PROJECT COMPLETION REPORT

PROJECT NAME **Humble Canal Hydrologic Restoration Project**

CWPPRA/STATE PROJECT NO. **ME-11**

Report Date: August 12, 2003 **BY: USDA-NRCS and LA DNR/CRD**

1. Project Managers/Contracting Officer:

DNR Project Manager	Garrett Broussard	Telephone 337-893-3643
DNR Construction Project Manager	Melvin Guidry	Telephone 337-482-0654
DNR Monitoring Manager	Christine Thibodeaux	Telephone 337-893-3643
Federal Agency Project Manager	Marty Floyd	Telephone 318-473-7690

2. Location and description of projects as approved for construction by Task Force.

The project area is located in the Mermentau Basin north of the Little Chenier Ridge and west of the Mermentau River in Cameron Parish, Louisiana. The 4,030 acre area is bounded on the south by the Little Chenier Ridge, the Mermentau River on the east and oilfield canals on the north and west. Approximately 74% of the project area can be classified as freshwater marsh, with the balance being open water. Salinities in the project area remain around 1 part per thousand (ppt), while salinities in the Mermentau River have exceeded 20 ppt.

Prior to the construction of Humble Canal, the area functioned as a freshwater estuary connected to the Mermentau River by overland flow, as well as by Little Chenier and Marsellaise Bayous. With the construction of Humble Canal, the area was subjected to increased salinities and tidal fluctuations from the Mermentau River resulting in erosion and sediment loss. A levee system was then constructed along the west bank of the Mermentau River and water control structures were installed where Humble Canal intersected the levee. This set of structures prevented the intrusion of saltwater and controlled the exchange of water and sediment. In addition to the structure at Humble Canal, three other water control structures were installed in the levee on the west bank of the Mermentau River. The structures are composed of single barrel corrugated aluminum pipes (CAP's) with flap gates on their downstream ends. In 1998 the Humble Canal Structure was removed and the outlet plugged due to its' deteriorated condition and lack of funding to replace it. This action was necessary to protect the interior marshes from salinity damage, but left little provision for excess freshwater to leave the system.

The installation of a new water control structure near Humble Canal will better allow excess water to be removed from within the project area while protecting the area from outside salinities. Interior areas that have been converted to shallow open water will be given the opportunity to re-vegetate with the lowering of water levels in the area. Protection from excess salinity will continue to permit the growth of aquatic vegetation.

3. Final, as-built features, boundaries and resulting acreage (use attachments if necessary).

This project consisted of one construction contract that included various items: mobilization, furnishing and installing the water control structure, aggregate surface course, rock riprap, and inlet and outlet channel excavation. This structure consists of five, 48" diameter X 50' long corrugated aluminum pipe culverts with automatic flap gates installed on the downstream end and variable crest weirs installed on the upstream end. An additional 18" diameter by 50' long corrugated aluminum pipe culvert with a lift gate on the upstream end was also included in the structure. Approximately 4,363 cubic yards of dredged material was conveyed when constructing inlet and outlet channels that allowed the structure to have an adequate hydraulic connection to the Mermentau River. Approximately 450 tons of riprap was placed adjacent to the structure to control erosion. Net acres benefited by this project are estimated to be 378.
See the "as-built" plans for the project for detailed information regarding the completed project.

4. **Items of Work Construction**

Item No.	Work	Est. Qty	Unit	Est. Unit Price	Estimated Amount	Final Qty	Bid Unit Price	Final Amount	% Over/ Under
1	Mobilization	1	Lump	36626.5	36626.50	1	35840	35,840.00	0.0
2	Temporary Signs	1	Lump	2000	2000.00	1	2000	2,000.00	0.0
3	Furnish & Install Water Control Structure	1	Lump	331000	331,000.	1	294240	302,641.21	2.8
4	Aggregate Surface Course	225	Ton	35.	7875.00	225	55.	12,375.00	0.0
5	Rock Riprap	450	Tons	60.	27000.00	450	70	31,500.00	0.0
6	Inlet Channel Excavation	2508	Cu Yds	4.89	12540.00	2508	5.00	12,540.00	0.0
7	Outlet Channel Excavation	1855	Cu Yds	4.89	9070.95	1855	5.00	9,275.00	0.0
		Orig. Est.			$426,112.50	Original Bid Amount		$397,770.00	
						Final Contract Amount		$406,171.21	2.8

5. **Construction and construction oversight**

Prime Construction Contractor	**Edward T. McCain dba M & M Electric**
Subcontractor	
Original Construction Contract	**$397,770.00**
Change Orders	**One ($8.401.21)**
Over/Under runs	**$8.401.21**
Final Construction Contract	**$406,171.21**

Oversight and Administration

Construction Oversight Contractor **Lonnie G. Harper & Associates, Inc.**

Construction Oversight /Admin. Agency **Coastal Restoration Division/LA DNR**

6. **Major equipment used.**

The construction contactor utilized an 80 ton crane, a 50,000 pound excavator, and a marsh buggy excavator to complete the project. The construction equipment as well as materials was transported to and from the construction site utilizing marine equipment.

7. Discuss construction sequence and activities, problems encountered, solution to problems, etc.
Construction contractor began construction of this project on November 25, 2002. A summary of the various construction activities is as follows:

a. Dewatering of the site occurred from 11/25/2002 to 11/30/2002.
b. Excavation of the water control structure site from 11/30/2002 to 12/12/2002.
c. Installation of timber products associated with the water control structure from 12/12/2002 to 01/17/2003.
d. Installation of rock riprap from 01/17/2003 to 01/20/2003.
e. Installation of fabricated aluminum components associated with the water control structure from 01/20/2003 to 01/30/2003.
f. Backfilled around structure from 01/30/2003 to 02/03/2003.
g. Installation of rock riprap on the west end of the structure from 02/03/2003 to 02/04/2003.
h. Installation of fabricated aluminum components associated with the water control structure from 02/04/2003 to 02/12/2003.
i. Excavation of the inlet channel from 02/12/2003 to 02/20/2003.
j. Excavation of the outlet channel from 02/20/2003 to 02/22/2003.
k. Installation of aggregate surface course on upper surface of structure from 02/22/2003 to 02/23/2003.
l. Installation of marine barrier located in the outlet channel from 02/23/2003 to 03/01/2003.

There were no problems encountered during construction.

8. Construction change orders and field changes
One construction change order in the amount of $8,401.21 was necessary to adjust the final quantities associated with the project, add five platforms adjacent to the flap gates on the downstream end of the structure and plant disturbed areas in the vicinity of the water control structure with bermuda grass seed.

9. Pipeline and other utility crossings: None

Structure	Owner	Representative to Contact

10. Safety and Accidents: No accidents

11. Additional comments pertaining to construction, completed project, etc.
The contractor experienced unusual weather conditions in the form of high water levels and large amounts of rainfall during the construction of this project. However, his performance and corporation was found to be above average. The workmanship and quality of the fabricated aluminum products for this project were found to be exceptional.

12. Significant construction dates: To be filled out by DNR Construction Project Manager or Contracting Officer for construction for Agency responsible for construction.

Contract Number	Date
Bid Opening	**April 2002**
Construction Contract Award	**@ 20 May 2002**
Pre-construction Conference	**28 June 2002,15 July 2002**
Notice to Proceed	**25 June 2002**
Mobilization	**13 November 2002**
Construction Start	**25 November 2002**
Construction Complete	**1 March 2003**
Final Acceptance	**5 March 2003**