



**Coastal Protection and Restoration
Authority of Louisiana**

**Office of Coastal Protection and
Restoration**

2008 Annual Inspection Report

**Barataria Bay Waterway West
Bank Protection**

State Project Number BA-23
Priority Project List 4

July 13, 2009
Jefferson Parish

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I. Introduction

The Barataria Bay Waterway West Bank Protection Project (BA-23) is located in Jefferson Parish, Louisiana approximately 4.5 mi (7.2 km) south of Lafitte on the west side of the Dupre Cut portion of the Barataria Bay Waterway (BBW). The project area is east of Bayou Rigolettes, north of the Lafitte Oil and Gas Field, and southwest of The Pen (Appendix A).

II. Project Description and History

Project area wetlands were formed in a protective curve of the natural ridge of Bayou Barataria. The east-west orientation of the ridge, which serves as the southern boundary of the project area, protected the wetlands from the direct influence of salinities and tidal action of the Gulf of Mexico through Barataria Bay. Construction of the Dupre Cut portion of BBW established a direct conduit linking project wetlands with Barataria Bay. Initially, Dupre Cut spoil banks protected the project area from salinity and tidal fluctuations in the waterway. The combination of subsidence and wave erosion from marine traffic, however, has caused a breaching of the spoil banks which has resulted in increased water exchange and salinity fluctuations.

Principal project components include:

1. Foreshore Rock Dike
 - 9,900 linear feet (2,865 m) of rock shoreline protection along the west bank of the BBW.
2. Water Control Structure
 - Two (2) 48 inch diameter culverts.
 - Four (4) 5 ft long stop log bays capable of holding 10 stop logs each.

The purpose of the foreshore rock dike is to protect the existing adjacent marsh from excessive water exchange, wave action, and subsequent erosion. The structure also protects newly created marsh which was constructed as a beneficial use project during the U.S. Army Corps of Engineers' (USACE) maintenance dredging of the BBW. This marsh was created by beneficially placing approximately 750,000 cubic yards of dredge material from the Waterway in shallow open water areas adjacent to the BBW. Gaps in the spoil bank excluded from the USACE dredging operation were filled in, thereupon reinforcing and forming a continuous structure.

The purpose of the water control structure, which is located at the end of an abandoned oil well access canal, is to allow the water levels in the new and existing marsh to be managed. The structure remains open most of the year, allowing unimpeded ingress and egress of marine organisms. During waterfowl hunting season, which is also low water season, (November through January) the structure is adjusted to retain water within the

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southern project area. Water levels are managed to a height not to exceed 6 inches (15 cm) below marsh elevation in the southern project area.

Project construction began on June 9, 2000, and was completed on November 7, 2000. Project life is estimated to be 20 years. Annual project inspections are planned.

In December, 2005, a contract to raise the foreshore rock dike was awarded and resulted in the placement of 5,143 tons of rock riprap on the settled sections of the structure. The work was completed on January 24, 2006

In May, 2007, a contract for dredging the access channel which leads to the water control structure was awarded. Approximately 4,400 cubic yards of material was dredged and placed within the channel to be used beneficially. This work was completed on June 19, 2007.

III. Inspection Purpose and Procedures

The purpose of the annual inspection of the Barataria Bay Waterway West Bank Protection Project (BA-23) 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, the OCPR 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 March 18, 2002). 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 Barataria Bay Waterway West Bank Protection Project (BA-23) was held on September 30, 2008, by Barry Richard of OCPR and Quin Kinler of NRCS. This inspection was a result of Hurricanes Gustav and Ike making landfall in coastal Louisiana. There was a light wind and a clear sky. Photographs of that inspection are included in Appendix B of this report.

IV. Inspection Results

Rock Riprap

The rock structure appeared to be in good condition at the time of the inspection (Photo #1).

Water Control Structure

On March 18, 2009, Barry Richard of OCPR removed the stop logs and the structure was in good condition at that time. The water control structure is accessed through an abandoned oil well canal. After Hurricanes Gustav and Ike passed it was noted that some logs and stumps had been deposited in front of the access canal for the water control structure (Photo #2). This canal was dredged recently to improve flow and access to the water control structure. The dredge spoil was placed inside the canal to be used beneficially. This spoil material is showing no sign of sliding back into the dredged channel and is heavily vegetated.

V. Conclusions

The Barataria Bay Waterway West Bank Protection Project (BA-23) is performing as intended. The rock dike is protecting the existing marsh as designed, and the dredge material which the USACE placed inside of the project area has set up and vegetated nicely. The last maintenance lift raised the elevation of the settled sections of foreshore rock dike back to the original designed elevation. This should ensure that the structure performs adequately through the next programmed maintenance lift.

VI. Recommendations

There are no recommendations at this time.

Immediate Repairs

- There are no immediate repairs scheduled at this time.

Programmed Maintenance

- In Appendix C there is a programmed maintenance lift of the foreshore rock dike scheduled for fiscal year 2010/2011. This maintenance lift is represented in this report because it is found in the O&M Budget (O&M Plan March 18, 2002). However, the necessity of this lift will be determined in future inspections and site visits.

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Appendix A

Project Features Map

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Appendix B

Photographs



Photo #1 – Shoreline Protection Looking North.



Photo #2 – Access Canal Gate to Water Control Structure.

Appendix C

Three Year Budget Projection

**Barataria Bay Waterway West Bank Protection / BA-23 / PPL NO. 4
 Three-Year Operations & Maintenance Budgets 07/01/2009 - 06/30/2012**

<u>Project Manager</u> <i>Barrt Richard</i>	<u>O & M Manager</u> <i>Barry Richard</i>	<u>Federal Sponsor</u> NRCS	<u>Prepared By</u> <i>Barry Richard</i>
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	2009/2010	2010/2011	2011/2012
Maintenance Inspection	\$3,428.00	\$3,517.00	\$3,608.00
General Maintenance	\$0.00	\$0.00	\$0.00
Structure Operation	\$7,459.00	\$7,653.00	\$7,852.00
Administration	\$0.00	\$19,849.44	\$0.00
Maintenance/Rehabilitation			

09/10 Description:

E&D	\$0.00
Construction	\$0.00
Construction Oversight	\$0.00
<i>Sub Total - Maint. And Rehab.</i>	\$ -

10/11 Description: Cap Rock and Weir Structure Repair

E&D	\$30,324.00
Construction	\$223,118.00
Construction Oversight	\$4,944.00
<i>Sub Total - Maint. And Rehab.</i>	\$ 258,386.00

11/12 Description:

E&D	\$0.00
Construction	\$0.00
Construction Oversight	\$0.00
<i>Sub Total - Maint. And Rehab.</i>	\$ -

	2009/2010	2010/2011	2011/2012
<u>Total O&M Budgets</u>	\$ 10,887.00	\$ 289,405.44	\$ 11,460.00

<u>O & M Budget (3 yr Total)</u>	\$ 311,752.44
<u>Unexpended O & M Budget</u>	\$ 611,619.18
<u>Remaining O & M Budget (Projected)</u>	\$ 299,866.74

OPERATION AND MAINTENANCE BUDGET WORKSHEET 2009/2010
 Barataria Bay Waterway West Bank Protection / BA-23 / PPL NO. 4

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	\$3,428.00	\$3,428.00
General Structure Maintenance	LUMP	1	\$0.00	\$0.00
Engineering and Design	LUMP	1	\$0.00	\$0.00
Operations	LUMP	1	\$7,459.00	\$7,459.00
Construction Oversight	LUMP	1	\$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	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	
TOTAL CONSTRUCTION COSTS:					\$0.00

TOTAL OPERATIONS AND MAINTENANCE BUDGET: \$10,887.00

OPERATION AND MAINTENANCE BUDGET WORKSHEET 2010/2011
 Barataria Bay Waterway West Bank Protection / BA-23 / PPL NO. 4

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	\$3,517.00	\$3,517.00
General Structure Maintenance	LUMP	1	\$0.00	\$0.00
Engineering and Design	LUMP	1	\$25,477.00	\$25,477.00
Operations	LUMP	1	\$7,653.00	\$7,653.00
Construction Oversight	LUMP	1	\$4,944.00	\$4,944.00

ADMINISTRATION

LDNR / CRD Admin.	LUMP	1	\$8,924.72	\$8,924.72
FEDERAL SPONSER Admin.	LUMP	1	\$8,924.72	\$8,924.72
SURVEY Admin.	LUMP	1	\$2,000.00	\$2,000.00
OTHER				\$0.00
TOTAL ADMINISTRATION COSTS:				\$19,849.44

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
Structure survey	LUMP	1	\$4,847.00	\$4,847.00
TOTAL SURVEY COSTS:				\$4,847.00

GEOTECHNICAL

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

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	\$71,093.00	\$71,093.00
Contingency	LUMP	1	\$0.00	\$0.00
General Structure Maintenance(cap 20%)	LUMP	1	\$152,025.00	\$152,025.00
Variable Crest Weir Structure Repair	LUMP	1	\$0.00	\$0.00
OTHER			\$0.00	\$0.00
OTHER			\$0.00	\$0.00
TOTAL CONSTRUCTION COSTS:				\$223,118.00

TOTAL OPERATIONS AND MAINTENANCE BUDGET: \$289,405.44

OPERATION AND MAINTENANCE BUDGET WORKSHEET 2011/2012
 Barataria Bay Waterway West Bank Protection / BA-23 / PPL NO. 4

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	\$3,608.00	\$3,608.00
General Structure Maintenance	LUMP	1	\$0.00	\$0.00
Engineering and Design	LUMP	1	\$0.00	\$0.00
Operations	LUMP	1	\$7,852.00	\$7,852.00
Construction Oversight	LUMP	1	\$0.00	\$0.00

ADMINISTRATION

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
TOTAL ADMINISTRATION COSTS:				\$0.00

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
	Structure survey	LUMP	1	\$0.00	\$0.00
TOTAL SURVEY COSTS:					\$0.00

GEOTECHNICAL

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

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
	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
	General Structure Maintenance(cap 20%)	LUMP	1	\$0.00	\$0.00
	Variable Crest Weir Structure Repair	LUMP	1	\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
TOTAL CONSTRUCTION COSTS:					\$0.00

TOTAL OPERATIONS AND MAINTENANCE BUDGET: **\$11,460.00**

Appendix D

Field Inspection Form

Annual Inspection Report
 Barataria Bay Waterway West Bank Protection
 State Project No. BA-23

MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: **BA-23 Barataria Waterway (West) Shoreline Protection**

Date of Inspection: 9/30/2008

Time: 9:30 am

Structure No. _____

Inspector(s): Richard, Kinler

Structure Description: _____

Water Level

Inside: N/A

Outside: N/A

Type of Inspection: Post Storm

Weater Conditions: Clear Skies, Light Wind

Item	Condition	Pysical Damage	Corrosion	Photo #	Observations and Remarks
CMP culverts	Good	None	None		
Weir Bays - logs locks, hoist, supports	Good	None	Some		
Handrails Grating Hardware etc.	Good	None	None		
Timber Piles	Good	None	None		
Timber Wales	Good	None	None		
Galv. Pile Caps	Good	None	None		
Signage /Supports	Good	None	None		
Riprap	Good	None	None	Photo #1	
Silt/Fill	Fair	None	None		The area in front of the Water Control Structure access canal is silting in.
Foreshore Rock Dike	Good	None	None	Photo #1	

Position of stoplogs at the time of the inspection? Out of Structure
 Are there any signs of vandalism? No
 Conditions of existing levees? Good
 Settlement of rock plugs and weirs? None
 Noticable breaches? None