

FINAL REPORT

HOPEDALE HYDROLOGIC RESTORATION

NOAA Grant No. NA07FZ0008

Project No. PO-24

I. Executive Summary

The construction of project features will abate site specific wetland loss by replacing collapsed culverts installed in the 1950s near Yscloskey. These degraded water control structures were preventing the drainage of high tides and stormwater runoff, resulting in impounded water on the marsh.

II. Introduction

The project area is located southeast of Yscloskey, in St. Bernard Parish, Louisiana and is bordered by Louisiana Highway 624 and the Mississippi River Gulf Outlet (MRGO). The total project area is approximately 3,805 acres. Approximately 719 acres are open water, the remaining 3,086 acres are brackish and saline marsh; bottomland hardwoods; and bottomland scrub/shrub within the spoil bank.

In the 1950s, a water control structure was placed in the canal which parallels the MRGO spoil containment dike. This canal connects the interior project area to Bayou La Loutre. The control structure consists of an earthen berm penetrated by three 60" corrugated steel pipes which were originally fitted with cast iron flap gates. Over time the flap gates were removed and two of the three culverts have partially collapsed. The deterioration of this control structure appears to have adversely affected wetlands in the project area. Wind driven tide water and rainwater pond on the marsh surface as a result of reduced drainage capacity at this outlet, reducing plant health and accelerating marsh loss. Additionally, extreme tides occasionally overtop the roadway and become impounded upstream of the control structure, flooding or endangering business and residential properties. Parish maintenance workers must then dig out the earthen embankment to facilitate drainage of the area. Replacement of this structure would allow more rapid drainage of the area, improve fisheries access to the area, and may reduce wetland loss rates. The Hopedale Hydrologic Restoration Project is expect to protect approximately 3,086 acres of marsh.

III. Purpose

- A. Problem Description : The main cause of current wetland loss is a deteriorated water control structure with reduced drainage capacity, which did not allow for sufficient drainage during overtopping events and impounded water on the marsh upstream of the structure.
- B. Project Objectives : The objective of this project was to replace the deteriorated

water control structure to allow for more rapid drainage of the project area, improve fisheries access to the project area and reduce wetland loss rates.

IV. Approach

A. Description of Work Performed:

1. Water level data collection for the project was accomplished by the LDNR monitoring section prior to and during the active engineering and design phase of this project. Copies of the project data collection and analysis deliverables were provided to Rachel Sweeney from NMFS.
2. The project engineering, plan development, and specifications for the project features were conducted by LDNR's contract engineer for this project, BCG of Baton Rouge, Louisiana. A mandatory pre-bid meeting was held at the Breton Sound Marina on August 19, 2003 at 10:00 am. The bid opening for this project was held at State Purchasing in Baton Rouge on September 11, 2003. The low bidder for this project was Gill's Crane and Dozer Service, Inc. of New Orleans, Louisiana who received a notice to proceed on December 1, 2003. A pre-construction conference was held on January 21, 2004 at the project site.
3. Landrights for this project were completed by LDNR and their contract landman Dan S. Collins & Associates.

Agreements for the project were taken with Gulf Outlet Lands; the Bishop of Mobile; St. Bernard Parish Government; Mereaux Land Development and Amigo Enterprises Inc. (Anthony Fernandez) a lessee to Mereaux Land Development. A letter of no objection was provided by the Louisiana Office of State Lands on November 21, 2001. An overgrazing determination statement was received from NRCS on March 21, 2002. A Section 303(e) letter was received from the USCOE on July 25, 2002.

4. Permits for this project were prepared by LDNR and submitted with St. Bernard Parish Government as the permit holder. Permits for the project were acquired from CMD (Consistency C20020555, dated February 17, 2003); USCOE (Permit # EC-20-020-2657, dated June 30, 2003), and LDEQ (Water Quality Certification WQC 021223-04/AI 105663 dated March 18, 2003). A letter from the Louisiana State Historic Preservation Officer dated March 27, 2003 stated that no known archaeological sites or historic properties will be affected by the Hopedale project. A letter from the Chitimacha Tribe of Louisiana dated February 18, 2003 was sent to the USCOE as part of the permit process requesting notification if, during the course of construction, any traditional cultural properties are discovered.

5. Construction of the Hopedale Hydrologic project was initiated by Gill's Crane and Dozer Service, Inc. of New Orleans, Louisiana on January 9, 2004 and completed on November 30, 2004 and consisted of construction of a sheet pile wall with three 84" combination (sluice/flap) gates and two 7' x 2' fish access slots with sluice gates. Construction inspection services were conducted by the LDNR New Orleans Field Office. The LDNR New Orleans Field office was supported in construction inspection services by Hydro Consultants Inc. whose tasks included inspection of project features during layout and construction and preparation of inspection reports.
6. A Monitoring Plan was developed for this project by the Monitoring Section of the Louisiana Department of Natural Resources. This plan was reviewed by the Technical Advisory Group at a TAG meeting at the LDNR in Baton Rouge, Louisiana on August 26, 2002. The monitoring plan was revised per comments at the TAG meeting and subsequently approved on August 26, 2003.
7. An Operations, Maintenance and Rehabilitation Plan was developed for this project by the Operations and Maintenance Section of the LDNR This plan was done in coordination with all of the project team members and with the St. Bernard Parish Department of Public Works. The operation protocol of the project features was included in the permits for this project. The Louisiana Department of Natural Resources entered into an agreement with the St. Bernard Parish Government to compensate them for operations of the structure in accordance with the permitted operations protocol. The Louisiana Department of Natural Resources will conduct regular inspections of the project features and will perform maintenance and rehabilitation actions in coordination with NMFS staff.

B. Project Management : The overall project management responsibility for the work performed under this grant was assigned to the Louisiana Department of Natural Resources. Specific activities accomplished through the implementation of this project include the following:

1. A grant application (including scope of services and grant application forms) was prepared and sent to NOAA for this project on August 10, 1999. NOAA approved the grant on January 11, 2000 and the grant was executed by LDNR on January 24, 2000. The first grant amendment was approved by NOAA on January 8, 2003 and executed by LDNR on January 22, 2003 extending the period of performance to allow for construction completion. The second grant amendment was approved by NOAA on January 22, 2004 and executed by LDNR on January 27, 2004 extending the period of performance to allow for construction completion.

2. Preliminary engineering for this project was completed by Guidry Beasley through a contract with the NMFS-Baton Rouge office. Final engineering services for this project were provided by BCG to LDNR. A task order for these tasks was issued on July 18, 2000. These tasks included: topographic and bathymetric surveys; geotechnical field investigation; geotechnical analysis; hydraulic and hydrologic analysis; and the development of final plans, specifications and construction documents.
3. A request for construction approval for this project was submitted and approved by the CWPPRA Technical Committee at their March 26, 2003 meeting in Baton Rouge and the CWPPRA Task Force at their April 16, 2003 meeting held in Lafayette.

V. Findings

A. Accomplishments and Findings :

1. BCG submitted final plans and specifications for this project in July 2003 for review by the CWPPRA agencies and submission to State Purchasing for bid purposes.
2. Gill's Crane and Dozer Service, Inc. of New Orleans, Louisiana constructed a sheet pile wall with three 84" combination (sluice/flap) gates and two 7' x 2' fish access slots with sluice gates in 2004.
4. Monitoring of this project continues as described in the Monitoring Report for this project.
5. Operations and Maintenance of this project continues as described in the Operations and Maintenance plan for this project.

B. Problems Encountered :

1. The original supplier of the gates for this project, whom the construction contractor based his bid and construction schedule on, went bankrupt. A new supplier had to be located and the construction schedule modified to allow for this delay.
2. The Louisiana Department of Natural Resources was not able to secure landrights on secondary water control structures at locations S2-S5. Fortunately, St. Bernard Parish Government secured funding from FEMA ; has ordered and received the screw gates; and is moving forward with a plan to implement water control structures at the four locations in 2005.

VI. Evaluation and Conclusion

The project was successful in constructing the water control structure as authorized.

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