



**Coastal Protection and Restoration
Authority of Louisiana**

**Office of Coastal Protection and
Restoration**

**2007/2008 Annual Inspection
Report**

for

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

State Project Number CS-22
Priority Project List 2

November 27, 2007
Cameron Parish

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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 27, 2007 under clear skies and mild temperatures. In attendance were Stan Aucoin, Mel Guidry, Darrell Pontiff and Tommy McGinnis from LDNR; and Dale Garber from NRCS (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 10:30 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 March 1997, the construction completion date of the Clear Marais Shoreline Protection 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

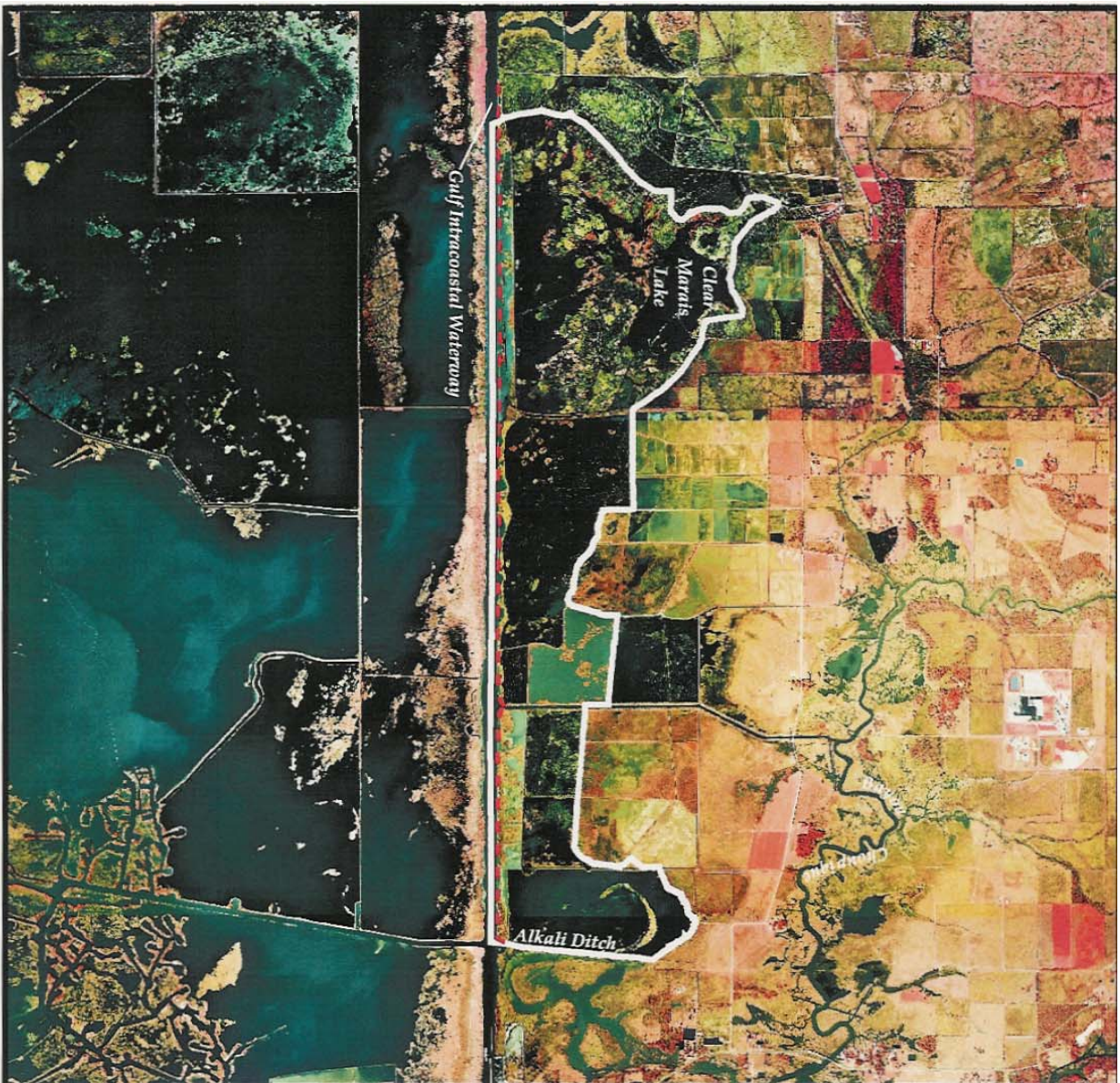
The dike is in fairly good condition. As noted on previous inspections, approximately 4,000 to 5,000 linear feet of dike is slightly below constructed elevation. This appears to be the result of slight settlement rather than displacement. Several of the settlement plates placed during construction are 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 FY 2008:

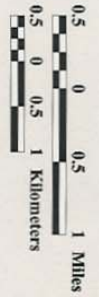
- Install staff gauge

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 Restoration Field Station

Background Imagery:
1998 Digital Orthophoto Quarter Quadangle

Map Date: August 20, 2002
Map ID: 2002-11-699
Data accurate as of: August 20, 2002

Appendix B

Photographs



Photo 1—East tie-in at Alkali Ditch.



Photo 2—Area of dike slightly low in elevation.



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
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CLEAR MARAIS SP / CS22 / PPL2
Three-Year Operations & Maintenance Budgets 07/01/2008 - 06/30/11

<u>Project Manager</u> Pat Landry	<u>O & M Manager</u> Mel Guidry	<u>Federal Sponsor</u> COE	<u>Prepared By</u> Mel Guidry
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	2008/2009	2009/2010	2010/2011
Maintenance Inspection	\$ 5,570.00	\$ 5,737.00	\$ 5,909.00
Structure Operation			\$ -
Administration		\$ -	\$ -
Maintenance/Rehabilitation			

08/09 Description: Install staff gage.

E&D	\$ 7,500.00
Construction	\$ -
Construction Oversight	\$ -
<i>Sub Total - Maint. And Rehab.</i>	<u>\$ 7,500.00</u>

09/10 Description:

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

10/11 Description:

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

	2008/2009	2009/2010	2010/2011
<u>Total O&M Budgets</u>	<u>\$ 13,070.00</u>	<u>\$ 5,737.00</u>	<u>\$ 5,909.00</u>

<u>O & M Budget (3 yr Total)</u>	<u>\$ 24,716.00</u>
<u>Unexpended O & M Budget</u>	<u>\$ 730,582.30</u>
<u>Remaining O & M Budget (Projected)</u>	<u>\$ 705,866.30</u>

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OPERATION AND MAINTENANCE BUDGET WORKSHEET
 CLEAR MARAIS BANK PROTECTION PROJECT / PROJECT NO. CS-22 / PPL NO. 2

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	\$5,570.00	\$5,570.00
General Structure Maintenance	LUMP	1	\$0.00	\$0.00
Engineering and Design	LUMP	1	\$0.00	\$0.00
Operations Contract	LUMP	1	\$0.00	\$0.00
Construction Oversight	LUMP	1	\$0.00	\$0.00

ADMINISTRATION

LDNR / CRD Admin.	LUMP	1	\$0.00	\$0.00
FEDERAL SPONSOR Admin.	LUMP	1	\$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:	Add staff gage.				
	Secondary Monument	EACH	0	\$0.00	\$0.00
	Staff Gauge / Recorders	EACH	1	\$7,500.00	\$7,500.00
	Marsh Elevation / Topography	LUMP	0	\$0.00	\$0.00
	TBM Installation	EACH	0	\$0.00	\$0.00
	OTHER				\$0.00
TOTAL SURVEY COSTS:				\$7,500.00	

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	
	Rock Rip rap	0	0.0	0	\$0.00	\$0.00
	Aggregate Surface Course	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	
	Navigation 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	LUMP	1	\$0.00	\$0.00	
	OTHER			\$0.00	\$0.00	
	OTHER			\$0.00	\$0.00	
	OTHER			\$0.00	\$0.00	
	TOTAL CONSTRUCTION COSTS:				\$0.00	

TOTAL OPERATIONS AND MAINTENANCE BUDGET: \$13,070.00

Appendix D

Field Inspection Form

Annual Inspection Report
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MAINTENANCE INSPECTION REPORT CHECK SHEET

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

Date of Inspection: November 27, 2007 Time: 10:30 am

Structure No.

Inspector(s): Stan Aucoin, Mel Guidry, Darrell Pontiff (LDNR)
 Tommy McGinnis (LDNR), Dale Garber (NRCS)

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