



**Coastal Protection and Restoration
Authority of Louisiana**

**Office of Coastal Protection and
Restoration**

**2008/2009 Annual Inspection
Report**

for

**LITTLE VERMILION BAY
SEDIMENT TRAPPING
PROJECT
(TV-12)**

State Project Number TV-12
Priority Project List 5

October 9, 2008
Vermilion Parish

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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, OCPR 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 OCPR was responsible for the operation and maintenance phase of the vast majority of CWPPRA projects, that OCPR would be the responsible party for all Post Storm/Hurricane Assessments. After Hurricane Ike, every project appeared to have been impacted by the storms; therefore, OCPR determined that all projects should be assessed for damages (Broussard, 2006). With concurrence from the federal sponsor, OCPR 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 9, 2008 under clear skies and hot temperatures. In attendance were Stan Aucoin and Mel Guidry of (OCPR); John Foret of NOAA Fisheries; and Dale Garber (NRCS) for other in. Parties met at the Lafayette Field Office of CED and traveled to Intracoastal City in

Vermilion Parish, LA. The annual inspection began at the westernmost terraces of Little Vermilion Bay.

The field inspection included a complete visual inspection of the entire project site. Staff gauge readings were used, when available, 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: Below is a summary of completed maintenance projects and operation tasks performed since July 1999, the construction completion date of the Little Vermilion Bay Sediment Trapping Project.

None as yet required.

Structure Operations:

There are no active operations associated with this project.

V. Inspection Results

Site 1—Earthen terraces

The project survived the storm intact. Erosion near the bays intersection with Freshwater Bayou continues to worsen however this is not a result of the storm. Terraces nearest Freshwater Bayou are eroding also. Water elevation was not available at the time of this inspection. Staff gauges will need to be re-established in the area. Erosion continues on the southwestern most terraces but vegetation is still evident and the terrace is still functioning as protection to the terraces to the north. (Photos: Appendix B, Photo 1)

Site 2—Vegetation plantings

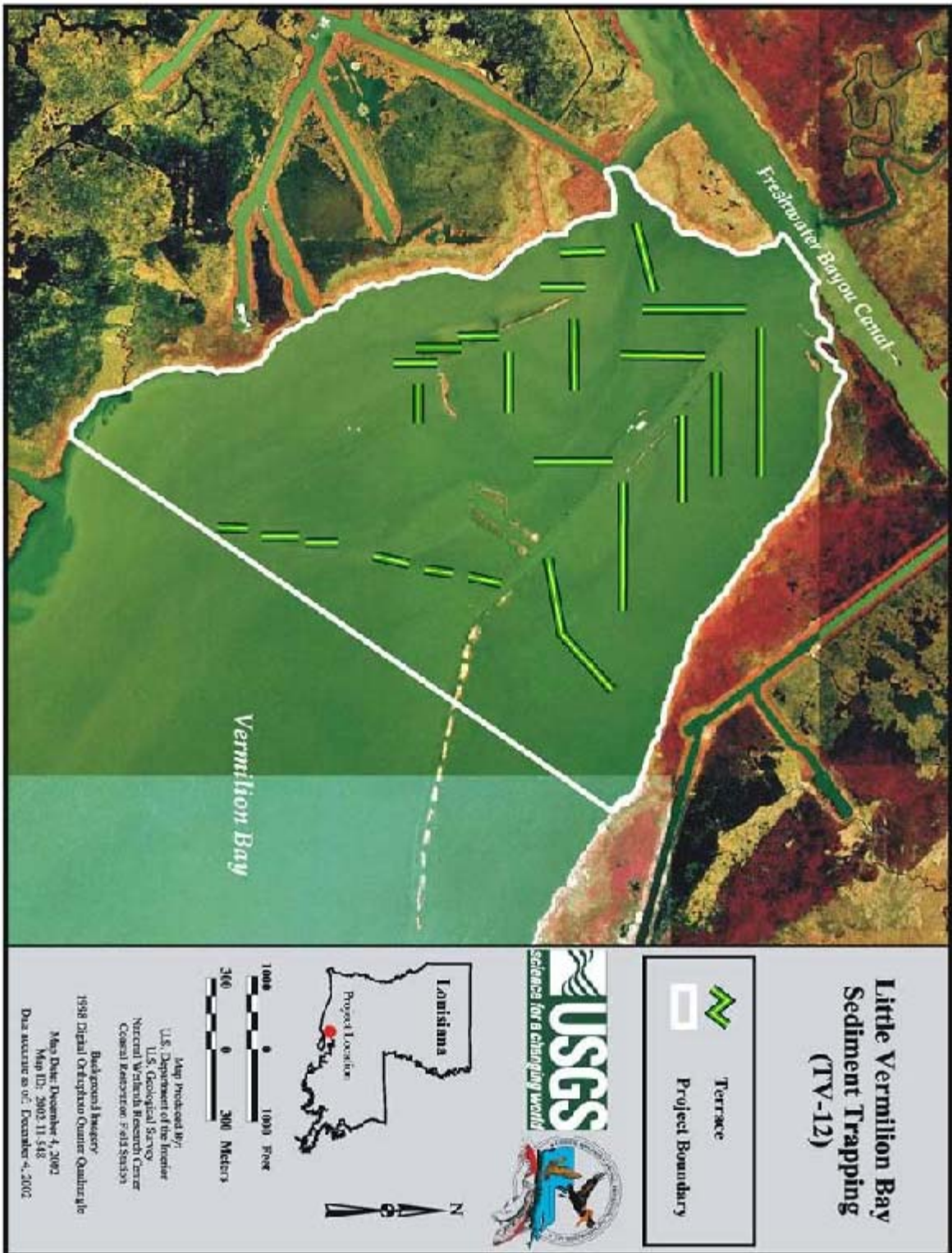
Vegetation has expanded 40-60 feet from the original plantings, and while stressed, appears strong. No maintenance needed at this time.

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 continues to accrete. Emergent vegetation should soon become established. Maintenance required in 2009/2010:

- Installation of a staff gauge

Appendix A
Project Features Map



Appendix B

Photographs



Photo No. 1, typical terrace

Appendix C

Three Year Budget Projection

Annual Inspection Report
 LITTLE VERMILION BAY SEDIMENT TRAPPING PROJECT
 State Project No. TV-12

LITTLE VERMILION/ TV12 / PPL 5
Three-Year Operations & Maintenance Budgets 07/01/2009 - 06/30/2012

<u>Project Manager</u> Pat Landry	<u>O & M Manager</u> Stan Aucoin	<u>Federal Sponsor</u> NMFS	<u>Prepared By</u> Stan Aucoin
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	2009/2010	2010/2011	2011/2012
Maintenance Inspection	\$ 5,737.00	\$ 5,909.00	\$ 6,086.00
Structure Operation			
Administration		\$ -	\$ -

Maintenance/Rehabilitation

09/10 Description: Install one staff gage.

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

10/11 Description

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

11/12 Description:

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

	2009/2010	2010/2011	2011/2012
Total O&M Budgets	<u>\$ 13,237.00</u>	<u>\$ 5,909.00</u>	<u>\$ 6,086.00</u>

O & M Budget (3 yr Total)	<u>\$ 25,232.00</u>
Unexpended O & M Budget	<u>\$ 169,908.00</u>
Remaining O & M Budget (Projected)	<u>\$ 144,676.00</u>

Appendix D

Field Inspection Form

Annual Inspection Report
 LITTLE VERMILION BAY SEDIMENT TRAPPING PROJECT
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MAINTENANCE INSPECTION REPORT CHECK SHEET

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

Date of Inspection: October 9, 2008 Time:

Structure No. N/A

Inspector(s): Stan Aucoin, Mel Guidry (OCPR)
 John Foret (NMFS), Dale Garber (NRCS)

Structure Description: Terraces/Vegetation

Water Level NAVD

Type of Inspection: Annual

Weather Conditions: Sunny and warm

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				
Vegetation	Good				
Signage / Supports	N/A				
Rip Rap (fill)	N/A				
Earthen Embankment (terraces)	Excellent				1 Terraces are in good condition, although some erosion is occurring.

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