



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

**2015 Annual Inspection Report**

for

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

State Project Number PO-33

Priority Project List PPL-13

May 27, 2015

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 30, 2015 on a clear and mild day with winds out of the north at 6 mph. In attendance were Luke Prendergast and Bryan Gossman (CPRA), along with Danny Breau (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 Field Inspection Form at the end of this inspection report (Appendix D).

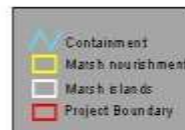
#### **VI. Conclusions and Recommendations**

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



**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** – Grass plantings after one full growing season



**Area B Nourishment** – This area was mostly shallow mud flats one year ago



**Area B Nourishment** – Active wildlife observed throughout project area



**Area C** – North containment berm with marsh creation area in background



**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

|  | Year 1<br>2009 | Year 2<br>2010 | Year 3<br>2011   | Year 4<br>2012 | Year 5<br>2013 | Year 6<br>2014 | Year 7<br>2015 | Year 8<br>2016 | Year 9<br>2017 | Year 10<br>2018 | Year 11<br>2019 | Year 12<br>2020 | Year 13<br>2021 | Year 14<br>2022 | Year 15<br>2023 | Year 16<br>2024 | Year 17<br>2025 | Year 18<br>2026 | Year 19<br>2027 | Year 20<br>2028 | Project Life<br>Budget | Currently<br>Funded |  |
|--|----------------|----------------|------------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|---------------------|--|
| <b>Current Approved O&amp;M Budget</b> |                |                |                  |                |                |                |                |                |                |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                     |  |
| 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            |  |
| <b>Total</b>                           | <b>\$6,856</b> | <b>\$7,000</b> | <b>\$575,652</b> | <b>\$7,298</b> | <b>\$7,451</b> | <b>\$7,607</b> | <b>\$7,767</b> | <b>\$7,930</b> | <b>\$8,097</b> | <b>\$8,267</b>  | <b>\$8,440</b>  | <b>\$8,618</b>  | <b>\$8,799</b>  | <b>\$8,983</b>  | <b>\$9,172</b>  | <b>\$9,365</b>  | <b>\$9,561</b>  | <b>\$9,762</b>  | <b>\$9,967</b>  | <b>\$10,176</b> | <b>\$736,767</b>       | <b>\$633,917</b>    |  |

|                                       |  |  |  |  |  |  |  |                |                |                 |                |                |                |                |                |                |                |                |                |                 | Remaining<br>Project Life | Current 3 year<br>Request |          |
|---------------------------------------|--|--|--|--|--|--|--|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|---------------------------|---------------------------|----------|
| <b>Projected O&amp;M Expenditures</b> |  |  |  |  |  |  |  |                |                |                 |                |                |                |                |                |                |                |                |                |                 |                           |                           |          |
| Maintenance Inspection                |  |  |  |  |  |  |  | \$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         | \$53,920                  | \$11,183                  |          |
| General Maintenance                   |  |  |  |  |  |  |  |                |                |                 |                |                |                |                |                |                |                |                |                |                 | \$0                       | \$0                       |          |
| Structure Operations                  |  |  |  |  |  |  |  |                |                |                 |                |                |                |                |                |                |                |                |                |                 | \$0                       | \$0                       |          |
| Corps Admin                           |  |  |  |  |  |  |  |                |                |                 |                |                |                |                |                |                |                |                |                |                 | \$0                       | \$0                       |          |
| Federal S&A                           |  |  |  |  |  |  |  | \$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         | \$50,201                  | \$10,412                  |          |
| State S&A                             |  |  |  |  |  |  |  |                |                | \$894           |                |                |                |                |                |                |                |                |                |                 | \$1,918                   | \$2,812                   | \$894    |
| 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                       |          |
| <b>Total</b>                          |  |  |  |  |  |  |  | <b>\$7,049</b> | <b>\$7,197</b> | <b>\$76,936</b> | <b>\$7,503</b> | <b>\$7,660</b> | <b>\$7,821</b> | <b>\$7,985</b> | <b>\$8,153</b> | <b>\$8,324</b> | <b>\$8,499</b> | <b>\$8,677</b> | <b>\$8,860</b> | <b>\$99,759</b> | <b>\$264,422</b>          | <b>\$91,182</b>           |          |

|   |           |   |                    |  |                    |
|---|-----------|---|--------------------|--|--------------------|
| Current O&M Expenditures                                | \$280,244 | Current O&M Budget less COE Admin                   | \$624,599          | Current Project Life Budget less COE Admin | \$718,072          |
| State O&M Expenditures not submitted for in-kind credit | \$0       | Remaining Available O&M Budget                      | \$344,355          | Total Projected Project Life Budget        | \$544,666          |
| Total Estimated O&M Expenditures (as of May 2015)       | \$280,244 | <b>Incremental Funding Request Amount FY16-FY18</b> | <b>(\$253,172)</b> | <b>Project Life Budget Request Amount</b>  | <b>(\$173,405)</b> |



**Appendix D**  
**Field Inspection Form**

**FIELD INSPECTION CHECK SHEET**

|                            |   |                        |                               |                        |   |              |          |
|----------------------------|---|------------------------|-------------------------------|------------------------|---|--------------|----------|
| <b>Project No. / Name:</b> | Goose Point / Point Platte M.C. (PO-33) |                        |                               | <b>Date:</b>           | 4/30/2015   | <b>Time:</b> | 10:00 AM |
| <b>Structure No. :</b>     | n/a                                     |                        |                               | <b>Inspector(s):</b>   | Prendergast, Gossman, Breaux  |              |          |
| <b>Description:</b>        | Marsh creation fill areas               |                        |                               | <b>Water Level:</b>    | 0.45' NAVD88 (USACE Mandeville gage)  |              |          |
| <b>Type of Inspection:</b> | Annual                                  |                        |                               | <b>Weather Cond:</b>   | Clear, wind from the N at 6 mph   |              |          |
| <b>Project Features</b>    | <b>Overall Condition</b>                | <b>Physical Damage</b> | <b>Containment Dikes</b>      | <b>Marsh Fill Area</b> | <b>Observations and Remarks</b>   |              |          |
| <b>Fill Area "A"</b>       | Good                                    | None                   | Very Good<br>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, with healthy new growth observed.   |              |          |
| <b>Fill Area "B"</b>       | Very Good                               | None                   | Very Good<br>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 and the nourishment area to the east exhibited prolific growth and looked very healthy. |              |          |
| <b>Fill Area "C"</b>       | Very Good                               | None                   | Very Good<br>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.   |              |          |
| <b>Fill Area "D"</b>       | Good                                    | See Remarks            | Very Good                     | Very Good              | Minor damage to vinyl sheet piles along the lake shore was observed during previous inspections; no additional damage was noted this year. Condition of the marsh behind the sheet pile wall was very good.   |              |          |
| Vinyl Sheet Pile 504 ft.   |   |                        |                               |                        |   |              |          |
| <b>Fill Area "E"</b>       | 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 have vegetated very well due to both naturally recruited species and successful marsh plantings. An abundance of healthy new growth was observed.             |              |          |
| Vinyl Sheet Pile 110 ft.   |   |                        |                               |                        |   |              |          |