



**State of Louisiana
Department of Natural Resources
Coastal Restoration Division**

2006 Annual Inspection Report

Bayou Chevee Shoreline Protection

State Project Number PO-22
Priority Project List 5

August 15, 2006
Orleans Parish

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I. Introduction

The Bayou Chevee Shoreline Protection Project (PO-22) is located within the northern section of the Bayou Sauvage National Wildlife Refuge, approximately 2 miles west of Chef Pass. Project features are located entirely in Orleans Parish and the project area encompasses 212 acres. The site was inspected on October 12, 2005, by representatives of LDNR and USACE.

II. Project Description and History

On December 7, 2001, construction of the Bayou Chevee project, located on the southern shoreline of Lake Pontchartrain, was completed. The project is divided into two areas, the North Cove area and the South Cove area (Appendix A). The rock dike protects both areas from shoreline erosion.

High wave energies associated with Lake Pontchartrain and Chef Pass have caused extensive erosion along the southern Lake Pontchartrain shoreline that has been estimated to average 15 feet per year. Thus, without the project, the shoreline erosion would have amounted to 300 feet in 20 years. The project was intended to alleviate this problem through the construction of 8,875 feet (extended from the originally planned 5,690 feet by contract modification) of new rock dike that extends across both the North and South Coves. A pre-existing U.S. Fish and Wildlife Service rock dike located between the North Cove and the South Cove serves to link the dike sections into one continuous rock structure.

The principal project features include:

1. Rock dike – North Cove. Dike length = 4,825 feet.
2. Rock dike – South Cove. Dike length = 4,050 feet.
3. Both dikes were constructed with following dimensions:
 - a. Height – 3.6 feet.
 - b. Crown width – 4.9 feet.
 - c. Two fish dips on each of North Cove and South Cove dikes.
 - d. Settling plate on east-southeast side of each fish dip
4. Flotation channels were constructed along the length of the dikes. The Channels were constructed a minimum of 82 feet from the center of the dike and silted in shortly after construction.

III. Inspection Purpose and Procedures

The purpose of the annual inspection of the Bayou Chevee Shoreline Protection Project (PO-22) is to evaluate the constructed project features to identify any deficiencies and prepare a report detailing the condition of project features and recommended corrective

actions needed. Should it be determined that corrective actions are needed, LDNR shall provide, in the report, a detailed cost estimate for engineering, design, supervision, inspection, and construction contingencies, and an assessment of the urgency of such repairs (O&M Plan September 3, 2003). The annual inspection report also contains a summary of maintenance projects and an estimated projected budget for the upcoming three (3) years for operation, maintenance and rehabilitation. The three (3) year projected operation and maintenance budget is shown in Appendix C. A summary of past operation and maintenance projects completed since completion of the project are outlined in Section II.

An inspection of the Bayou Chevee Shoreline Protection Project (PO-22) was held on October 12, 2005, by representatives of LDNR George Boddie, Brady Carter, Barry Richard, and Bill Hicks of USACE. The tidal gauge in Chef Pass read 2.0 ft NAVD at the time of the inspection. Photographs of that inspection are included in Appendix B of this report.

IV. Inspection Results

Rock Rip Rap

There was no visible damage to the dikes from the Hurricanes (Photo #1). Structures appear to be settling, however, it was not noticeable enough to warrant any action at this time.

V. Conclusions

The structures on the North and South Coves appear to be performing as designed. The storm surge from Hurricane Katrina caused some damage to the marsh inside of the project area (Photo #2). Most of this damage occurred in the South Cove section of the project, near Chef Pass, where the structure ends and leaves a portion of the cove exposed. This project would be greatly benefited by extending the structure on the South Cove to meet Chef Pass.

VI. Recommendations

There is no need for any maintenance activity at this time. The marsh situation will continue to be monitored.

Immediate Repairs

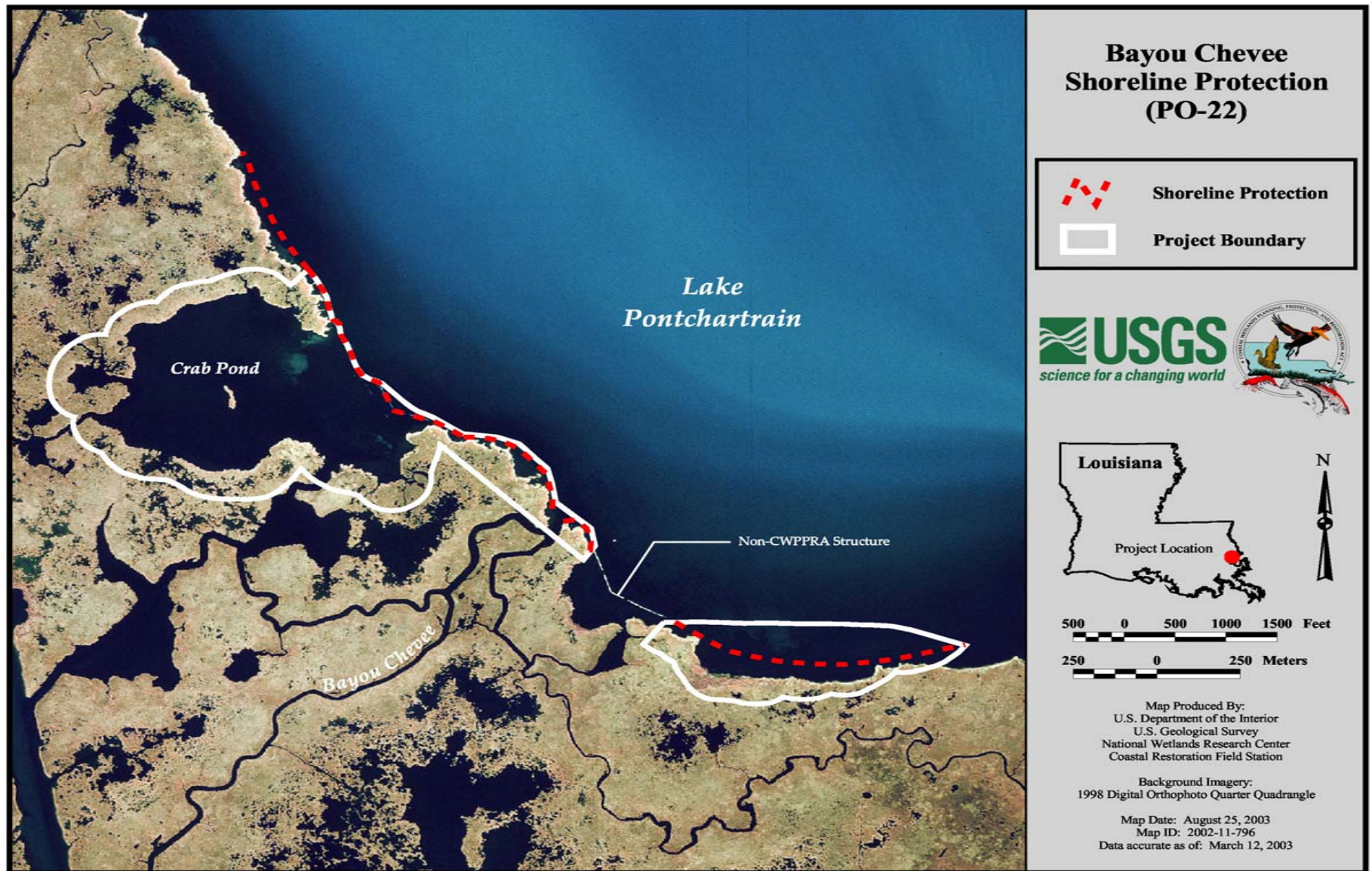
- None at this time.

Programmed Maintenance

- The next scheduled rock lift is in 2008.

Appendix A

Project Features Map



Appendix B

Photographs



Photo #1 – Rock Dike. Looking toward the project area from Lake Pontchartrain.
Notice the difference in surface water activity inside and outside the project area.



Photo #2 – South Cove Marsh. Notice how broken up the marsh is behind this structure.

Appendix C

Three Year Budget Projection

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Three-Year Operations & Maintenance Budgets 07/01/2006 - 06/30/2009				
<u>Project Manager</u>	<u>O & M Manager</u>		<u>Federal Sponsor</u>	<u>Prepared By</u>
Barry Richard	Barry Richard		USACE	Barry Richard
	2006/2007		2007/2008	2008/2009
Maintenance Inspection	\$3,257.00		\$-	\$-
Structure Operation	\$-		\$-	\$-
Administration	\$-		\$-	\$-
Maintenance/Rehabilitation				
06/07 Description:				
E&D	\$-			
Construction	\$-			
Construction Oversight	\$-			
Sub Total - Maint. And Rehab.	\$-			
07/08 Description:				
E&D			\$-	
Construction			\$-	
Construction Oversight			\$-	
	Sub Total - Maint. And Rehab.		\$-	
08/09 Description:				
E&D				\$-
Construction				\$-
Construction Oversight				\$-
			Sub Total - Maint. And Rehab.	\$-
	2006/2007		2007/2008	2008/2009
<u>Annual O&M Budgets</u>	\$3,257.00		\$-	\$-
<u>O & M Budget (3 yr Total)</u>				\$3,257.00
<u>Existing O & M Budget</u>				\$226,539.50
<u>Remaining O & M Budget (Projected)</u>				\$223,282.50

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OPERATION AND MAINTENANCE BUDGET WORKSHEET 2006/2007
 BAYOU CHEVEE SHORELINE PROTECTION PROJECT / PO-22 / PPL 5

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	\$3,257.00	\$3,257.00
General Structure Maintenance	LUMP	0	\$0.00	\$0.00
Engineering and Design	LUMP	0	\$0.00	\$0.00
Operations Contract	LUMP	0	\$0.00	\$0.00
Construction Oversight	LUMP	0	\$0.00	\$0.00

ADMINISTRATION

LDNR / CRD Admin.	LUMP	0	\$0.00	\$0.00
FEDERAL SPONSER Admin.	LUMP	0	\$0.00	\$0.00
SURVEY Admin.	LUMP	0	\$0.00	\$0.00
OTHER				\$0.00
TOTAL ADMINISTRATION COSTS:				\$0.00

MAINTENANCE / CONSTRUCTION

SURVEY

SURVEY DESCRIPTION:					
Secondary Monument	EACH	0	\$0.00	\$0.00	
Staff Gauge / Recorders	EACH	0	\$0.00	\$0.00	
Marsh Elevation / Topography	LUMP	0	\$0.00	\$0.00	
TBM Installation	EACH	0	\$0.00	\$0.00	
OTHER				\$0.00	
TOTAL SURVEY COSTS:				\$0.00	

GEOTECHNICAL

GEOTECH DESCRIPTION:					
	Borings	EACH	0	\$0.00	\$0.00
	OTHER				\$0.00
	TOTAL GEOTECHNICAL COSTS:				\$0.00

CONSTRUCTION

CONSTRUCTION DESCRIPTION:						
	Rip Rap	LIN FT	TON / FT	TONS	UNIT PRICE	
		0	0.0	0	\$0.00	\$0.00
		0	0.0	0	\$0.00	\$0.00
		0	0.0	0	\$0.00	\$0.00
Filter Cloth / Geogrid Fabric		SQ YD	0	\$0.00	\$0.00	
Navagation Aid		EACH	0	\$0.00	\$0.00	
Signage		EACH	0	\$0.00	\$0.00	
General Excavation / Fill		CU YD	0	\$0.00	\$0.00	
Dredging		CU YD	0	\$0.00	\$0.00	
Sheet Piles (Lin Ft or Sq Yds)			0	\$0.00	\$0.00	
Timber Piles (each or lump sum)			0	\$0.00	\$0.00	
Timber Members (each or lump sum)			0	\$0.00	\$0.00	
Hardware		LUMP	0	\$0.00	\$0.00	
Materials		LUMP	0	\$0.00	\$0.00	
Mob / Demob		LUMP	0	\$0.00	\$0.00	
Contingency		LUMP	0	\$0.00	\$0.00	
General Structure Maintenance		LUMP	0	\$0.00	\$0.00	
OTHER				\$0.00	\$0.00	
OTHER				\$0.00	\$0.00	
OTHER				\$0.00	\$0.00	
TOTAL CONSTRUCTION COSTS:					\$0.00	

TOTAL OPERATIONS AND MAINTENANCE BUDGET: **\$3,257.00**

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OPERATION AND MAINTENANCE BUDGET WORKSHEET 2007/2008
 BAYOU CHEVEE SHORELINE PROTECTION PROJECT / PO-22 / PPL 5

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	0	\$3,341.00	\$0.00
General Structure Maintenance	LUMP	0	\$0.00	\$0.00
Engineering and Design	LUMP	0	\$0.00	\$0.00
Operations Contract	LUMP	0	\$0.00	\$0.00
Construction Oversight	LUMP	0	\$0.00	\$0.00

ADMINISTRATION

LDNR / CRD Admin.	LUMP	0	\$0.00	\$0.00
FEDERAL SPONSER Admin.	LUMP	0	\$0.00	\$0.00
SURVEY Admin.	LUMP	0	\$0.00	\$0.00
OTHER				\$0.00
TOTAL ADMINISTRATION COSTS:				\$0.00

MAINTENANCE / CONSTRUCTION

SURVEY

SURVEY DESCRIPTION:					
	Secondary Monument	EACH	0	\$0.00	\$0.00
	Staff Gauge / Recorders	EACH	0	\$0.00	\$0.00
	Marsh Elevation / Topography	LUMP	0	\$0.00	\$0.00
	TBM Installation	EACH	0	\$0.00	\$0.00
	OTHER				\$0.00
	TOTAL SURVEY COSTS:				\$0.00

GEOTECHNICAL

GEOTECH DESCRIPTION:					
	Borings	EACH	0	\$0.00	\$0.00
	OTHER				\$0.00
	TOTAL GEOTECHNICAL COSTS:				\$0.00

CONSTRUCTION

CONSTRUCTION DESCRIPTION:						
	Rip Rap	LIN FT	TON / FT	TONS	UNIT PRICE	
		0	0.0	0	\$0.00	\$0.00
		0	0.0	0	\$0.00	\$0.00
		0	0.0	0	\$0.00	\$0.00
Filter Cloth / Geogrid Fabric		SQ YD	0	\$0.00	\$0.00	
Navigation Aid		EACH	0	\$0.00	\$0.00	
Signage		EACH	0	\$0.00	\$0.00	
General Excavation / Fill		CU YD	0	\$0.00	\$0.00	
Dredging		CU YD	0	\$0.00	\$0.00	
Sheet Piles (Lin Ft or Sq Yds)			0	\$0.00	\$0.00	
Timber Piles (each or lump sum)			0	\$0.00	\$0.00	
Timber Members (each or lump sum)			0	\$0.00	\$0.00	
Hardware		LUMP	0	\$0.00	\$0.00	
Materials		LUMP	0	\$0.00	\$0.00	
Mob / Demob		LUMP	0	\$0.00	\$0.00	
Contingency		LUMP	0	\$0.00	\$0.00	
General Structure Maintenance		LUMP	0	\$0.00	\$0.00	
OTHER				\$0.00	\$0.00	
OTHER				\$0.00	\$0.00	
OTHER				\$0.00	\$0.00	
TOTAL CONSTRUCTION COSTS:					\$0.00	

TOTAL OPERATIONS AND MAINTENANCE BUDGET: **\$0.00**

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OPERATION AND MAINTENANCE BUDGET WORKSHEET 2008/2009
 BAYOU CHEVEE SHORELINE PROTECTION PROJECT / PO-22 / PPL 5

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	0	\$3,428.00	\$0.00
General Structure Maintenance	LUMP	0	\$0.00	\$0.00
Engineering and Design	LUMP	0	\$0.00	\$0.00
Operations Contract	LUMP	0	\$0.00	\$0.00
Construction Oversight	LUMP	0	\$0.00	\$0.00

ADMINISTRATION

LDNR / CRD Admin.	LUMP	0	\$0.00	\$0.00
FEDERAL SPONSER Admin.	LUMP	0	\$0.00	\$0.00
SURVEY Admin.	LUMP	0	\$0.00	\$0.00
OTHER				\$0.00
TOTAL ADMINISTRATION COSTS:				\$0.00

MAINTENANCE / CONSTRUCTION

SURVEY

SURVEY DESCRIPTION:				
Secondary Monument	EACH	0	\$0.00	\$0.00
Staff Gauge / Recorders	EACH	0	\$0.00	\$0.00
Marsh Elevation / Topography	LUMP	0	\$0.00	\$0.00
TBM Installation	EACH	0	\$0.00	\$0.00
OTHER				\$0.00
TOTAL SURVEY COSTS:				\$0.00

GEOTECHNICAL

GEOTECH DESCRIPTION:				
Borings	EACH	0	\$0.00	\$0.00
OTHER				\$0.00
TOTAL GEOTECHNICAL COSTS:				\$0.00

CONSTRUCTION

CONSTRUCTION DESCRIPTION:					
	Rip Rap	LIN FT	TON / FT	TONS	UNIT PRICE
		0	0.0	0	\$0.00
		0	0.0	0	\$0.00
		0	0.0	0	\$0.00
Filter Cloth / Geogrid Fabric		SQ YD	0	\$0.00	\$0.00
Navigation Aid		EACH	0	\$0.00	\$0.00
Signage		EACH	0	\$0.00	\$0.00
General Excavation / Fill		CU YD	0	\$0.00	\$0.00
Dredging		CU YD	0	\$0.00	\$0.00
Sheet Piles (Lin Ft or Sq Yds)			0	\$0.00	\$0.00
Timber Piles (each or lump sum)			0	\$0.00	\$0.00
Timber Members (each or lump sum)			0	\$0.00	\$0.00
Hardware		LUMP	0	\$0.00	\$0.00
Materials		LUMP	0	\$0.00	\$0.00
Mob / Demob		LUMP	0	\$0.00	\$0.00
Contingency		LUMP	0	\$0.00	\$0.00
General Structure Maintenance		LUMP	0	\$0.00	\$0.00
OTHER				\$0.00	\$0.00
OTHER				\$0.00	\$0.00
OTHER				\$0.00	\$0.00
TOTAL CONSTRUCTION COSTS:					\$0.00

TOTAL OPERATIONS AND MAINTENANCE BUDGET: \$0.00

Appendix D
Field Inspection Form

MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: PO-22 Bayou Chevee Shoreline Protection

Date of Inspection: 10/12/2005

Time: 8:30 am

Structure No. no number assigned

Inspector(s): Richard, Boddie, Carter, Hicks

Structure Description: Foreshore Rock Dike

Water Level Inside: N/A

Outside: Approx. 2.0 ft

Type of Inspection: Post Storm

Weather Conditions: Warm, partly cloudy

Item	Condition	Pysical Damage	Corrosion	Photo #	Observations and Remarks
Foreshore Rock Dike North Cove	Good	May Be Sinking	None		Observation: The structure appeared in good condition. It may be sinking but not significantly. The marsh behind the structure has been greatly damaged by the storm surge.
Foreshore Rock Dike South Cove	Good	May Be Sinking	None	1	
USFWS Dike Segment	Good	May Be Sinking	None		Remarks:
Exposed Shore South of Dike	Poor	Inundated/ Washed Away	N/A	2	