



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

**2006/2007 Annual Inspection  
Report**

for

**Bayou Chevee Shoreline Protection  
(PO-22)**

State Project Number PO-22  
Priority Project List 5

July 18, 2007  
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. 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 March 13, 2007, by representatives of LDNR, Barry Richard, Peter Hopkins and Jason Binet of USACE. The tidal gauge in Chef Pass read 0.2 ft NAVD at the time of the inspection. Photographs of that inspection are included in Appendix B of this report.

## **III. 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.

#### **IV. Summary of Past Operation and Maintenance Projects**

**Operation:** There are no structures requiring operation.

**General Maintenance:** There have been no maintenance projects to date.

#### **V. Inspection Results**

##### **Rock Rip Rap**

Structures appear to be settling, however, it was not noticeable enough to warrant any action at this time.

#### **VI. Conclusions and Recommendations**

The structures on the North and South Coves appear to be performing as designed. The storm surge damage from Hurricane Katrina to the marsh inside of the project area is still evident. Most of that 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. Erosion of the marsh in this area appears to be continuing (see Photo # 1). This project would be greatly benefited by extending the structure on the South Cove to meet Chef Pass.

There is no need for any maintenance activity at this time. The marsh situation will continue to be monitored. Consider extending the rock dike at the South end to meet Chef Pass.

##### **Immediate Repairs**

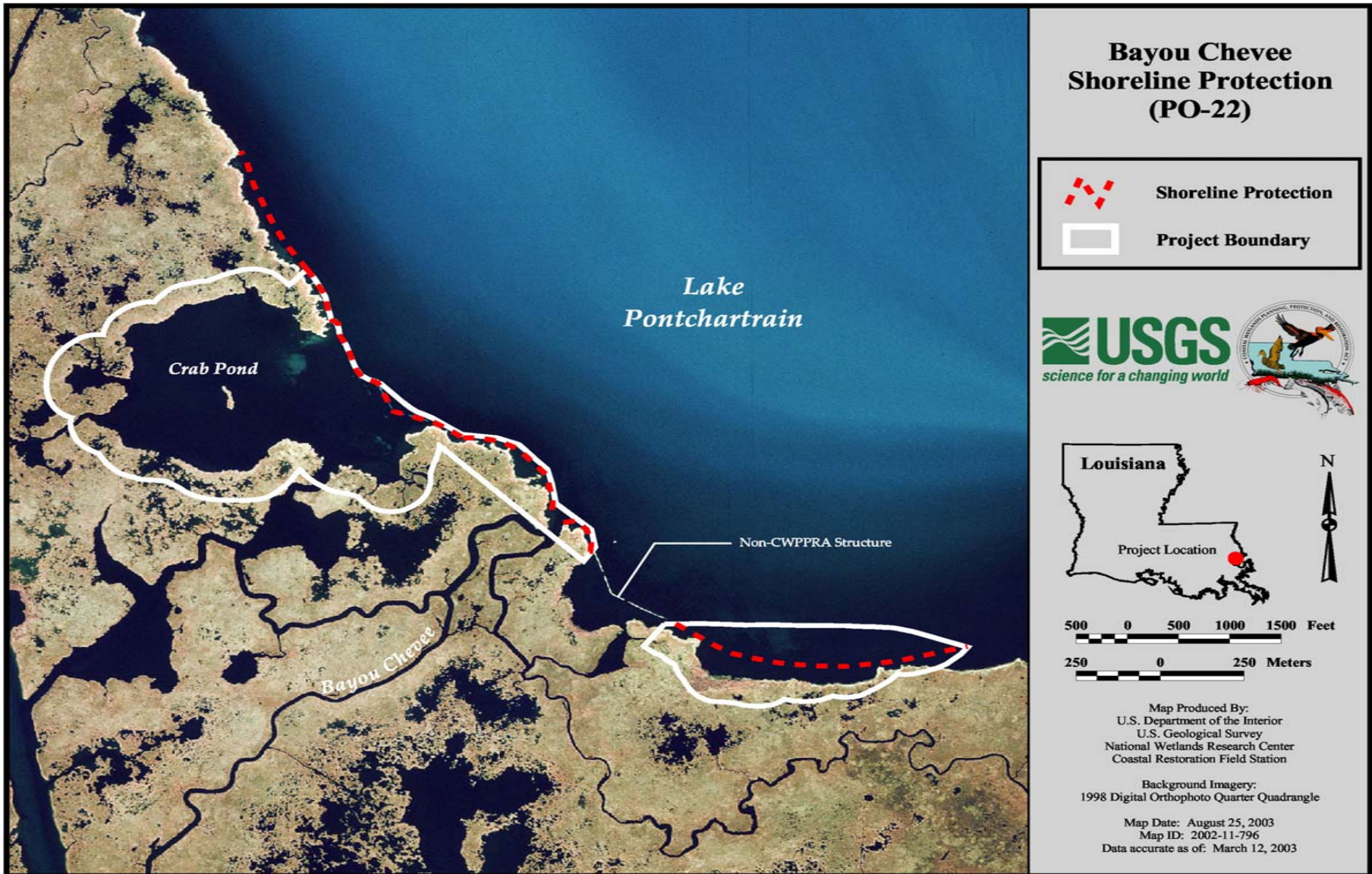
- None at this time.

**Programmed Maintenance**

- None at this time.

## **Appendix A**

### **Project Features Map**



**Appendix B**  
**Photographs**





**Photo #1 – Shore Erosion.** Looking east toward Chef Pass. Erosion has separated this point of land from the shore beyond the end of the project area.



**Photo #2 – South Cove Marsh.** Notice the open water behind the rock dike.

## **Appendix C**

### **Three Year Budget Projection**

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 Bayou Chevee Shoreline Protection  
 State Project No. PO-22

Bayou Chevee Shoreline Protection / PO-22 / PPL 5  
**Three-Year Operations & Maintenance Budgets 07/01/2007 - 06/30/2010**

=  
 Project Manager Barry Richard      O & M Manager Barry Richard      Federal Sponsor COE      Prepared By Peter Hopkins

	2007/2008	2008/2009	2009/2010
Maintenance Inspection	\$0.00	\$0.00	\$4,596.00
General Maintenance	\$0.00	\$0.00	\$0.00
Structure Operation	\$0.00	\$0.00	\$0.00
Administration	\$0.00	\$0.00	\$0.00
Maintenance/Rehabilitation			

07/08 Description:

E&D	\$0.00
Construction	\$0.00
Construction Oversight	\$0.00
Sub Total - Maint. And Rehab.	\$ -

08/09 Description: Cap Rock

E&D	\$0.00
Construction	\$0.00
Construction Oversight	\$0.00
Sub Total - Maint. And Rehab.	\$ -

09/10 Description:

E&D	\$0.00
Construction	\$0.00
Construction Oversight	\$0.00
Sub Total - Maint. And Rehab.	\$ -

	2007/2008	2008/2009	2009/2010
<b>Total O&amp;M Budgets</b>	\$ -	\$ -	\$ 4,596.00

<b>O &amp; M Budget (3 yr Total)</b>	\$ 4,596.00
<b>Unexpended O &amp; M Budget</b>	\$ 212,497.84
<b>Remaining O &amp; M Budget (Projected)</b>	\$ 207,901.84

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**OPERATION AND MAINTENANCE BUDGET WORKSHEET 2007/2008**  
 Bayou Chevee Shoreline Protection / PO-22 / PPL 5

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	0	\$0.00	\$0.00
General Structure Maintenance	LUMP	1	\$0.00	\$0.00
Engineering and Design	LUMP	1	\$0.00	\$0.00
Operations Contract	LUMP	1	\$0.00	\$0.00
Construction Oversight	LUMP	1	\$0.00	\$0.00
<b>ADMINISTRATION</b>				
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
<b>TOTAL ADMINISTRATION COSTS:</b>				<b>\$0.00</b>

**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
<b>TOTAL SURVEY COSTS:</b>				<b>\$0.00</b>

**GEOTECHNICAL**

GEOTECH DESCRIPTION:				
Borings	EACH	0	\$0.00	\$0.00
OTHER				\$0.00
<b>TOTAL GEOTECHNICAL COSTS:</b>				<b>\$0.00</b>

**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	\$0.00
Navigation Aid	EACH	0	\$0.00	\$0.00	\$0.00
Signage	EACH	0	\$0.00	\$0.00	\$0.00
General Excavation / Fill	CU YD	0	\$0.00	\$0.00	\$0.00
Dredging	CU YD	0	\$0.00	\$0.00	\$0.00
Sheet Piles (Lin Ft or Sq Yds)		0	\$0.00	\$0.00	\$0.00
Timber Piles (each or lump sum)		0	\$0.00	\$0.00	\$0.00
Timber Members (each or lump sum)		0	\$0.00	\$0.00	\$0.00
Hardware	LUMP	1	\$0.00	\$0.00	\$0.00
Materials	LUMP	1	\$0.00	\$0.00	\$0.00
Mob / Demob	LUMP	1	\$0.00	\$0.00	\$0.00
Contingency	LUMP	1	\$0.00	\$0.00	\$0.00
General Structure Maintenance	LUMP	1	\$0.00	\$0.00	\$0.00
OTHER			\$0.00	\$0.00	\$0.00
OTHER			\$0.00	\$0.00	\$0.00
OTHER			\$0.00	\$0.00	\$0.00
<b>TOTAL CONSTRUCTION COSTS:</b>					<b>\$0.00</b>

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

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**OPERATION AND MAINTENANCE BUDGET WORKSHEET 2008/2009**  
 Bayou Chevee Shoreline Protection / PO-22 / PPL 5

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	0	\$0.00	\$0.00
General Structure Maintenance	LUMP	1	\$0.00	\$0.00
Engineering and Design	LUMP	1	\$0.00	\$0.00
Operations Contract	LUMP	1	\$0.00	\$0.00
Construction Oversight	LUMP	1	\$0.00	\$0.00
<b>ADMINISTRATION</b>				
LDNR / CRD Admin.	LUMP	1	\$0.00	\$0.00
FEDERAL SPONSER Admin.	LUMP	1	\$0.00	\$0.00
SURVEY Admin.	LUMP	1	\$0.00	\$0.00
OTHER				\$0.00
<b>TOTAL ADMINISTRATION COSTS:</b>				<b>\$0.00</b>

**MAINTENANCE / CONSTRUCTION**

**SURVEY**

SURVEY DESCRIPTION:	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
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
<b>TOTAL SURVEY COSTS:</b>				<b>\$0.00</b>

**GEOTECHNICAL**

GEOTECH DESCRIPTION:	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
Borings	EACH	0	\$0.00	\$0.00
OTHER				\$0.00
<b>TOTAL GEOTECHNICAL COSTS:</b>				<b>\$0.00</b>

**CONSTRUCTION**

CONSTRUCTION DESCRIPTION:	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
Rip Rap	LIN FT	0	\$0.00	\$0.00
	TON / FT	0.0	\$0.00	\$0.00
	TONS	0	\$0.00	\$0.00
		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	1	\$0.00	\$0.00
Materials	LUMP	1	\$0.00	\$0.00
Mob / Demob	LUMP	1	\$0.00	\$0.00
Contingency	LUMP	1	\$0.00	\$0.00
			\$0.00	\$0.00
OTHER			\$0.00	\$0.00
OTHER			\$0.00	\$0.00
OTHER			\$0.00	\$0.00
<b>TOTAL CONSTRUCTION COSTS:</b>				<b>\$0.00</b>

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

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**OPERATION AND MAINTENANCE BUDGET WORKSHEET 2009/2010**  
 Bayou Chevee Shoreline Protection / PO-22 / PPL 5

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	\$4,596.00	\$4,596.00
General Structure Maintenance	LUMP	1	\$0.00	\$0.00
Engineering and Design	LUMP	1	\$0.00	\$0.00
Operations Contract	LUMP	1	\$0.00	\$0.00
Construction Oversight	LUMP	1	\$0.00	\$0.00
<b>ADMINISTRATION</b>				
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
<b>TOTAL ADMINISTRATION COSTS:</b>				<b>\$0.00</b>

**MAINTENANCE / CONSTRUCTION**

**SURVEY**

SURVEY DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	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
<b>TOTAL SURVEY COSTS:</b>					<b>\$0.00</b>

**GEOTECHNICAL**

GEOTECH DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Borings	EACH	0	\$0.00	\$0.00
	OTHER				\$0.00
<b>TOTAL GEOTECHNICAL COSTS:</b>					<b>\$0.00</b>

**CONSTRUCTION**

CONSTRUCTION DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Rip Rap	LIN FT	0	\$0.00	\$0.00
		TON / FT	0.0	\$0.00	\$0.00
		TONS	0	\$0.00	\$0.00
			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	1	\$0.00	\$0.00
	Materials	LUMP	1	\$0.00	\$0.00
	Mob / Demob	LUMP	1	\$0.00	\$0.00
	Contingency	LUMP	1	\$0.00	\$0.00
	General Structure Maintenance	LUMP	1	\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
<b>TOTAL CONSTRUCTION COSTS:</b>					<b>\$0.00</b>

**TOTAL OPERATIONS AND MAINTENANCE BUDGET: \$4,596.00**

**Appendix D**  
**Field Inspection Form**



**MAINTENANCE INSPECTION REPORT CHECK SHEET**

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

Date of Inspection: 3/12/2007

Time: 10:00am

Structure No. no number assigned

Inspector(s): Richard, Hopkins, Binet

Structure Description: Foreshore Rock Dike

Water Level

Inside: N/A

Outside: Approx. 0.2 ft

Type of Inspection: Annual

Weater Conditions: Warm, partly cloudy

Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
Foreshore Rock Dike North Cove	Good	May Be Sinking	None		The structure appeared in good condition. It may be sinking but not significantly.
Foreshore Rock Dike South Cove	Good	May Be Sinking	None		The structure appeared in good condition. It may be sinking but not significantly.
USFWS Dike Segment	Good	May Be Sinking	None		It may be sinking but not significantly.
Exposed Shore South of Dike	Poor	Inundated/ Washed Away	N/A		The marsh behind the structure has been greatly damaged by the storm surge, and continues to erode, particularly between the south end and Chef Pass.