State of Louisiana
Department of Natural Resources
Coastal Engineering Division

2005/2006 Annual Inspection Report

for

LITTLE VERMILION BAY SEDITMENT TRAPPING PROJECT

State Project Number TV-12
Priority Project List 5

October 4, 2005
Vermilion Parish

Prepared by:

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Table Of Contents

Appendices

I. Introduction

The Little Vermilion Bay Sediment Trapping Project (T/V-12) is located in the northwest corner of Vermilion Bay approximately three and three quarters (3-3/4) miles south west of Intracoastal City in Vermilion Parish. The project consists of dredging approximately 21,300 linear feet of distributary channels and create approximately 33 acres of terraces. The channels and terraces are intended to trap sediments from Freshwater Bayou to create vegetative wetlands and dissipate wave energy in this open water area and combat land loss being experienced as a result of wave action. The project will create marsh using trapped sediment material. The terraces were planted in an effort to establish vegetation in an area that was previously open water.

The Little Vermilion Bay Sediment Trapping 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 fifth Priority Project List. The Little Vermilion Bay Project has a twenty –year (20 year) economic life, which began in July 1999.

II. Inspection Purpose and Procedures

The purpose of the annual inspection of the Little Vermilion Bay Sediment Trapping Project (TV-12) 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 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. A summary of past operation and maintenance projects completed since completion of the Little Vermilion Bay Project are outlined in Section IV.

In 2003, the CWPPRA Task Force determined, due to the fact that LDNR was responsible for the operation and maintenance phase of the vast majority of CWPPRA projects, that LDNR would be the responsible party for all Post Storm/Hurricane Assessments. After Hurricanes Katrina and Rita, every project appeared to have been impacted by the storms; therefore, LDNR determined that all projects should be assessed for damages (Broussard, 2006). With concurrence from the federal sponsor, LDNR has decided to use the information obtained during this post hurricane assessment in this Annual Maintenance Inspection.

An inspection of the Little Vermilion Bay Sediment Trapping Project (TV-12) was held on October 4, 2005 under clear skies and mild temperatures. In attendance was Stan Aucoin, Herb Juneau, Darrell Pontiff, Beau Tate, Christine Thibodeaux, and Pat Landry from LDNR, and John Foret of NOAA Fisheries. All parties met at the Lafayette Field Office of CED and

traveled to Intracoastal City in Vermilion Parish, LA. The annual inspection began at the convergence of Freshwater Bayou and Little Vermilion Bay.

The field inspection included a complete visual inspection of the entire project site. Staff gauge readings were used to determine approximate elevations of water and earthen terraces. 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

Recent erosion rates in Little Vermilion Bay of 8 feet per year are expected to continue, thereby causing the loss of emergent wetlands in surrounding the bay. The marshes separating Freshwater Bayou from Little Vermilion Bay have eroded to the point that 750 feet of the navigation channel are currently directly exposed to wave energy from Little Vermilion Bay. Another 1000 feet of Freshwater Bayou are currently separated from Little Vermilion Bay by 100 foot wide strip of eroding marsh. It is therefore likely that 1,750 feet of Freshwater Bayou will soon be exposed to open bay wave energy. Actions are needed to stop and reverse marsh erosion that is exposing a vital shipping corridor on Freshwater Bayou to wave energy from Little Vermilion Bay. The project has a twenty-year (20 year) economic life, which began in July 1999.

The principal project features include:

1. 21,300 Linear Feet of Earthen Terraces

2. Smooth Cordgrass Plantings on Terraces

IV. Summary of Past Operation and Maintenance Projects

General Maintenance:

None as yet required.

Structure Operations:

There are no active operations associated with this project.

V. Inspection Results

Site 1—Earthen terraces

The terraces appear to be in excellent condition. Water elevation taken at a gauge on the Vermilion River Cut-Off was +1.7 NAVD. Some erosion has taken place on the southern most terraces but not nearly as severely as anticipated. The western most terraces have nearly eroded away. Water levels in this borrow canal are still 5-6 feet deep. The berm is still present. A tanker barge that was being used at an oilfield location in the vicinity had broken free as a result of Hurricane Rita and was sitting on the northeast corner of the southwest row of terraces impacting approximately 30 linear feet of terrace. Oilfield crews were working on removing the barge at the time of this inspection. Damage to the terrace from this barge is expected to be minimal. No maintenance needed at this time. (Photos: Appendix B, Photo 1)

Site 2—Vegetation plantings

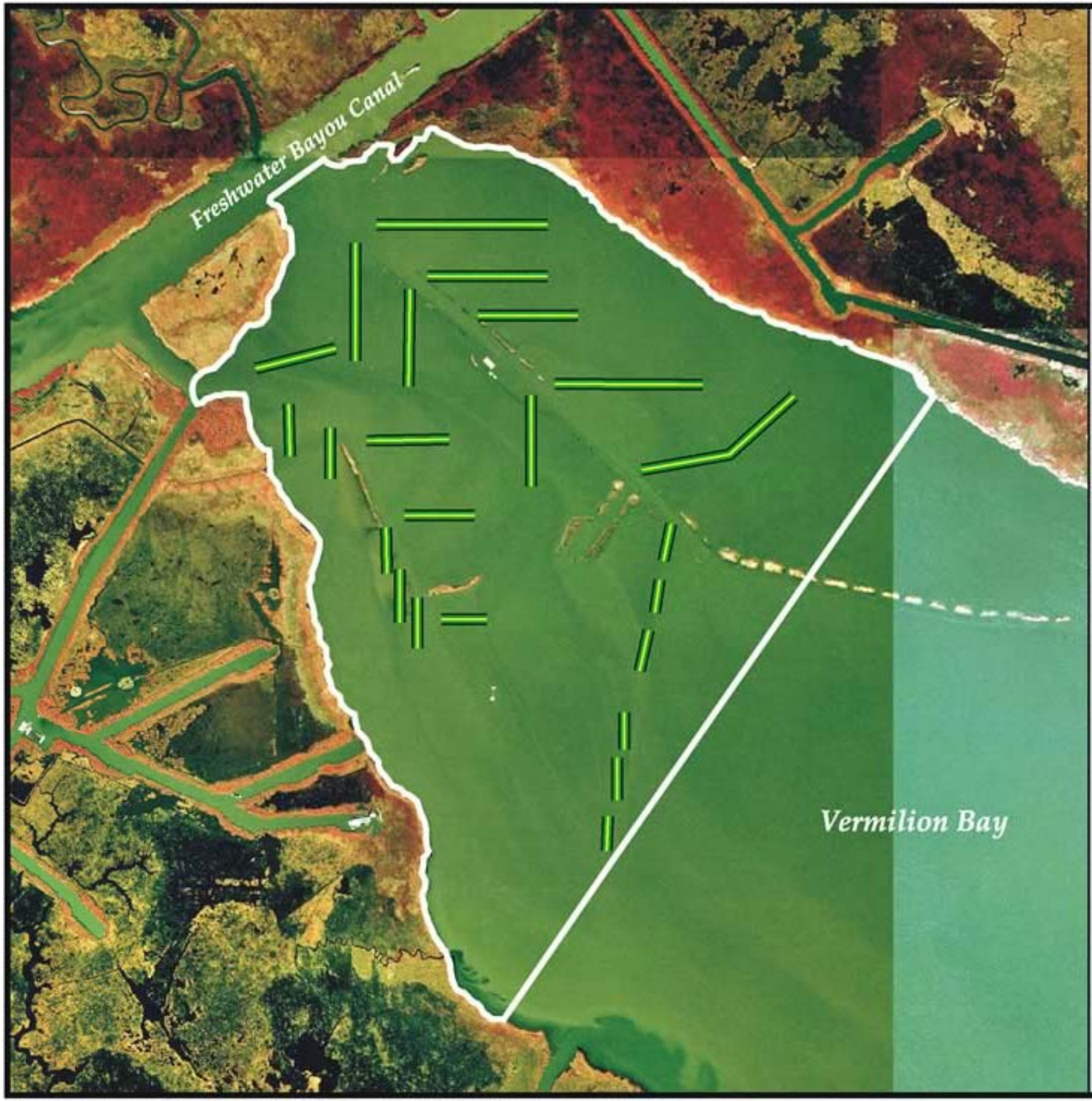
Vegetation planted on the terraces during construction was stressed but is expected to recover. No maintenance needed at this time. (Photos: Appendix B, Photo 2)

VI. Conclusions and Recommendations

The Little Vermilion Bay Sediment Trapping Project is in excellent condition and functioning as intended. Accretion between the terraces is still evident and has apparently survived the hurricane. Emergent vegetation should soon become established.

Appendix A

Project Features Map



Little Vermilion Bay Sediment Trapping (TV-12)

Terrace

Project Boundary

USGS science for a changing world

Louisiana

Project Location

N

1000 0 1000 Feet

300 0 300 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: December 4, 2002
Map ID: 2002-11-548
Data accurate as of: December 4, 2002

Appendix B

Photographs

Photo 1—oilfield barge on terrace

Photo 2—typical vegetated terrace

Appendix C

Three Year Budget Projection

LITTLE VERMILION/ TV12 / PPL 5

Three-Year Operations & Maintenance Budgets 07/01/2005 - 06/30/08

Project Manager	O & M Manager	Federal Sponsor	Prepared By
Pat Landry	*Stan Aucoin*	*N/A*	*Stan Aucoin*

	2005/2006	2006/2007	2007/2008
Maintenance Inspection	$ 4,955.00	$ 5,250.00	$ 5,407.00
Structure Operation			
Administration		$ -	$ -
Maintenance/Rehabilitation			

05/06 Description:

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

06/07 Description

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

07/08 Description:

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

	2005/2006	2006/2007	2007/2008
Total O&M Budgets	**$ 4,955.00**	**$ 5,250.00**	**$ 5,407.00**

O &M Budget (3 yr Total)	**$ 15,612.00**
Existing O & M Budget	**$ 173,029.00**
Remaining O & M Budget (Projected)	**$ 157,417.00**

Appendix D

Field Inspection Form

MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: TV-12 Little Vermilion Bay

Date of Inspection: October 4, 2005 Time:

Structure No. N/A

Inspector(s): Stan Aucoin, Pat Landry, Darrell Pontiff, Beau Tate, Herb Juneau, Christine Thibodeaux (DNR); John Foret (NOAA)

Structure Description: Terraces/Vegetation

Water Level +1.7 at VRCO

Type of Inspection: Annual

Weather Conditions: Clear and mild

Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
Steel Bulkhead / Caps					
Steel Grating					
Stop Logs					
Hardware					
Timber Piles					
Timber Wales					
Galv. Pile Caps					
Vegetation					Stressed due to hurricane, however, stable & well established. No maintenance required.
Signage /Supports					
Rip Rap (fill)					
Earthen Embankment (terraces)	Excellent				Terraces are in good condition, although some erosion is occurring. Barge lodged on terrace as a result of hurricane being removed. No repairs needed.

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