



**State of Louisiana
Coastal Protection and Restoration Authority
Operations Division**

2014 Annual Inspection Report

for

**GOOSE POINT / POINT PLATTE
MARSH CREATION PROJECT**

State Project Number PO-33

Priority Project List PPL-13

July 16, 2014

St. Tammany Parish

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I. Introduction

The Goose Point/Point Platte Marsh Creation Project (PO-33) 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. The PO-33 project was approved on the 13th Priority Project List.

The PO-33 project is located on the north shore of Lake Pontchartrain in St. Tammany Parish, within the Big Branch Marsh National Wildlife Refuge. Two marsh creation cells (A & B) are located at Goose Point, and the other three cells (C, D, & E) were built east of Point Platte. The approximate coordinates of the project areas are: Goose Point – 30° 15' 58.43" N latitude, 89° 58' 40.44" W longitude; Point Platte – 30° 15' 11.63" N latitude, 89° 55' 17.25" W longitude. The marsh creation cells were constructed using sediment hydraulically dredged from Lake Pontchartrain. All necessary agreements to allow project construction and operation have been executed between CPRA and the U.S. Fish and Wildlife Service (FWS). A site map included in Appendix A shows the project boundary and all project features.

II. Inspection Purpose and Procedures

The purpose of the annual inspection is to evaluate the constructed project features, to identify any deficiencies, and to prepare a report detailing the condition of the features and recommended corrective actions needed. Should it be determined that corrective actions are required, CPRA 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 (OM&R Plan February 1, 2012). This annual inspection report also contains a summary of possible 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. The summary of any past maintenance projects completed since completion of the initial construction of the Goose Point/Point Platte Marsh Creation Project in 2009, if any, will be outlined in Section IV.

This annual inspection of the PO-33 project was held on July 9, 2014 on a partly cloudy and mild day with winds out of the southeast at 2 mph. In attendance were Luke Prendergast and Bryan Gossman (CPRA), along with Danny Breaux (FWS). The inspection was made using an airboat furnished by FWS. Photographs of that inspection are included in Appendix B of this report.

III. Project Description and History

There has been a long history of wetland loss in the project area. Interior ponding, and to a lesser extent shoreline erosion, are the major causes of this wetland loss. Interior marsh loss rates for the Goose Point and Point Platte area were highest during the period from 1956 to 1978 and are estimated to be 31.3 acres/year and 10.42 acres/year, respectively during that period (McCarty 2001). Those high loss rates are associated with hydrologic

alterations (construction of Lake Road and two large pipeline canals) which allowed saltwater to penetrate the fresher sawgrass marshes. During the transition to a more brackish marsh hay cordgrass (*Spartina patens*) community, large ponds were formed (McCarty 2001). An extensive seismic survey and the associated marsh buggy traffic conducted in the early 1970's may have worsened the condition of the already stressed marsh (McCarty 2001). The more current loss rates for those same areas from 1978 to 1995 are estimated by McCarty to be 6.42 acres/year and 5.54 acres/year, respectively.

Goals: 1) Create 437 acres of emergent marsh through the deposition of dredged material into open water areas.

2) Nourish/enhance 114 acres of emergent marsh by adding a layer of sediment to the existing marsh surface.

The Project has a twenty-year (20 year) economic life, which began upon completion of construction in 2009.

The principal project features include:

Fill Area A – approximately 479,903 cubic yards of dredge material was placed in Fill Area A creating approximately 64 acres of new marsh and some 23 acres of marsh nourishment.

Fill Area B – approximately 949,700 cubic yards of dredge material was placed in Fill Area B creating approximately 125 acres of new marsh and some 77 acres of marsh nourishment.

Fill Area C – approximately 863,176 cubic yards of dredge material was placed in Fill Area C creating approximately 120 acres of new marsh and some 49 acres of marsh nourishment.

Fill Area D – approximately 149,370 cubic yards of dredge material was placed in Fill Area D creating approximately 13 acres of new marsh and approximately 6 acres of marsh nourishment.

Fill Area E – approximately 658,770 cubic yards of dredge material was placed in Fill Area E creating approximately 95 acres of new marsh, not including the marsh nourishment area.

The proposed design was to stack dredged material 1.0 ft. above average marsh elevation. Final target elevations depended on the results of geotechnical investigations. Dewatering and compaction of dredged sediments should produce marsh elevations conducive to establishment of emergent marsh and within the intertidal range. It was expected, if necessary, that the created marsh platform could be planted with a combination of marsh hay, cordgrass, and smooth cordgrass (*Spartina alterniflora*).

The work site, including the five marsh fill areas and two dredge borrow sites, is only accessible by boat. A public launch is located on Lake Road (an extension of LA 434) along Bayou Lacombe, approximately 0.5 miles from Lake Pontchartrain and two miles from the marsh areas.

This project created approximately 566 acres of new marshland areas by dredging material from Lake Pontchartrain and disposing into designated on-shore fill areas along the Lake Pontchartrain shore at Goose Point and east of Point Platte. The Goose Point borrow site was the source of materials being placed into Fill Areas A and B. The Point Platte Borrow Site was the source of materials being placed into Fill Areas C, D, and E. A total of 49,557 linear feet of earthen perimeter containment dikes, were constructed with adjacent material from inside the perimeters of the five marsh creation areas. These perimeter dikes were constructed with long reach marsh buggy backhoes casting from one to three lifts. The contract was later amended to include three sections of vinyl sheet pile on the lake rim of Fill Area D and one section on the lake rim of Fill Area E. A total of 614 linear feet of vinyl sheet pile was placed in weak sections of lake side perimeter dikes that were subject to breach from wave action.

IV. Summary of Past Maintenance Projects

Shallow open-water areas in Fill Areas A, B, C, and E were selected for a marsh grass planting project. This effort was completed in early 2014 at a cost of \$194,778.50. Observations of the project results are documented on the Field Inspection Form included in Appendix D.

V. Inspection Results

See the description of the existing condition of each of the Project Features on the Project Inspection Form at the end of this inspection report.

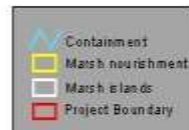
VI. Conclusions and Recommendations

The goal for this project was to recreate marsh habitat in open water behind the existing shoreline. Based on findings from this inspection, the design goal of the project is being met. Recommendation: Continue to inspect the project features annually to document and assess site conditions. If a maintenance need is identified on a future inspection, the project team will determine the necessary corrective action(s) at that time.

APPENDIX A Project Features Map



Goose Point/Point Platte Marsh Creation Project CWPPRA PPL 13 Candidate Project



APPENDIX B
Photographs



Area A – Marsh grass plantings with vegetated fill area beyond



Area A – Containment degraded for tidal exchange at north end of fill area



Area B – Shallow water in containment borrow area with fill area beyond



Area B – Recent grass plantings with marsh nourishment area in background



Area C – North containment berm with marsh creation in background



Area C – Interior marsh viewed from north containment rim



Area D – Marsh infill behind vinyl sheet pile wall



Area D – Apparent vandalism; sheet piles appear to have been cut



Area E – Vegetated containment berm at northwest end of fill cell



Area E – Shallow water in containment borrow area with marsh fill beyond

APPENDIX C
O&M Budget

2014 Annual Inspection Report
GOOSE POINT/POINT PLATTE MARSH CREATION
State Project No. PO-33

Appendix D

Field Inspection Form

2014 Annual Inspection Report
 GOOSE POINT/POINT PLATTE MARSH CREATION
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FIELD INSPECTION CHECK SHEET							
Project No. / Name:	Goose Point / Point Platte M.C. (PO-33)			Date:	7/9/2014	Time:	9:30 AM
Structure No. :	n/a			Inspector(s):	Prendergast, Gossman, Breaux		
Description:	Marsh creation fill areas			Water Level:	0.40' NAVD88 (USACE Mandeville gage)		
Type of Inspection:	Annual			Weather Cond:	Partly Cloudy, wind SE at 2 mph		
Project Features	Overall Condition	Physical Damage	Containment Dikes	Marsh Fill Area	Observations and Remarks		
<u>Fill Area "A"</u>	Good	None	Very Good Gaps remain open	Good	Much of the interior containment borrow area has subsided below the water surface elevation; this condition was anticipated prior to construction. Marsh plantings performed in the spring of 2014 look good generally, although some plantings have failed to root and are overturned.		
<u>Fill Area "B"</u>	Very Good	None	Very Good Gaps remain open	Very Good	Some of the interior containment borrow area has subsided below the water surface elevation; this condition was anticipated prior to construction and is acceptable. Marsh plantings performed in the spring of 2014 look very good and show healthy new growth.		
<u>Fill Area "C"</u>	Very Good	None	Very Good Gaps remain open	Very Good	This area has vegetated very well. The perimeter containment borrow area has subsided, but no open water areas are visible. This marsh creation area and the containment berms are nearly 100% vegetated.		
<u>Fill Area "D"</u>	Good	See Remarks	Very Good	Very Good	Some of the vinyl sheet piles along the lake shore show signs of damage, probably vandalism from hunters attempting to access the marsh creation areas. Marsh conditions behind the sheet pile wall appeared to be very good, but some scour was visible behind the damaged wall sections.		
Vinyl Sheet Pile 504 ft.							
<u>Fill Area "E"</u>	Very Good	None	Very Good	Very Good	Low water conditions prevented a thorough inspection of this fill cell, however the marsh creation area as seen from the northwest containment berm looked very good. Containment area was almost 100% vegetated.		
Vinyl Sheet Pile 110 ft.							