

**U.S. Army Corps of Engineers
New Orleans District
ATTN: CEMVN-ERO**

New Orleans, LA

**Project Information Report
Rehabilitation of Damaged Flood Control Works**

**FEDERAL and NON-FEDERAL
PUMP STATIONS, FLOOD CONTROL**

JEFFERSON PARISH, LA

April 2006

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EXECUTIVE SUMMARY

Jefferson Parish is located in southeast Louisiana. Portions of the parish are in the Louisiana coastal area and the Pontchartrain Basin, situated near the center of the Gulf Coastal plain in the lower reaches of the Mississippi Embayment. Lake Pontchartrain, a shallow, land-locked tidal basin approximately 640 square miles in area with an average depth of 12 feet, is the dominant topographic feature in the area.

The East Bank Basin is connected by a grid of canals. The lateral canals equalize flow between the major outfall canals, allowing rain water to flow in different directions depending on the rainfall patterns and available capacities at the pump stations. The West Bank Basins are subdivided into subbasins that, for smaller rainfall events, operate independently. However, overbank flow does occur between adjacent subbasins for a 10-year event. Rainfall runoff is collected by the canal system and pumped over the hurricane protection system in to Lake Ponchartrain on the east bank or into tidal estuaries on the West Bank.

In 1997, the Corps of Engineers entered into a Project Cooperative Agreement with Jefferson Parish to improve drainage. Authority of this endeavor is the Southeast Urban Flood Control (SELA) Project. Under the SELA project, drainage improvements consists of channel improvement projects, adding capacity to existing pump stations and constructing new pump stations.

There are a total of 25 pump stations in Jefferson Parish. Under the Federal SELA Project, two of these pump stations were enlarged (Elmwood and Suburban), one new station (Whitney Barataria) was constructed, and one station is under construction (Cousins). The remaining stations are non-Federal pump stations.

The pump stations were damaged by Hurricane Katrina, a Category 3 hurricane on August 29, 2005, when it made landfall near Buras-Triumph, immediately southeast of Jefferson Parish.

Rehabilitation assistance is necessary to return the pump stations to pre-storm condition and level of protection. The estimated cost for the recommended alternative is \$758,000 with an overall benefit cost ration of 5.1 to 1.0. The cost of the rehabilitation effort for the Federal (SELA) pump stations is \$287,000 and the cost of the non-Federal pump stations is \$471,000. The table below presents a summary of the project costs and benefits.

Jefferson Parish Pump Stations



Figure Exec 1. Jefferson Parish Pump Station

Summary of Cost and Benefits

Basin	Pump Station	First Cost Repairs (\$)	Average Annual Cost (\$)	Average Annual Benefits (\$)	Benefit Cost Ratio	Federal (SELA) Cost (\$)	Non-Fed Cost (\$)
East Bank							
	Bonnabel	142,000					142,000
	Suburban	23,000				23,000	
	Elmwood	251,000				251,000	
	Duncan	142,000					142,000
	Subtotal	558,000	5,336,000	26,262,000	4.9	274,000	284,000
West Bank--East of Harvey							
	Planters	37,000					37,000
	Hero	11,000					11,000
	Whitney Barataria	13,000				13,000	
	Subtotal	61,000	3,000	383,000	127.7	13,000	48,000
West Bank--West of Harvey							
	Harvey	2,000					2,000
	Cousins No. 1	1,000					1,000
	Cousins No. 2	90,000					90,000
	Estelle 1	12,000					12,000
	Ames	27,000					27,000
	Westwego No. 1	2,000					2,000
	Westwego No. 2	2,000					2,000
	Subtotal	136,000	8,000	204,000	25.5	0	136,000
West Bank--West of Harvey (Cataouatche Subbasin)							
	Lake Cataouatche No. 2	1,000					1,000
	Bayou Segnette 1 & 2	2,000					2,000
	Subtotal	3,000	200	233,000	1165	0	3,000
	Total	758,000	5,347,200	27,082,000	5.1	287,000	471,000

1. Project Identification.

a. Project Name. Federal and Non-Federal Pump Stations, Flood Control, Jefferson Parish, Louisiana (See Figure 1)

b. Project Funding Classification. FCCE 326 for non-Federal
FCCE 316 for Federal (SELA)

c. Project CWIS Number. 030725 for non-Federal
075517 for Federal (SELA)

2. Project Authority.

a. Classification. Non-Federal and Federal Flood Control

b. Authority.

1) Non-Federal: See Section 15.

2) Federal Project:

The Southeast Louisiana (SELA) Project was authorized by the Fiscal Year 1996 Appropriations Act, Public Law 104-46 (Section 108) and the Water Resources Development Act of 1996, Public Law 104-303 (Section 533). Section 108 reads as follows:

“SEC. 108. Using \$2,000,000 of the funds appropriated herein, the Secretary of the Army, acting through the Chief of Engineers, is authorized and directed to proceed with engineering, design, and construction of projects to provide for flood control and improvements to rainfall drainage systems in Jefferson, Orleans, and St. Tammany Parishes, Louisiana, in accordance with the following reports of the New Orleans District Engineer; Jefferson and Orleans Parishes, Louisiana, Urban Flood Control and Water Quality Management, July 1992; Tangipahoa, Techefuncte and Tickfaw Rivers, Louisiana, June 1991; Schneider Canal, Slidell, Louisiana, Hurricane Protection, May 1990. There is authorized to be appropriated \$25,000,000 for the initiation and partial accomplishment of projects described in these reports. The cost of any work performed by the non-Federal interest subsequent to the above cited reports as determined by the Secretary of the Army to be a compatible and integral part of the projects, shall be credited toward the non-Federal share of the projects.”

Section 533 reads as follows:

“SEC. 533. SOUTHEAST LOUISIANA. (a) FLOOD CONTROL.- The Secretary shall proceed with engineering, design, and construction of projects

to provide for flood control and improvements to rainfall drainage systems in Jefferson, Orleans, and St. Tammany Parishes, Louisiana, in accordance with the following reports of the New Orleans District Engineer: Jefferson and Orleans Parishes, Louisiana, Urban Flood Control and Water Quality Management, July 1992; Tangipahoa, Techefuncte and Tickfaw Rivers, Louisiana, June 1991; Schneider Canal, Slidell, Louisiana, Hurricane Protection, May 1990. (b) COST SHARING.- The cost of any work performed by the non-Federal interests subsequent to the dates of the reports referred to in subsection (a) and determined by the Secretary to be a compatible and integral part of the projects shall be credited toward the non-Federal share of the projects. (c) FUNDING.- There is authorized to be appropriated \$100,000,000 for the initiation and partial accomplishment of projects described in the reports referred to in subsection (a). (d) ADDITIONAL OBLIGATIONS.- No funds may be obligated in excess of the amount authorized by subsection (c) for the projects for flood control and improvements to rainfall drainage systems authorized by subsection (a) until the Corps of Engineers determines that the additional work to be carried out with such funds is technically sound, environmentally acceptable, and economic, as applicable.”

- c. Estimated original cost of project:
 - 1) non-Federal unknown
 - 2) Federal (SELA)--\$418,000 Fed Cost and \$138,000 non-Fed Cost. The non-Federal cost identified is the cost share required under the SELA project.

- d. Construction start date of project:
 - 1) non-Federal unknown
 - 2) Federal (SELA)
 - a) Suburban December 21, 1999
 - b) Elmwood December 1, 1999
 - c) Whitney Barataria December 21, 1999
 - d) Cousins October 10, 2002

- e. Construction completion date of project.
 - 1) non-Federal
 - a) Bonnabel 1986
 - b) Duncan 1986
 - c) Parish Line 1987
 - d) Canal Street 1998
 - e) Ames 1985
 - f) Bayou Segnette No. 1 1962
 - g) Bayou Segnette No. 2 No Data
 - h) Cousins No. 1 1973
 - i) Cousins No. 2 1985
 - j) Estelle No. 1 1992

- k) Estelle New 1998
- l) Harvey 1986
- m) Hero 1984-1997
- n) Planters 1973-1988
- o) Lake Cataouatche 1978
- p) Lake Cataouatche No. 2 1985
- q) Westminster 1988
- r) Westminster No. 2 No Data
- s) Mount Kennedy 2005
- t) Westwego No. 1 1969
- u) Westwego No. 2 1997

2) Federal (SELA)

- a) Suburban 1985 (Original non-Fed)
SELA additions completed August 10, 2005, has not been formally turned over to the sponsor.
- b) Elmwood 1981 (Original non-Fed)
SELA additions final inspection held on June 24, 2005, has not been formally turned over to the sponsor unresolved.
- c) Whitney Barataria 2005
- d) Cousins Under Construction

f. Major modifications/improvements/betterments since beginning of project. n/a

g. Need for Rehabilitation. Rehabilitation assistance is necessary to return the system to an adequately functioning project and reduce the immediate threat to life and improved property. Planned rehabilitation will return the system to a pre-storm condition and level of protection. While the next Atlantic hurricane storm season will begin on June 1, 2006, significant rainfall can occur at any time.

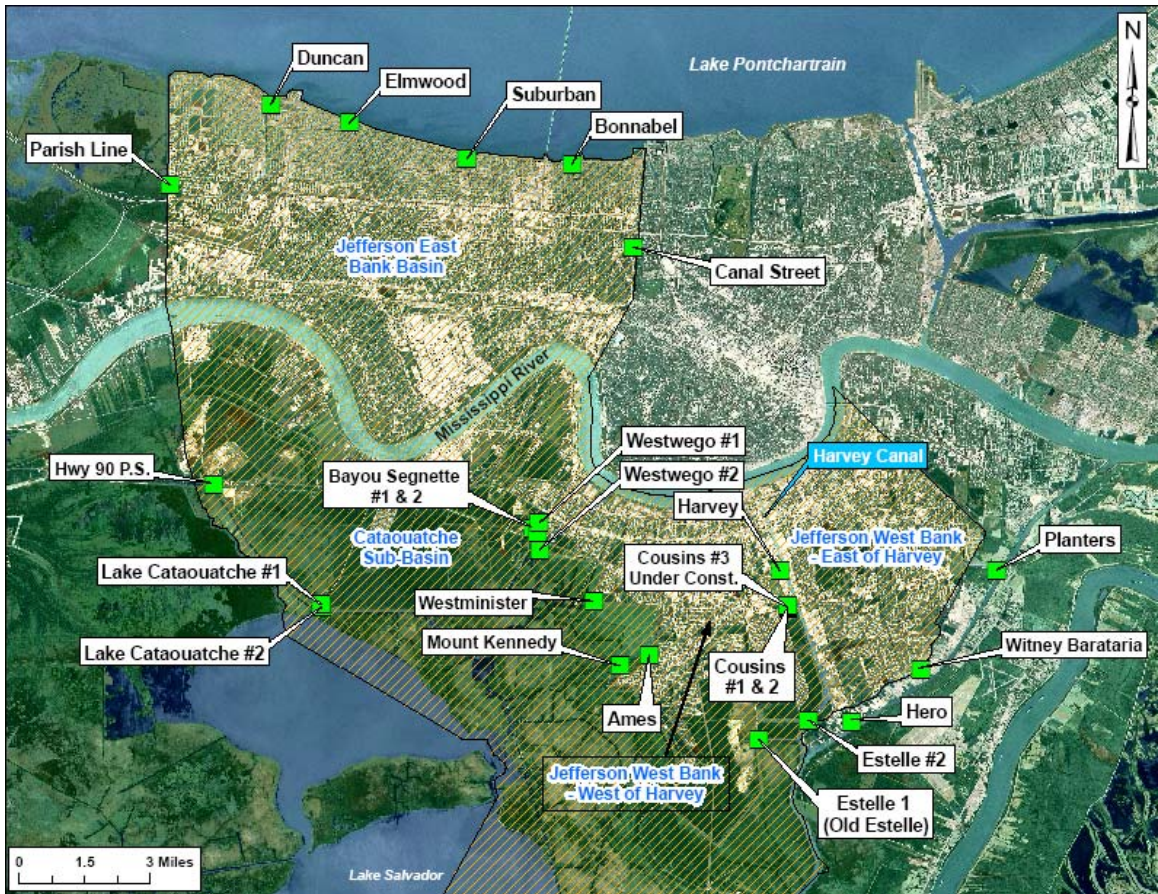


Figure 1. Pump Station and Basin Identification

3. Project Sponsors.

a. Sponsor Identification. Jefferson Parish Government for Federal (SELA) and non-Federal

b. Application for Assistance. On September 15, 2005, the New Orleans District Engineer, Colonel Richard P. Wagenaar issued a Notice to Public Sponsors notifying them that the application period to request Rehabilitation Assistance for Flood Damaged Flood Control Projects expired on October 15, 2005. Requests for assistance for both non-Federal pump stations and the Southeast Louisiana Urban Flood Control Project were received from the Jefferson Parish Government on October 15, 2005, signed by, Aaron F. Broussard Jefferson Parish President Parish (Appendix A).

c. Sponsor Coordination Summary. Inspection was conducted to determine the extent of the damages to the pump stations caused by Hurricane Katrina. The inspection and Damage Survey Report (DSR) was performed by Corps of Engineers' Project Delivery Team and Jefferson Parish:

Structural Engineer	Larry Mickal
Electrical Engineer	Dan Bradley
Jefferson Parish Government	Jerome Wool

4. Project Location.

a. Location. Jefferson Parish is located in southeast Louisiana. Portions of the parish are in the Louisiana coastal area and the Pontchartrain Basin, situated near the center of the Gulf Coastal plain in the lower reaches of the Mississippi Embayment. (See Appendix B).

Jefferson Parish is bisected by the Mississippi River, creating east and west bank areas. The parish is geographically subdivided into three major basins by the Mississippi River and the Harvey Canal: Jefferson East Bank, Jefferson West Bank—East of Harvey Canal, Jefferson West Bank—West of Harvey Canal (includes the Cataouatche Subbain).

Generally, the areas near the Mississippi River are above sea level, and ground elevations decrease with distance from the river. Most of the developed areas are protected by levee systems from river and hurricane flooding and drained by pumps, which discharge primarily into estuarine water bodies. The leveed areas are divided into many subbasins by natural and man-made barriers are webbed with drainage canals that terminate at pump stations.

Elevations on the east bank of the Mississippi River can be as low as -9 feet NGVD in the artificially drained, former marsh and swamps that are presently commercially or residentially developed. The west bank of the Mississippi River is characterized by mostly low relief associated with an alluvial plain. Land elevations slope gently from an average elevation of 12 feet NGVD along the natural banks of the Mississippi River to several feet below sea level in portions of the leveed areas.

b. Description. The Jefferson Parish drainage system is an intertwined network of subsurface culverts, ditches, canals and pump stations. Similar to the New Orleans system and unique to all others in the United States, the system's operation depends on the collection and pumping of all rainfall in the area. In most areas of the parish, land elevations are lower than the surrounding water surface elevations. Levees protect much of the area from hurricane and Mississippi River flooding. However, levees assume an opposite role of retaining water, where rainfall is concerned. Generally, flow is away from the higher ground elevations at the Mississippi River.

Jefferson Parish operates its pump stations to maintain a specific water surface elevation in the major canals. Once those elevations are exceeded the pumps are engaged to discharge the excess. Subsidence problems in the parish dictate this operation, so that ground water is not drawn out of areas adjacent to the canals for extended periods.

The East Bank Basin is connected by a grid of canals. The lateral canals equalize flow between the major outfall canals, allowing rain water to flow in different directions depending on the rainfall patterns and available capacities at the pump stations. The West Bank Basins are subdivided into subbasins that, for smaller rainfall events, operate independently. However, overbank flow does occur between adjacent subbasins for a 10-year event.

5. Project Design.

a. Federal (SELA). The SELA project was designed to reduce flooding damages in Jefferson Parish. Flood damage reduction features included in the SELA project consist of additions to existing pump stations, construction of additional pump stations, improvements to existing drainage canals, and improvements at canal crossings. Generally, the project is designed for the 10-year event.

1) East Bank Basin (See Figure 2)

The Suburban Canal terminates at Lake Pontchartrain at Pump Station No. 2 (Suburban Pump Station). The capacity of the station was increased by 2,400 cfs by adding on to the existing station under SELA.

The Elmwood Canal terminates at Lake Pontchartrain at Pump Station No. 3 (Elmwood Pump Station). The capacity of the station was increased by 2,400 cfs by adding on to the existing station. Two 1,200 cfs horizontal pumps were added under SELA.

These two pump stations are considered Federal pump stations because the damage was to features added under the SELA project or the damaged items affects the operation of the pump station including the SELA components. Drainage canals to the Elmwood Pump Station, Elmwood Canal, Soniat Canal and Canal Number 3, and to the Suburban Pump Station, Suburban Canal are the major features of work. The canals were unaffected by Hurricane Katrina.



Figure 2. Federal (SELA) East Bank Basin Improvements

2) West Bank—East of Harvey (See Figure 3)

The 3,150 cfs Whitney Barataria Pump Station was constructed on the Gulf Intracoastal Waterway (GIWW) just east of the Verret Canal under the SELA project. Collected storm water is pumped over the hurricane protection levee into the GIWW. Additionally five major canals were improved.

3) West Bank—West of Harvey (See Figure 4)

Features in the SELA project include improvements to 15 canals, the addition of a new Cousins Pump Station, adding 325 cfs to the New Westwego Pump Station, and 1,200 cfs to the Westminster Pump Station. Construction on the 2,000 cfs Cousins Pump Station began in October 2002 and is scheduled to be completed in June 2007. Work at the New Westwego and Westminster Pump Stations has not begun.

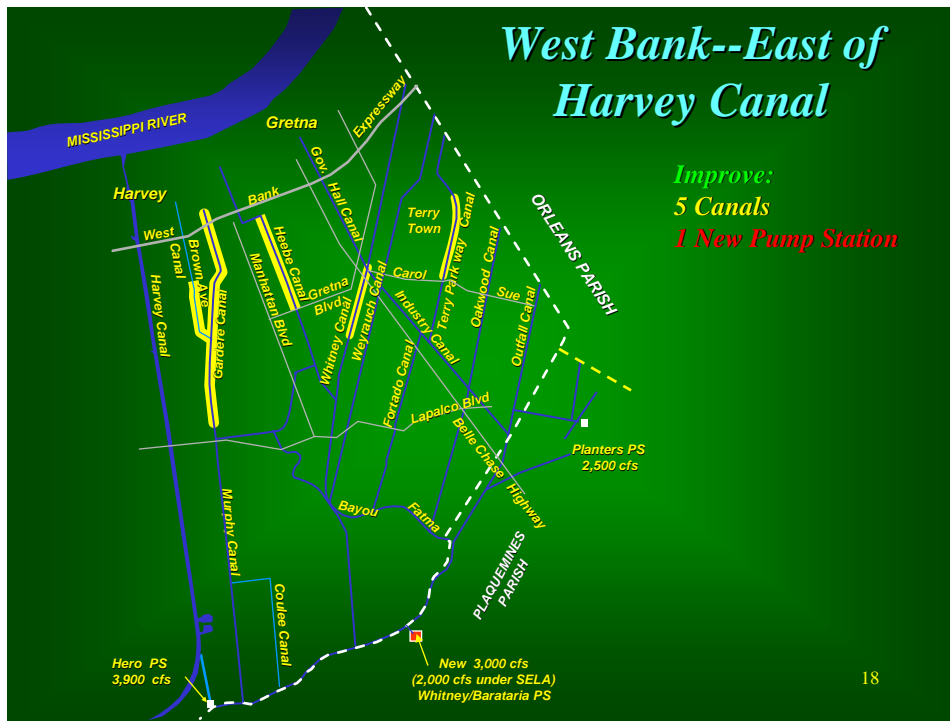


Figure 3. Federal (SELA) West Bank, East of Harvey Basin Improvements

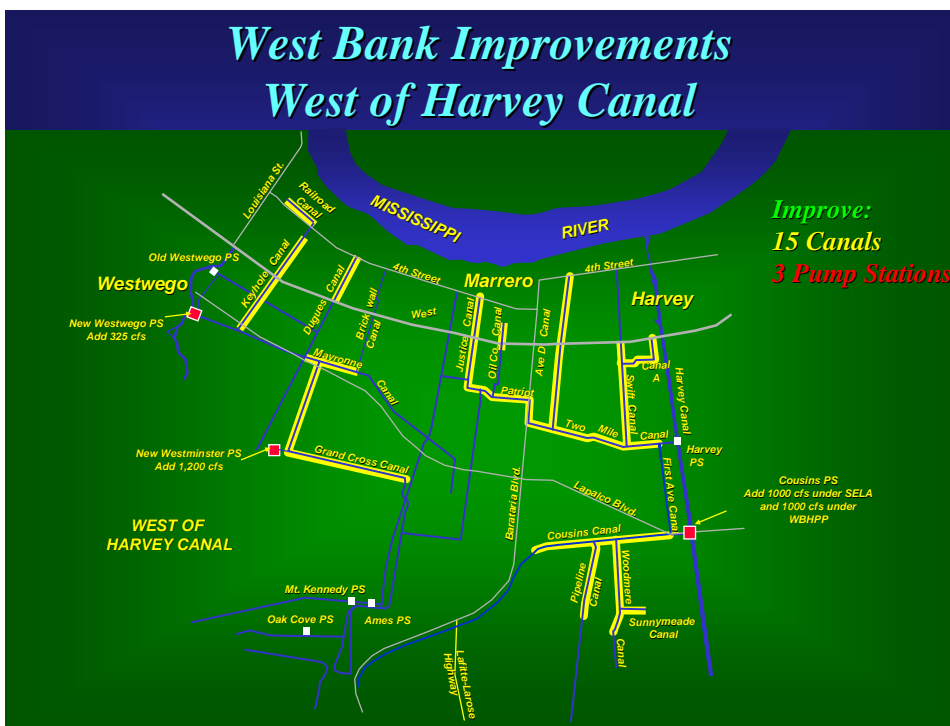


Figure 4. Federal (SELA) West Bank, West of Harvey Basin Improvements

b. non-Federal

1) East Bank Basin

The 31,734 acres of the east bank basin of Jefferson Parish is drained by the six pump stations located in Jefferson Parish (Parish Line, Duncan, Elmwood, Suburban, Bonnabel, and Canal Street). Additionally 2,456 acres (Hoey's Subbasin) drains into the 17th Street Canal and is discharged into Lake Pontchartrain via Pump Station No. 6 in Orleans Parish. (Note that repairs to the 17th Street Canal are included in a separate PIR.)

2) West Bank Basin—East of Harvey

The 11,581 acres of the East of Harvey Basin of Jefferson Parish is drained by three pump stations (Hero, Whitney Baratavia, and Planters).

3) West Bank Basin—West of Harvey

The 15,654 acre area can be subdivided into four subbasins, Estelle, Ames, Westwego and Harvey. The area is drained by 11 pump stations (Harvey, Cousins No. 1 and 2, Estelle, New Estelle, Ames, Mount Kennedy, Westminster No.1 and 2, Westwego No. 1 and 2).

4) West Bank Basin—Lake Cataouatche Subbain

The Lake Cataouatche Subbain is 24,249 acres and is drained by 5 pump stations (Bayou Segnette No.1, Bayou Segnette No. 2, Lake Cataouatche No. 1, Lake Cataouatche No. 2, and Highway 90).

Table 1
Summary of Drainage Area and Pump Capacity

Basin	Pump Station	Number of Pumps	Capacity	Drainage Area (Ac)
East Bank				
	Bonnable	5	3,750	
	Suburban	8	5,340	
	Elmwood	10	5,700	
	Duncan	6	4,800	
	Parish Line	3	900	
	Canal Street	4	<u>160</u>	
	Subtotal		20,650	31,734
West Bank--East of Harvey				
	Planters	5	1,206	
	Hero	10	3,840	
	Whitney Barataria	3	<u>3,150</u>	
	Subtotal		8,196	11,581
West Bank--West of Harvey				
	Harvey	3	960	
	Cousins No. 1	4	800	
	Cousins No. 2	2	2,100	
	Estelle	4	514	
	New Estelle	2	1,140	
	Mount Kennedy	3	501	
	Westminster 1 and 2	4	1,248	
	Ames	3	1,650	
	Westwego No. 1	1	300	
	Westwego No. 2	3	900	
	Cousins	Under Construction		
	Subtotal		<u>10,113</u>	15,654
West Bank--West of Harvey (Cataouatche Subbasin)				
	Lake Cataouatche No. 1	9	1,672	
	Lake Cataouatche No. 2	2	600	
	Highway 90		145	
	Bayou Segnette 1	6	936	
	Bayou Segnette 2	2	<u>1,200</u>	
	Subtotal		4,553	24,249
	Total		<u>43,512</u>	<u>83,218</u>

6. Disaster Incident.

The pump stations were damaged by Hurricane Katrina in 2005. Katrina made landfall in Louisiana on August 29, 2005, as an upper level Category 3 hurricane on the Saffir-Simpson Hurricane Scale with sustained winds of 125 mph (201 km/h) with higher gusts, at 6:10 a.m. CDT near Buras-Triumph in Plaquemines Parish, Louisiana. This meets the criteria of an “extraordinary storm” as noted in paragraph 5-20.e. in Engineering Regulation (ER) 500-1-1,

Emergency Employment of Army and Other Resources - Civil Emergency Management Program based on its being a category 3 Hurricane or stronger and its having caused significant amounts of damage.

7. Project Damages.

a. General.

A separate DSR is based on damages at these facilities from Hurricane Katrina, August 29, 2005. The DSR was prepared by the New Orleans District. Excerpts from the DSR are included in Appendix D with the complete DSR retained at the New Orleans District.

b. Summary.

The damage summaries are noted below.

1) Bonnabel Pump Station.

Damage to the pump station includes damage to the roof (6,300 sq. ft.), gutters, louvers for exhaust fans and generator; vent pipes for the fuel day tanks, lightning rods and cables, and heating elements for the interior heaters.

2) Suburban Pump Station.

Damage to the station consists of two control panels for the sump pumps, doors, and flapper for exhaust cover, lighting, and motor operated valves.

3) Elmwood Pump Station.

Damage to the station consists of damage to the roof, windows, vent stack, exhaust covers and lighting.

4) Duncan Pump Station.

Damage to the pump station includes damage to the roof (7,700 sq. ft.), gutters, exhaust covers, lightning rods and cables and exterior lighting.

5) Ames Pump Station.

Damage to the station consists of extensive damage to the skylight wall panels and flashing and minor damage to the GenSet enclosure.

6) Bayou Segnette No. 1.

Damage consists of minor damage to the corrugated metal roof.

7) Bayou Segnette No. 2.

Damage consists of minor damage to the buildings gutters.

8) Cousins No. 1.

Damage to the building consists of three broken windows.

- 9) Cousins No. 2.
Damage to the station consists of damage to the roof (6,000 sq. ft.), gutters, lightning rods, and exhaust fan covers.
- 10) Estelle No. 1.
Damage to the station consists of damage to the trash rack, office door, corrugated metal roof, light pole, exterior lighting, lightning rods and fuel line.
- 11) Harvey.
Damage consists of damage to the louvers and roof.
- 12) Hero.
Damage to the station includes damage to the roof, vents, flashing, exhaust stacks, and electric cable tray.
- 13) Planters.
Damage consists of damage to the skylight wall panels, flashing, and roof.
- 14) Lake Cataouatche No. 2.
Damage consists of damage to the corrugated fiberglass skylight panel and roof.
- 15) Whitney Barataria.
Damage to the station consists of damaged gutters, flashing, roof ridge cap, metal guard for electrical wiring, controller for a GenSet, lightning rods and fence.
- 16) Westwego No. 1.
Damage to the station consists of damage to the roof and windows.
- 17) Westwego No. 2.
Damage to the station consists of broken windows, and a leaking roof.

8. Project Performance Data.

a. Inspection Results, Date and Type of Inspection.

1) Non-Federal: Because the pump stations are not active in the RIP, inspections of the stations were not performed prior to the disaster. Therefore, a project condition code was not assigned by the Corps. See Appendix Q.

2) Federal:

(1) Suburban Pump Station: Completed on August 10, 2005, Final Inspection Pending.

(2) Elmwood Pump Station: Construction Final Inspection on June 24, 2005.

(3) Cousins Pump Station: Construction began on October 15, 2002 and is currently schedule for completion in June 2007.

(4) Whitney Barataria Pump Station. Final Construction Inspection.

b. Sponsor's Annual O&M Cost. unknown

c. Estimated cost to repair maintenance deficiencies. Not evaluated.

9. Project Repair Alternatives.

a. Description.

1) No Action. This alternative consists of providing no emergency repairs to the flood control system under PL 84-99 authority or funding sources. The area would be vulnerable to flooding caused by rainfall events and would not be suitable for residential, industrial and other urban usage.

2) Non-Structural Flood Recovery / Floodplain Management. This alternative consists of non-structural strategies generally involving changes in land use offered by other federal and state programs. Such strategies would include: (1) acquisition, relocation, elevation, and flood proofing existing structures; (2) acquisition of fee interest and/or conservation or other types of land easements and acquisitions; and (3) restoration of wetland. The sponsor has not requested any consideration of a non-structural alternative.

3) Repair and rehabilitate the pump stations to pre-storm conditions.

b. Discussion.

1) The no action alternative is not acceptable to the Sponsor because the area would be subject to flooding from rainfall events. This situation would prevent reliable residential and industrial use of the land.

2) The non-structural flood recovery / floodplain management alternative is not acceptable due to the numerous industrial uses for the lands within the protected area. In addition there will be residents who will want to and will be allowed to rebuild their homes. The sponsors have not requested a non-structural alternative.

3) The structural repair alternative restores the flood control system to the pre-storm condition and capacity. Without the repairs the area would be subject to flooding from rainfall events. Repairs would consist of replacement of damaged and non-operational equipment, replacement of damage roofs and other building damage.

10. Recommended Alternative.

a. Description. The recommended alternative is to repair the stations to their prestorm condition.

b. Standard Limits for Cost. ER-500-1-1, Section 5-2, paragraph v(1) limits the construction contingency to 10%; however, because of the emergency conditions under which the design and contract documents will be prepared, the short amount of time allowed for construction completion, and the high level of competition for construction contractor resources in the area, a 25% construction contingency is used. Additionally, because of the nature of rehabilitating mechanical and electrical work, including the uncertainty of rebuilding equipment and hidden damage, E&D of 10 % and S&A of 12 % of the construction cost is used.

c. In connection with Hurricane Katrina, the contractor for the Cousins Pump Station currently under construction has reported flood damage to equipment stored at his facility. The Contracting Officer in consulting with legal and technical advisors has determined that within the terms of the contract, the Government is not liable for the damage. Therefore, the cost is not presented in the PIR.

ASSESSMENT OF SELECTED ALTERNATIVE

11. Economic Analysis.

The majority of damage involves repairing roofs, windows, and other structural damage to the buildings containing the pumps, generators, and motors. Without the repairs these stations cannot be reliably maintained in good, safe working condition and must be repaired to fully restore the functional integrity of each pump station. For the East Bank Basin, the benefits were derived from the SELA Project. A conservative assumption was made to use the SELA project benefits for the economic analysis. Generally, the anticipated diminished capacity of the pump stations resulting from the storm damage would exceed the additional capacity provided by the SELA project. Therefore, the anticipated economic damages caused by the storm would be greater than the anticipated economic damages prevented by the SELA Project. For the purposes of the hydraulic and economic analysis of the West Bank Basins, it was assumed that damage to the pump stations structures and ancillary equipment caused a reduction in pump capacity. The reduction was estimated to be 50% of the stations capacity.

The economic feasibility analysis was conducted in accordance with the requirements of EP 500-1-1 in support of the repair and reconstruction of Federally-authorized flood control works as provided for under Public Law 84-99.

a. East Bank Basin.

1) Benefit Analysis.

The total average annual benefits associated with the Southeast Louisiana Feasibility Study for the East Bank Basin are \$26,262,000. The source of this estimate is the "Southeast Louisiana Urban Flood Control Project, East Bank Basin, Jefferson Parish, Louisiana Study (September 2002), 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 2005 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 are 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.

2) Cost Analysis.

The total first cost for the Southeast Louisiana East Bank of Jefferson is \$95,558,000. The total average annual cost is \$5,336,000, of which \$31,000 is for repair of damaged pump stations in this area. This estimate includes construction costs, contingencies, engineering and design costs, and construction management costs. The total first costs reflect October 2005 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 pump station repairs are 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.

3) Benefit Cost Ratio.

The degree to which the average annual project benefits exceed the 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. The net benefit for the East Bank Basin rehabilitation project is \$20,926,000. The benefit-to-cost ratio is 4.9 to 1.0.

b. West Bank—East of Harvey Basin

1) Benefit Analysis

The total average annual benefits associated with the East of Harvey Basin is \$383,000 based on 100 percent inventory collection, which was performed during the ongoing SELA West Bank East of Harvey Feasibility Study. There are approximately 25,000 housing units within this project area with a total population of approximately 76,000. 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 October 2005 price levels.

Three sets of hydraulics were used for this analysis. The without project condition was defined as without pumps. The two alternatives included stage-frequency data at the current damaged pumping capacity (post-Katrina) and stage-frequency data at 100 percent pumping capacity (pre-Katrina). The benefits reflect

the difference between 100 percent pumping capacity and the current pumping capacity. 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. The pump stations to be repaired are Hero, Planters, and Whitney Barataria. No adjustments thus far were made to account for the partial replacement of structures that have been damaged or destroyed by Hurricane Katrina.

2) Cost Analysis

The total first cost for the East of Harvey Basin rehabilitation work is \$61,000 with the total average annual cost of \$3,000. The total first costs for all work to be performed includes construction costs, contingencies, engineering and design costs, and salaries and administration costs. The total first costs reflect October 2005 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 repairs to the pumping stations are 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.

c) Benefit Cost Ratio.

The degree to which the average annual project benefits exceed the 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. The net benefit for the rehabilitation project is \$380,000. The benefit-to-cost ratio is 127.7 to 1.0.

c. West Bank—West of Harvey.

1) Benefit Analysis.

The total average annual benefits associated with the West of Harvey Basin is \$204,000 based on 100 percent inventory collection, which was performed during the ongoing SELA West Bank West of Harvey Feasibility Study. There are approximately 21,000 housing units within this project area with a total population of approximately 67,000. 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 October 2005 price levels.

Three sets of hydraulics were given for this analysis. The without project condition was defined as without pumps. The two alternatives included stage-frequency data at the current damaged pumping capacity (post-Katrina) and stage-frequency data at 100 percent pumping capacity (pre-Katrina). The benefits reflect the difference between 100 percent pumping capacity and the current pumping capacity. 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. The pump stations to be repaired are Cousins No. 1, 2 and 3, Estelle

No. 1, Harvey, and Westwego No. 1 and 2. No adjustments thus far were made to account for the partial replacement of structures that have been damaged or destroyed by Hurricane Katrina.

2) Cost Analysis.

The total first cost for the rehabilitation work is \$136,000 with the total average annual cost of \$8,000. The total first costs for all work to be performed includes construction costs, contingencies, engineering and design costs, and salaries and administration costs. The total first costs reflect October 2005 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 repairs to the pumping stations are 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.

3) Benefit Cost Ratio.

The degree to which the average annual project benefits exceed the 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. The net benefit for the rehabilitation project is \$196,000. The benefit-to-cost ratio is 25.5 to 1.0.

d. West Bank—Lake Cataouatche Basin.

1) Benefit Analysis.

The total average annual benefits associated with the Lake Catouatche Basin are \$233,000. This is based on 100 percent inventory collection, which was performed during the Lake Cataouatche Feasibility Study. There are approximately 8,000 housing units within this project area with a total population of approximately 24,000. 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 October 2005 price levels.

Three sets of hydraulics were given for this analysis. The without project condition was defined as without pumps. The two alternatives included stage-frequency data at the current damaged pumping capacity (post-Katrina) and stage-frequency data at 100 percent pumping capacity (pre-Katrina). The benefits reflect the difference between 100 percent pumping capacity and the current pumping capacity. 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. The pump stations to be repaired are Ames, Bayou Segnette No. 1 and 2, and Lake Cataouatche No. 2. No adjustments thus far were made to account for the partial replacement of structures that have been damaged or destroyed by Hurricane Katrina.

2) Cost Analysis.

The total first cost for the rehabilitation work is \$3,000 with the total average annual cost of \$200. The total first costs for all work to be performed includes construction costs, contingencies, engineering and design costs, and salaries and administration costs. The total first costs reflect October 2005 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 repairs to the pumping stations are 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.

3) Benefit Cost Ratio.

The degree to which the average annual project benefits exceed the 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. The net benefit for the rehabilitation project is \$232,800. The benefit-to-cost ratio is 1,165 to 1.0.

e. Summary of Costs and Benefits. Table 2 provides a summary of the costs and benefits associated with the rehabilitation effort. The total estimated cost of the rehabilitation effort is \$759,000.

Table 2
Cost and Benefit Cost Ratios

Basin	Pump Station	First Cost Repairs (\$)	Average Annual Cost (\$)	Average Annual Benefits (\$)	Benefit Cost Ratio	Fed (SELA) Cost (\$)	Non-Fed Cost (\$)
East Bank							
	Bonnable	142,000					142,000
	Suburban	23,000				23,000	
	Elmwood	251,000				251,000	
	Duncan	142,000					142,000
Subtotal		558,000	5,336,000	26,262,000	4.9	274,000	284,000
West Bank--East of Harvey							
	Planters	37,000					37,000
	Hero	11,000					11,000
	Whitney Barataria	13,000				13,000	
Subtotal		61,000	3,000	383,000	127.7	13,000	48,000
West Bank--West of Harvey							
	Harvey	2,000					2,000
	Cousins No. 1	1,000					1,000
	Cousins No. 2	90,000					90,000
	Estelle 1	12,000					12,000
	Ames	27,000					27,000
	Westwego No. 1	2,000					2,000
	Westwego No. 2	2,000					2,000
Subtotal		136,000	8,000	204,000	25.5	0	136,000
West Bank--West of Harvey (Cataouatche Subbasin)							
	Lake Cataouatche No. 2	1,000					1,000
	Bayou Segnette 1 & 2	2,000					2,000
Subtotal		3,000	200	233,000	1165	0	3,000
Total		758,000	5,347,200	27,082,000	5.1	287,000	471,000

Note the Average Annual Cost and Benefits for the East Bank includes the SELA East Bank Project.

e. Construction Cost Estimate. The estimated construction cost is \$758,000. Appendix H contains a detailed construction cost estimate for each pump station.

12. Environmental

The New Orleans District Commander has considered the probable environmental consequences of the proposed work under this PIR. 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. One of the pump stations to be repaired under this PIR, the Whitney Barataria Pump Station, was constructed under the SELA project. Two other pump stations were upgraded for additional pumping capacity under the SELA, Elmwood and Suburban Pump Stations. Repairs to these three pump stations are categorically excluded from additional National Environmental Policy Act (NEPA) documentation as per Engineering Regulation ER 200-2-2, Paragraph 9.a., which provides for NEPA exclusion of “activities at completed Corps projects which carry out the authorized project purposes.” Examples of such activities include “repair, rehabilitation, replacement of existing structures and facilities.” The requirements of other applicable environmental laws and regulations remain in effect and the proposed work will comply with them.

The other pump stations to be repaired under this PIR are not part of any Federal project. The environmental effects of the non-Federal pump station work will be included in an after-the-fact environmental assessment that is under preparation for all of the flood protection repair work being undertaken by the Corps 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 January 5, 2006, that this work prevents or reduces an imminent risk of life, health, property, or severe economic losses. (See Appendix G).

In order to comply with other applicable laws and regulations, the New Orleans District has coordinated the proposed action with appropriate Federal and state agencies. The District is recommending to the Louisiana State Historic Preservation Officer that the pump stations are not eligible for inclusion in the National Register of Historic Places and therefore are not significant historic properties. The Corps will not need to apply for a storm water pollution prevention permit from the Louisiana Department of Environmental Quality (LDEQ) pursuant to Section 402 of the Clean Water Act since LDEQ has granted the Corps blanket authority to discharge storm water runoff from construction activities related to hurricane response activities in the declared disaster areas. A State Water Quality Certification pursuant to Section 401 of the Clean Water Act will not have to be obtained from the LDEQ since that office sent a letter to the New Orleans District dated September 7, 2005, which waives and dispenses with the requirement of State Water Quality Certification prior to performing such work as needed to repair, replace, or restore public infrastructure damaged or destroyed by 2005 hurricanes.

13. Interagency Levee Task Force.

Not applicable.

14. Project Management.

a. Funding Authority.

- (1) Program and Appropriation. FCCE, 96x3125
- (2) Class. For non-Federal 326, for Federal 316
- (3) CWIS Number. For non-Federal 030725, for Federal 075517

b. Project Funds. Cost of Field Investigations /PIR Preparation: \$12,600 Fed, \$61,500 non-Fed

c. Project Repair Schedule.

DSR Complete	12/20/05
PIR Complete	04/15/06
Begin Construction	05/01/06
Complete Construction	07/01/06

15. Implementation Guidance for Emergency Supplemental Appropriations.

Pursuant to CECW-HS, Memorandum for Commanders, South Atlantic Division and Mississippi Valley Division, SUBJECT: 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 (Appendix N), for the purpose of delegating certain approval authority and to provide guidance concerning restoration and rehabilitation of flood damage reduction and hurricane and storm damage reduction project, and the acceleration of work to complete certain Federally authorized projects, in accordance with the funding and authority provided by PL 109-148, as follows:

Public Law 109-148 directs that in using funds appropriated for construction 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 of 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.

16. Requirements of Federal and Public Sponsor Cooperation for the Rehabilitation Effort

A Cooperation Agreement will be entered into between the Government and the Jefferson Parish Government as the Public Sponsor. Obligations of the Government and the Public Sponsor for the herein described rehabilitation efforts are described in the following subparagraphs.

a. Lands, Easements, Rights-of-Way, and Disposal or Borrow Areas (LERD)

(1) LERD Owned, Claimed or Controlled by the Public Sponsor: Upon the Government's request that the Public Sponsor provide right of entry for LERD determined by the Government to be necessary for the construction, operation and maintenance of the permanent rehabilitation efforts herein described, the Public Sponsor shall provide, at no cost to the Government, a right of entry to LERD on lands that were owned, controlled, or claimed by the Public Sponsor on the date of the Government's request for right of entry (hereafter "Public Sponsor LERD"). The Public Sponsor shall secure, at no cost to the Government, the subordination or release of all third party interests within said Public Sponsor LERD, as required by the Government's request for right of entry.

(2) LERD Owned, Claimed or Controlled by Other Non-Federal Governmental Entities: The Public Sponsor, at no cost to the Government, shall use its best efforts to provide right of entry, as requested by the Government, to LERD that were owned, controlled or claimed by other non-Federal Government entities on the date of the Government's request for right of entry (hereinafter "Other Non-Federal Governmental LERD"). If the Public Sponsor, despite diligent efforts, is unable to acquire right of entry to Other Non-Federal Governmental LERD, the Government shall obtain right of entry to the Other Non-Federal Governmental LERD from the non-Federal governmental entity who owns, controls or claims said LERD.

(3) Owned by Private Interests: For the rehabilitation efforts described herein, the Government shall fund the acquisition of LERD that are not owned, claimed or under the control of the Public Sponsor or any other non-Federal governmental entities on the date of the Government's request for right of entry (hereinafter "Private LERD"). The Government's responsibility to fund the acquisition of Private LERD shall be in accordance with the following procedures and requirements

(a) Exercise of Commandeering Powers: Immediately upon the Government's request that the Public Sponsor provide Private LERD, the Public Sponsor shall secure or cause to be secured an executive commandeering order or orders from the Governor of the State of Louisiana for Private LERD situated in Jefferson Parish, Louisiana, for the construction of the permanent rehabilitation efforts herein described. The exercise of such commandeering powers and authorities is subject, under the cited state law, to the requirement that the owners of any commandeered interest that is compensable under the law, be identified and justly compensated under the law. Repairs to the pump stations will be performed within existing right-of-way already under the control of Jefferson Parish. Therefore, it is anticipated that commandeering powers will not be required.

(b) Provision of Right of Entry: At no cost to the Government, the Public Sponsor shall promptly provide right of entry to the Government to the Private LERD for the construction, operation and maintenance of the rehabilitation efforts described herein.

(c) Responsibility for Acquisition of Private LERD: After receipt of the executed Commandeering Order and right of entry from the Public Sponsor, the Government will perform, or cause to be performed, the acquisition of the Private LERD determined by the Government to be necessary for the construction, operation and maintenance of the LERD described herein. The acquisition of LERD by the Government will be subject to the availability and receipt of P. L. 84-99 appropriations and the provision by the Public Sponsor, at no cost to the Government, of the Commandeering Order and right of entry referenced in Paragraph 20.a.(3)(a) and 20.a.(3)(b), respectively.

(d) Acquisition in the Name of the Public Sponsor: The Government shall acquire, as appropriate, any Private LERD and Other Non-Federal Governmental LERD and relocations, as well as any subordinations or releases of interest required to be obtained from third parties in the name of the Public Sponsor. Provided however, that if the Government is required to acquire said interests through the exercise of its Federal powers of eminent domain authority, the Government shall file such proceedings in a Federal district court, such that possession and ownership of the condemned LERD and interests shall be in the name of the United States of America. The Government shall thereafter quitclaim such interest to the Public Sponsor and the Public Sponsor shall agree in the Cooperation Agreement to accept the quitclaim of any LERD and interests so acquired by the Government for the purposes of the Rehabilitation Effort herein described.

b. Construction

The Government will expeditiously construct the rehabilitation efforts described herein, subject to the provision of REPAIR AND REHABILITATION funds by the Congress, and subject to the commandeering of Private LERD by the chief executive officer of the parish or city where the Private LERD are located and to the provision by the Public Sponsor of a right of entry to the LERD determined by the Government to be necessary for the construction, operation and maintenance of the Rehabilitation Effort.

c. Relocations

The Government will determine and accomplish or assure accomplishment of all the relocations necessary for the construction, operation and maintenance of the rehabilitation effort described herein, including those necessary to enable the removal of borrow materials and the proper disposal of dredged or excavated material; provided however, that the Public Sponsor, without cost to the Government, shall commandeer the privately-owned relocated facilities or utilities in accordance with its powers under La. R.S. 29:721, et seq.; shall diligently exercise its rights and authority to secure a subordination or release of third party interests on Public Sponsor LERD; and shall use its best efforts to secure a subordination or release of third party interests on other non-federal Governmental LERD. If the Public Sponsor, despite diligent efforts, is unable to secure the release or subordination of third party interests in other non-federal Governmental LERD, the Government shall obtain such subordination or release from the owners of such interests.

d. Hazardous Substances

The Government shall perform, or cause to be performed, such investigations for hazardous substances as are determined to be necessary by the Government to identify the existence and extent of hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 42 U.S.C. 9601-9675, on all lands that are determined by the Government to be necessary to the construction, operation, and maintenance of the subject Rehabilitation Effort. In the event that hazardous substances are determined to exist on lands acquired for the rehabilitation effort and the Government and the Public Sponsor determine to proceed or continue with the construction after considering liability that may arise under CERCLA, the Public Sponsor shall be responsible, as between the Government and the Public Sponsor, for any and all necessary clean up and response costs, to include the costs of any studies and investigations necessary to determine an appropriate response to the contamination. Such costs shall not be considered a part of the total rehabilitation effort for the subject project.

e. Indemnification

The Public Sponsor shall hold and save the Government free from all damages arising from the construction, operation, and maintenance of the subject Rehabilitation Effort and any related betterments, except for damages due to the fault or negligence of the Government or the Government's contractors.

f. Betterments

The Public Sponsor may request the Government to accomplish betterments and shall be solely responsible for any increase in costs resulting from the betterments. All such increased costs will be paid in advance by the non-Federal sponsors.

g. Operation and Maintenance

The Public Sponsor shall operate and maintain those portions of the Rehabilitation Effort herein described at no cost to the Government, in accordance with specific directions prescribed by the Government in Engineer Regulation 500-1-1 and any subsequent amendments thereto and other applicable authorities

17. Real Estate Requirements.

All applicable Rights of Entry will be provided by the appropriate Public Sponsor prior to each construction contract in accordance with the procedures set forth in paragraph 16 above.

PROJECT SUMMARY

18. Recommendations/Project Authentication

a. The recommended alternative is to repair or replace damage caused by Hurricane Katrina. Without repairs to the flood control Project, the threat of flooding from rainfall events would continue to leave the area unusable for residential and commercial use.

b. It is recommended that this project be approved. The project first cost is \$758,000 with a benefit-to-cost ratio of 5.1 to 1. The cost of the rehabilitation effort for the Federal pump stations is \$287,000 and the cost of the non-Federal pump stations is \$471,000. The final design will be completed with contract award scheduled to ensure repairs are completed by June 1, 2006.

DISTRICT PROJECT AUTHENTICATION
Project Information Report, FEDERAL AND NON-FEDERAL PUMP STATIONS,
FLOOD CONTROL, Jefferson Parish, Louisiana

Report Prepared By: James J. St. Germain 4/7/06
James J. St. Germain Date
Project Manager

Emergency Management Approval By: James W. Watten for Michael Lowe 12 APR 2006
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 Jefferson 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: Stella S. Blue 4/12/06
Assistant District Counsel Date

Certified by: Terese E. Frederick 4/12/06
District Counsel Date

District-Level Approval By: Richard P. Wogenrich 4/12/06
Richard P. Wogenrich Date
Colonel, U.S. Army
District Commander

DIVISION PROJECT APPROVAL
Project Information Report, FEDERAL AND NON-FEDERAL PUMP STATIONS,
FLOOD CONTROL, Jefferson Parish, Louisiana

Emergency Management
Approval By: *Jerry L Smith* *4/13/06*
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 Jefferson 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: *J Lawrence Barnett* *4/13/06*
Division Counsel Date

Division-Level Approval By: *Albert M. Bleakley* *4/14/06*
Albert M. Bleakley Date
Colonel, Engineer
Deputy Division Commander

TECHNICAL POINTS OF CONTACT

Project Management			
Project Manager	Jim St. Germain	CEMVN-PM-E	504-862-2499
Emergency Management			
Emergency Mgmt Approval	Herbert Wagner	CEMVN-OD-R	504-862-7434
Engineering			
Electrical Engineer	Dan Bradley	CEMVN-ED-GE	504-862-2696
Mechanical Engineer	Dennis Strecker	CEMVN-ED-GE	504-862-2694
Structural Engineer	Larry Mickal	CEMVN-ED-T	504-862-2711
Hydraulic Engineer	Clyde Barre	CEMVN-ED-HD	504-862-2429
Economics			
Economist	Toni Baldini	CEMVN-PM	504-862-
Environmental			
Biologist	Richard Boe	CEMVN-PM-RP	540-862-1505
Real Estate			
Real Estate Analysis	Michelle Marceaux	CEMVN-RE-E	504-862-1190
Construction			
Construction Mgmt	Glen Grimillion	CEMVN-CD-NO-Q	504-861-2439
Office of Counsel			
Attorney	Steve Bland	CEMVN-OC	504-862-2026
Attorney	Mary V. Kinsey	CEMVN-OC	504-862-2828
Executive			
DDPM Chief	Greg Breerwood	CEMVN-EX	504-862-2204
District Engineer	Col R. Wagenaar	CEMVN-DE	

Sponsor Points of Contact

Jefferson Parish Government	
Aaron Broussard, Parish President	(504) 364-2700
Kazem Alikhani, Director of Drainage	(504) 736-6753

APPENDICES

APPENDIX A.	Project Sponsor's Request for Assistance
APPENDIX B.	Project Location
APPENDIX C.	Disaster Incident (See section 6)
APPENDIX D.	Damages
APPENDIX E.	Repair Alternatives (See section 9)
APPENDIX F.	Economic Analysis Documents (See section 11)
APPENDIX G.	Environmental
APPENDIX H.	Construction Cost Estimates
APPENDIX I-P.	Not Used
APPENDIX Q.	
APPENDIX R-Y	Note Used
APPENDIX Z.	PIR Review Checklist

APPENDIX A

**Request for Assistance
Jefferson Parish**

Federal and Non-Federal

Jefferson Parish
1221 Elmwood Park Blvd., Suite 1002
Jefferson, Louisiana 70123
(504) 364-2700

Aaron F. Broussard
Parish President

October 15, 2005

Corps of Engineers, New Orleans District
Attn: Operations Division, Readiness Branch (Herbert J. Wagner)
7400 Leake Avenue
New Orleans, Louisiana 70118-3551

This letter is a written request for rehabilitation assistance for the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project, Mississippi River and Tributary Project and Southeast Louisiana Urban Drainage Project

1) Name of Requesting Agency: Jefferson Parish

Points of Contact:	Phone Number:
Aaron F. Broussard, Parish President	(504) 364-2700
Tim Whitmer, Chief Administrative Assistant	(504) 364-2700
Jose' Gonzalez, Director of Public Works	(504) 736-6408

2) Date of Last Inspection: October 2004

3) Flood Control Project Location (Section, Township, Range, City and Parish):
Jefferson Parish, State of Louisiana

4) Locations of damaged Sections: All project features for projects listed above protecting Jefferson Parish, State of Louisiana.

5) Waterways causing the damage: All waterways, lakes and bodies of water adjacent to and running through Jefferson Parish, Louisiana, such as Lake Pontchartrain, the Mississippi River and the Harvey Canal.

6) Financial Capability of the Non-Federal Sponsor: Hurricane Katrina, August 29, 2005, was a devastating hurricane of catastrophic proportions. The undersigned non-

Federal Sponsor requests that the Federal Government assume responsibility and/or cost of the following items of non-Federal responsibility under the requirements of the project's statutory authority and/or under Public Law 84-99: [SIGNIFY REQUEST BY PLACING AN "X" IN THE SPACE PROVIDED.]

a. After required new real property interests identified by the Federal Government are acquired and commandeered by or on behalf of the non-Federal sponsor, assume responsibility for acquisition and funding of land payments and incidental cost thereof, of newly acquired lands, easements, rights-of-way, relocations, and disposal areas (LERRDs), including credit/reimbursement for fair market value, settlement or final judgment for LERRDs commandeered by or on behalf of the non-Federal sponsor, subject to the requirement that the Federal Government must provide prior approval of fair market value and settlement determinations prior to the non-Federal tender of an offer to land owner: X

b. Non-Federal Sponsor's proportionate share of total project Rehabilitation Effort: X

c. Costs of Hazardous, Toxic, Radioactive Waste (HTRW) Investigation: X

7) The need for Federal Government assumption of cost-sharing responsibility for the above items of local obligation is requested due to the extraordinary demands upon the fiscal resources of the undersigned non-Federal sponsor, as follows: Jefferson Parish has suffered the substantial loss of its tax base, its business and industry community, its population base, its physical infrastructure and now has physical restraints upon recovering any reasonable portion of any or all of the forgoing municipal assets without Federal assumption of cost-sharing.

8) The non-Federal sponsor can provide the following services and/or items of local obligation, without credit or reimbursement: Assist the Parish in securing property title searches, acquisition of borrow areas, negotiation with property owners and acquisition of real property, i.e. immovable property, rights and titles.

9) It is in the national interest to provide permanent rehabilitation of the above described projects for the following reasons: Jefferson Parish which is part of the New Orleans Metropolitan Area has a population of approximately 500,000 residents and is located immediately adjacent to the City of New Orleans, which is one of the largest ports in the world, and the largest in the nation, at the base of the largest river system in the nation serving as a major economic gateway for industry and commerce to the nation and the world including the export market for the nations grain to the world. The seafood industry is a significant industry which provides products throughout the United States. The area supports petroleum refineries producing fuel at a critical juncture in our nation's energy plan and serving natural gas pipelines serving major portions of the Northeastern United States. It is a gateway and guard house for the nation between the world and North and South and Central America. The tourism industry is also of substantial importance to our area providing economic boost to the local economy.

10) It is understood and agreed that the Government's decision regarding the request in Paragraph 6 above will be within the Government's sole discretion, and will be determined based on the facts and circumstances applicable to each project.

Jefferson Parish

A handwritten signature in blue ink that reads "A.F. Broussard". The signature is stylized, with the first letters of the first and last names being large and prominent. The signature is written over a horizontal line.

Aaron F. Broussard, Parish President

Official Time: 11:55 PM

Jefferson Parish
1221 Elmwood Park Blvd., Suite 1002
Jefferson, Louisiana 70123
(504) 364-2700

Aaron F. Broussard
Parish President

October 15, 2005

Corps of Engineers, New Orleans District
Attn: Operations Division, Readiness Branch (Herbert J. Wagner)
7400 Leake Avenue
New Orleans, Louisiana 70118-3651

This letter is a written request for rehabilitation assistance for the following flood control project constructed by the non-Federal sponsor in Jefferson Parish, Louisiana: all interim levees and drainage systems within Jefferson Parish, all pumping stations, sewerage and water treatment plants, and related power plants and flood control structures owned or controlled by Jefferson Parish or other similarly situated project(s).

- 1) Name of Requesting Agency: Jefferson Parish

Points of Contact:	Phone Number:
Aaron F. Broussard, Parish President	(504) 364-2700
Tim Whitmer, Chief Administrative Assistant	(504) 364-2700
Jose' Gonzalez, Director of Public Works	(504) 736-6408

- 2) Corps assistance with inspection and Levee damage assessment: Yes
Corps assistance with inspection and Drainage canal and collection system damage assessment: Yes
Corps assistance with inspection and Pump Station damage assessment: Yes

- 3) Flood Control Project Location Jefferson Parish, State of Louisiana

- 4) Locations of damage: All project features for projects listed above protecting Jefferson Parish, State of Louisiana.

- 5) Waterways causing the damage: All waterways, lakes and bodies of water adjacent to Jefferson Parish, Louisiana, such as Lake Pontchartrain, the Mississippi River and the Harvey Canal.
- 6) Financial Capability of the Non-Federal Sponsor: Hurricane Katrina, August 29, 2005, was a devastating hurricane of catastrophic proportions. The undersigned non-Federal Sponsor requests that the Federal Government assume responsibility and/or cost of the following items of non-Federal responsibility under the requirements of Public Law 84-99: [SIGNIFY REQUEST BY PLACING AN "X" IN THE SPACE PROVIDED.]
 - a. After required new real property interests identified by the Federal Government are acquired or commandeered by or on behalf of the non-Federal sponsor, assume responsibility for acquisition and funding of land payments and incidental cost thereof, of newly acquired lands, easements, rights-of-way, relocations, and disposal areas (LERRDs), including credit/reimbursement for fair market value, settlement or final judgment for LERRDs acquired or commandeered by or on behalf of the non-Federal sponsor, subject to the requirement that the Federal Government must provide prior approval of fair market value and settlement determinations prior to the non-Federal tender of an offer to land owner: X
 - b. All reasonable, allocable and allowable cost of the project Rehabilitation Effort: X
 - c. Costs of Hazardous, Toxic, Radicactive Waste (HTRW) Investigation: X
- 7) The need for Federal Government assumption of cost-sharing responsibility for the above items of local obligation is requested due to the extraordinary demands upon the fiscal resources of the undersigned non-Federal sponsor, as follows: Jefferson Parish has suffered substantial loss of its tax base, its business and industry community, its population base, its physical infrastructure and now has physical restraints upon recovering any reasonable portion of any or all of the forgoing municipal assets without Federal assumption of cost-sharing.
- 8) Despite current and anticipated future non-Federal fiscal constraints, the non-Federal sponsor can provide the following services and/or items of local obligation, without credit or reimbursement: Assist the Parish in securing property title searches, acquisition of borrow areas, negotiation with property owners and acquisition of real property, i.e. immovable property, rights and titles.
- 9) It is in the national interest to provide permanent rehabilitation of the above described projects for the following reasons: Jefferson Parish which is part of the New Orleans Metropolitan Area has a population of approximately 500,000 residents and is located immediately adjacent to the City of New Orleans, which is one of the largest ports in the world, and the largest in the nation, at the base of

the largest river system in the nation serving as a major economic gateway for industry and commerce to the nation and the world including the export market for the nations grain to the world. The seafood industry is a significant industry which provides products throughout the United States. The area supports petroleum refineries producing fuel at a critical juncture in our nation's energy plan and serving natural gas pipelines serving major portions of the Northeastern United States. It is a gateway and guard house for the nation between the world and North and South and Central America. The tourism industry is also of substantial importance to our area providing economic boost to the local economy.

- 10) It is understood and agreed that the Government's decision regarding the request in Paragraph 6 above will be within the Government's sole discretion, and will be determined based on the facts and circumstances applicable to each project.

Jefferson Parish


Aaron F. Broussard, Parish President

Official Time: 11:55 PM

Appendix B
Jefferson Parish Pump Stations, Flood Control



Appendix C

Disaster Incident

See Section 6 of Main Report

Appendix D

Damages

Appendix D

Damages

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BONNABEL PUMP STATION (#1)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish East Bank

A. Number of Pumps: 5

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Electric	300	yes	
2	Electric	300	yes	
3	Diesel	1050	yes	
4	Diesel	1050	yes	
5	Diesel	1050	yes	
Total		3750		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No damage

Standby Backup Power Equipment: Currently under repair

Switchgear and/or Motor Control Centers: No damage

Motor Feeder Power Cables and Wiring: No damage

Pump Controls Systems: No Damage

Pump Lubricators: No Damage

Fuel Systems and Supply: No Damage

Compressed Air System: No Damage

Vacuum System: No Damage

Trash Racks: No damage.

Trash Raking Equipment: Operational.

Trash Rakes: Operational.

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: Acceptable.

Pump Station Building Roof: - Roof covering completely destroyed.
- Copper gutters damaged or missing.

Pump Station Building Doors & Windows: Acceptable.

Pump Station Mechanical Building Systems: - Louvers for exhaust fans are bent or damaged.
- Louvers for exhaust for generator no. 2 are damaged.
- 2 vent pipes for fuel day tanks are damaged.

Pump Station Electrical Building Systems: - Lightning rods and cables are damaged or missing.
- 12 Heating elements for interior heaters are damaged.

Pump Station Site: Acceptable.



Photo 1 – Roof covering displaced.



Photo 2 – Damaged exhaust fan louvers.



P Photo 3 – Bent vent pipe for fuel day tank



No. 4- Damaged Heater Elements



Photo No. 5- Damaged Lightning Protection System



Photo No.6- GenSet Currently under repair

SUBURBAN PUMP STATION (#2)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish East Bank

A. Number of Pumps: 8

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Diesel	1050	yes	
2	Diesel	1050	yes	
3	Electric	40	yes	
4	Diesel	250	yes	
5	Diesel	250	yes	
6	Electric	300	yes	
7	Diesel	1,200	yes	
8	Diesel	1,200	yes	
Total		5,340		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No Damage

Standby Backup Power Equipment: No Damage

Switchgear and/or Motor Control Centers: No Damage

Motor Feeder Power Cables and Wiring: No Damage

Pump Controls Systems: No Damage

Pump Lubricators: No Damage

Misc. Pumps: 2 control panels for the sump pumps were flooded and need to be replaced. -
SELA

Fuel Systems and Supply: No Damage

Compressed Air System:

Vacuum System:

Trash Racks: No damage.

Trash Raking Equipment: Operational.

Trash Rakes: Operational.

Discharge Pipe Flap Gates:

Pump Station Building Structure: Acceptable

Pump Station Building Roof: Acceptable

Pump Station Building Doors & Windows: - NW pedestrian door on main floor of station needs to be replaced.
- Door to sump room needs to be replaced – **SELA**.

Pump Station Mechanical Building Systems: - No. 1 flapper exhaust cover is missing.

Pump Station Electrical Building Systems: - 7 lights on roof are damaged and need to be replaced. **(3 are SELA)**

Pump Station Site: Acceptable.

Misc: - 4 Limitorque Motor operated Valves need to be replaced - **SELA**
- UPS for Engine No. 2 is currently being replaced



Photo 1 – Steel exhaust flapper missing.



Photo No.2-SELA Equipment Damage

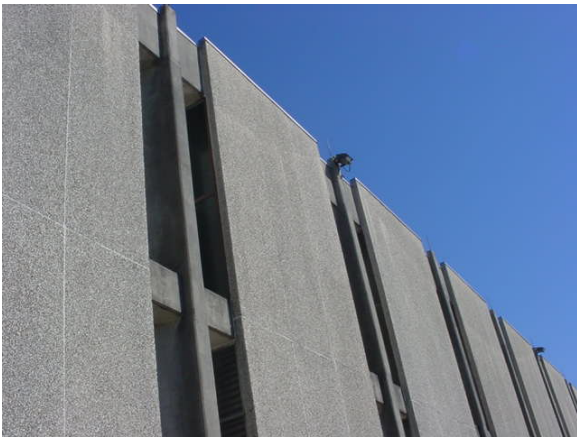


Photo No.3- Damaged lighting on rear side of building similar to front side lighting

ELMWOOD PUMP STATION (#3)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish East Bank

A. Number of Pumps: 10

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Diesel	300	yes	
2	Diesel	300	yes	
3	Diesel	550	yes	
4	Diesel	550	yes	
5	Diesel	550	yes	
6	Diesel	550	yes	
7	Diesel	300	yes	
8	Diesel	300	yes	
9	Diesel	1150	yes	
10	Diesel	1150	yes	
Total		5700		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No Damage

Standby Backup Power Equipment: No Damage

Switchgear and/or Motor Control Centers: No Damage

Motor Feeder Power Cables and Wiring: No Damage

Pump Controls Systems: No Damage

Pump Lubricators: No Damage

Fuel Systems and Supply: No Damage

Compressed Air System: No Damage

Vacuum System: No Damage

Trash Racks: No damage.

Trash Raking Equipment: Operational.

Trash Rakes: Missing trash rake guide for Bay 3.

Discharge Pipe Flap Gates:

Pump Station Building Structure: Acceptable.

Pump Station Building Roof: Rocks on roof pushed to south side; no leaks. Could possibly need a new roof. **SELA**

Pump Station Building Doors & Windows: Reinforced window broken. **SELA**

Pump Station Mechanical Building Systems: - Cap missing from heater vent stack.
- 5 flapper exhaust covers are missing or damaged. **3 are SELA**

Pump Station Electrical Building Systems: - 4 roof lights damaged. **SELA**
- 1 light damaged on catwalk. **SELA**

Pump Station Site: Acceptable.



Photo 1—Missing guide for trash rack.

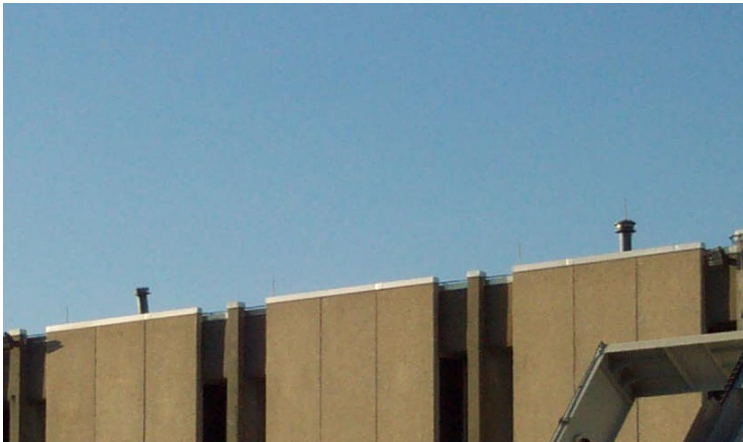


Photo 2 Missing Cap on Heater Exhaust Pipe.



Photo No. 3 Damage Lighting

DUNCAN PUMP STATION (#4)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish East Bank

A. Number of Pumps: 6

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Electric	300	yes	
2	Electric	300	yes	
3	Diesel	1050	yes	
4	Diesel	1050	yes	
5	Diesel	1050	yes	
6	Diesel	1050	yes	
Total		4800		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No Damage

Standby Backup Power Equipment: No Damage

Switchgear and/or Motor Control Centers: No Damage

Motor Feeder Power Cables and Wiring: No Damage

Pump Controls Systems: No Damage

Pump Lubricators: No Damage

Fuel Systems and Supply: No Damage

Compressed Air System: No Damage

Vacuum System: No Damage

Trash Racks: No damage.

Trash Raking Equipment: Operational.

Trash Rakes: Operational.

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: Acceptable.

Pump Station Building Roof: - Roof covering completely destroyed.
- Copper gutters and downspouts damaged or missing.

Pump Station Building Doors & Windows: Acceptable.

Pump Station Mechanical Building Systems: - 4 flapper exhaust covers are missing or damaged.

Pump Station Electrical Building Systems: - Lightning rods and cables are damaged or missing.
- 4 outside roof lights are damaged.

Pump Station Site: Acceptable.



Photo 1 – Steel exhaust cover damaged; gutter damaged.



Photo 2 – Roof covering hanging off side of building.



Photo No.3- Damaged light and lightning protection

AMES PUMP STATION (#7)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 3

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Electric	300	yes	
2	Electric	300	yes	
3	Diesel	1050	yes	
Total		1650		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No Damage

Standby Backup Power Equipment: Slight damage to Gen-Set Enclosure

Switchgear and/or Motor Control Centers: No Damage

Motor Feeder Power Cables and Wiring: No Damage

Pump Controls Systems: No Damage

Pump Lubricators: No Damage

Fuel Systems and Supply: No Damage

Compressed Air System: No Damage

Vacuum System: No Damage

Trash Racks: No Damage

Trash Raking Equipment: No Damage

Trash Rakes: No Damage

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: Extensive damage to skylight wall panels and flashing.

Pump Station Building Roof: No damage.

Pump Station Building Doors & Windows: No Damage.

Pump Station Mechanical Building Systems: No Damage

Pump Station Electrical Building Systems: Overhead crane has been repaired. Overhead lights damaged (4)

Pump Station Site: No damage.



Photo 1 – Vertical corrugated skylight panes missing.



Photo 2 – Flashing missing or damaged.



Photo No.3- Damaged GenSet enclosure



Photo No.4- Damaged overhead lighting

BAYOU SEGNETTE No. 1 (OLD) PUMP STATION (#8) OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 6

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Diesel	156	yes	
2	Diesel	156	yes	
3	Diesel	156	yes	
4	Diesel	156	yes	
5	Diesel	156	yes	
6	Diesel	156	yes	
Total		936		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No Damage, pole leans slightly

Standby Backup Power Equipment: No Damage

Switchgear and/or Motor Control Centers: No Damage

Motor Feeder Power Cables and Wiring: No Damage

Pump Controls Systems: No Damage

Pump Lubricators: No Damage

Fuel Systems and Supply: No Damage

Compressed Air System: No Damage

Vacuum System: No Damage

Trash Racks: No Damage

Trash Raking Equipment: No Damage

Trash Rakes: No Damage

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: No damage.

Pump Station Building Roof: One half of roof for small office building is missing;
acoustical ceiling tile and insulation damaged.

Pump Station Building Doors & Windows: No damage.

Pump Station Mechanical Building Systems: No Damage

Pump Station Electrical Building Systems: No Damage

Pump Station Site: No damage.



Photo 1 – Half of corrugated metal roof missing on office building.

BAYOU SEGNETTE No. 2 (NEW) PUMP STATION (#9) OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 2

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Diesel	600	yes	
2	Diesel	600	yes	
Total		1200		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No Damage

Standby Backup Power Equipment: No Damage

Switchgear and/or Motor Control Centers: No Damage

Motor Feeder Power Cables and Wiring: No Damage

Pump Controls Systems: No Damage

Pump Lubricators: No Damage

Fuel Systems and Supply: No Damage

Compressed Air System: No Damage

Vacuum System: No Damage

Trash Racks: No Damage

Trash Raking Equipment: No Damage

Trash Rakes: No Damage

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: No damage.

Pump Station Building Roof: Small portion of gutter missing; also, gutter strap damaged.

Pump Station Building Doors & Windows: No damage.

Pump Station Mechanical Building Systems: No damage.

Pump Station Electrical Building Systems: No Damage

Pump Station Site: No damage.



Photo 1 – Portion of gutter missing.

COUSINS No. 1 PUMP STATION (#10)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 4

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Electric	50	yes	
2	Diesel	250	yes	
3	Diesel	250	yes	
4	Diesel	250	yes	
Total		800		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No Damage

Standby Backup Power Equipment: No Damage

Switchgear and/or Motor Control Centers: No Damage

Motor Feeder Power Cables and Wiring: No Damage

Pump Controls Systems: No Damage

Pump Lubricators: No Damage

Fuel Systems and Supply: No Damage

Compressed Air System: No Damage

Vacuum System: No Damage

Trash Racks: No damage

Trash Raking Equipment: Chain drive cover replaced.

Trash Rakes: No damage.

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: No damage.

Pump Station Building Roof: No damage.

Pump Station Building Doors & Windows: 16" x 22" window panes broken.

Pump Station Mechanical Building Systems: No damage

Pump Station Electrical Building Systems: No damage

Pump Station Site: No damage.



Photo 1 – 16” x 22” windows broken.

COUSINS No. 2 PUMP STATION (#11)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 2

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Diesel	1050	yes	
2	Diesel	1050	yes	
Total		2100		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No damage

Standby Backup Power Equipment: No damage

Switchgear and/or Motor Control Centers: No damage

Motor Feeder Power Cables and Wiring: No damage

Pump Controls Systems: No damage

Pump Lubricators: No damage

Fuel Systems and Supply: No damage

Compressed Air System: No damage

Vacuum System: No damage

Trash Racks: No damage

Trash Raking Equipment: Acceptable.

Trash Rakes: No damage

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: No damage.

Pump Station Building Roof: - Damage to roof.
- Gutters damaged or missing.

Pump Station Building Doors & Windows: Some windows are broken or cracked.

Pump Station Mechanical Building Systems: Louvers for exhaust fans are bent or damaged.

Pump Station Electrical Building Systems: Some lightning rods are missing or damaged.

Pump Station Site: No damage.



Photo 1 – Exhaust fan cover damaged.



Photo 2 - Damaged lightning protection system and portion of gutter missing.

ESTELLE No. 1 PUMP STATION (#12)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 4

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Electric	138	yes	
2	Electric	138	yes	
3	Electric	138	yes	
4	Electric	100	yes	
Total		514		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: Service pole reset

Standby Backup Power Equipment: No damage

Switchgear and/or Motor Control Centers: No damage

Motor Feeder Power Cables and Wiring: No damage

Pump Controls Systems: No damage

Pump Lubricators: No damage

Fuel Systems and Supply: Slight fuel line damage

Compressed Air System: No damage

Vacuum System: No damage

Trash Racks: Damage to timber trash rack; no damage to steel rack.

Trash Raking Equipment: N/A

Trash Rakes: N/A

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: No damage.

Pump Station Building Roof: Portion of office roof damaged.

Pump Station Building Doors & Windows: Office door damaged by Katrina; was previously in poor condition.

Pump Station Mechanical Building Systems: No damage

Pump Station Electrical Building Systems: Replace 10' lighting pole, 2 air terminals and 2 lighting fixtures

Pump Station Site: No damage.



Photo 1 – Damage to roof of office and pole resting on office.



Photo 2 – Horizontal timber in timber trash rack needs re-alignment.



Photo No.3- Damaged light pole and fixture on ground



Photo No. 4- Damaged electrical service pole



Photo No.5- Unaffected lighting pole, fixture, and air terminal

HARVEY PUMP STATION (#14)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 3

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Electric	320	yes	
2	Electric	320	yes	
3	Electric	320	yes	
Total		960		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No damage

Standby Backup Power Equipment: No damage

Switchgear and/or Motor Control Centers: No damage

Motor Feeder Power Cables and Wiring: No damage

Pump Controls Systems: No damage

Pump Lubricators: No damage

Fuel Systems and Supply: No damage

Compressed Air System: No damage

Vacuum System: No damage

Trash Racks: No damage

Trash Raking Equipment:

Trash Rakes: No damage.

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: No damage.

Pump Station Building Roof: Roof leaks at location of 3 vent stacks; possibly flashing damaged or missing.

Pump Station Building Doors & Windows: No damage.

Pump Station Mechanical Building Systems: No damage

Pump Station Electrical Building Systems: No damage

Pump Station Site: Several louvers are missing or damaged in wall surrounding station.



Photo 1 – Louvers in wall missing or damaged.



Photo 2 – Leak in roof at vent stack.

HERO PUMP STATION (#15)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 10

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Electric	100	yes	
2	Electric	300	yes	
3	Electric	300	yes	
4	Diesel	1020	yes	
5	Diesel	1020	yes	
6	Electric	300	yes	
7	Electric	200	yes	
8	Electric	200	yes	
9	Electric	200	yes	
10	Electric	200	yes	
Total		3840		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No damage

Standby Backup Power Equipment: No damage

Switchgear and/or Motor Control Centers: No damage

Motor Feeder Power Cables and Wiring: No damage

Pump Controls Systems: No damage

Pump Lubricators: No damage

Fuel Systems and Supply: No damage

Compressed Air System: No damage

Vacuum System: No damage

Trash Racks: No damage

Trash Raking Equipment: No damage

Trash Rakes: No damage

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: No damage.

Pump Station Building Roof: - Roof severely damaged over #4 EMD
- Vent missing in roof of main building.
- Flashing missing or damaged in smaller building.

Pump Station Building Doors & Windows: Acceptable.

Pump Station Mechanical Building Systems: Two stacks missing on rear of smaller building.

Pump Station Electrical Building Systems: Approx. 50' of aluminum cable tray covering damaged

Pump Station Site: No damage.



Photo 1 – Roof damaged.



Photo 2 – Inside view of roof damage.



Photo 3 – Exhaust stacks missing



Photo No.4, Damaged aluminum cable tray cover

PLANTERS PUMP STATION (#16)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 5

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Diesel	289	yes	
2	Diesel	289	yes	
3	Diesel	289	yes	
4	Diesel	289	yes	
5	Electric	50	yes	
Total		1206		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No damage

Standby Backup Power Equipment: Gen-set repaired

Switchgear and/or Motor Control Centers: No damage

Motor Feeder Power Cables and Wiring: No Damage

Pump Controls Systems: No damage

Pump Lubricators: No damage

Fuel Systems and Supply: No damage

Compressed Air System: No damage

Vacuum System: No damage

Trash Racks: No damage

Trash Raking Equipment: No damage

Trash Rakes: No damage.

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: Skylight wall panels are leaking; bottom flashing is missing; 4 panels are missing.

Pump Station Building Roof: - Roof leaks at centerline of roof; appears to be missing ridge cap.
- Roof leaks around exhaust pipes; probably needs flashing.

Pump Station Building Doors & Windows: No damage.

Pump Station Mechanical Building Systems: No damage

Pump Station Electrical Building Systems: No damage

Pump Station Site: No damage.



Photo 1 – Vertical wall skylight panels leaking.



Photo 2 – Flashing missing from vertical wall skylight panels.



Photo 3 – Ridge cap missing from roof.

LAKE CATAOUCHE No. 2 PUMP STATION (#18)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 2

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Diesel	300	yes	
2	Diesel	300	yes	
Total		600		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No damage

Standby Backup Power Equipment: No damage

Switchgear and/or Motor Control Centers: No damage

Motor Feeder Power Cables and Wiring: No damage

Pump Controls Systems: No damage

Pump Lubricators: No damage

Fuel Systems and Supply: No damage

Compressed Air System: No damage

Vacuum System: No damage

Trash Racks: No damage

Trash Raking Equipment: No damage.

Trash Rakes: No damage.

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: No damage (transite siding).

Pump Station Building Roof: - One skylight panel missing.
- Corrugated metal roof over porch is missing.

Pump Station Building Doors & Windows: No damage.

Pump Station Mechanical Building Systems: No damage

Pump Station Electrical Building Systems: No damage

Pump Station Site: No damage.



Photo 1 – Skylight panel missing.

WHITNEY BARATARIA PUMP STATION (#23)
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 3

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Diesel	1050	yes	
2	Diesel	1050	yes	
3	Diesel	1050	yes	
Total		3150		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No damage

Standby Backup Power Equipment: Replace Controller for Detroit Diesel Gen Set **SELA**

Switchgear and/or Motor Control Centers: No damage

Motor Feeder Power Cables and Wiring: No damage

Pump Controls Systems: No damage

Pump Lubricators: No damage

Fuel Systems and Supply: No damage

Compressed Air System: No damage

Vacuum System: No damage

Trash Racks: No damage

Trash Raking Equipment: Metal guard for electrical wiring is broken off frame. **SELA**

Trash Rakes: No damage

Discharge Pipe Flap Gates: No damage.

Pump Station Building Structure: No damage.

Pump Station Building Roof: - Damage to roof; about 1/3 of ridge cap appears to be missing. **SELA**
- Gutters, downspouts, and flashing damaged or missing. **SELA**

Pump Station Building Doors & Windows: No damage.

Pump Station Mechanical Building Systems: No damage

Pump Station Electrical Building Lightning Protection System Damaged **SELA**

Pump Station Site: Rods anchoring 4 fence gates slightly bent. **SELA**



Photo 1 – Metal guard for electrical wiring in trash rack broken. Currently being repaired.



Photo 2 – Gutter and flashing damage; downspout missing. Photo No.3- GenSet controller damaged by rainwater



Photo No.4- Damaged lightning protection conductors .

WESTWEGO No. 1 PUMP STATION
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 1

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Diesel	300	yes	
Total		300		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service: No damage

Standby Backup Power Equipment: No damage

Switchgear and/or Motor Control Centers:

Motor Feeder Power Cables and Wiring:

Pump Controls Systems:

Pump Lubricators:

Fuel Systems and Supply:

Compressed Air System:

Vacuum System:

Trash Racks: N/A

Trash Raking Equipment: N/A

Trash Rakes: N/A

Discharge Pipe Flap Gates:

Pump Station Building Structure: No damage.

Pump Station Building Roof: Portion of corrugated sheet metal roof is missing.

Pump Station Building Doors & Windows: Several windows broken or missing.

Pump Station Mechanical Building Systems: No damage.

Pump Station Electrical Building Systems: No damage.

Pump Station Site: No damage.



Photo 1 – Portion of corrugated metal roof missing.



Photo 2 – Windows broken.

WESTWEGO No. 2 PUMP STATION
OBSERVATION SHEET

Parish (drainage basin) where pump station is located: Jefferson Parish West Bank

A. Number of Pumps: 3

<u>Pump No.</u>	<u>Drive Type</u>	<u>Capacity (cfs)</u>	<u>Operational</u>	<u>Comments</u>
1	Diesel	300	yes	
2	Diesel	300	yes	
3	Electric	300	yes	
Total		900		

B. Auxiliary Equipment and Features (note damage and problems):

Incoming Electric Power Service:

Standby Backup Power Equipment:

Switchgear and/or Motor Control Centers:

Motor Feeder Power Cables and Wiring:

Pump Controls Systems:

Pump Lubricators:

Fuel Systems and Supply:

Compressed Air System:

Vacuum System:

Trash Racks: No damage.

Trash Raking Equipment: No damage.

Trash Rakes: No damage.

Discharge Pipe Flap Gates:

Pump Station Building Structure: No damage.

Pump Station Building Roof: - Roof leaking at location of ridge cap.
- Roof leaking at location of 2 heater vents; possible problem with flashing.

Pump Station Building Doors & Windows: Windows missing from office door.

Pump Station Mechanical Building Systems: No damage.

Pump Station Electrical Building Systems: No damage.

Pump Station Site: No damage.



Photo 1 – Glass broken in door.

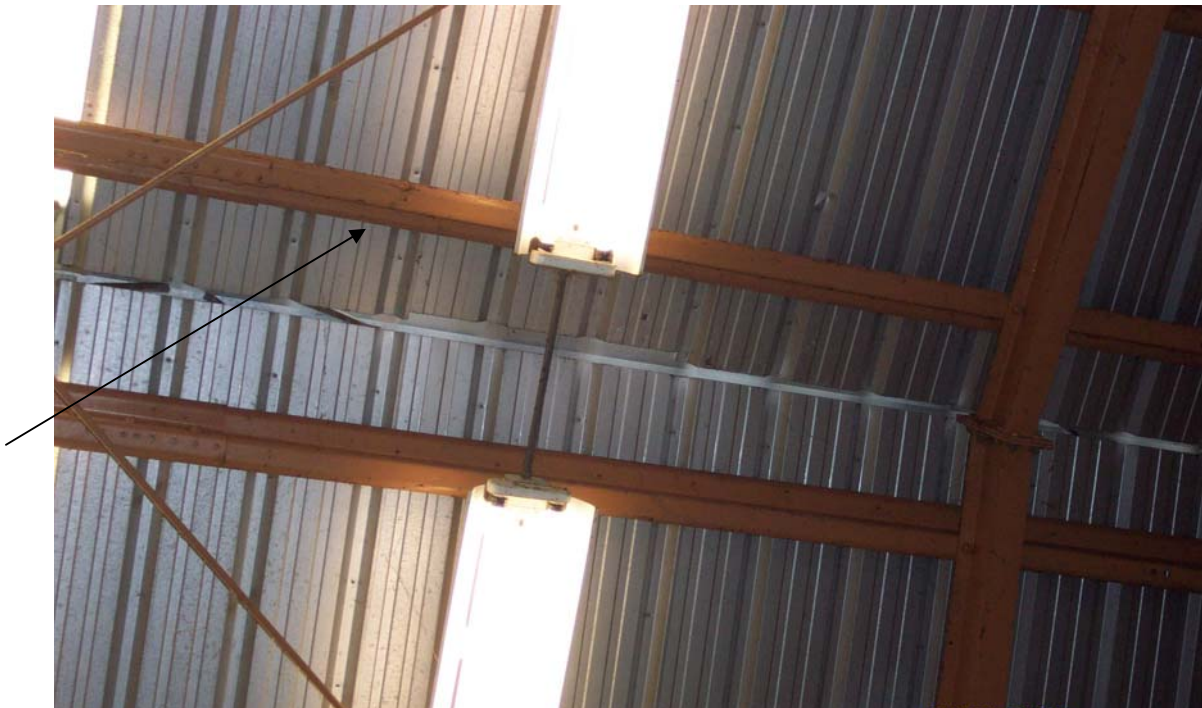


Photo 2 – Roof leaking at location of ridge cap.

Appendix E

Repair Alternatives

See Section 9 of Main Report

Appendix F

Economic Analysis

See Section 11 of Main Report

Appendix G

Environmental



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

Planning, Programs and Project
Management Division
Environmental Planning and
Compliance Branch

MEMORANDUM FOR New Orleans District Staff and All Interested Parties


SUBJECT: Imminent Threat of Flooding Due to Damaged Hurricane Protection Works

1. On August 29, 2005, Hurricane Katrina caused major damage to the hurricane protection system in Orleans, St. Bernard, Plaquemines, and Jefferson Parishes, Louisiana. Since the storm, the U.S. Army Corps of Engineers has been working to restore the hurricane protection system to the level of protection provided prior to the 2005 hurricane season. These efforts have been conducted mainly under the authority provided by Public Law 84-99, Rehabilitation of Damaged Flood Control Works.
2. While significant progress is being made in restoring the hurricane protection system to its pre-storm conditions, the system remains vulnerable to tropical weather systems. It is imperative that all hurricane protection works are restored to their pre-storm conditions as soon as possible to protect life, health, property, and economic losses.
3. Engineering Regulation 200-2-2, Environmental Quality, Procedures for Implementing the National Environmental Policy Act (NEPA) provides for District commanders to respond to emergency situations to prevent or reduce imminent risk of life, health, property, or severe economic losses without first preparing specific documentation and following the procedural requirements of the NEPA. Engineering Regulation 500-1-1, Emergency Employment of Army and Other Resources - Civil Emergency Management Program, provides that emergency flood control activities performed under Public Law 84-99 are not subject to the NEPA documentation requirements if risk to life, health, property, or severe economic losses is imminent. This regulation defines imminent risk as a subjective, statistically supported evaluation of how quickly a threat scenario can develop, how likely that threat is to develop in a given geographical location, and how likely the threat will produce catastrophic consequences to life and improved property. Implicit in the timing aspect can be considerations of time or season or of known cyclical activities.

4. Several words in the above definition are important in determining if there is an imminent threat to flooding within the four parishes listed above. The first is "subjective" which allows a decision to be based on sound reasoning. The second and third are "statistically supported evaluation" and "how likely that threat is to develop in a given geographical location." During the past four hurricane seasons, New Orleans has had 13 tropical storms or hurricanes pass within 300 miles of the city (three in 2002, two in 2003, three in 2004, and five in 2005), an average of over three storms per hurricane season. The National Hurricane Center has been reporting for the past several years that we have entered a period of more active hurricane seasons. The next key phrase is "how likely the threat will produce catastrophic consequences to life and improved property." Nothing demonstrates this better than Hurricane Rita in 2005. Hurricane Rita came ashore along the Louisiana/Texas state line, approximately 250 miles from New Orleans, yet the impacts of the storm in the Metropolitan New Orleans area were significant. Without a complete rehabilitation of the hurricane protection system to pre-storm levels, the New Orleans area could again be faced with the potential for catastrophic damages from a storm making landfall hundreds of miles away. The last phrase of significance is "known cyclical activities." As every day passes, the 2006 hurricane season gets closer, and the threat to life and property increases without adequate storm surge protection.

5. Based upon applicable regulations and guidance, I consider the Metropolitan New Orleans Area to be under an imminent threat from flooding due to the damaged hurricane protection system. I consider this threat to remain in effect until the hurricane protection system is restored to its pre-storm condition. The District will continue preparing an environmental assessment of the impacts associated with restoration of the hurricane protection system, and release the document for public and agency review and comment as soon as possible after all features of the restoration work are determined.

11/5/06
Date



Richard P. Wagenaar
Colonel, U.S. Army
District Engineer

Appendix H
Cost Estimates

**The information contained
in Appendix H is
proprietary to the
Government and can not be
posted on the public
website.**

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, (202) 761-7687.



DON F. 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 Z

PIR REVIEW CHECKLIST

ER 500-1-1, 30 Sept 01

PROJECT: FEDERAL and NON-FEDERAL PUMP STATIONS, FLOOD CONTROL
JEFFERSON PARISH

PIR Review Checklist for FCW Rehabilitation Projects				
	YES	NO	N/A	
1.		X		The project is active in the RIP. [ER, 5-2.a.] See Note Below
2.	X			The project was damaged by flood(s) or coastal storm(s) [ER, 5-2.]
3.	X			The Public Sponsor has requested Rehabilitation Assistance in writing. [EP, 5-10.]
4.	X			The Public Sponsor has agreed to sign the Cooperation Agreement, which will occur before USACE begins rehabilitation work. [ER, 5-10]
5.	X			The estimated construction cost of the rehabilitation is greater than \$15,000, and is not considered sponsor maintenance. [ER, 5-2.q.]
6.	X			The repair option selected is the option that is the least cost to the Federal government , or, the sponsor's preferred alternative is selected with all increases in cost paid by the public sponsor. [ER, 5-2.h. and 5-11.e.(3)]
7.	X			The public sponsor is aware of the opportunity to seek a nonstructural alternative project, and has decided to proceed with a structural rehabilitation. [ER, 5-16]
8.			X	The cost estimate in the PIR itemized the work to identify the Public Sponsor's cost share [ER, 5-11]
9.	X			The rehabilitation project has a favorable benefit cost ratio of greater than 1.0:1. [ER, 5-2.r]
10.	X			The proposed work will not modify the FCW to increase the degree of protection or capacity, or to provide protection to a larger area [ER, 5-2.n.]
11.			X	Betterments are paid 100% by the Public Sponsor. [ER, 5-2.o.]
12.		X		The CA contains a provision for 80% Federal and 20% local cost share for non-Federal projects. [ER, 5-11.a.] See Note Below
13.			X	Cost for any betterments are identified separately in the cost estimate. [ER, 5-2.o.]
14.			X	Repair of deliberate levee cuts is the responsibility of the public sponsor, except as provided for in ER 500-1-1, paragraphs 5-2.j. and 4-3.h. [ER, 5-2.j. and 4-3.h.]
15.			X	All deficient and deferred maintenance will be paid for or accomplished by the public sponsor, without receiving credit toward any sponsor's cost share. [ER, 5-2.g.]
16.			X	Any relocation of levees is adequately justified. [ER, 5-2.h.]

17.	X	USACE assistance does not correct design or construction deficiencies. [ER, 5-12.a.]
18.	X	An assessment of environmental requirements was completed [ER, 5-13.]
19.	X	The project complies with NEPA, and required documentation was completed and placed in PIR. [ER, 2-3.k. and 5-13.]
20.	X	The Endangered Species Act was appropriately considered. [ER, 5-13.g.]
21.	X	EO 11988 requirements were considered in the process of evaluating the proposed project for rehabilitation. [ER, 5-13.f.]
22.	X	The completed PIR has been reviewed and the PIR checklist has been reviewed and signed by the Emergency Management Office.
23.	X	The completed PIR meets all policy, procedural, content, and formatting requirements of ER 500-1-1 [ER, 2-3.b.]

Item 1 and 12. The costs for restoration and rehabilitation construction and construction related activities associated with this PIR will be full Federal expense, in accordance with 3rd Supplemental Appropriations and implementation guidance received from HQUSACE, dated 14 Feb 06.

Item 19. The environmental effects of the pump station work will be included in an after-the-fact environmental assessment that is under preparation for all of the flood protection repair work being undertaken by the Corps in the Metropolitan New Orleans area. The authority for this approach is per ER500-1-1, Paragraph 2-3.j(1), and ER200-2-2, Paragraph 8, and a determination by the New Orleans District Commander on January 5, 2006, that this work prevents or reduces an imminent risk of life, health, property, or severe economic losses (See Appendix G). Portions of the pump station work occur within the existing Federal project (SELA) and are categorically excluded from additional NEPA documentation. Per ER200-2-2, Paragraph 9b.

Item 23. ER-500-1-1, Section 5-2, paragraph v(1) limits the construction contingency to 10%; however, because of the emergency conditions under which the design and contract documents will be prepared, the short amount of time allowed for construction completion, and the high level of competition for contractor resources in the area, a 25% construction contingency is used. Additionally, because of the nature of rehabilitating mechanical and electrical work, including the uncertainty of rebuilding equipment and hidden damage, E&D of 10 percent and S&A of 12 percent of the construction cost is used.


 FM REVIEWING OFFICIAL'S SIGNATURE

NAME: Michael Lowe
 TITLE: Chief, Readiness Branch CEMVN-OD-R
 TELEPHONE NUMBER: 504-862-2244