



Coastal Protection and Restoration Authority of Louisiana

Office of Coastal Protection and Restoration

2011 Annual Inspection Report

Fritchie Marsh Restoration

State Project Number PO-06
Priority Project List 2

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St. Tammany Parish

Prepared by:

Barry Richard, P.E.
CPRA/ Office of Coastal Protection and Restoration
New Orleans Field Office
CERM, Suite 309
2045 Lakeshore Dr.
New Orleans, La 70122

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I. Introduction

The Fritchie Marsh Restoration Project (PO-06) project area contains intermediate and brackish marsh, and is located southeast of Slidell in St. Tammany Parish (Appendix A). The area is bound by US Hwy 190 to the north, US Hwy 90 to the south and east, and LA Hwy 433 to the west and south.

II. Project Description and History

From 1956 to 1984, 2,260-ac (915-ha) of emergent marsh within the Fritchie Marsh project area have been converted to open water, with the greatest loss occurring in the northern project area. This loss reflects a pattern of marsh deterioration from north to south due to a reduction of freshwater and sediment input into the northern part of the project area. Natural hydrologic patterns have been disrupted by the construction of the perimeter highways. These embankments isolate the marsh from the West Pearl River, and have restricted inflow of freshwater, nutrients, and sediment. Additionally, saltwater from Lake Pontchartrain enters the marsh through the W-14 canal and Little Lagoon during high tides and strong winds. As a result, the project area has converted from a predominantly fresh marsh in 1956 to a predominantly brackish marsh in 1990.

The objective of the Fritchie Marsh Restoration Project is to reduce marsh loss by restoring more natural hydrologic conditions in the project area through management of available freshwater. Specific objectives are (1) to increase freshwater flow and promote water exchange into the area from West Pearl River by enlarging the culvert at U.S. Highway 90 and by dredging portions of Salt Bayou and (2) increase freshwater flow into the northern project area by diverting flow from the W-14 canal.

The Fritchie Marsh Restoration Project was constructed in one phase beginning in October 2000 and completed in March 2001. The project has a 20-year economic life which began in March 2001.

The principal project features include:

- A 72-inch diameter by 136-foot long concrete culvert under U.S. Highway 90, rock riprap lining of the Salt Bayou channel bottom and pipe outlets, and installation of 308 linear feet of sheet piling to form a bulkhead.
- Dredging of approximately 5300 linear feet of Salt Bayou.
- Installation of a weir in the W-14 canal. The weir consists of 108 linear feet of sheet pile with a 20-foot wide boat bay.
- Dredging approximately 400 linear feet of the W-14 diversion channel.

In August 2005 Hurricane Katrina passed directly over the Fritchie Marsh Project area. The forces created by this storm caused significant damage to the marsh but not to any of the project features. Large areas of marsh were converted to open water, whereas sections

of sheared marsh were deposited into the natural bayous and canals creating a number of blockages. Existing breaches on the banks of Salt Bayou were enlarged and new breaches were created, which are diverting water away from the natural conveyance channels. The previously established hydrology within the project area has been significantly altered.

III. Inspection Purpose and Procedures

The purpose of the annual inspection of the Fritchie Marsh Restoration Project (PO-06) 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 July 10, 2002). The annual inspection report also contains a summary of maintenance projects 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 project are outlined in Section II.

An inspection of the Fritchie Marsh Restoration Project (PO-06) was held on July 29, 2011, by Barry Richard and Kyle Breau of OCPR. Access to Salt Bayou was limited due to mechanical difficulties and siltation.

IV. Inspection Results

Hwy 90 Culvert and Stone Revetment

There is no change in this structure from the previous inspection. The bank scour reported in previous inspection reports is still of concern, however it is vegetating very nicely.

Salt Bayou Dredging

There was not a detailed inspection performed of this feature. The inspection consisted of boat travel halfway down the bayou from the west and observations made from Hwy 90 at the culverts. There was no damage observed at the areas inspected. The worst sections from the previous inspection, where breaches and infilling occurred, were not inspected.

W-14 Weir

There was no visible damage to this structure and it appears to be operating as designed.

W-14 Diversion Channel Dredging

There is no visible damage to this feature. It appears to be diverting the water from the north as designed.

V. Conclusions

The project features for the Fritchie Marsh Restoration Project are performing as designed. There is no need for any maintenance work at this time.

VI. Recommendations

Continue to inspect the project features for functionality.

Immediate Repairs

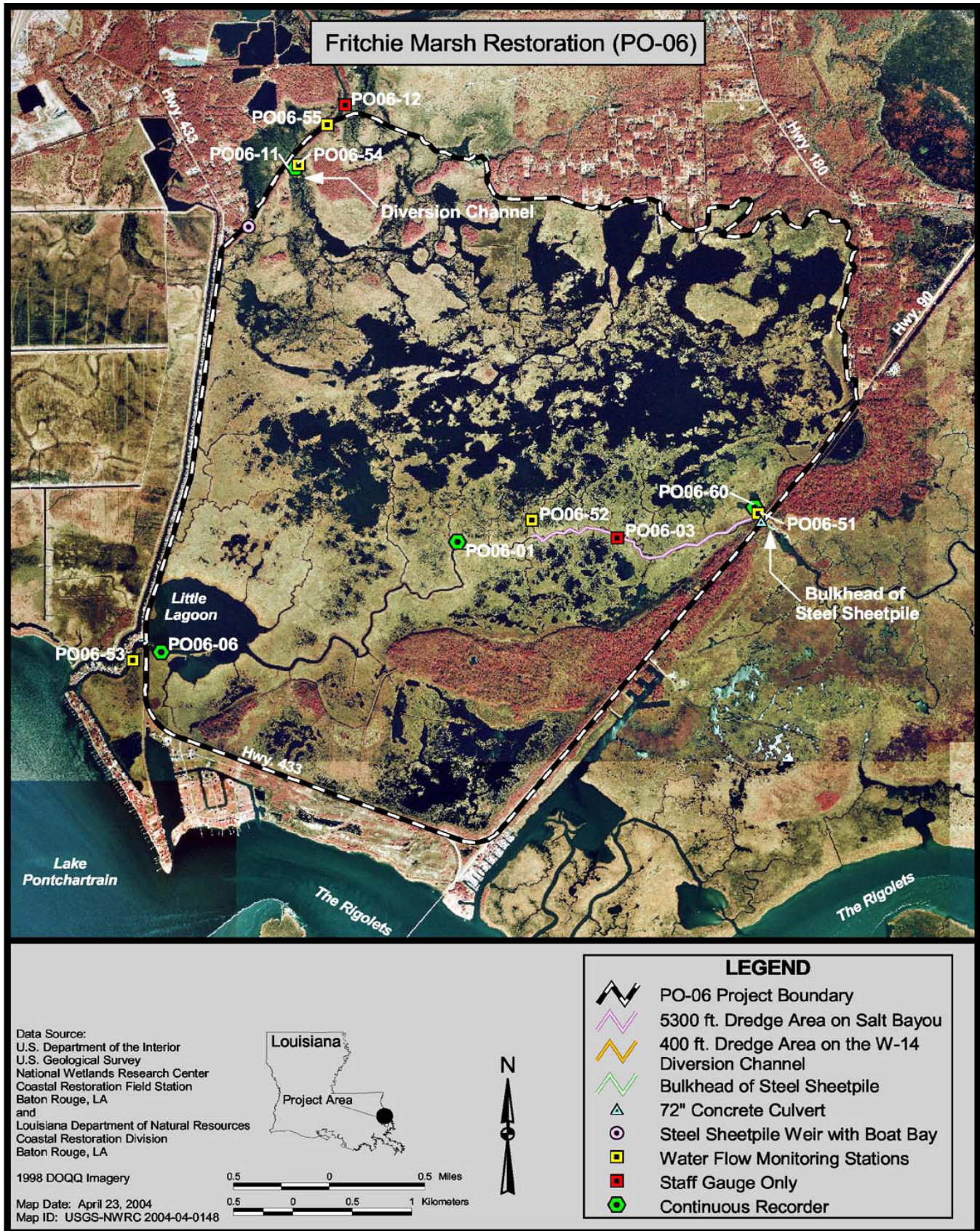
- None at this time.

Programmed Maintenance

- None at this time.

Appendix A

Project Features Map



Appendix B

Photographs



W-14 Weir



W-14 Diversion Channel Beyond Dredging



Salt Bayou from Culverts



Culverts from Project Side



Culverts from Project Side

Appendix C

Three Year Budget Projection

Annual Inspection Report
Fritchie Marsh Restoration
State Project No. PO-06

Fritchie Marsh Hydrologic Restoration (PO-06)

Federal Sponsor: NRCS
Construction Completed : March 6, 2001
PPL 2

Current Approved O&M Budget June 2009	Year 0 FY02	Year - 1 FY03	Year -2 FY04	Year -3 FY05	Year -4 FY06	Year -5 FY07	Year -6 FY08	Year -7 FY09	Year -8 FY10	Year -9 FY11	Year -10 FY12	Year -11 FY13	Year -12 FY14	Year -13 FY15	Year -14 FY16	Year -15 FY17	Year -16 FY18	Year - 17 FY19	Year -18 FY20	Year -19 FY21	Project Life Budget	Currently Funded
State O&M																					\$225,211	\$225,211
Corps Admin																					\$0	\$0
Federal S&A																					\$0	\$0
Total																					\$225,211	\$225,211

Projected O&M Expenditures																	Remaining Project Life	Current 3 year Request					
Maintenance Inspection							\$3,796	\$3,895	\$3,996	\$4,100	\$4,206	\$4,316	\$4,428	\$4,543	\$4,661	\$4,782	\$42,724	\$11,687					
General Maintenance																	\$0	\$0					
Surveys																	\$0	\$0					
Sign Replacement											\$14,000						\$14,000	\$0					
Federal S&A																	\$0	\$0					
Maintenance/Rehabilitation																	\$0	\$0					
	E&D																\$0	\$0					
	Construction																\$0	\$0					
	Construction Oversight																\$0	\$0					
Total						\$0	\$0	\$0	\$0	\$0	\$0	\$3,796	\$3,895	\$3,996	\$4,100	\$18,206	\$4,316	\$4,428	\$4,543	\$4,661	\$4,782	\$56,724	\$11,687

O&M Expenditures from COE Report	\$116,582	Current O&M Budget less COE Admin	\$225,211	Current Project Life Budget less COE Admin	\$225,211
State O&M Expenditures not submitted for in-kind credit	\$0	Remaining Available O&M Budget	\$108,629	Total Projected Project Life Budget	\$173,306
Federal Sponsor MIPRs (if applicable)	\$0	Incremental Funding Request Amount FY12-FY14	-\$96,942	Project Life Budget Request Amount	-\$51,905
Total Estimated O&M Expenditures (as of April 2010)	\$116,582				

Appendix D

Field Inspection Form

Annual Inspection Report
Fritchie Marsh Restoration
State Project No. PO-06

MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: **PO-06 Fritchie Marsh**

Date of Inspection: 7/29/11 Time: 10:00am

Structure No. n/a

Inspector(s): Richard, Breaux

Structure Description: **HWY 90 Culvert & Salt Bayou Bulkhead**

Water Level Inside: 0.40' Outside: N/A

Type of Inspection: Annual

Weather Conditions: Warm, Clear

Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
Steel Bulkhead / Caps	Good	None	None	1	
Handrails, Grating, Hardware, etc.	Good	None	None	1	Vegetation and debris surrounding railings. Overall condition is good.
Signage, Supports	Good	None	None	1	Clear and legible.
Rock RipRap channel lining	Good	None	None	n/a	
W-14 Weir structure	Good	None	None	1	Submerged.
W-14 diversion channel dredge	Good	n/a	n/a	2	Sunken branches at inlet of channel
Salt Bayou dredging	n/a	n/a	n/a	3	A thorough inspection was not conducted at this time.
72" Diameter culvert	Good	None	None	4	Functioning properly. No undermining of the structure observed.
HWY 90 road surface	Good	None	None	n/a	