



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

2015 Annual Inspection Report

for

**BAYOU CHEVEE SHORELINE
PROTECTION (PO-22)**

State Project Number PO-22
Priority Project List 5

August 7, 2015
Orleans 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



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for
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(PO-22)**

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I. Introduction

The Bayou Chevee Shoreline Protection Project (PO-22) is located in Orleans Parish within the northern section of the Bayou Sauvage National Wildlife Refuge, approximately 2 miles west of Chef Pass. The entire project covers approximately 212 acres. Project features include a rock dike, fish dips, and settlement plates.

II. Project Description and History

Construction of the Bayou Chevee project was completed on December 7, 2001. 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 estimated to average 15 feet per year. Thus, without the project, it is estimated that 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. North Cove Rock dike – 4,825 feet
 - a. Height – 3.6 feet
 - b. Crown width – 4.9 feet
2. South Cove Rock dike – 4,050 feet
 - a. Height – 3.6 feet
 - b. Crown width – 4.9 feet
3. Fish dips – two on each of North Cove and South Cove dikes.
4. Settlement plate – placed on east-southeast side of each fish dip.
5. Flotation channels – channels were constructed a minimum of 82 feet from the center of the dike and silted in shortly after construction.

III. 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, CPRA shall provide a detailed cost estimate for engineering, design, supervision, inspection, 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.

An inspection of the Bayou Chevee Shoreline Protection Project (PO-22) was held on May 14, 2015. Representatives in attendance included: Barry Richard, CPRA; Susan Hennington, USACE; and Keith O'Cain, USACE. At the time of the inspection the water level at the "Tally Ho" Hunting Club staff gauge was 0.3 feet NAVD88, based on Historical Online Data. Photographs were not taken at the time of this inspection.

IV. Inspection Results

Rock Rip Rap

The seas were rough this day which gave us a good idea if the structure was still functional. It was noted that whether the rocks were visible or not they were still reducing the energy of the waves traveling toward the shoreline.

A majority of the rock dikes have settled below acceptable grade. The rock structure has maintained its shape although some sections were beneath the water surface. No mud waves or loose geotextile were noticed. The settlement plates at each fish dip are no longer functioning because the angle of the plates is greater than 10.5 degrees. This was observed during the March 2012 survey.

V. Conclusions

The settlement and subsidence of the rock dike is evident throughout the structure. However, it appears that the rock dike is still functioning to reduce wave energy as it approaches the shoreline. While this feature still appears to be functioning it is unclear how long this will last and if it will benefit the project area through the remaining project life.

VI. Recommendations

The inspection team discussed a maintenance rock lift, which would require requests for additional funds due to the minimal amount of remaining funds. Improving the project by extending the rock dike to meet the headland of Chef Menteur Pass was also discussed. The agreed upon course of action was to contact the landowner (USFWS) concerning their willingness to take ownership of the project features after the end of life (2022). If they are willing to take ownership then the project team will design a rock lift, request the necessary funding from CWPPRA, and perform the lift within the final three years of the project life. This would prove to be most beneficial for the future benefits of this project feature. The project team will also discuss the need to extend the project feature toward Chef Pass.



Immediate Repairs

- Limited funds prevent maintenance at this time.

Programmed Maintenance

- None



Appendix A

Project Features Map



Bayou Chevee Shoreline Protection (PO-22)



Shoreline Protection



Project Boundary



500 0 500 1000 1500 Feet

250 0 250 Meters

Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station

Background Imagery:
1998 Digital Orthophoto Quarter Quadrangle

Map Date: August 25, 2003
Map ID: 2002-11-796
Data accurate as of: March 12, 2003

Appendix B

Photographs

Appendix C

Budget

[illegible]

Appendix D

Field Inspection Form

MAINTENANCE INSPECTION REPORT CHECK SHEET

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

Date of Inspection: 5/14/15

Time: 9:30 am

Structure No. no number assigned

Inspector(s): Richard, Hennington, O'Cain

Structure Description: Foreshore Rock Dike

Water Level

Inside: 0.3'

Outside: 0.3'

Type of Inspection: Bi-Annual

Weather Conditions: Cloudy, medium wind

| Item | Condition | Physical Damage | Corrosion | Photo # | Observations and Remarks |
|--------------------------------|-----------|---------------------------|-----------|---------|--|
| Foreshore Rock Dike North Cove | Fair | Settling | None | | |
| | | | | | North end looking good. South end settling below acceptable grade. |
| | | | | | |
| Foreshore Rock Dike South Cove | Poor | Settling | None | | |
| | | | | | Settling below acceptable grade. |
| | | | | | |
| USFWS Dike Segment | Poor | Settling | None | | |
| | | | | | Settled below acceptable grade. |
| | | | | | |
| Exposed Shore South of Dike | Poor | Inundated/ Washed Away | N/A | | |
| | | | | | This is recovering, but the process is slow. Needs protection. |
| | | | | | |
| | | | | | |
| | | | | | Remarks: Project needs maintenance lift. |
| | | | | | |