



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

**2006/2007 Annual Inspection
Report**

for

**CLEAR MARAIS SHORE
PROTECTION PROJECT
(CS-22)**

State Project Number CS-22
Priority Project List 2

November 8, 2006
Cameron Parish

Prepared by:

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I. Introduction

The Clear Marais Shore Protection Project (State Project No. CS-22) is located in the Calcasieu-Sabine Basin on the northern bank of the Gulf Intracoastal Waterway in Calcasieu Parish. The 4,637 acre project area extends from the Alkali Ditch on the northern shore of the GIWW westward for approximately 35,375 linear feet. (See Appendix A).

The Clear Marais Shore Protection Project was authorized by Section 303(a) of Title III Public Law 101-646, the Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) enacted on November 29, 1990 as amended and approved on the second Priority Project List. The Clear Marais Project has a twenty –year (20 year) economic life, which began in March 1997.

II. Inspection Purpose and Procedures

The purpose of the annual inspection of the Clear Marais Shore Protection Project (CS-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, 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, 2002). The annual inspection report also contains a summary of maintenance projects, if any, which were completed since completion of constructed project features 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 Clear Marais Shore Protection Project (CS-22) was held on November 8, 2006 under clear skies and mild temperatures. In attendance were Stan Aucoin and Herb Juneau from LDNR; Bill Hicks from USACE; and John Foret from NMFS (for other inspections). Parties left the Lafayette Field Office of CED, and proceeded to the CS-22 project area. The boat was launched at the park at the foot of the Ellender Bridge over the Gulf Intracoastal Waterway. The annual inspection began at approximately 9:00 am at the eastern end of the rock dike at its intersection with Alkali Ditch.

The field inspection included a complete visual inspection of all features. No staff gauge readings were available to determine approximate elevations of water, or rock dikes. Photographs were taken at each project feature (see Appendix B) and Field Inspection notes were completed in the field to record measurements and deficiencies (see Appendix D).

III. Project Description and History

Wetlands in their natural state are among the most productive areas on earth, and they are central to the culture and development of south Louisiana. The Coastal Wetlands Planning, Protection and Restoration Act provides a substantial federal commitment to help Louisiana save its coastal wetlands. The wetlands are a fragile environment, which is disappearing at a

rate of over 25 square miles of marsh a year in Louisiana, which is 80 percent of the nation's annual coastal wetland loss. The wetlands provide many benefits including commercial and recreational value, wildlife habitat, wintering habitat for millions of the continent's migratory ducks and geese, nursery habitat for one of America's largest fish and shellfish harvests, erosion control, flood protection and acting as storm buffers. Additionally the wetlands help maintain water quality.

Due to navigational improvements on the Calcasieu River, the hydrology of the Calcasieu/Sabine Basin has changed. Salt water intrusion has resulted in an increase in salt and brackish wetlands as well as loss and/or conversion of fresh and intermediate wetlands.

The Clear Marais wetlands, which encompasses approximately 4,637 acres, is one of the few remaining tracts of freshwater wetlands located within the Calcasieu/Sabine Basin. As mentioned above, this area provides important nursery habitat for estuarine-dependent fish and shellfish species, wintering habitat for migratory waterfowl, and foraging habitat for wading birds. Although these wetlands are privately owned and not available for use by the general public, they are important to the wildlife and fisheries resources of surrounding water bodies in the Calcasieu/Sabine Basin.

The north bank of the GIWW was eroding adjacent to these wetlands to the extent that several of the Clear Marais wetland lakes were connected to the GIWW. The present levee served to protect interior freshwater wetlands from salinity fluctuations and wave erosion. Implementation of the proposed 6.7 miles of rock dike has ensured the stability of this levee thereby protecting these interior lakes and marshes.

Construction of the Clear Marais Shore Protection Project was completed in March 1997 and has a 20-year economic life.

The principal project features include:

- Site 1 - Foreshore Rock Dike (approximately 35,375 linear feet)

IV. Summary of Past Operation and Maintenance Projects

General Maintenance: Below is a summary of completed maintenance projects and operation tasks performed since December 2003, the construction completion date of the Black Bayou Hydrologic Restoration Project.

No maintenance has been necessary on this project.

Structure Operations: There are no active operations associated with this project.

V. Inspection Results

Site 1—Foreshore rock dike

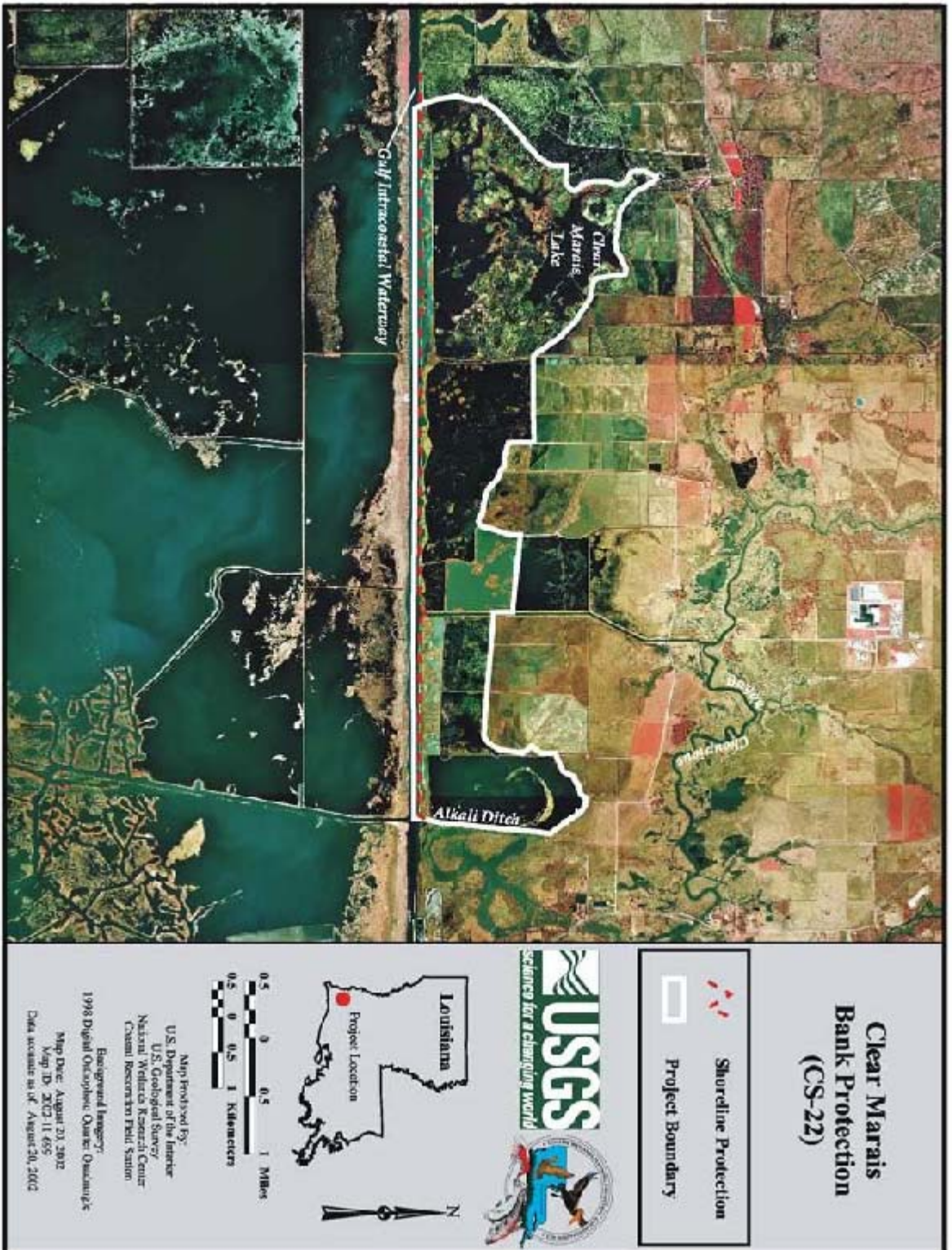
The dike is in fairly good condition. As noted on previous inspections, approximately 4,000 to 5,000 linear feet of dike is slightly below constructed elevation. This appears to be the result of slight settlement rather than displacement. Several of the settlement plates placed during construction are broken/leaning/damaged/ etc. and are no longer useful. One section of dike, approximately 0.5 miles from the Alkali Ditch, has apparently been removed by hunters and or fishermen. This section is only about 4 feet wide with rock removed to an approximate +0.5 NAVD elevation. It has been noted in previous inspections and has not worsened. Three other sections appear to have been displaced by barges nosing up on the bank. This is a problem noted on several other rock dikes along the GIWW. A staff gauge will need to be installed in the vicinity. No apparent need for any other maintenance at this time. (Photos: Appendix B, Photos 1-4)

VI. Conclusions and Recommendations

Overall, the Clear Marais Shore Protection Project is in good condition and functioning as designed with only minor problems noted. Stand pipes on the settlement plates installed on future projects of this type should be much shorter in height. Damage to these plates has apparently been caused by barges or other similar type traffic running in to or tying up to these pipes making them useless for any post-construction settlement information. A much shorter pipe should serve to protect these pipes and/or discourage people from using them as mooring devices. Maintenance recommendations for CY 2007:

- Install staff gauge

Appendix A
Project Features Map



**Clear Marais
 Bank Protection
 (CS-22)**

 Shoreline Protection
 Project Boundary



Map produced by:
 U.S. Department of the Interior
 U.S. Geological Survey
 National Wetlands Research Center
 Coastal Resources Field Station
 Biographical Language:
 1998 Digital Orthophoto Quarter: Omsamrpx
 Map Date: August 21, 2012
 Map ID: 201211495
 Data accurate as of: August 20, 2012

Appendix B

Photographs



Photo 1—East tie-in at Alkali Ditch



Photo 2—vandalized area of dike



Photo 3—typical section of dike



Photo 4—western tie-in of dike

Appendix C

Three Year Budget Projection

Annual Inspection Report
 CLEAR MARAIS SHORE PROTECTION PROJECT
 State Project No. CS-22

CLEAR MARAIS SP / CS22 / PPL2
Three-Year Operations & Maintenance Budgets 07/01/2007 - 06/30/10

Project Manager <i>Pat Landry</i>	O & M Manager <i>Mel Guidry</i>	Federal Sponsor <i>COE</i>	Prepared By <i>Mel Guidry</i>
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	2007/2008	2008/2009	2009/2010
Maintenance Inspection	\$ 5,407.00	\$ 5,570.00	\$ 5,737.00
Structure Operation			\$ -
Administration		\$ -	\$ -

Maintenance/Rehabilitation

07/08 Description:

E&D	
Construction	\$ -
Construction Oversight	\$ -
Sub Total - Maint. And Rehab.	\$ -

08/09 Description: Install staff gage.

E&D	\$ 7,500.00
Construction	
Construction Oversight	
Sub Total - Maint. And Rehab.	\$ 7,500.00

09/10 Description:

E&D	
Construction	
Construction Oversight	
Sub Total - Maint. And Rehab.	\$ -

	2007/2008	2008/2009	2009/2010
Total O&M Budgets	\$ 5,407.00	\$ 13,070.00	\$ 5,737.00

O & M Budget (3 yr Total)	\$ 24,214.00
Unexpended O & M Budget	\$ 733,543.90
Remaining O & M Budget (Projected)	\$ 709,329.90

Appendix D

Field Inspection Form

Annual Inspection Report
 CLEAR MARAIS SHORE PROTECTION PROJECT
 State Project No. CS-22

MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: CS-22 Clear Marais Shoreline Protection

Date of Inspection: November 8, 2006 Time: 9:00

Structure No.

Inspector(s): Stan Aucoin & Herb Juneau (LDNR)
 John Foret (NMFS), Bill Hicks (COE)

Structure Description: Rock Dike

Water Level

Type of Inspection: Annual

Weather Conditions: Clear & mild

Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
Steel Bulkhead / Caps	N/A				
Steel Grating	N/A				
Stop Logs	N/A				
Hardware	N/A				
Timber Piles	N/A				
Timber Wales	N/A				
Galv. Pile Caps	N/A				
Cables	N/A				
Signage / Supports	N/A				
Rip Rap (fill) (foreshore dike)	Good			1,2,3 & 4	
Earthen Embankment	N/A				

What are the conditions of the existing levees?
 Are there any noticeable breaches?
 Settlement of rock plugs and rock weirs?
 Position of stoplogs at the time of the inspection?
 Are there any signs of vandalism?

Appendix E

Locations to be Monitored