



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

2017 Annual Inspection Report

for

**Barataria Bay Waterway West
Shoreline Protection**

State Project Number BA-23
Priority Project List 4

November 7, 2017
Jefferson Parish

Prepared by:

Clay Worley, E.I.
Coastal Protection and Restoration Authority
New Orleans Regional Office
CERM, Suite 309
2045 Lakeshore Drive
New Orleans, LA 70122



**2017 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 Results3

V. Conclusions.....3

VI. Recommendations.....3

 Immediate Repairs3

 Programmed Maintenance3

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 Project Features Map).

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 along the west bank of the BBW.
2. Water Control Structure
 - 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 Waterway 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 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. Project inspections are scheduled annually.

Past Maintenance Events

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 284 square yards 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, to identify any deficiencies, and to prepare a report that details the condition of project features and recommends any necessary corrective actions. 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 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 performed since completion of the project are outlined in Section II.

An inspection of the Barataria Bay Waterway West Shoreline Protection Project (BA-23) was conducted on November 2, 2017, by Clay Worley and Barry Richard of CPRA, along with Quin Kinler of National Resources Conservation Service (NRCS). 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). There are some sections which have experienced settlement, but the structure is still functioning as designed. These sections will continue to be monitored for maintenance needs.

Water Control Structure

The WCS appeared to be in good condition (Photos #3 & #4). Some of the stoplogs are warped and deteriorating, and 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

- Perform a survey of the rock dike to determine their status as we move toward the End of Project Life.

Programmed Maintenance

- Continue to check the WCS during operational procedures.
- Determine if WCS needs any minor maintenance before Project End of Life.
- Continue to observe rock structure for settlement.

Appendix A
Project Features Map

Barataria Bay Waterway West Side Shoreline Protection Project (BA-23)



Appendix B

Photographs



Photo #1 – Shoreline Protection



Photo #2 – Shoreline Protection



Photo #3 – Water Control Structure



Photo #4 – Water Control Structure

Appendix C

Three 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	\$12,979
General Maintenance																						\$0
Operations																			\$2,000	\$2,000	\$2,000	\$6,000
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	\$18,979

O&M Expenditures from COE Report	\$613,813	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	\$445,643 estimated	Est. O&M Expenditures	\$1,069,325	Total Projected Expenditures	\$1,088,304
Federal Sponsor MIPRs (if applicable)	\$9,869	Remaining Available O&M Budget	\$32,574	Project Life Budget Surplus (Shortfall)	\$13,595
Total Estimated O&M Expenditures (as of October 2017)	\$1,069,325				

Appendix D

Field Inspection Form

MAINTENANCE INSPECTION REPORT CHECK SHEET

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

Date of Inspection: 11/2/2017

Time: 10:00 am

Structure No. **n/a**

Inspector(s): Worley, Kinler, Richard

Structure Description: Rock dike and water control weir structure

Water Level

Inside: N/A

Outside: 1.50'

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	#3, #4	A few stoplogs experienced deterioration and warping from extended submersion.
Handrails Grating Hardware etc.	Good	None	Minor	#3, #4	No significant defects noted.
Timber Piles	Good	None	N/A	#3, #4	No significant defects noted.
Timber Wales	Good	None	N/A		No significant defects noted.
Galv. Pile Caps	Fair	None	Moderate	#3, #4	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		No significant defects noted.
Foreshore Rock Dike	Good	None	N/A	#1, #2	Good condition overall; some minor settlement was observed.