State of Louisiana
Coastal Protection and Restoration Authority

2016 Annual Inspection Report

for

GOOSE POINT / POINT PLATTE MARSH CREATION PROJECT

State Project Number PO-33
Priority Project List PPL-13

April 28, 2016
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 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 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 April 11, 2016 on a mostly cloudy day with winds out of the south-southeast at 17 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 marshhay 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.

<u>The principal project features include</u>:

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 marshhay 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 Field Inspection Form at the end of this inspection report (Appendix D).

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

4000 0 4000 8000 Feet

Containment
Marsh nourishment
Marsh islands
Project Boundary

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APPENDIX B
Photographs

Area A – Marsh grass plantings with vegetated fill area beyond

Area A – Shrubs observed within the fill area and along the containment rim

Area B – Shallow water in containment borrow area with healthy marsh beyond

Area B – Interior of fill cell is well-vegetated

Area C – Oak tree growing on northern containment berm

Area C – Interior of marsh creation area viewed from north containment rim

Area D –Vinyl sheet pile wall at Lake Pontchartrain shoreline

Area D – Interior of marsh creation area as viewed from lake shore containment

Area E – Vegetated containment berm at north side of fill cell

Area E – Interior of marsh creation area showing healthy vegetation

APPENDIX C
O&M Budget

Goose Bayou/Point Platte Marsh Creation Project (PO-33)
Federal Sponsor: USFWS
Construction Completed: January, 2009
PPL #13

Current Approved O&M Budget	Year 1 2009	Year 2 2010	Year 3 2011	Year 4 2012	Year 5 2013	Year 6 2014	Year 7 2015	Year 8 2016	Year 9 2017	Year 10 2018	Year 11 2019	Year 12 2020	Year 13 2021	Year 14 2022	Year 15 2023	Year 16 2024	Year 17 2025	Year 18 2026	Year 19 2027	Year 20 2028	Project Life Budget	Currently Funded
State O&M	$3,156	$3,222	$571,227	$3,359	$3,430	$3,502	$3,575	$3,650	$3,727	$3,805	$3,885	$3,967	$4,050	$4,135	$4,222	$4,311	$4,401	$4,494	$4,588	$4,684	$645,391	$595,251
Corps Admin	$762	$778	$794	$811	$828	$845	$863	$881	$900	$919	$938	$958	$978	$998	$1,019	$1,041	$1,062	$1,085	$1,107	$1,131	$18,696	$9,318
Federal S&A	$2,938	$3,000	$3,630	$3,128	$3,193	$3,260	$3,329	$3,399	$3,470	$3,543	$3,617	$3,693	$3,771	$3,850	$3,931	$4,013	$4,098	$4,184	$4,272	$4,361	$72,680	$29,348
Total	$6,856	$7,000	$575,652	$7,298	$7,451	$7,607	$7,767	$7,930	$8,097	$8,267	$8,440	$8,618	$8,799	$8,983	$9,172	$9,365	$9,561	$9,762	$9,967	$10,176	$736,767	$633,917

Projected O&M Expenditures																					Remaining Project Life	Current 3 year Request
Maintenance Inspection									$3,727	$3,805	$3,885	$3,967	$4,050	$4,135	$4,222	$4,311	$4,401	$4,494	$4,588	$4,684	$50,270	$11,418
General Maintenance																					$0	$0
Structure Operations																					$0	$0
Corps Admin																					$0	$0
Federal S&A									$3,470	$3,543	$3,617	$3,693	$3,771	$3,850	$3,931	$4,013	$4,098	$4,184	$4,272	$4,361	$46,803	$10,630
State S&A										$3,000										$1,918	$4,918	$3,000
Construction																					$0	$0
Professional Services:																					$0	$0
E&D																					$0	$0
Engineering Surveying										$68,694										$88,795	$157,489	$68,694
Construction Administration																					$0	$0
Inspection																					$0	$0
Total									$7,197	$79,042	$7,503	$7,660	$7,821	$7,985	$8,153	$8,324	$8,499	$8,677	$8,860	$99,759	$259,479	$93,742

Estimated O&M Expenditures to-date	$280,384
State O&M Expenditures not submitted for in-kind credit	$0
Total Estimated O&M Expenditures (as of March 2016)	$280,384

Current O&M Budget less COE Admin	$624,599
Remaining Available O&M Budget	$344,215
Incremental Funding Request Amount FY17-FY19	**($250,473)**

Current Project Life Budget less COE Admin	$718,072
Total Projected Project Life Budget	$539,863
Project Life Budget Request Amount	**($178,208)**

Appendix D
Field Inspection Form

FIELD INSPECTION CHECK SHEET

Project No. / Name: Goose Point / Point Platte M.C. (PO-33)

Date: 4/11/2016 **Time:** 9:00 AM

Structure No. : n/a

Inspector(s): Prendergast, Gossman, Breaux

Description: Marsh creation fill areas

Water Level: 0.95' NAVD88 (USACE Mandeville gage)

Type of Inspection: Annual

Weather Cond: Mostly cloudy, wind from the SSE at 17 mph

Project Features	Overall Condition	Physical Damage	Containment Dikes	Marsh Fill Area	Observations and Remarks
Fill Area "A"	Good	None	Very Good Gaps remain open	Very Good	Much of the interior containment borrow area remains below the water surface elevation; this condition was anticipated prior to construction. Marsh plantings looked very good, and significant waterfowl activity was observed in this fill area.
Fill Area "B"	Very Good	None	Very Good Gaps remain open	Very Good	Some of the interior containment borrow area remains subsided below the water surface elevation; this condition was anticipated prior to construction and is acceptable. Marsh plantings within the fill cell were well-established.
Fill Area "C"	Very Good	None	Very Good Gaps remain open	Very Good	No open water areas were visible within the perimeter containment borrow area. This marsh creation area and the containment berms are nearly 100% vegetated.
Fill Area "D" Vinyl Sheet Pile 504 ft.	Good	See Remarks	Very Good	Very Good	Vinyl sheet piles along the lake shore have experienced some additional minor damage/deterioration; however the condition of the marsh behind the sheet pile wall was very good.
Fill Area "E" Vinyl Sheet Pile 110 ft.	Very Good	None	Very Good	Very Good	Similar to Areas A & B, much of the containment borrow area remains shallow open water. However, the containment berm and the fill cell appeared to be well-vegetated with marsh grass and shrub species.