



**State of Louisiana  
Coastal Protection and Restoration Authority**

**2019 Annual Inspection Report**

for

**Barataria Bay Waterway West  
Shoreline Protection**

State Project Number BA-23  
Priority Project List 4

May 7, 2019  
Jefferson Parish

Prepared by:

Barry Richard, P.E.  
Coastal Protection and Restoration Authority  
New Orleans Regional Office  
CERM, Suite 309  
2045 Lakeshore Drive  
New Orleans, LA 70122



**2019 Annual Inspection Report  
for  
Barataria Bay West Shoreline Protection  
(BA-23)**

**Table of Contents**

I. Introduction.....	1
II. Project Description and History.....	1
III. Inspection Purpose and Procedures .....	2
IV. Inspection Results .....	3
V. Conclusions.....	3
VI. Recommendations.....	3

**Appendices**

Appendix A	Project Features Map
Appendix B	Photographs
Appendix C	Three Year Budget Projections
Appendix D	Field Inspection Form



## **I. Introduction**

The Barataria Bay Waterway West 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 (see 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. Over time, the combination of subsidence and wave erosion from marine traffic caused a breaching of the spoil banks which resulted in increased water exchange and salinity fluctuations within the project area.

Principal project components include:

1. Foreshore Rock Dike
  - 9,400 linear feet (2,865 m) of rock shoreline protection (68,283 tons) along the west bank of the BBW.
2. Water Control Structure (WCS)
  - Two (2) 48-inch diameter corrugated metal pipe (CMP) 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 that 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 BBW in shallow open water areas adjacent to the BBW. Gaps in the spoil bank excluded from the USACE dredging operation were filled in, thereby repairing the spoil bank to form a continuous line of protection.

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 water and marine organisms. During waterfowl hunting season, which is also low water season (November through January), the structure is managed 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 have been performed throughout the project life and are planned to continue until the project is closed out.

### Summary of Maintenance Projects

In December 2005, a contract to cap the rock shoreline protection structure 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.

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

A contract was awarded in November 2015 to repair the water control structure and earthen berm. Two 36-inch diameter HDPE liners were installed and grouted within the annular space of the deteriorated CMP culverts. Approximately 191 cubic yards of earthen fill was placed to repair erosional damage adjacent to the structure, and 284 square yards of geotextile fabric and 95 cubic yards of riprap were installed to help prevent further erosion on the marsh side of the structure. This work was completed on June 2, 2016.

## **III. Inspection Purpose and Procedures**

The purpose of the BA-23 annual inspection is to evaluate the constructed project features, identify any deficiencies, and prepare a report that details the condition of project features and recommends any necessary corrective actions. The inspection procedure consists of a site visit by water with a visual inspection of the project features. If corrective actions are needed, the Coastal Protection and Restoration Authority (CPRA) provides in the report a detailed cost estimate for engineering, design, supervision, inspection, and construction contingencies, and an assessment of the urgency of such repairs. The annual inspection report also contains a summary of maintenance projects (Section II) and an estimated projected budget for the remaining one (1) year for operation, maintenance and rehabilitation as shown in Appendix C.

Barry Richard and Zachary Collier of CPRA, along with Quin Kinler of NRCS, held an inspection of the Naomi Outfall Management Project (BA-03c) on March 8, 2019. At the time of the inspection the weather was mostly sunny with slight wind. The water elevation was observed to be +1.0 feet NAVD88 on the BA01-10 staff gauge located in the Barataria Bay Waterway across from the entrance into Bayou Rigolettes. Photographs of that inspection are included in Appendix B of this report.



## **IV. Inspection Results**

### Rock Riprap

The rock structure was mostly visible above the water surface and in good condition at the time of the inspection (Photo #1). There are some sections that have experienced settlement but the overall structure is still functioning as designed.

### Water Control Structure

The WCS shows little sign of damage. (Photos #2, #3, & #4). There is some minor to moderate corrosion of the steel members; however, the structure is still functioning as designed.

## **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 WCS will continue to regulate water exchange in accordance with permit conditions.

## **VI. Recommendations**

Inspection of project features should continue on an annual basis.

### Immediate Repairs

- None

### Programmed Maintenance

- Continue to check the WCS during operational procedures.
- Continue to observe rock structure for settlement.

## **Appendix A**

### **Project Features Map**







## **Appendix B**

### **Photographs**





**Photo #1 – Shoreline Protection (North End)**



**Photo #2 – Water Control Structure**



**Photo #3 – Water Control Structure (Culverts Submerged)**



**Photo #4 – Water Control Structure (Looking toward the BBW)**

## **Appendix C**

### **One Year Budget Projection**

Barataria Bay Waterway West Bank Protection (BA-23)

Federal Sponsor: NRCS

Construction Completed : 11/7/2000

PPL 4

Current Approved O&M Budget June 2009	Year 0 FY01	Year - 1 FY02	Year -2 FY03	Year -3 FY04	Year -4 FY05	Year -5 FY06	Year -6 FY07	Year -7 FY08	Year -8 FY09	Year -9 FY10	Year -10 FY11	Year -11 FY12	Year -12 FY13	Year -13 FY14	Year -14 FY15	Year -15 FY16	Year -16 FY17	Year - 17 FY18	Year -18 FY19	Year -19 FY20	Project Life Budget
State O&M																					\$1,101,899
Corps Admin																					\$0
Federal S&A																					\$0
Total																					\$1,101,899
Projected O&M Expenditures																					Remaining Project Life
Maintenance Inspection																		\$4,216	\$4,325	\$4,438	\$4,438
General Maintenance																					\$0
Operations																		\$2,000	\$2,000	\$2,000	\$2,000
Surveys																					\$0
Sign Replacement																					\$0
Fed/State S&A																					\$0
Maintenance/Rehabilitation																					\$0
E&D																					\$0
Construction																					\$0
Construction Oversight																					\$0
Total																		\$6,216	\$6,325	\$6,438	\$6,438

O&M Expenditures from COE Report	\$1,005,597	Current Funded O&M Budget	\$1,101,899	Current Project Life Budget (per CSA)	\$1,101,899
State O&M Expenditures not submitted for in-kind credit	\$4,608 estimated	Est. O&M Expenditures	\$1,020,075	Total Projected Expenditures	\$1,026,512
Federal Sponsor MIPRs (if applicable)	\$9,869	Remaining Available O&M Budget	\$81,824	Project Life Budget Surplus (Shortfall)	\$75,387
Total Estimated O&M Expenditures (as of February 2019)	\$1,020,075				



## **Appendix D**

### **Field Inspection Form**

**MAINTENANCE INSPECTION REPORT CHECK SHEET**

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

Date of Inspection: 3/8/2019

Time: 10:00 am

Structure No. **n/a**

Inspector(s): Richard, Collier, Kinler

Structure Description: Rock dike and water control weir structure

Water Level

Inside: N/A

Outside: '+1.0' NAVD

Type of Inspection: Annual

Weather Conditions: Mostly sunny, light wind

Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
CMP culverts	Very Good	None	N/A		No significant defects noted.
Weir Bays - logs locks, hoist, supports	Good	None	Minor	#2, 3, 4	No significant defects noted.
Handrails Grating Hardware etc.	Good	None	Minor	#3	No significant defects noted.
Timber Piles	Good	None	N/A	#2, 3, 4	No significant defects noted.
Timber Wales	Good	None	N/A		No significant defects noted.
Galv. Pile Caps	Fair	None	Moderate	#3	Galvanized caps exhibited some weathering.
Signage /Supports	Good	None	None		No significant defects noted.
Riprap	Good	None	N/A	#3, #4	No significant defects noted.
Earthen Berm	Very Good	None	N/A	#2, #4	No significant defects noted.
Foreshore Rock Dike	Fair	None	N/A	#1	Fair condition overall; some minor settlement was observed.