



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

2007 Annual Inspection Report

**Barataria Bay Waterway West
Bank Protection**

State Project Number BA-23
Priority Project List 4

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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 closed to retain water within the

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 these structures 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, 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 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 March 27, 2007 by Barry Richard of LDNR and Michael Trusclair of NRCS. There was a light wind, clear sky, and the tide gage, which is located approximately 0.8 miles north of C&M Marina on the east bank of the Barataria Bay Waterway, read approximately +0.5-ft. NAVD-88. 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 (Photos #1 & #2).

Water Control Structure

On February 13, 2008, Barry Richard and Kyle Dudley of LDNR 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. 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 little to no sign of sliding back into the dredged channel and is beginning to vegetating.

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

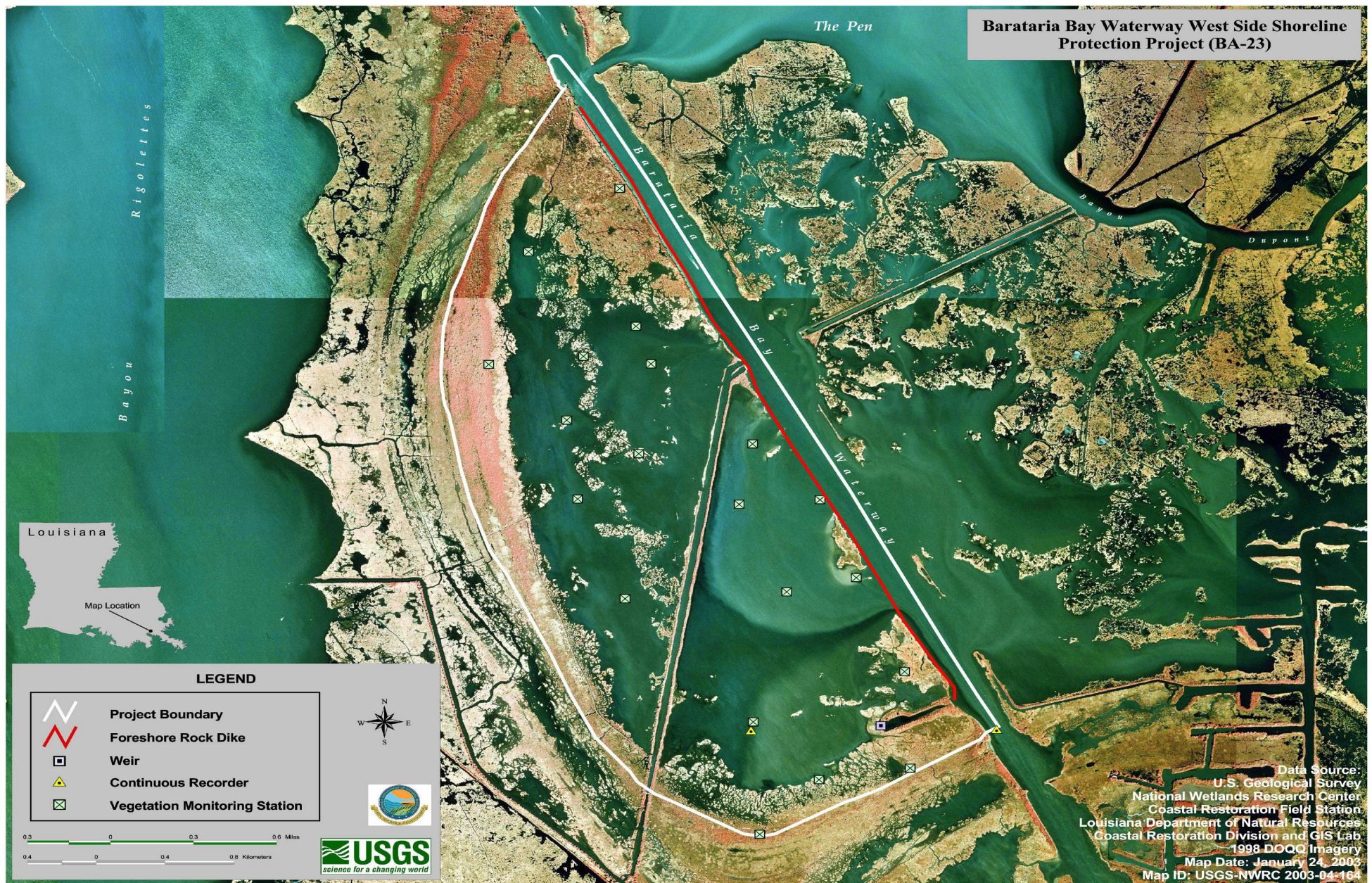
- Continue to check the water control structure during operational procedures.

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

Appendix A

Project Features Map

Annual Inspection Report
Barataria Bay Waterway West Bank Protection
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Appendix B

Photographs



Photo #1 – Shoreline Protection Looking South.



Photo #2 – Shoreline Protection Looking North.

Appendix C

Three Year Budget Projection

Barataria Bay Waterway West Bank Protection / BA-23 / PPL NO. 4
Three-Year Operations & Maintenance Budgets 07/01/2008 - 06/30/2011

<u>Project Manager</u> <i>Bart Richard</i>	<u>O & M Manager</u> <i>Barry Richard</i>	<u>Federal Sponsor</u> <i>NRCS</i>	<u>Prepared By</u> <i>Barry Richard</i>
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	2008/2009	2009/2010	2010/2011
Maintenance Inspection	\$3,342.00	\$3,428.00	\$3,517.00
General Maintenance	\$0.00	\$0.00	\$0.00
Structure Operation	\$7,269.00	\$7,459.00	\$7,653.00
Administration	\$0.00	\$19,849.44	\$0.00
Maintenance/Rehabilitation			

08/09 Description:

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

09/10 Description: Cap Rock and Weir Structure Repair

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

10/11 Description:

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

	2008/2009	2009/2010	2010/2011
<u>Total O&M Budgets</u>	\$ 10,611.00	\$ 289,122.44	\$ 11,170.00

<u>O & M Budget (3 yr Total)</u>	\$ 310,903.44
<u>Unexpended O & M Budget</u>	\$ 611,619.18
<u>Remaining O & M Budget (Projected)</u>	\$ 300,715.74

OPERATION AND MAINTENANCE BUDGET WORKSHEET 2008/2009
 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	\$3,342.00	\$3,342.00
General Structure Maintenance	LUMP	1	\$0.00	\$0.00
Engineering and Design	LUMP	1	\$0.00	\$0.00
Operations	LUMP	1	\$7,269.00	\$7,269.00
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	0.0	0	\$0.00
		0	0.0	0	\$0.00
	Filter Cloth / Geogrid Fabric		SQ YD	0	\$0.00
	Navagation Aid		EACH	0	\$0.00
	Signage		EACH	0	\$0.00
	General Excavation / Fill		CU YD	0	\$0.00
	Dredging		CU YD	0	\$0.00
	Sheet Piles (Lin Ft or Sq Yds)			0	\$0.00
	Timber Piles (each or lump sum)			0	\$0.00
	Timber Members (each or lump sum)			0	\$0.00
	Hardware		LUMP	1	\$0.00
	Materials		LUMP	1	\$0.00
	Mob / Demob		LUMP	1	\$0.00
	Contingency		LUMP	1	\$0.00
	General Structure Maintenance		LUMP	1	\$0.00
	OTHER				\$0.00
	OTHER				\$0.00
	OTHER				\$0.00
TOTAL CONSTRUCTION COSTS:					

TOTAL OPERATIONS AND MAINTENANCE BUDGET: **\$10,611.00**

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	\$25,477.00	\$25,477.00
Operations	LUMP	1	\$7,459.00	\$7,459.00
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:					
	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:					
	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
	Navagation Aid		EACH	0	\$0.00
	Signage		EACH	0	\$0.00
	General Excavation / Fill		CU YD	0	\$0.00
	Dredging		CU YD	0	\$0.00
	Sheet Piles (Lin Ft or Sq Yds)			0	\$0.00
	Timber Piles (each or lump sum)			0	\$0.00
	Timber Members (each or lump sum)			0	\$0.00
	Hardware		LUMP	1	\$0.00
	Materials		LUMP	1	\$0.00
	Mob / Demob		LUMP	1	\$71,093.00
	Contingency		LUMP	1	\$0.00
	General Structure Maintenance(cap 20%)		LUMP	1	\$152,025.00
	Variable Crest Weir Structure Repair		LUMP	1	\$0.00
	OTHER				\$0.00
OTHER				\$0.00	
TOTAL CONSTRUCTION COSTS:					\$223,118.00

TOTAL OPERATIONS AND MAINTENANCE BUDGET: **\$289,122.44**

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	\$0.00	\$0.00
Operations	LUMP	1	\$7,653.00	\$7,653.00
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:					
	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:					
	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	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: **\$11,170.00**

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: 3/27/2007

Time: 9:30 am

Structure No. _____

Inspector(s): Richard, Trusclair

Structure Description: _____

Water Level

Inside: N/A

Outside: Approx. 0.5 ft

Type of Inspection: Annual

Weather Conditions: Clear Skies, Light Wind

Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
CMP culverts	Good	None	None		
Weir Bays - logs locks, hoist, supports	Good	None	Some		
Handrails					
Grating	Good	None	None		
Hardware etc.					
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		
Silt/Fill	Good	None	None		
Foreshore Rock Dike	Good	None	None		

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