

**PL-646 CWPPRA  
PROJECT COMPLETION REPORT**

<b>PROJECT NAME</b>	<b>Grand – White Lake Land Bridge Protection – Construction Unit #2</b>
<b>CWPPRA/STATE PROJECT NO</b>	<b>ME-19</b>

Report Date      January 3, 2005                      By:      Natural Resources Conservation Service

**1. Project Personnel**

DNR Project Manager	Ralph Libersat	(225) 342-1952
DNR Construction Project Manager	Melvin Guidry	(337)-482-0682
DNR Monitoring Manager	Melissa Hymel	(504) 280-4074
Federal Agency Project Manager	Darryl Clark	(337) 291-3111
Federal Agency Contracting Officer	Ralph Broome	(318) 473-7781
Federal Agency Design Engineer	Ronnie Faulkner	(318) 473-7792
Federal Agency COTR	Wayne Melancon	(318) 783-1257 ext. 125
Federal Agency Inspector	Carol Clement	(318) 783-1257 ext. 125

**2. Project Location & Description**

The project area is located in southwestern Louisiana in the Mermentau Basin/Lakes Sub-basin. The constructed features are on the east bank of Grand Lake between the Old GIWW and Collicon Lake and on the southeast shore of Grand Lake just north of the old GIWW eastward to Collicon Lake in Cameron Parish. The project consists of construction of rock riprap foreshore dike and the construction of earthen vegetative terraces.

This project was completed in two construction contracts. The first phase of construction (Construction Unit #1) was completed on November 10, 2003. A Completion Report for Construction Unit #1 was completed on February 24, 2004 that detailed the work within that construction unit.

This completion report will detail the work completed within the second phase of the project (Construction Unit #2) and provide the total project cost elements for both construction units in Section 4. Construction Unit #2 consisted of the installation of 19,544 linear feet of shallow water earthen terraces vegetated with 19,479 containerized wetland plants. The shallow water terraces were constructed in Collicon Lake and followed the shoreline contour

**3. Final Constructed Features**

Construction Unit #2 of the completed project consisted of a total of 19,544 linear feet of segmented vegetated earthen terraces. Two rows of segmented terraces (marsh side and lake side), each row having a different cross section were constructed roughly parallel to the existing shoreline. Also a 4000' segment of the southern shoreline of Round Lake was planted with wetland plants.

**EARTHEN TERRACES**

The marsh side row of terraces consisted of 45 segments varying in length from 83' to 385'. This row was constructed approximately 40' out from the existing shoreline. The cross section of the marsh side terraces consisted of a top elevation at +3.0' NAVD 88 with a top width of 8' and 3 horizontal to 1 vertical side slopes on both sides.

The lake side row of terraces consisted of 47 segments varying in length from 130' to 374', with the vast majority of the segments 200' feet in length. This row was constructed approximately 155' out from the existing shoreline. The land side toe of this terrace row was spaced a minimum of 70' out from the lake side toe of the marsh side terrace row. The cross section of the lake side terraces consisted of a top elevation at +3.0' NAVD 88 with a top width of 10' and 6 horizontal to 1 vertical side slopes on both sides.

All earthen terraces except on the three terraces labeled in the drawings as "to be planted by others" were planted with trade gallon Giant Cutgrass plants around the perimeter at an elevation of approximately +0.5' NAVD 88. The Giant Cutgrass plants were installed at a five foot spacing. The plants installed on the lake side and ends of the lake side terraces were secured using 1/4" diameter 24" long plant anchors. The tops of all terraces were planted with Seashore Paspalum at five foot spacing in three staggered rows.

The actual constructed locations, elevations, alignment, and cross sections of the terraces can be found in the "As Built" plans.

**ROUND LAKE PLANTINGS**

The southern shoreline of Round Lake was planted with trade gallon Giant Cutgrass and California Bullrush. The existing shoreline was followed for a distance of 4000 linear feet with the plants installed at an approximate elevation of +1.0' NAVD 88. The plants were installed on a 2.5' spacing alternating between the Giant Cutgrass and the California Bullrush.

**4. Project Cost Elements**

The cost elements below are inclusive of both construction units #1 and #2.

<b>ME - 19 Grand/White Lake</b>	<b>CWPPRA Project Cost Estimates</b>	<b>Cost Incurred as of Construction Completion</b>
<b>Construction</b>	3,936,864	2,837,807
<b>E &amp; D</b>	634,021	175,766
<b>Land rights</b>	36,736	11,584
<b>Monitoring</b>	186,403	16,910
<b>O &amp; M</b>	4,841,000	0
<b>Total</b>	9,635,124	3,042,067

**5. Items of Work**

Item No.	Work	Est. Quant.	Unit	Est. Unit Price	Est. Amount	Contract Unit Price	Contract Amount	Final Quant.	Final Amount
1	Mobilization and Demobilization	1	Job	LS	\$80,000.00	LS	\$60,785.00	1	\$60,785.00
2	Shallow Water Terraces	19544	LF	\$8.00	\$156,352.00	\$13.26	\$259,153.44	19,544	\$259,153.44
3	Vegetative Seeding	1	Job	LS	\$300.00	LS	\$4,500.00	1	\$4,500.00
4	Coastal Wetland Plants - <i>Zizaniopsis miliacea</i> (Giant Cutgrass) - Round Lake	801	EA	\$8.00	\$6,408.00	\$7.50	\$6,007.50	801	\$6,007.50
5	Coastal Wetland Plants - <i>Zizaniopsis miliacea</i> (Giant Cutgrass) - Terraces	7933	EA	\$8.00	\$63,464.00	\$7.50	\$59,497.50	7,933	\$59,497.50
6	Coastal Wetland Plants - <i>Paspalum vaginatum</i> (Seashore Paspalum)	11546	EA	\$5.00	\$57,730.00	\$5.50	\$63,503.00	11,546	\$63,503.00
7	Coastal Wetland Plants - <i>Schoenoplectus californicus</i> (California bulrush)	801	EA	\$8.00	\$6,408.00	\$6.50	\$5,206.50	801	\$5,206.50

Total Estimate \$370,662.00

Contract Bid Amount \$458,652.94

Final Contract Amount \$458,652.94

**6. Construction and Construction Oversight Construction Unit #2**

<b>Prime construction contractor</b>	<b>Wilco Marsh Buggies, Inc</b>
<b>Subcontractor</b>	<b>Erosion Control Services (plants)</b>
<b>Original construction contract</b>	<b>\$ 458,652.94</b>
<b>Change orders</b>	<b>\$ 0.00</b>
<b>Over/Under runs</b>	<b>\$ 0.00</b>
<b>Final construction contract</b>	<b>\$ 458,652.94</b>

**7. Major Equipment Used**

- 5800 Link-belt Marsh Buggy Excavator
- 4300 Link-belt Marsh Buggy Excavator
- 330B Marsh Buggy Excavator
- 345B Marsh Buggy Excavator
- One Crew boat with outboard motor
- Two Flat-bottom boats with outboard motors

**8. Construction Sequence**

The start of work in January consisted of potting the plants to be used to vegetate the terraces after earthwork was completed. The growing of the plants was performed by the subcontractor.

The actual work at the project site began with the initial lift of earth to construct the lakeside terraces starting at terrace #1 (station 0+00, southwest end) using two marsh buggy excavators. The week following the start of work on the job site, two additional marsh buggy excavators arrived on the job site and began work on the marsh side terraces. Wayne, did was one excavator placing the first lift followed by the second excavator shaping and final grading, or did both work placing the first lift, then both went back for the second lift and final shaping?

The first pass consisted of piling spoil in the areas where the terraces were to be constructed. The second pass consisted of shaping the terraces to its final grade and adding additional fill where needed. In some areas, the contractor had to make one or two additional passes to get the grade and top width required.

Upon completion of construction of the terraces to the specified lines and grades, acceptance of the earthwork portion of the terraces by NRCS was made. After acceptance, the subcontractor that supplied the plants began installation of the plants.

**9. Contract Modifications & Field Changes**

There were no modifications issued for this contract. A field change was made in the location of the gap between marsh side terrace # 32 and terrace # 33 (station 86+98 to station 87+54) and is shown on the “As-Built” Plans.

**10. Pipeline and Utility In the Project Location**

<u>Utility Type</u>	<u>Owner</u>	<u>Rep. To Contact</u>
Gas Pipeline	Columbia Gulf Transmission	(713) 621-0101 (318) 737-2373

**11. Construction Safety**

There were no safety issues raised during the contract.

**12. Additional Comments**

None

**13. Significant Construction Dates:**

<b>Contract No. 50-7212-03-11</b>	<b>Date</b>
Bid Opening	11/06/2003
Construction Contract Award	12/2/2003
Preconstruction Conference	1/21/2004
Notice to Proceed	12/2/2003*
Mobilization	7/29/2004
Construction Start	7/29/2004
Construction Completion	9/13/2004
Final Acceptance	9/13/2004

\* Notice to proceed issued on 12/2/2003 allowed for the start of growing plant materials. By the specifications, the contractor was not allowed to start construction of the terraces on site until 5/15/2003.