Temporary Pumps	
Subtotal	
Engineering and Design (E&D = [REDACTED])	
Supervision and Administration (S&A = [REDACTED])	
LERRDs: 17th Street Canal - [REDACTED]	
London Avenue Canal @ Mirabeau Avenue - [REDACTED]	
London Avenue Canal @ Robert E. Lee Boulevard - \$ [REDACTED]	
17th Street Canal Closure Structure - [REDACTED]	
Operation and Maintenance of interim closures and temporary pumps (\$ [REDACTED] year for 3 years)	
Additional Temporary Pumps (PIR Rev 03)	
Additional Temporary Pumps (PIR Rev 04)	
Tree Removal	
Contingency Measures (17th Street and London Avenue Outfall Canals)	
Portable Pumps at 17th street	
TOTAL	

(c) Summary

The degree to which average annual project benefits exceed average annual project costs is the measure of positive average annual net project benefits and is consistent with a benefit-to-cost ratio of 1.0 or greater. Net benefits for the rehabilitation project are [REDACTED]. The benefit-to-cost ratio is accordingly [REDACTED] to 1.0.

15. Environmental Concerns

The New Orleans District Commander has considered the probable environmental consequences of the proposed work under this PIR and does not anticipate that this work will result in significant environmental impacts. No adverse impacts to endangered species, important fish and wildlife resources, waters of the United States subject to Section 404 permitting including wetlands, water quality, floodplains, or other natural and cultural resources are expected.

The installation of three temporary gated structures and pumping capacity on the Orleans Ave., London Ave, and 17th Street Canal was described and evaluated in the U.S. Army Corps of Engineers Response to Hurricanes Katrina & Rite in Louisiana Environmental Assessment #433, April 2006. EA #433 evaluated the effects of establishing interim pumping capacity of up to 30 percent of the volume of the 17th Street Canal and 100 percent of the volume of Orleans Ave. and London Ave. Canals. The described increase in pumping volume described in this revised PIR falls within the capacity evaluated under EA #433 for Orleans Ave. The pumping capacity increase in the 17th Street Canal which was not described and evaluated in EA #433 and any new effects of any work on either canal within the existing project footprint and work outside of the existing project footprint will be included in an after-the-fact supplemental environmental assessment that is under preparation for all of the flood protection repair work being undertaken by the USACE in the Metropolitan New Orleans area.

The authority for this approach is per ER 500-1-1, Paragraph 2- 3.k(1), and ER 200-2-2, Paragraph 8, and a determination made by the New Orleans District Commander on 5 January 2006, that this work prevents or reduces an imminent risk of life, health, property, or severe economic losses. ER 200 -2-2, paragraph 8 allows for the completion of NEPA compliance as soon as practicable during an imminent threat. The imminent threat determination relieve the Corps of the duty to perform an alternative analysis for projects in which alignments have changed, new borrow sources are required, or in cases where modifications to the project are investigated that would alter the existing authorized project footprint. The requirements of other applicable environmental laws and regulations remain in effect and the proposed work will comply with them.

All of the lands required for this work have been previously impacted by human activities and contain no threatened or endangered species or other natural or cultural resources. No new rights of way are required to complete this work. The District has been, and will continue to coordinate the proposed action with other interested Federal and state resource and regulatory agencies as necessary. (See Appendix M).

16. Permits

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

17. Real Estate

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

18. Project Management

- a. Funding Authority No Change
- b. Project Funds
 - (1) Total estimated construction cost is \$518,500,000.
 - (2) Other Non-Federal cost \$0
- c. Project Repair Schedule. The additional temporary pump identified in the Revision 04 to the PIR will be completed by 1 June 07.

19. Implementation Guidance for Emergency Supplemental Appropriations

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

20. Requirements of Federal and Public Sponsor Cooperation for the Rehabilitation Efforts

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

21. Project Summary

- a. Conclusions.
 - (1) No Change
 - (2) No Change
 - (3) Structural repairs to the project would consist of increasing the temporary pumping capacity at the 17th Street and London Avenue Canals. This alternative consists of providing discharge capacity at 17th Street of 7,700 cfs and London Avenue Canals of 5,000 cfs.
 - (4) The total estimated construction cost for increasing the temporary pumping capacity at 17th Street and London Avenue Canals, including contingencies, Engineering & Design (E&D), and Supervision & Administration (S&A) is [REDACTED]

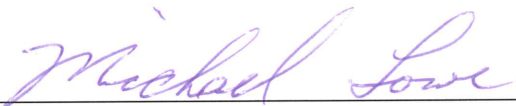
b. Recommendations / Project Approval

(1) Structural repairs to the project would consist of increasing the temporary pumping capacity at the 17th Street and London Avenue Canals. This alternative consists of adding additional pumps at the interim gated closure structures at 17th Street and London Avenue Canals near Lake Pontchartrain. The total capacity of the temporary pumps will be increased from 6,000 cfs to 7,700 cfs at the 17th Street Canal closure structure and decreased from 5,600 cfs to 5,000 cfs at the London Avenue Canal closure structure.

(2) It is also recommended that this project be approved and that additional Federal funds in the amount of [REDACTED] be provided.

DISTRICT PROJECT AUTHENTICATION
Project Information Report, Lake Pontchartrain, Louisiana and Vicinity, Hurricane
Protection Project, Orleans Parish, Louisiana, REVISION NO. 4

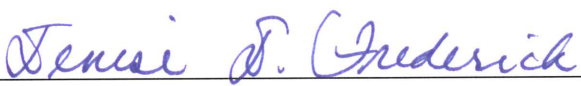
Report Prepared By:  10/31/06
James J. St. Germain Date
Project Manager

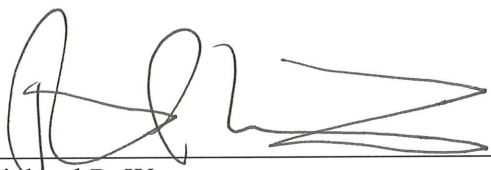
Emergency Management Approval By:  10/31/06
Michael Lowe Date
Chief, Emergency Operations

CERTIFICATION OF LEGAL REVIEW

The Project Information Report (PIR) for repair of the Federal and non-Federal Pump Stations in Orleans Parish, Louisiana has been reviewed by the Office of Counsel, New Orleans District and is approved as a legally sufficient document for commencement of construction.

Reviewed by:  02 Nov 2006
Assistant District Counsel Date

Certified by:  2 Nov 2006
District Counsel Date

District-Level Approval By:  11-02-06
Richard P. Wagenaar Date
Colonel, U.S. Army
District Commander

DIVISION PROJECT APPROVAL

Project Information Report, Lake Pontchartrain, Louisiana and Vicinity, Hurricane Protection Project, Orleans Parish, Louisiana, REVISION NO. 4

Emergency Management
Approval By: *Jimmy Smith* 11/3/06
 Chief, MVD Emergency Operations Date

CERTIFICATION OF LEGAL REVIEW

The Project Information Report (PIR) for repair of the Federal and non-Federal Pump Stations in Orleans Parish, Louisiana has been reviewed by the Office of Counsel, Mississippi River Division and is approved as a legally sufficient document for commencement of construction.

Certified by: *James Edward J. Jones* 11/6/06
 Division Counsel Date

Division-Level Approval By: *Albert M. Bleakley* 11/6/06
 Albert M. Bleakley Date
 Colonel, Engineer
 Deputy Division Commander

APPENDIX A
PROJECT SPONSOR'S REQUEST FOR ASSISTANCE

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

APPENDIX B
Project Maps

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

APPENDIX C
Project Overviews

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

APPENDIX D
Project Design Data

No changes to this appendix refer to the 18 Oct 2005 PIR.

APPENDIX E
Project Maintenance Data

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

APPENDIX F
Periodic Maintenance Data

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

APPENDIX G
Periodic Renourishment Data

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

APPENDIX H
Previous REPAIR AND REHABILITATION or Other
Federal Agency Assistance

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

APPENDIX I
Disaster Incident

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

APPENDIX J
Damage Description

Investigations are continuing on each of the three outfall canals to determine the safe water elevation. As a result of the extensive damage caused by Hurricane Katrina, the floodwalls along the outfall canals no longer provide the authorized level of protection. The ongoing investigations will identify the maximum allowable stage in each of the outfall canals and will be used to determine the stage at which the gates must be closed.

APPENDIX K
Proposed Work

Reference Section 12 of this Revision #04 Main Report

**APPENDIX L
Cost Estimate Data**

Reach	
OEB01 - Phase I Floodwall Repairs - 17 St. Canal	
OEB02 - Phase II Floodwall Repairs - 17 St. Canal	
OEB03 - Phase I Floodwall Repairs - London Ave Canal at Mirabeau Ave	
OEB04 - Phase II Floodwall Repairs - London Ave Canal at Mirabeau Ave	
OEB05 - Phase I Floodwall Repairs - London Ave Canal at Robert E. Lee Blvd	
OEB06 - Phase II Floodwall Repairs - London Ave Canal at Robert E. Lee Blvd	
OEB07 - Lake Pontchartrain-Scour Repair and Slope Paving at Orleans Canal Pump Station; Floodwall Repair; East Bank	
OEB09 - Closure Structure at 17th Street Canal	
OEB10 - Closure Structure at London Avenue Canal	
OEB11 - Closure Structure at Orleans Avenue Canal	
OEB12 - Bank Stabilization for 17th Street Canal	
OEB13 - Bank Stabilization for London Avenue Canal	
IHNC02 - West Side Floodwall Repairs - France Rd to Benefit Rd	
IHNC04 - West Side Floodwall Repairs - Hwy 90 To Lake	
IHNC05 - West Side Floodwall Repairs - France Rd to IHNC	
IHNC08 - West Side Floodwall and Minor Scour Repairs - Benefit Rd. to Almonaster Blvd.	
IHNC09 - West Side Floodwall and Minor Scour Repairs - IHNC Lock to Florida Ave.	
Subtotal	
Contingency (Awarded Contracts = 10%)	
Demolition of Interim Gates and Temporary Pumps	
Temporary Pumps	
Subtotal	
Engineering and Design (E&D = [REDACTED])	
Supervision and Administration (S&A = [REDACTED])	
LERRDs: 17th Street Canal - [REDACTED]	
London Avenue Canal @ Mirabeau Avenue - [REDACTED]	
London Avenue Canal @ Robert E. Lee Boulevard - [REDACTED]	
17th Street Canal Closure Structure - [REDACTED]	
Operation and Maintenance of interim closures and temporary pumps (\$ [REDACTED] year for 3 years)	
Additional Temporary Pumps (PIR Rev 03)	
Additional Temporary Pumps (PIR Rev 04)	
Tree Removal	
Contingency Measures (17th Street and London Avenue Outfall Canals)	
Portable Pumps at 17th street	
TOTAL	

APPENDIX M ENVIRONMENTAL CONSIDERATIONS

Tab M-1. A statement on the effect of proposed work on the environment.

The New Orleans District Commander has considered the probable environmental consequences of the actions described in this PIR and does not anticipate that this work will result in significant environmental impacts. If any of this new work has unavoidable impacts to the human environment, these unavoidable impacts would be mitigated for in an appropriate manner.

Tab M-2. Environmental Assessment.

Currently, a supplemental environmental assessment for work conducted under Task Force Guardian is being prepared for the work described in this PIR as well as other work that has been or will be started since the completion of EA #433. This assessment will be completed as soon as practicable, but after construction starts, as authorized in the January 5, 2006, District Commander's imminent threat determination. Compliance for all other Federal and state environmental laws for the work described in the PIR has been completed.

Tab M-3. Considerations under Section 7 of the Endangered Species Act of 1973 (PL 93-205).

The actions described in this PIR are not expected to cause any harm or impacts to any threatened or endangered species or any habitats currently listed as critical for any listed threatened or endangered species. District environmental staff will continue to coordinate with the U.S. Fish and Wildlife Service in regards to this matter and will reaffirm concurrence with the Corps determination of no significant impacts to any threatened and endangered (T&E) species as necessary.

Tab M-4. Archeological Investigations and Salvage Activities considerations.

The actions described in this PIR have been previously reviewed in regards to impacts to known cultural resources that may occur in the project area. A determination of the impacts associated with the ongoing project investigations has been coordinated with the State Historic Preservation Officer.

Tab M-5. Section 404(b) evaluations.

The actions described in this PIR have been previously investigated in regards to impacts to waters of the United States subject to Section 404 of the Clean Water Act, as described in the Section 404 Public Notice dated 17 April 2006. Impacts to Section 404 waters have been identified have been recognized in EA #433 and appropriate actions (avoid, minimize, or mitigation) have been taken.

Tab M-6. A statement on the applicability of EO 11988.

The New Orleans District Commander has considered the probable impacts to the flood plain in and around the project area described in this PIR. It is not expected that any changes to the local floodplain will occur as a result of the increased pump capacity described in this PIR.

Tab M-7 Hazardous, Toxic and Radioactive Waste

Hazardous, Toxic and Radioactive Waste (HTRW) investigations have been completed and reports filed for the actions described in this PIR. Previous assessments of the project area indicate that the potential of encountering HTRW is a low probability during construction.

Tab M-8 Essential Fish Habitat

No impacts to Essential Fish Habitat are expected as a result if the actions described in this PIR. Coordination with the National Marine Fisheries Service will continue as necessary to ensure compliance with the Magnuson-Stevens Fishery Conservation and Management Act of 1976 is maintained.

Tab M-9 Air Quality

Rehabilitation activities will result in dust and exhaust fumes from equipment. These activities will result in short-term minor impacts that would terminate after the repair work is completed. Expected emissions levels have been estimated to be below the threshold *de minimus* levels as provided in the State Implementation Plan. Therefore a conformity determination is not required as a part the Air Quality investigation for compliance with the Clean Air Act.

Tab M-10 Cumulative Impacts

Cumulative impacts associated with the work were described in the Orleans East Bank PIR dated 18 October 2005, of which this PIR serves as a revision. The PIR stated that “The proposed action is part of a comprehensive program named Task Force Guardian, which is the U.S. Army Corps of Engineers' effort to rehabilitate the Standard Project Hurricane protection for Orleans, Jefferson, St. Charles, St. Bernard, and Plaquemines Parishes to its condition prior to the 2005 hurricane season. Repairs are being planned for both the Lake Pontchartrain, LA and Vicinity project and the New Orleans to Venice Project. Failure to repair the damages to the hurricane storm-surge protection system would leave large developed areas vulnerable to flooding from minor storms. Separate assessments may be conducted for other proposed actions under Task Force Guardian.” The additional pumping capacity being added to the London Avenue and 17th Street Canals as described in this revised PIR will not change or increase these cumulative impacts.

APPENDIX N

CECW-HS, Memorandum for Assistant Secretary of the Army for Civil Works (ASA(CW)), SUBJECT: Recommendations for One-Time Deviations to Certain Policies Regarding Use of P. L. 84-99 (33 U.S.C. 701n) in New Orleans and Vicinity following Hurricane Katrina-FOR APPROVAL, dated October 7, 2005

Authorization for this effort is under P.L. 109-148. Therefore, this Memorandum has no application.

APPENDIX O

Letter from Office of Assistant Secretary of the Army for Civil Works (ASA(CW)) John Paul Woodley, Jr. to Director of Office of Management and Budget, Joshua Bolten, dated October 12, 2005

Authorization for this effort is under P.L. 109-148. Therefore, this Letter has no application.

APPENDIX P

PIR Points of Contact

No Change, See the Original PIR dated 18 October 2005, Revision #1 dated 20 January 2006, Revision #2 dated 17 May 2006 and Revision #3 dated July 2006.

APPENDIX Q

Post Hurricanes Katrina, Wilma, Ophelia Expenditure of Flood Control and Coastal Emergency (FCCE) Funds for Restoration and Rehabilitation, and for Accelerated Work to Complete Authorized Projects, in accordance with the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico and Pandemic Influenza Act, 2006 (public Law 109-148), dated February, 14, 2006, signed by Don Riley, Major General, Director of Civil Works

On Following 4 pages



DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CECW-HS

FEB 14 2006

MEMORANDUM FOR

COMMANDER, SOUTH ATLANTIC DIVISION
COMMANDER, MISSISSIPPI VALLEY DIVISION

SUBJECT: Post Hurricanes Katrina, Wilma, and Ophelia Expenditure of Flood Control and Coastal Emergency (FCCE) Funds for Restoration and Rehabilitation, and for Accelerated Work to Complete Authorized Projects, in accordance with the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico and Pandemic Influenza Act, 2006 (Public Law 109-148)

1. Reference:

a. Memorandum, HQ USACE, CECW-HS, 25 Oct 04, subject: Post-Hurricane Flood & Coastal Storm Damage Reduction Project Rehabilitation Policy Guidance.

b. Circular 11-2-189, CECW-I, 31 Dec 05, subject: Execution of the Annual Civil Works Program.

2. The purpose of this memorandum is to delegate certain approval authority and to provide guidance concerning restoration and rehabilitation of flood damage reduction and hurricane and storm damage reduction projects, and the acceleration of work to complete certain Federally authorized projects, in accordance with the funding and authority provided in Public Law 109-148.

3. In order to expedite the restoration and rehabilitation of flood damage reduction and hurricane and storm damage reduction projects damaged by Hurricanes Katrina, Ophelia, and Wilma, subject to the further guidance provided in this memorandum, authority is delegated to the Division Commander to:

a. Determine whether a storm qualifies as extraordinary under the criteria provided in ER 500-1-1, section 5-20, paragraphs a & b, for determining eligibility of damaged hurricane and storm damage reduction projects; and

b. Approve Project Information Reports (PIR), such as those prescribed in EP 500-1-1, to document restoration and rehabilitation determined to be eligible for FCCE funding.

CECW-HS

SUBJECT: Post Hurricanes Katrina, Wilma, and Ophelia Expenditure of Flood Control and Coastal Emergency (FCCE) Funds for Restoration and Rehabilitation, and for Accelerated Work to Complete Authorized Projects, in accordance with the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico and Pandemic Influenza Act, 2006 (Public Law 109-148)

4. Public Law 109-148 directs that in using funds appropriated for construction related to Hurricane Katrina in the areas covered by the disaster declaration, the Corps of Engineers will restore flood damage reduction and hurricane and storm damage reduction projects and related works to provide the level of protection for which they were designed, at full Federal expense. The Joint Explanatory Statement of the Committee of Conference accompanying Public Law 109-148 further clarifies that the funds are provided to fund repairs to non-Federal levees and pumps and to construct levees and floodwalls to original design levels, rather than to pre-storm condition. Therefore, within the funds provided, for Federally authorized projects with levee and floodwall components, and non-Federal levees and pumps, which were damaged by Hurricane Katrina, restoration and rehabilitation will be undertaken to the previously constructed design level. The costs for restoration and rehabilitation construction and construction related activities will be at full Federal expense. These costs include Engineering and Design, Supervision and Administration, actual construction, acquisition of real estate interests not already owned by or under the control of the non-Federal sponsor, and relocations. HTRW investigations will be performed at Federal expense; if HTRW is discovered, then a mutual decision will be made by the Federal Government and the non-Federal sponsor on whether to proceed with acquisition of the property; and if the parties mutually agree to proceed, then the non-Federal sponsor will be responsible for HTRW clean-up costs. Other non-Federal responsibilities, including operation and maintenance and the requirement to hold and save the Federal Government free from damages, remain.

5. Projects damaged by Hurricanes Ophelia and Wilma to be restored and rehabilitated to the pre-storm condition using FCCE funds will be implemented in accordance with cost sharing set out in ER 500-1-1, Paragraph 5-11. In some cases it may be appropriate to fully restore sacrificial beach elements of these projects beyond the pre-storm condition, with this work cost shared as periodic renourishment by the Federal Government (using Construction, General (CG) funds) and the non-Federal sponsor in accordance with the Project Cooperation Agreement. In these cases, following the guidance provided in memorandum referenced in paragraph 1, the PIR should document undertaking the CG-funded periodic renourishment at the same time as the FCCE-funded restoration and rehabilitation, except that as provided in paragraph 3. above, approval of the PIR shall be with the Division Commander.

6. Public Law 109-148 also authorizes, at full Federal expense, within the funds provided, acceleration of work to complete unconstructed portions of Federally authorized projects in the State of Mississippi along the Mississippi Gulf Coast and Federally authorized flood damage and hurricane and storm damage reduction projects in the greater New Orleans and South Louisiana area. The costs for new construction and currently ongoing construction and construction related activities to accomplish acceleration of completion of unconstructed portions of Federally

CECW-HS

SUBJECT: Post Hurricanes Katrina, Wilma, and Ophelia Expenditure of Flood Control and Coastal Emergency (FCCE) Funds for Restoration and Rehabilitation, and for Accelerated Work to Complete Authorized Projects, in accordance with the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico and Pandemic Influenza Act, 2006 (Public Law 109-148)

authorized projects will be at full Federal expense. These costs include Engineering and Design, Supervision and Administration, actual construction, acquisition of real estate interests not already owned by or under the control of the non-Federal sponsor, and relocations. HTRW investigations will be performed at Federal expense; if HTRW is discovered then a mutual decision will be made by the U.S. and the non-Federal sponsor on whether to proceed with acquisition of the property; and, if the parties mutually agree to proceed, then the non-Federal sponsor will be responsible for HTRW clean-up costs. Other non-Federal responsibilities, including operation and maintenance and the requirement to hold and save the Federal Government free from damages, remain. The non-Federal sponsor's operation and maintenance responsibilities will include operation and maintenance of the new construction under Public Law 109-148. Existing agreements will be amended to make it clear that 1) new construction and associated activities will be at full Federal expense; b) the non-Federal sponsor's operation and maintenance responsibilities will include operation and maintenance of the new construction; and c) HTRW investigations will be performed at Federal expense and if HTRW is discovered and the parties mutually agree to proceed, then the non-Federal sponsor will be responsible for HTRW clean-up costs.

7. For accelerated completion of projects in the South Atlantic Division, Accelerated Project Information Reports (APIRs) will be prepared to document proposed accelerated work for those unconstructed portions of authorized projects that are not covered by existing Project Cooperation Agreements (PCAs). The Accelerated Project Information Report will be approved by the Division Commander. The PCA will be approved by the ASA(CW).

8. For accelerated completion of projects in the Mississippi Valley Division, amendments to the existing agreements and sufficient supporting documentation will be developed in coordination, as appropriate, with the Headquarters and OASA(CW). Authority is delegated to the Division Commander to approve amendments to existing agreements for the accelerated construction to be undertaken in accordance with Public Law 109-148.


9. Construction and operation of the temporary closures in New Orleans, including temporary pumping stations, during the extended construction period of 1-3 years will be performed by the Federal Government in order to ensure optimum and safe construction. Funds provided in Public Law 109-148 will be used to fund operations of necessary temporary closures or temporary pumping at the outfall canals in New Orleans during the extended construction period of 1-3 years; however, FCCE funds other than those provided in Public Law 109-148 will not be available for this purpose.

CECW-HS

SUBJECT: Post Hurricanes Katrina, Wilma, and Ophelia Expenditure of Flood Control and Coastal Emergency (FCCE) Funds for Restoration and Rehabilitation, and for Accelerated Work to Complete Authorized Projects, in accordance with the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico and Pandemic Influenza Act, 2006 (Public Law 109-148)

10. We will manage Public Law 109-148 funding in the FCCE program as programs, projects, and activities (PPA) IAW reference 1.b above. Work allowance documents will be issued by project for work in these PPAs. Any re-distribution of funds allocated between projects as included in the 9 Dec 06 estimates of project requirements different from the work allowance must be coordinated with the headquarters FCCE program manager prior to re-distribution.

11. Questions concerning this policy should be directed to Jeffrey Jensen, HQUSACE, Civil Emergency Management Branch, [REDACTED]


DON T. RILEY
Major General, USA
Director of Civil Works

CF:
COMMANDER, NORTH ATLANTIC DIVISION
COMMANDER, NORTHWESTERN DIVISION
COMMANDER, PACIFIC OCEAN DIVISION
COMMANDER, SOUTH PACIFIC DIVISION
COMMANDER, SOUTHWESTERN DIVISION
COMMANDER, GREAT LAKES & OHIO RIVER DIVISION

APPENDIX R
Not Used

APPENDIX S
Not Used

APPENDIX T
Not Used

APPENDIX U
Not Used

APPENDIX V
Not Used

APPENDIX W
Not Used

APPENDIX X
Not Used

APPENDIX Y
Not Used

APPENDIX Z
PIR Review Checklist (HSPP)

PIR Review Checklist for HSPP Rehabilitation Assistance				
	YES	NO	N/A	
1.	X			The project is a Federally authorized and constructed hurricane or shore protection project. [ER, 5-20.a.]
2.	X			The project is Active in the RIP. [ER, 5-2.a.] Last inspection date: <u> May </u> 2005
3.	X			The Public Sponsor has requested HSPP Rehabilitation Assistance in writing. [EP, 5-18.b.]
4.	X			The FCCE-funded HSPP Rehabilitation Assistance is necessary (a) to allow for adequate functioning of the project; (b) to reduce the immediate threat to life and improved property; and (c) is to a level no more than the pre-storm condition. [ER, 5-20.a., c., and d.]
5.	X			There is sufficient evidence in the PIR to support a finding that the HSPP was damaged by an extraordinary storm. [ER, 5-20.e.]
6.	X			There are "significant amounts of damage" to the HSPP. [ER, 5-20.e.(2)] The criterion used to make this determination is: _____ the cost of the construction effort to effect repair of the HSPP (<i>exclusive of dredge mob/demob costs</i>) (a) exceeds \$1 million and (b) is greater than 2 percent of the original project construction costs (expressed in current day dollars.); or, <u> X </u> the cost of the construction effort to effect repair of the HSPP (<i>exclusive of dredge mob/demob costs</i>) exceeds \$6 million; or, _____ more than one-third of the planned or historically placed sand for renourishment was lost. _____ only hard features are involved.
7.	X			The public sponsor has agreed to sign the Cooperation Agreement, which will occur before USACE begins rehabilitation work. [EP, 5-18.1.]
8.	X			The rehabilitation project has a favorable benefit cost ratio of greater than 1.0:1. [ER, 5-20.a.]
9.	X*			The Public Sponsor has access to sufficient funds to meet its required cost contributions. [EP, 5-18.h.] <i>Please note * Based upon the sponsor's request for assistance, it appears that the Public Sponsor will have to seek financial assistance from the State of Louisiana.</i>
10.	X			The cost estimate in the PIR itemizes the work and identifies the Public Sponsor's cost responsibility for items such as deferred and deficient maintenance. [ER, 5-2.g.]
11.			X	The cost estimate in the PIR allocates costs between what may be paid for under PL 84-99 Rehabilitation Assistance, and what is cost shared between the Corps (using CG funds) and the public sponsor under periodic renourishment terms of the project PCA. [EP, 5-18.d.]]
12.			X	Dredge mobilization/demobilization costs are borne proportionally among contributing sources of funds for sand renourishment. [ER, 5-20.i.]
13.		X**		Contingency funds for the FCCE-funded portion of the project are limited to 15 percent for dredging-related costs, and 10 percent for all other costs. [ER, 5-2.v.]
14.	X			The repair option selected is the option that is the least cost to the Federal government. [ER, 5-2.h.]
15.	X			The benefit cost ratio calculation excludes all recreation benefits. [ER, 5-20.a.]
16.			X	Betterments are paid by the Public Sponsor. [ER, 5-2.o.]
17.			X	Costs for any betterments are identified separately in the cost estimate. [ER, 5-2.o.]
18.	X			Based on the projected schedule, project history, anticipated degree of contention of undertaking the project, and similar items, the Rehabilitation Assistance will be finished prior to the onset of the next storm season, or within one year of the date of occurrence of the damage, whichever is less. [ER, 5-20.j.]
19.	X			The proposed work will not modify the HSPP to increase the degree of protection or

				capacity, or provide protection to a larger area. [ER, 5-2.n.]
20.	X***			An assessment of environmental requirements was completed. [ER, 5-13.e.]
21.	X			The Endangered Species Act was appropriately considered. Dredging will not be adversely impacted. [ER, 5-13.e.]
22.	X			The Archeological and Historical Preservation Act was appropriately considered. [ER, 5-13.h.]
23.			X	EO 11988 was appropriately considered. [ER, 5-13.f.]
24.	X			Other permitting and evaluations were appropriately considered, and result in no impediment to the Rehabilitation Assistance effort. [ER, 5-13.a.]
25.	X			The cover letter forwarding the PIR to the MSC will contain the projected schedule for completing the Rehabilitation Assistance. [EP, 5-18.f.(2)]
26.	X			The completed PIR has been reviewed and the PIR Checklist has been reviewed and signed by the Emergency Management Office. [EP, 5-18.f.(1)]
27.	X			The completed PIR meets all policy, procedural, content, and formatting requirements of ER 500-1-1 and EP 500-1-1. [ER, 2-3.b.]

NOTES:

* Public Law 109-148 directs that in using funds appropriated for construction related to Hurricane Katrina in the areas covered by the disaster declaration, the Corps of Engineers will restore flood damage reduction and hurricane and storm damage reduction projects and related works to provide the level of protection for which they were designed, at full (100%) Federal expense.

** Rationale for use of the [REDACTED] % contingency for the contracts yet to be awarded is based on the emergency conditions under which the design and contract documents have been prepared, the short amount of time allowed for construction completion, and the high level of competition for construction contractor resources in the area. The need for this is evidenced by bids received on awarded contracts generally exceeding construction estimates and it is anticipated that there will be a higher than normal percentage of contract modifications.

*** An imminent threat declaration has been issued by the Commander of the New Orleans District. Refer to Appendix M of this report for this Declaration.

REVIEWING OFFICIAL'S SIGNATURE

NAME: Michael H. Lowe

TITLE: Emergency Operations Manager

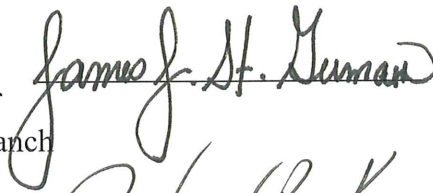
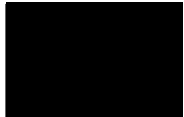
TELEPHONE NUMBER: [REDACTED]

Routing Slip

Project Information Report
Rehabilitation Hurricane or Shore Protection Projects Damaged by Hurricane Katrina
Lake Pontchartrain, Louisiana and Vicinity, Hurricane Protection Project
Orleans Parish, Louisiana

ORLEANS EAST BANK
REVISION No. 4

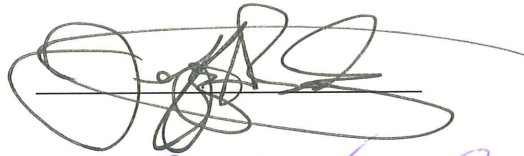
1. Jim St. Germain
HPO, Acting Branch Chief
Existing Pump Stations Branch

2. Richmond Kendrick
HPO, Chief Program Execution



3. Colonel Jeff Bedey
HPO Commander



4. Michael Lowe
Chief, Emergency Operations



6. Mary Kinsey
Office of Counsel



7. Colonel Wagenaar
District Commander

