



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

**2005/2006 Annual Inspection
Report**

for

**FRESHWATER BAYOU
WETLANDS PROJECT
(ME-04)**

State Project Number ME-04
Priority Project List 3

October 7, 2005
Vermilion Parish

Prepared by:

Mel Guidry, Engineering Tech.
LDNR/Coastal Engineering Division
Lafayette Field Office
635 Cajundome Blvd.

Table Of Contents

I. Introduction.....	1
II. Inspection Purpose and Procedures	1
III. Project Description and History.....	1
IV. Summary of Past Operation and Maintenance Projects.....	2
V. Inspection Results	3
VI Conclusions and Recommendations	3

Appendices

Appendix A	Project Features Map
Appendix B	Photographs
Appendix C	Three Year Budget Projections
Appendix D	Field Inspection Notes
Appendix E	Map showing areas to be monitored

I. Introduction

The Freshwater Bayou Wetlands Project (State Project No. ME-04) is located in the Mermentau Basin on the western bank of the Freshwater Bayou Canal in Vermilion Parish just south of the town of Intracoastal City. Structural components of the project extend from the North Prong/Belle Isle Canal south to the Humble/Acadiana Marina Canal. (See Appendix A).

The Freshwater Bayou Wetlands 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 Freshwater Bayou Wetlands Project has a twenty –year (20 year) economic life, which began in March 1995.

II. Inspection Purpose and Procedures

The purpose of the annual inspection of the Freshwater Bayou Wetlands Project (ME-04) 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, 2003). 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 Freshwater Bayou Wetlands 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 Freshwater Bayou Wetlands Project (ME-04) was held on October 7, 2005 under sunny skies and mild temperatures. In attendance were Stan Aucoin, Mel Guidry, Pat Landry, Leigh Anne Sharp, Amanda Phillips, David Burkholder, Whitney Thompson and Ken Duffy of DNR and Brad Sticker representing NRCS.

The field inspection included a complete visual inspection of the entire project site. Staff gauge readings and existing temporary benchmarks were used to determine approximate elevations of water & rock weirs. Aucoin & Associates has been contracted to begin E&D on

damaged sections of dike that were found on previous inspections. Field Inspection notes were completed in the field to verify areas requiring repairs. (see Appendix D).

III. Project Description and History

The Freshwater Bayou Wetlands (ME-04) project encompasses approximately 37,000 acres of fresh to intermediate wetlands located between La. Hwy. 82 and Freshwater Bayou Canal, approximately 5 mi east of White Lake, Louisiana (figure 1). Boat wake-induced shoreline erosion, which averaged 12.5 ft/yr along each bank of Freshwater Bayou Canal between 1968 and 1992 (Brown & Root 1992), has deteriorated the spoil banks along the channel, allowing multiple breaches to form, and tidal scour of the organic soils in the adjacent wetlands to ensue. Between 1968 and 1990, the bank width of this navigation canal increased almost fourfold, resulting in the loss of 768 acres of coastal wetlands (Good et al. 1995).

The objective of phase 1 of this project is to prevent further widening of the Freshwater Bayou Canal channel into the project area, thereby protecting existing emergent wetlands along the west bank of the canal from further deterioration caused by shoreline erosion and tidal scour. The specific goal of the project is to decrease the rate of erosion and wetland loss along the west bank of Freshwater Bayou Canal using a rock dike. Construction of approximately 28,000 linear ft of free-standing, continuous rock dike along the west bank of the canal was completed in March 1995 by using existing rock that was salvaged from a weir at Wax Lake Outlet. The USACE provided manpower and equipment to facilitate removal of the rock from the weir and transport to the FWB Wetlands location for initial construction of this project.

The principal project features include:

- Site 1 - Foreshore Rock Dike (approximately 28,000 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 1995, the construction completion date of the Freshwater Bayou Wetlands Project (ME-04).

2002 - Freshwater Bayou Wetlands Maintenance Project – LDNR: This maintenance project included the installation of approximately 26,750 tons of 1000 lb gradation stone to repair fifteen thousand, two hundred and sixty-three linear feet of bank. Quantity limitations prevented the repair of all sections required. Construction was completed on 4/22/2002. The cost associated with the engineering, design and construction of the Freshwater Bayou Wetlands Maintenance Project is as follows:

Construction:	\$615,900.00
Engineering & Design:	\$ 46,882.86
Construction Administration:	\$ 36,954.00

Construction Oversight/As built: \$ 17,311.06

Project Total: **\$717,047.92**

2005 - Freshwater Bayou Wetlands Maintenance Project – LDNR (Luhr Bros. Contractor): This maintenance project included the installation of approximately 21,370 tons of 1,250 lb gradation stone to repair 11,426 linear feet of bank. Quantity limitations prevented the repair of all sections required. Construction was completed on 12/15/2005. The cost associated with the engineering, design and construction of the Freshwater Bayou Wetlands Maintenance Project is as follows:

Construction: \$472,660.50

Engineering & Design: \$ 1,282.84

Construction Administration: \$ 5,625.00

Construction Oversight/As built: \$ 4,419.68

Project Total: **\$483,988.02**

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

V. Inspection Results

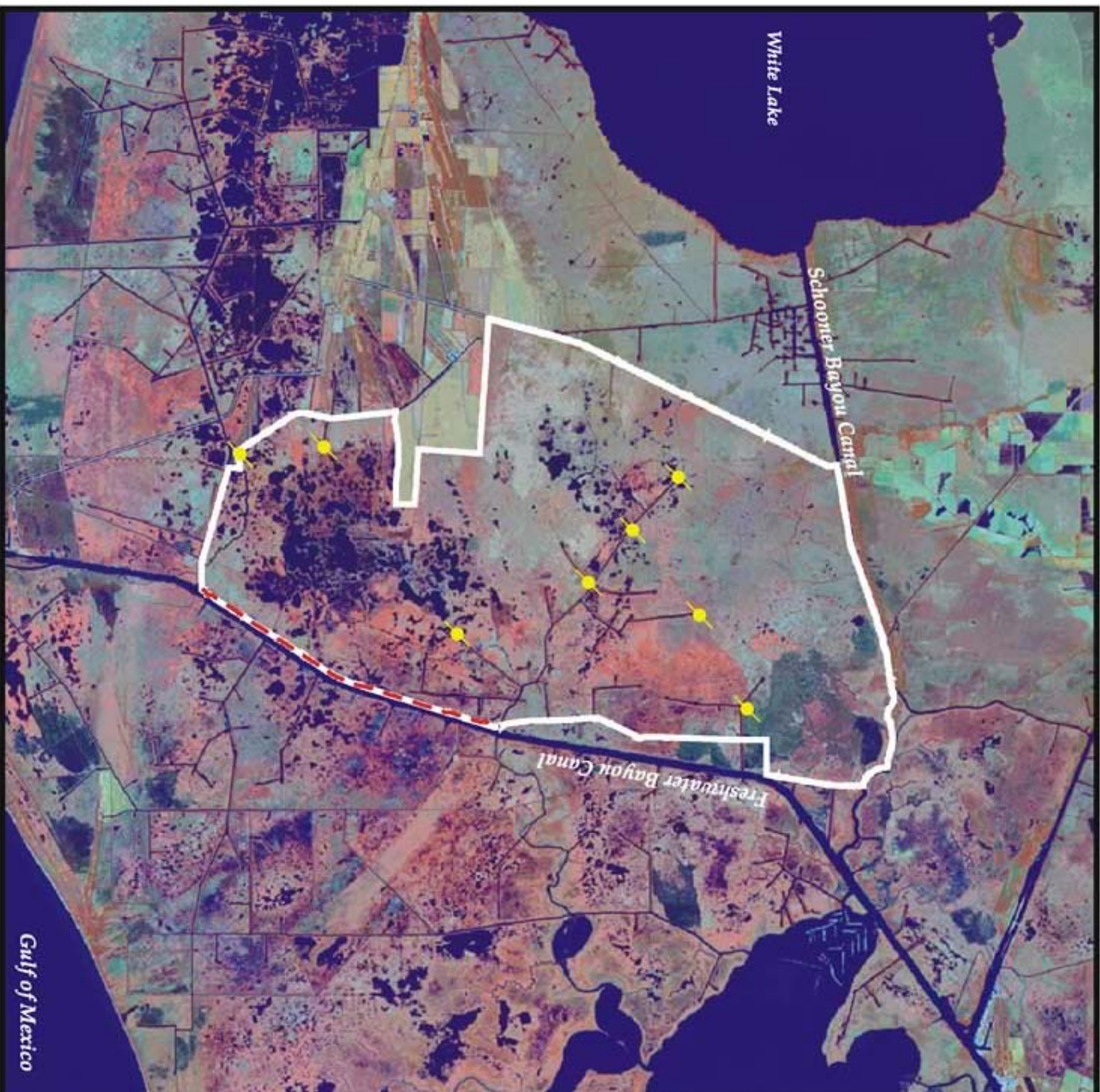
Site 1—Foreshore rock dike

The inspection revealed the rock foreshore dike is in good condition and sustained no damage from the storm surge. The recently completed maintenance project to restore the dike to constructed elevations held up well through high water conditions. (Photos: Appendix B, Photos 1 & 2)

VI. Conclusions and Recommendations

Overall the Freshwater Bayou Wetland Project is in good condition and sustained no discernable damage from Hurricane RITA. No maintenance is required at this time.

Appendix A
Project Features Map



Freshwater Bayou Wetland Protection (ME-04)

-  Water Control Structure
(landowner constructed)
-  Rock Dike
-  Project Boundary

USGS
science for a changing world



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

Background Imagery:
Thematic Mapper Satellite Imagery 2000
Map Date: August 23, 2002
Map ID: 2002-11-712
Data accurate as of: August 23, 2002

Gulf of Mexico

Appendix B
Photographs



Photo 1, Typical rock dike



Photo 2, Typical rock dike.

Appendix C

Three Year Budget Projection

FRESHWATER BAYOU / ME04 / PPL2
Three-Year Operations & Maintenance Budgets 07/01/2005 - 06/30/08

<u>Project Manager</u>	<u>O & M Manager</u>	<u>Federal Sponsor</u>	<u>Prepared By</u>
Mel Guidry	Mel Guidry	NRCS	Mel Guidry

	2005/2006	2006/2007	2007/2008
Maintenance Inspection	\$ 4,955.00	\$ 5,250.00	\$ 5,407.00
Structure Operation	\$ -	\$ -	\$ -
Administration	\$ 5,625.00	\$ -	\$ -

Maintenance/Rehabilitation

05/06 Description: Cap rock dike to constructed elevations.

E&D	\$ 1,282.84
Construction	\$ 472,660.50
Construction Oversight	\$ 4,419.68
<i>Sub Total - Maint. And Rehab.</i>	<u>\$ 478,363.02</u>

06/07 Description:

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

07/08 Description:

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

	2005/2006	2006/2007	2007/2008
<u>Total O&M Budgets</u>	\$ 488,943.02	\$ 5,250.00	\$ 5,407.00

<u>O & M Budget (3 yr Total)</u>	\$ 499,600.02
<u>Existing O & M Budget</u>	\$ 12,342.00
<u>Remaining O & M Budget (Projected)</u>	\$ 487,258.02

Note: Maintenance Project for 2005/2006 completed, therefore these funds already expended

Appendix D

Field Inspection Form

MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: ME-04 Freshwater Bayou

Date of Inspection: October 7, 2005 Time:

Structure No. N/A

Inspector(s): Stan Aucoin, Pat Landry, Leigh Anne Sharp,
Mel Guidry, David Burkholder, Amanda Phillips

Structure Description: Foreshore Rock Dike

Whitney Thompson, & Ken Duffy (LDNR), Brad Sticker (NRCS)

Type of Inspection: Annual

Water Level

Weather Conditions: Sunny and 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	Recent maintenance work to restore dike to constructed elevation sustained no damage from Hurricane RITA.
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