



Coastal Protection and Restoration Authority of Louisiana

Office of Coastal Protection and Restoration

2008 Annual Inspection Report

for

LAKE CHAPEAU SEDIMENT INPUT AND HYDROLOGIC RESTORATION PROJECT (TE-26)

State Project Number TE-26
Priority Project List 3

May 16, 2008
Terrebonne Parish

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I. Introduction

The Lake Chapeau Sediment Input and Hydrologic Restoration Project encompasses 13,549 acres of intermediate and brackish marsh and open water on Point au Fer Island, in the vicinity of Lake Chapeau, located approximately 30 miles south of Morgan City, Louisiana, in Terrebonne Parish. The project area is bounded by Four League Bay to the north, Atchafalaya Bay to the west, Locust Bayou and a network of canals to the south, and Wildcat Bayou and an oil field canal to the east (Project Features Map - Appendix A).

Construction of the Lake Chapeau Sediment Input and Hydrologic Restoration Project 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 Lake Chapeau Project was approved on the third (3rd) Priority Project List.

The Lake Chapeau Hydrologic Restoration and Marsh Creation Project (TE-26) project was designed to restore the marshes west of Lake Chapeau by re-establishing a hydrologic separation between Locust Bayou and Alligator Bayou watersheds. This was partially accomplished by hydraulically dredging sediments from the Atchafalaya Bay and filling large open water areas on the interior island near Lake Chapeau. Another objective of the Lake Chapeau project was to restore the islands natural hydrologic flow patterns by constructing weirs, spoil bank gapping and maintenance dredging of natural bayous within the project area.

The property associated with the Lake Chapeau Project is owned by the Terrebonne Parish School Board, Point au Fer LLC, and the Roman Catholic Church - Arch Diocese of New Orleans.

II. Inspection Purpose and Procedures

The purpose of the annual inspection of the Lake Chapeau Sediment Input and Hydrologic Restoration Project (TE-26) is to evaluate the constructed project features to identify any deficiencies, prepare a report detailing the condition of project features and recommended corrective actions needed. Should it be determined that corrective actions are needed, the Office of Coastal Protection and Restoration (OCPR) shall provide, in report form, a detailed cost estimate for engineering, design, supervision, inspection, construction, and contingencies and an assessment of the urgency of such repairs (O&M Plan, 2002). The annual inspection report also contains a summary of past projects completed in the maintenance phase and an estimated projected 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. A summary of past operation and maintenance projects of the Lake Chapeau Project are outlined in Section IV.

The annual inspection of the Lake Chapeau Sediment Input and Hydrologic Restoration Project (TE-26) took place on April 8, 2008. The inspection included the interior plug sites 1, 3, 4, 5, 6, 7 & 9 and the corridor closure along the shoreline of the Atchafalaya Bay. In attendance were Shane Triche, Brian Babin, Daniel Dearmond and Elaine Lear from OCPR

and Cheryl Brodnax with the National Marine Fisheries Service (NMFS). All parties met at Bob's Marina in Bayou Black, Louisiana. The weather conditions included mostly cloudy skies and mild temperatures with strong winds. The annual inspection began at approximately 9:30 a.m. at rock plug site 1, continued through the remaining interior rock plug sites, and ended at 2:00 p.m. on the west bank of Four League Bay near structure No.4.

The field inspection included a complete visual inspection of the hydrologic restoration features of the project. The interior marsh creation feature of the project was not inspected due to the remote location and difficulty in accessing the area. However, we were able to access the degraded containment dikes along the old corridor to view the fill area near the shoreline closure. Due to the timber barricade system, preventing access to the rock weirs (Structures 1, 3, 5, 6, 7, & 9); the crest elevations of the rock weir were not measured. Where available, staff gauge readings were used to determine water elevations at the time of the inspection. Photographs were taken at each project feature (Appendix B - Photographs), and Field Inspection Notes were completed in the field to record measurements and deficiencies (Appendix D – Field Inspection Notes).

III. History and Project Description

Marsh loss rates throughout Point au Fer Island between 1932 and 1974 peaked at 45 acres per year and occurred as a direct result of oil exploration activities (NMFS, n.d.). The rate of interior marsh loss has decreased since that time and is currently estimated to be approximately 20 acres per year (NMFS, n.d.). Shoreline erosion along Lake Chapeau was estimated to be approximately 3 ft/yr. between 1932 and 1983 (NMFS, n.d.). Oil and gas access canals cut into the interior of Point au Fer Island have deteriorated the hydrologic separation between the Locust Bayou and Alligator Bayou watersheds and dramatically altered the island's natural drainage pattern. Sheet flow and over bank flow were drastically reduced by artificial levees, which in turn impounded marsh and led to degradation due to soil water logging (NMFS, n.d.). Due to unnatural hydrologic patterns, the abundant sediment load generated by the Atchafalaya River circulating through the island's interior have not been effectively utilized. Some other causes of land loss in this area can be contributed to natural subsidence and natural shoreline erosion (NMFS, n.d.).

The Lake Chapeau Hydrologic Restoration and Marsh Creation Project (TE-26) project involves the restoration of marshes west of Lake Chapeau to partially re-establish a hydrologic separation (land bridge) between the Locust Bayou and Alligator Bayou watersheds by utilizing sediment input by means of dredging and fill operations and restoring the islands hydrology by means of plugs/weirs, spoil bank gapping, and maintenance dredging a natural bayous (NMFS, n.d.).

The final design of the Lake Chapeau project consisted of three (3) components, with additional project features added to address problems encountered during and after construction:

1. To re-establish a land bridge between Locust Bayou and Alligator Bayou, the first component was to hydraulically dredge approximately 721,931 cubic yards of material

from the Atchafalaya Bay and spread to an average of two (2) feet to create approximately 168 acres of marsh between these two bayous (D. Burkholder, Final Report n.d.).

2. The second component of the project (hydrologic restoration) consisted of the construction of seven (7) rock weirs in manmade canals around the perimeter of Lake Chapeau and gapping existing spoil banks in one channel. The rock weirs and spoil bank gappings are designed to help restore the natural circulation and drainage pattern within the central portion of Point au Fer Island (D. Burkholder, Final Report n.d.). The principle project features of this component are:

- Site No. 1 – Rock weir – 150 linear feet (LF)
- Site No. 3 – Rock weir – 229 LF
- Site No. 4 – Rock weir – 174 LF
- Site No. 5 – Rock weir – 70 LF
- Site No. 6 – Rock weir – 145 LF
- Site No. 7 – Rock weir – 157 LF
- Site No. 9 – Rock weir – 240 LF

3. The third component of the project consisted of dredging a 6,700 foot long silted section of Locust Bayou to its original navigable depth. This was done to accommodate the increase flows resulting from the re-establishment of the island's natural drainage patterns. A total of 59,218 cubic yards of material was dredged and placed in 1.5 ft. high by 80 ft. wide spoil banks on both sides of the bayou. The spoil banks were gapped periodically so not to impede the flow of natural waterways and drainage (D. Burkholder, Final Report n.d.)

Engineering, Design and Construction Administration for the Lake Chapeau project was performed by Burk-Kleinpeter (BKI) of New Orleans, La. under contract to the Department of Natural Resources (LDNR). BKI utilized two subcontractors during the design phase of the project. T. Baker Smith, Inc. of Houma, La. performed the field surveys and Eustice Engineering Company, Inc. of Metairie, La. performed the geotechnical investigation of the weir sites. The sediment coring and geotechnical analysis of the borrow site in the Atchafalaya Bay were performed by C-K Associates, Inc. of Baton Rouge, La. and was completed through an indefinite delivery contract with NMFS. Landrights necessary for construction of the project were obtained by the LDNR and included servitude agreements with three (3) landowners: Point au Fer LLC/Archdiocese of New Orleans; Terrebonne Parish School Board; and the Louisiana Department of Wildlife and Fisheries. A letter of no objection was also obtained from the Louisiana State Lands Office for the dredging and placement of spoil material on state lands (D. Burkholder, Final Report n.d.).

Below is a timeline of significant events:

September 1995	Engineering design activities began.
September 1996	Preliminary design report and deliverables submitted by BKI
June 1997	Final Design Completed

April 1998	All landrights necessary to proceed with construction completed.
June 1998	Advertising for bids.
July 1998	Bids for construction opened.
September 1998	Notice to Proceed with construction issued to River Road Construction.
January 1999	Breach 3 repaired/ safety buoy installed (Change Order)
October 1999	Notice of Acceptance was issued by LDNR.

IV. Summary of Past Operation and Maintenance Projects

Below is a summary of maintenance projects completed since October 1999, the Notice of Acceptance date for the Lake Chapeau Sediment Input and Hydrologic Restoration Project (TE-26).

June 2000 – Repair of spoil bank breach by constructing a rock weir (breach site 3) and the repair and maintenance of five spoil bank areas by bucket dredging material in a canal located southwest of Lake Chapeau just west of plug Site No. 9. This work was performed by Johnny F. Smith Truck & Dragline Service, Inc. of Slidell, LA as part of the Point au Fer Project (TE-22) Phase III construction contract. Notice of Acceptance for this work was issued by LDNR in September 2000.

October 2004 – Maintenance project consisted of removal and replacement of existing warning buoy system with a more rigid timber barricade system at six (6) of the seven (7) rock weir locations. The timber barricade system included timber piles driven every 20 ft across the channel with 4” diameter horizontal piping connecting the vertical timber piling. Each structure was marked with warning signs and reflective tape to allow visibility at night. The project was designed by Piciolla and Associates of Larose, La. and constructed by Dupre Brothers Construction Co., Inc. of Houma, La. The project was completed in October 2004 at a total cost of \$330,745.50 (Includes: Engineering, Design, Bidding, Construction Administration, Inspection and Construction)

September 2005 – Breach repair on the south side of Structure No.3 by adding approximately 50 linear feet of rock rip rap to the south side of the structure along with articulated concrete mats under a geotextile fabric to slow future shoreline erosion and breaching. This work was performed in conjunction with maintenance work on the Point au Fer Project (TE-22), which consisted of breach closures adjacent to the rock dikes along Mobil and Transco Canals and extension of the bulkhead at Structure No. 8. This work was performed by Luhr Bros., Inc. with construction oversight services provided by Picciolla and Associates, Inc. of Larose.

Non-Maintenance Projects

November 2007 – Dedicated Dredge Program – Point au Fer Island

The Department of Natural Resources Dedicated Dredge Program was initiated in FY 98/99 and is funded 100% by the State of Louisiana through its statutorily dedicated Wetlands

Conservation and Restoration Fund. The goal of this program is to use a small, mobile hydraulic dredge to move sediment from small inland waterways within the coastal zone of Louisiana and deposit the material to nourish and/or rebuild the threatened coastal marsh that area located immediately adjacent to those waterways.

The Point au Fer Island Dedicated Dredge Project is located on Point au Fer Island between the Atchafalaya Bay and Lake Chapeau in Terrebonne Parish. The project consisted of dredging approximately 295,000 cubic yards to fill a 60 acre site including an existing linear corridor connecting the lake to the bay. Below is the project cost elements involved with construction of the Point au Fer Island Dedicated Dredge Project:

Construction Cost:	\$2,461,650
Construction Administration:	<u>\$ 107,000</u>
Total:	\$2,568,650

V. Inspection Results

Site No. 1 – Rock Weir

Overall, the rock weir appeared to be in good condition with no apparent erosion or breaching around the ends of the weir. The timber barricade system and warning signs were also in good condition with no visual signs of damage or corrosion. With the timber barricade system extending across the channel, we were unable to access the rock weir to measure water depths above the crest. However, from previous survey data collected in 2004 by Acadian Engineers, we estimated that the rock weir has settled approximately 1.39' from its original designed crest elevation. There are no indications that further settlement has occurred from the 2004 estimates. The water level at the time of the inspection, based on gauge readings at station TE26-03, was 1.45' NAVD (Appendix B, Photos 1 through 4).

Site No. 3 – Rock Weir with Boat Bay

The north side of rock weir was found to be in poor condition with a large breach from the end of the weir on the north side to the existing marsh. It is estimated that the breach is approximately 50 to 60 ft. wide. The marsh on the south side of the structure has experienced significant erosion but remains in fair condition. The installation of a rock rip rap closure and articulated mats in 2003 has provided adequate protection of the marsh shoreline on the south side. A large portion of the weir crest was below the waterline at the time of the inspection due to high tides. The 2004 survey data indicates that the rock weir has settled approximately 1.0' from the design elevation since construction (Appendix B, Photos 5 through 10).

On April 15, 2008, through a faxed vote, OCPR and NMFS received additional maintenance funding from the CWPPRA Task Force in the amount of \$326,764 for repairs to north side of Structure 3 of the Lake Chapeau Hydrologic Restoration Project. Additional authorizations for permitting were obtained by NMFS (Appendix E – Project Permits). LDNR has contracted Shaw Coastal, Inc. of Houma, in the amount of \$25,922, to perform design surveys and prepare plans and specifications for the breach closure project. The breach repair shall include an extension of the existing rock weir using rock riprap and the armorment of an additional

200 linear feet of shoreline northward of the weir to stabilize the existing shoreline. The maintenance project will likely go to bids by the end of June 2008, with construction beginning in August 2008. **Due to the additional damage to the marsh on the north side of Structure 3 resulting from Hurricanes Gustav and Ike (September 2008), the proposed breach closure and repairs were canceled.**

Site No. 4 – Rock Weir

The rock weir appeared to be in good condition with no breaching around the ends. Although there was no breaching, we did observe that the existing marsh strip, tying the structure to land, was very thin and narrow. Situated between Four League Bay and a large open body of water, there is a potential for breaching to develop should erosion continue on the south side of the structure. The timber barricade system and signage appeared to be in good condition. As reported in previous inspections, the two (2) center pilings, with signs attached to them, were found to be slightly unstable. A combination of the inadequate embedment depths and poor soil conditions could have caused the slight instability in these two (2) piling. With the lateral support provided by the two (2) horizontal steel pipe members, we do not believe that minor instability in the center piles is a cause for concern. The rock plug itself appeared to be in good condition. As determined from survey data collected in 2004 by Acadian Engineers, Inc., the average settlement along the length of the structure was approximately 1.1'. (Appendix B, Photos 11 through 16).

Site No. 5 – Rock Weir

The rock plug, tie-ins, earthen embankments, barricade system, warning signs and supports appeared to be in good condition with no visual signs of marsh erosion adjacent to the structure or damage to the barricade system. Based on the 2004 survey profile, it was determined that the rock weir had settled an average of 0.14' from the designed elevation. (Appendix B, Photos 17 through 19)

Site No. 6 – Rock Weir

Upon arriving to the location of Structure 6, it was evident that the timber barricade system had been vandalized. A ten (10) foot section of the two (2) steel pipe cross members between the center piles had been cut with a torch and were missing. It was obvious that the steel pipe sections were removed to gain access across the weir to the open bodies of water east of the structure. It is our opinion that any attempt to repair the damage to the barricade system, preventing access across the weir, would be unsuccessful due to the strong will and determination of vandals' intent on traveling this channel. Therefore, we do not recommend repairs at this time. Other than the damage to the barricade system, the rock weir, earthen embankments, warning signs and supports were in very good condition. From the 2004 profile survey of the structure, it was determined that the rock weir had settled an average of approximately 1.1 ft. from the designed elevations. (Appendix B, Photos 20 through 24)

Site No. 7 – Rock Weir

The rock weir, earthen embankments, timber barricade system and signs and supports were all in very good condition with no apparent structure damage or erosion problems. Based on a survey profile of the rock weir in 2004, the structure has settled approximately 1.7' from its designed elevation (Appendix B, Photos 25 through 30).

Site No. 9 – Rock Weir

The rock weir at this location was in good condition with no noticeable damage to the timber barricade system or erosion around the ends of the weir. Based on the 2004 survey profile of the structure, it was determined that the rock weir had settled an average of 1.7' from the designed elevation (Appendix B, Photos 31 through 34).

Dedicated Dredge Project

In November 2007, the Point au Fer Island Dedicated Dredge Project was completed and consisted of approximately 60 acres of marsh creation on the interior of the island adjacent to the original Lake Chapeau marsh creation site, including a smaller fill area located along an existing corridor from Lake Chapeau to the shoreline of the Atchafalaya Bay. With high tides present at the time of the inspection, we were able to access the shoreline near the old dredge corridor leading to the interior marsh. The containment dikes constructed on each side of the old corridor were still visible and did not appear to have settled much since construction. (Appendix B, Photos 35 through 38) The fill area inside the containment dikes was impounded with water making it difficult to assess the elevation of the fill material. GSE Associates, Inc. is currently conducting as-built field surveys of the corridor and disposal area which should be completed in late June 2008. The final survey results shall be presented in the 2009 Annual Inspection Report.

VI. Conclusions and Recommendations

Overall, the seven (7) rock weirs of the Lake Chapeau Sediment Input and Hydrologic Restoration Project (TE-26) were in fairly good condition with only minor settlement noted. Based on the elevations data provided in the 2004 Survey Report prepared by Acadian Engineers, it was determined that all of the rock weirs have experienced varying degrees of settlement. At this time, the 2004 profile surveys are the latest available elevation data in determining structure settlement. The estimated settlement of the rock weirs were determined by comparing the design elevations shown on the construction drawings with survey profile elevations outlined in the 2004 Survey Report. Since as-built drawings for this project are not available, the design elevations were used as the baseline for estimating settlement. Other than minor settlement, there is no reason to believe that the rock weirs are not performing as designed. Therefore, we are not recommending any maintenance to raise the rock weirs to the originally designed elevations at this time.

In November of 2007, OCPR was notified by monitoring staff in the Thibodaux Field Office that a large breach had developed on the north side of Structure 3. Subsequently, it was determined that breach was approximately 60' wide and 7' deep with strong tides moving through the opening. Concerned that the breach may deepen over time, OCPR and NMFS began to develop a plan for corrective actions, including the construction of a rock riprap breach closure and 200 linear foot rock revetment extending along the northern shoreline adjacent to the structure. With assistance from NMFS, an additional \$326,764 in maintenance funds was authorized by CWPPRA Task Force to proceed with the breach repair project. OCPR has contracted Shaw Coastal of Houma, La., in the amount of \$25,922, to perform design surveys, and prepare plans and specifications for bidding. It is anticipated that the

project will go to bids by the end of May followed by notice to proceed with construction sometimes in July 2008. The projected overall project budget for the breach closure project is outlined in Appendix C. **Due to the additional damage to the marsh on the north side of Structure 3 resulting from Hurricanes Gustav and Ike (September 2008), the proposed breach closure and repairs were canceled.**

Another area of concern is the marsh tie-in on the south side of Structure 4. Although there was no breaching in this area, we did observe that the existing marsh strip, tying the structure to land, was very thin and narrow. Based on the observed condition of the existing marsh and obvious erosion along the shoreline, we believe that there is a potential for breaching to develop should the shoreline continue to retreat westward. In an effort to prevent breaching, a rock riprap revetment structure can be erected along the shoreline, southward to a location where the marsh platform is higher and wider. Another alternative would be to initiate a small dredge project to pump sediment from Four League Bay to reconstruct the shoreline and marsh on the south side of the structure. Although this would be the most desirable solution, the enormous cost associated with hydraulic dredging projects makes this alternative economically unfeasible for a maintenance project. Although the potential for breaching exists, we are not recommending corrective actions at this time; however, we will continue to monitor the condition of the marsh in this area.

The most disturbing observation made during this inspection was the vandalism of the timber barricade system at Structure 6. A ten (10) foot section of the two (2) steel pipe cross members between the center piles had been cut with a torch and were missing. It was obvious that the steel pipe sections were removed to gain access across the weir to canals and open bodies of water east of the structure. Other than stationing uniform patrol officers on each side of the structure for the duration of the project life, we believe that any attempt to repair the damage to the barricade system would be unsuccessful in preventing vandalism in the future. Therefore, we are not recommending corrective actions at this time.

In closing, the sound condition of the weir structures located on the interior of the island can be attributed to the protection provided by the vast marshes surrounding the island. On the other hand, structures located along the perimeter of the island, such as Structures 3 and 4 do not have that same protection from wave action and shoreline erosion, requiring preventative maintenance to maintain the integrity of the weir structures. The area of most concern regarding erosion is the shoreline on the west bank of Four League Bay. Since Hurricanes Katrina and Rita in 2005, this area has experienced very high rates of erosion and shoreline retreat. As the shoreline retreats, the marsh tie-ins on both sides of Structures 3 and 4 have become very thin and are susceptible to breaching. In the case of Structure 3, a large breach approximately 60' wide and 7' deep has developed on the north side of the structure. In 2003, the south side of Structure 3 was reinforced with a rock dike and articulated concrete mats to slow erosion around the weir. In the short term, reinforcement of the marsh tie-ins by extending the rock weir and hardening the existing shoreline adjacent to the structure has been effective. However, in the long term, as the shoreline continues to erode, a larger scale project will be required to stabilize the west bank of Four League Bay in the vicinity of Structures 3 and 4. Based on the documented erosion in this area, we are certain that maintenance of these structures will continue to be problematic unless preventative measures are taken. In our

opinion, the maintenance funds provided by CWPPRA for maintenance and rehabilitation of the constructed project features are not intended for such large scale projects. Therefore, it is recommended that other sources of funding be acquired to address the serious erosion problems in this area. In the meantime, with concurrence from NMFS, OCPR will continue to address maintenance issues involving Structures 3 and 4 by requesting additional maintenance funding through the CWPPRA process.

References:

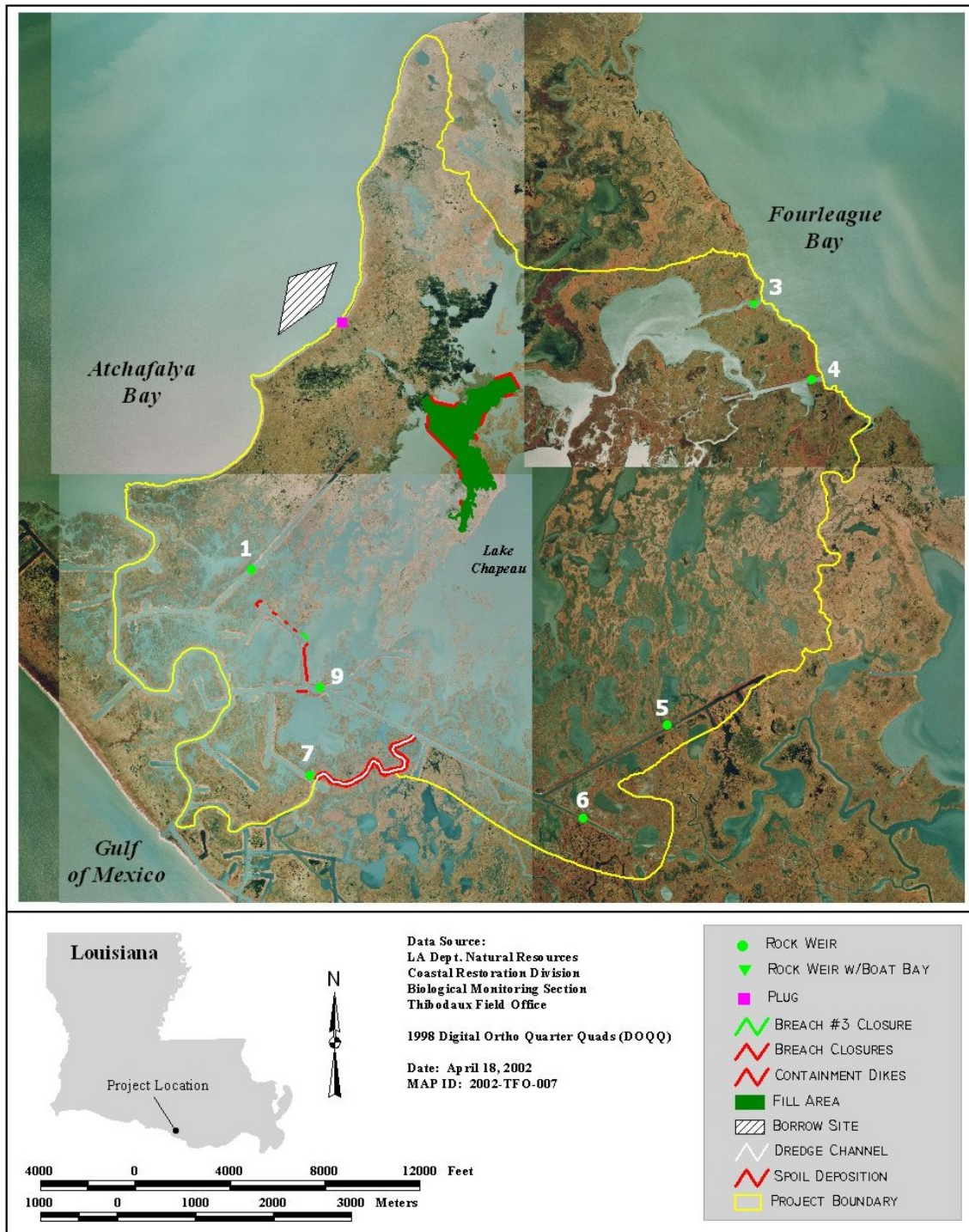
National Marine Fisheries n.d., Coastal Wetlands Planning, Protection, and Restoration Act: Proposed Project Information Sheet. 9 pp.

D. Burkholder, n.d., Final Report, the Louisiana Department of Natural Resources, Baton Rouge, Louisiana.

Appendix A

Project Features Map

2008 Annual Inspection Report
 Lake Chapeau Sediment Input and Hydrologic Restoration
 State Project No. TE-26



Appendix B

Photographs



Photo No. 1 - view of (Structure 1) on the interior of Lake Chapeau looking northeast.



Photo No. 2 – view of timber barricade system and rock weir (Structure 1) looking northeast.



Photo No.3 – view of rock weir blanket on the west marsh bank and timber barricade system (Structure 1).



Photo No. 4 – view of rock weir blanket on the east marsh bank and timber barricade system (Structure 1).



Photo No. 5 – view of southern end of rock weir and marsh tie-in (Structure 3).



Photo No. 6 – view of northern end of rock weir adjacent to existing marsh breach (Structure 3)



Photo No.7 – view of rock weir and boat bay left of existing signage (Structure 3)



Photo No. 8 – view of marsh breach on the north side of the rock weir at Structure 3.



Photo No. 9 – view of rock weir and articulated mats on the south side of Structure 3.



Photo No. 10 – view of marsh breach located on the northern end of the rock weir (Structure 3).



Photo No. 11 – view of rock weir to marsh tie-in and timber barricade system on the southern end of Structure 4.



Photo No. 12 - a view of the existing marsh to rock tie-in and barricade system on the southern end of Structure 4.



Photo No. 13 – view of rock weir to marsh tie-in on the north side of Structure 4.



Photo No. 14 – view of rock weir to marsh tie-in on the south side of Structure 4.



Photo No. 15 – an overall view of the rock weir and timber barricade system at Structure 4.



Photo 16 – view of the southern end of the rock weir and barricade system on the north side of Structure 4.



Photo No. 17 – an overall view of the rock weir and barricade system (Structure 5).



Photo No. 18 – view of the southwest side of the rock weir and barricade system (Structure 5).



Photo No. 19 – view of the northeast side of the rock weir and barricade system (Structure 5).



Photo No. 20 – view of the right center section of timber barricade system (Structure 6). The steel pipes were cut with torch.



Photo No. 21 – view of the left center section of timber barricade system (Structure 6). The steel pipes were cut with torch.



Photo No. 22 – view of the southern end of the rock weir and timber barricade system (Structure 6).



Photo No. 23 – view of the northern end of the rock weir and timber barricade system (Structure 6).



Photo No. 24 – overall view of the timber barricade system and rock weir (Structure 6).



Photo No.25 – view of the southeastern end of the rock weir and barricade system (Structure 7).



Photo No.26 – view of the northwestern end of the rock weir and barricade system (Structure 7).



Photo No.27 – view of the barricade system and rock weir on the southeastern end of Structure 7.



Photo No.28 – view of the northern end of the rock weir and barricade system on the northwest side of Structure 7.



Photo No. 29 – an overall view of rock weir and timber barricade system (Structure 7) looking southeast.



Photo No. 30 – an overall view of the rock weir and timber barricade system (Structure 7) looking southeast.



Photo No. 31 – view of the southern end of the rock weir and timber barricade system (Structure 9).



Photo No.32 – view of the northern end of rock weir and timber barricade system (Structure 9).



Photo No.33 – view of the timber barricade system on the eastern and western side of the rock weir looking east.



Photo No.34 – overall view of the rock weir and barricade system (Structure 9) looking east.



Photo No.35 – Earthen plug at the entrance of the old corridor along the shoreline of the east bank of the Atchafalaya Bay.



Photo No. 36 – the access corridor used in the construction of the Point au Fer Island Dedicated Dredge Project completed in 2007.



Photo No. 37 - view of the access corridor used in the construction of the Point au Fer Island Dedicated Dredge Project completed in 2007.



Photo No. 38 – view of containment levees along the old corridor to the Lake Chapeau disposal area. Containment was constructed during the Point au Fer Island Dedicated Dredge Project.

Appendix C

Three Year Budget Projection

Lake Chapeau Marsh Creation/ Hydrologic Restoration/ TE-26 / PPL 3				
Three-Year Operations & Maintenance Budgets 07/01/2008 - 06/30/11				
Project Manager	O & M Manager	Federal Sponsor	Prepared By	
Brian Babin	Shane Triche	NMFS	Brian Babin	
	2008/2009	2009/2010	2010/2011	
Maintenance Inspection	\$ 5,569.00	\$ 5,736.00	\$ 5,908.00	
Structure Operation				
Administration	\$13,000.00	\$ 2,000.00	\$ 2,060.00	
Maintenance/Rehabilitation				
08/09 Description: Breach repair adjacent to Structure No.3				
E&D	\$26,000.00			
Construction	\$493,750.00			
Construction Oversight	\$15,000.00			
Sub Total - Maint. And Rehab.	\$ 534,750.00			
09/10 Description: Secondary Monument Adjustment				
E&D				
Construction		\$ 10,000.00		
Construction Oversight				
Sub Total - Maint. And Rehab.		\$ 10,000.00		
10/11 Description:				
E&D				
Construction				
Construction Oversight			\$ -	
		Sub Total - Maint. And Rehab.	\$ -	
	2008/2009	2009/2010	2010/2011	
Annual O&M Budgets	\$ 553,319.00	\$ 17,736.00	\$ 7,968.00	
O & M Budget (3 yr Total)			\$579,023.00	
Unexpended O & M Funds (includes \$326,736 request this year)			\$579,023.00	
Remaining O & M Budget (Projected)			\$0.00	

OPERATIONS & MAINTENANCE BUDGET WORKSHEET

Project: TE-26 Lake Chapeau Marsh Creation and Hydrologic Restoration

FY 08/09 –

Administration	\$ 0
O&M Inspection & Report	\$ 5,569
Operation:	\$ 0
Maintenance:	\$547,750

Operation and Maintenance Assumptions: Includes an unplanned maintenance event to repair a breach adjacent to Structure No. 3. Method of repair includes plugging the breach with rock rip rap and extending the rock weir northward approximately 200 ft. to stable marsh.

Construction Cost:	Mobilization and Demobilization:	\$112,150
	Clearing and Grubbing:	\$ 10,000
	DOTD Class 250 lb. rip rap:	\$258,750
	(2,875 tons @ \$90/ ton)	
	Geotextile Fabric:	\$ 14,100
	(1,410 sq. yd. @ \$10/sp.yd)	
	Sub-Total Construction:	\$395,000
	25% contingency:	<u>\$ 98,750</u>
	Total Estimated Construction Cost:	\$493,750
Surveying, Engineering and Design:		\$ 26,000
Construction Oversight:		\$ 15,000
LDNR Construction Administration:		\$ 5,000
NMFS Construction Administration:		<u>\$ 8,000</u>
Overall Project Budget for Breach Repair (Structure No.3):		\$547,750

FY 09/10 –

Administration	\$ 2,000
O&M Inspection & Report	\$ 5,736
Operation:	\$ 0
Maintenance:	\$ 10,000

Operation and Maintenance Assumptions: \$10,000 for adjustment of vertical and horizontal control of two (2) secondary monuments located within the Lake Chapeau Project area. NMFS administration: \$2,000.

FY 10/11 –

Administration	\$ 2,060
O&M Inspection & Report	\$ 5,908
Operation:	\$ 0
Maintenance:	\$ 0

Operation and Maintenance Assumptions:

NMFS Administration: 2,060

Appendix D

Field Inspection Notes

MAINTENANCE INSPECTION REPORT CHECK SHEET					
Project No. / Name: TE-26 Lake Chapeau Marsh Creation				Date of Inspection: <u>04/08/2008</u>	
Structure No. Site No. <u>1</u>				Inspector(s): <u>S. Triche, B. Babin, D. Dearmond, E. Lear and C. Brodnax</u>	
Structure Description: <u>150 linear ft. rock plug</u>				Water Level Inside: <u>N/A</u> Outside: <u>N/A</u>	
Type of Inspection: <u>Annual</u>				Weather Conditions: <u>Partly Cloudy, Mild Temps and Strong Winds</u>	
Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
Rock Rip-Rap	Good	Some settlement		1 thru 4	Observation: Structure was in good condition with suspected settlement of the rock weir
Signage/Supports	Good				Timber Barracade system and signage was in good condition.
Warning Capsule Buoys	Removed in 2004				Remarks: From the survey profile performed in 2004 by Acadian Engineers, it is estimated that the rock weir had settled an average of 1.4ft since construction. The comparison was made between the 2004 survey data and the design elevations. No as-built elevations were collected.
Earthen Embankment	Good				
Timber Barracade System	Good		None		The existing water gage located near the site (TE-26-03) indicated that the water elevation at the time of the inspection was at 1.45' NAVD at approximately 9:30 a.m.

MAINTENANCE INSPECTION REPORT CHECK SHEET					
Project No. / Name: TE-26 Lake Chapeau Marsh Creation				Date of Inspection: <u>04/08/2008</u>	
Structure No. Site No. <u>3</u>				Inspector(s): <u>S. Triche, B. Babin, D. Dearmond, E. Lear and C. Brodnax</u>	
Structure Description: <u>230 linear ft. rock plug</u>				Water Level Inside: <u>N/A</u> Outside: <u>N/A</u>	
Type of Inspection: <u>Annual</u>				Weather Conditions: <u>Partly Cloudy, Mild Temps and Strong Winds</u>	
Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
Rock Rip-Rap	Good			5 thru 10	Observations: The structure at site no.3 appears to be in poor condition. A large breach has developed on the north side of the rock weir. The breach appears to be approximately 50 to 60 feet wide and 6 to 7 ft. deep. LDNR has contracted Shaw Coastal to engineer and design the breach repair. Design surveys are completed with plans and specifications to be submitted in mid May 2008.
Signage/Supports	Good				The repair shall included closing the breach using rock rip rap and a rock revetment structure extending approximately 200' north of the breach to a more stable marsh
Timber Barracade System	not installed at this location				All signs and supports are in good condition.
Earthen Embankment	Poor	Breach on north side of structure			Remarks: From the June 2004 survey of this structure, it was determined that the rock weir had settled approximately 1.0' since construction. A comparison between the 2004 surveys and design elevations were made to determine settlement.

MAINTENANCE INSPECTION REPORT CHECK SHEET					
Project No. / Name: TE-26 Lake Chapeau Marsh Creation				Date of Inspection: <u>04/08/2008</u>	
Structure No. Site No. <u>4</u>				Inspector(s): <u>S. Triche, B. Babin, D. Dearmond, E. Lear and C. Brodnax</u>	
Structure Description: <u>175 linear ft. rock plug</u>				Water Level Inside: <u>N/A</u> Outside: <u>N/A</u>	
Type of Inspection: <u>Annual</u>				Weather Conditions: <u>Mostly Cloudy, Mild Temp and Strong Winds</u>	
Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
Rock Rip-Rap	Good			11 thru 16	Observations:
Signage/ Supports	Good				The rock plug, barricade system, warning signs and supports were all in good condition
Warning Capsule	Removed in 2004				The earthen embankments were in fair condition. Most notable, the existing marsh on the south side of the structure where the rock weir terminates appears to be low and very thin. With a large area of open water on the interior and Four League Bay on the exterior, further erosion of this area will likely result in breaching of the rock rock weir on the south side of the structure.
Eathen Embankment	Fair				Remarks:
Timber Barrade System	Good				As noted in previous inspections, The two timber piling supporting the barricade system and signage in the center of the channel were found to be a little unstable. This is due to the piling being located in an existing channel where the embedment of the piling is not as deep. At this time, we did not notice any change from previous inspections. DNR will continue to monitor the stability of the center piling.
					From the 2004 maintenance surveys, we determined that the rock weir has settled an average of 1.1 ft. Comparison was made between the 2004 surveys and design elevations.

MAINTENANCE INSPECTION REPORT CHECK SHEET					
Project No. / Name: TE-26 Lake Chapeau Marsh Creation				Date of Inspection: <u>04/08/2008</u>	
Structure No. Site No. <u>5</u>				Inspector(s): <u>S. Triche, B. Babin, D. Dearmond, E. Lear and C. Brodnax</u>	
Structure Description: <u>70 linear ft. rock plug</u>				Water Level Inside: <u>N/A</u> Outside: <u>N/A</u>	
Type of Inspection: <u>Annual</u>				Weather Conditions: <u>Mostly Cloudy, Mild Temps and Strong Winds</u>	
Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
Rock Rip-Rap	Good	Some settlement		17 thru 19	Observation:
Signage/ Supports	Good				The rock weir, earthen tie-ins, embankments, barricade system, warning signs and supports all appeared to be in good condition. Due to Structure 5's location, interior island, erosion of the existing marsh is not a problem.
Warning Capsule	Removed in 2004				Remarks:
Earthen Embankment	Good				As indicated from the 2004 maintenance survey, it was determined that the rock weir has settled an average of 0.14' from the original design elevation of -0.14 NAVD.
Timber Barricade System	Good				No as-built drawings were prepared for this project.

MAINTENANCE INSPECTION REPORT CHECK SHEET					
Project No. / Name: TE-26 Lake Chapeau Marsh Creation			Date of Inspection: <u>04/08/2008</u>		
Structure No. Site No. <u>9</u>			Inspector(s): <u>S. Triche, B. Babin, D. Dearmond, E. Lear and C. I Brodnax</u>		
Structure Description: <u>240 linear ft. rock plug</u>			Water Level Inside: <u>N/A</u> Outside: <u>N/A</u>		
Type of Inspection: <u>Annual</u>			Weather Conditions: <u>Partly Cloudy, Mild Temps and Strong Winds</u>		
Item	Condition	Pysical Damage	Corrosion	Photo #	Observations and Remarks
Rock Rip-Rap	Good			31 thru 34	Observations: The rock weir, tie-ins, earthen embankments, timber barricade system, signs and supports were all in good condition with no apparent damage or breaches.
Signage/ Supports	Good				The warning signs marking the location of the rock weir were nearly submerged.
Warning Capsule	Removed in 2004				The tides at the time of the inspection were approximately 1.5' NAVD.
Buoys					
Earthen Embankment	Good				Remarks: From the profile survey of the structure in 2004, it was estimated that the structure has settled approximately 1.7' since construction. Settlement was determined by comparing the average survey profile and design elevations. No as-builts were taken after construction.
Timber Barricade System	Good				

Appendix E

Project Permits – Lake Chapeau Structure No.3 Breach Repairs



DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT CORPS OF ENGINEERS

P.O. BOX 60267

NEW ORLEANS, LOUISIANA 70160-0267

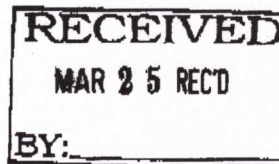
REPLY TO
ATTENTION OF:

March 20, 2008

Operations Division
Central Evaluation Section

SUBJECT: MVN 2008-803-CY

Mr. Richard Hartman
National Marine Fisheries Service
c/o LSU Center for Wetland Resources
Baton Rouge, Louisiana 70803-7535



Dear Mr. Hartman:

The proposed work, to install and maintain rip-rap along the shoreline and to repair an existing breach at Weir No. 3 (CWPPRA TE-26, Lake Chapeau Marsh Creation and Hydrologic Restoration Project, original permit number WH-19-970-4707 issued April 9, 1998), on Point au Fer Island, in Terrebonne Parish, as shown on the attached drawings, is authorized under **Category I** of the **Programmatic General Permit** provided that all conditions of the permit are met.

This authorization has a blanket water quality certification from the Louisiana Department of Environmental Quality (DEQ), Office of Environmental Services. As such, no additional authorization from DEQ is required.

However, prior to commencing work on your project, you must obtain approvals from state and local agencies as required by law and by terms of this permit. These approvals include, but are not limited to, a permit or waiver from the Coastal Management Division of the Louisiana Department of Natural Resources.

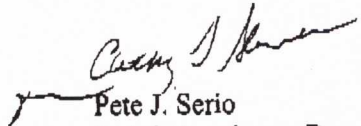
The following special conditions are being made a part of this authorization:

1. The permittee shall limit dredge and fill activities to areas essential to the project.
2. If the proposed project requires any additional work not expressly permitted herein, or impacts any wetlands other than the areas indicated on the attached drawings, the permittee must apply for an amendment to this authorization prior to commencement of work.

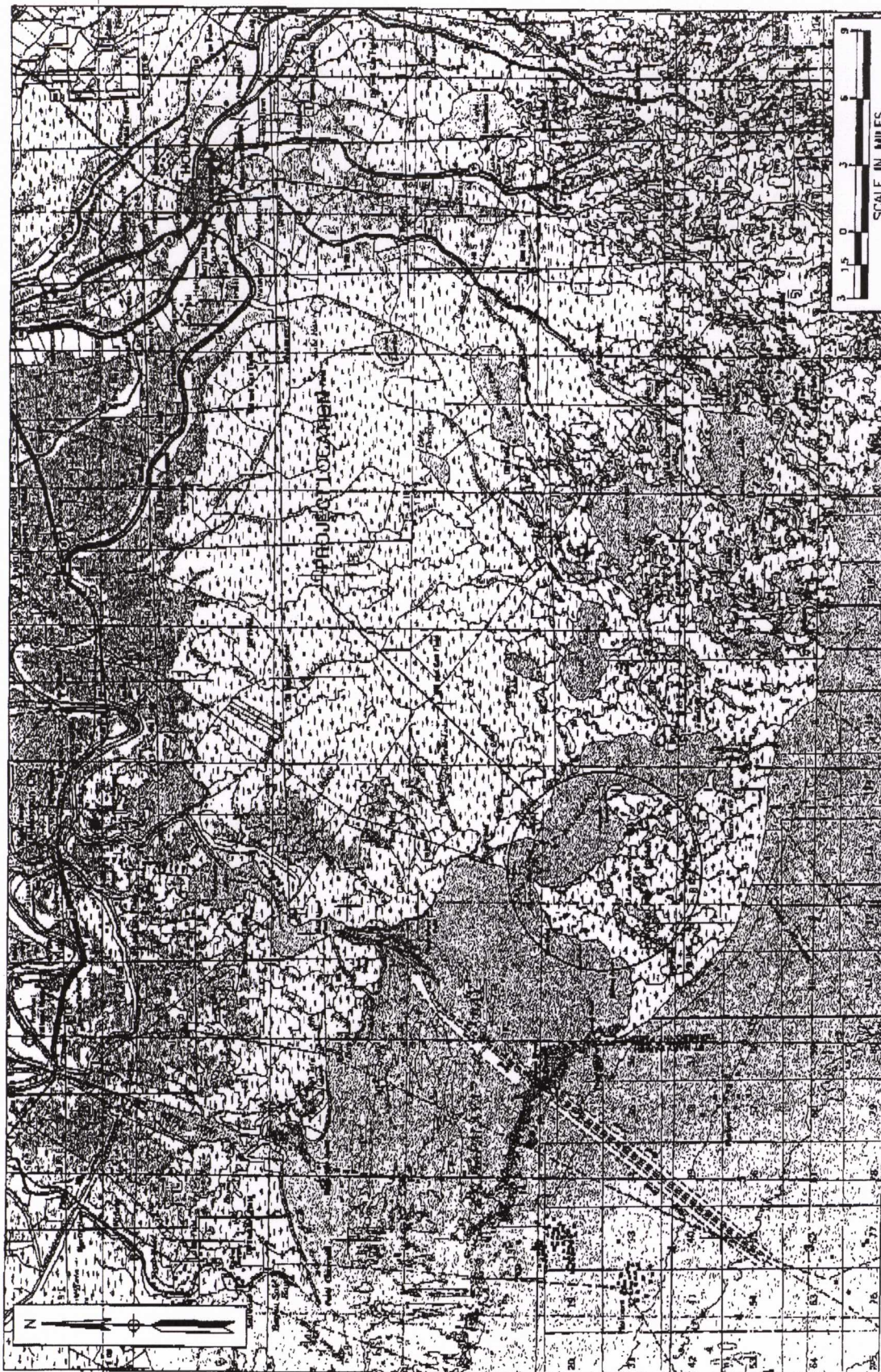
If the work is initiated within two (2) years of the date of this letter, the authorization remains valid for a total of five (5) years from the date of this letter. If the work is not initiated within two (2) years, this authorization becomes null and void.

Should you have any further questions concerning this matter, please contact John M. Herman of this office at (504) 862-1581.

Sincerely,


Pete J. Serio
Chief, Regulatory Branch

Enclosures



APPLICATION BY:
U. S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION
847 NORTH 3RD STREET
BATON ROUGE, LOUISIANA 70802

Lake Chapreau Marsh Creation
and Hydrologic Restoration Project
WEIR No. 3 BREACH REPAIRS

WEIR No. 3
PROJECT VICINITY

DRAWN BY: S. TRICHE

DESIGNED BY: B. BARN

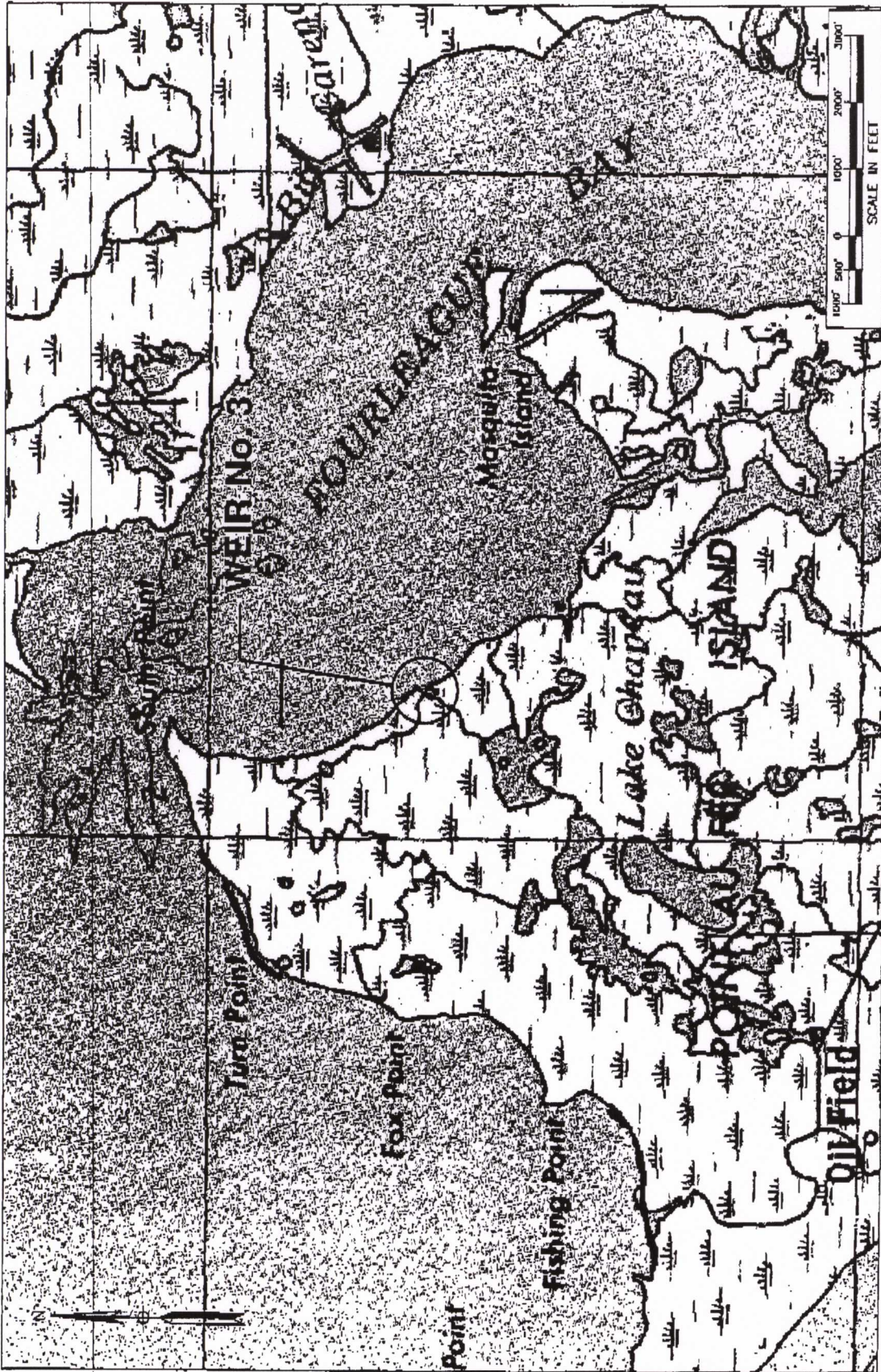
APPROVED BY: D. BLANKHOLTER

STATE PROJECT NUMBER: TE-26

FEDERAL PROJECT NUMBER: PTE-13/26/33

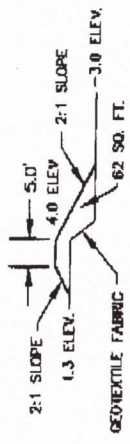
DATE: FEBRUARY 2006

SHEET 1 OF 4

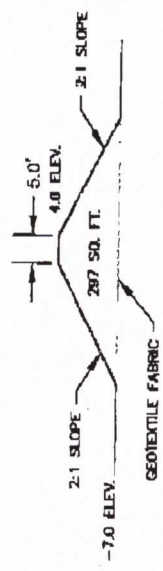


APPLICATION BY: U. S. Department of Commerce National Oceanic and Atmospheric Administration National Marine Fisheries Service	LOUISIANA DEPARTMENT OF NATURAL RESOURCES COASTAL ENGINEERING DIVISION 817 NORTH 3RD STREET BAYOU LA PRAIRIE, LOUISIANA 70002	Lake Chapadeau Marsh Creation and Hydrologic Restoration Project WEIR No. 3 BREACH REPAIRS	WEIR No. 3 PROJECT LOCATION
DRAWN BY: S. BRICH	DESIGNED BY: B. BARN	STATE PROJECT NUMBER: TE-26	DATE: FEBRUARY 2008
APPROVED BY: D. BURKHOLDER		FEDERAL PROJECT NUMBER: PIE-23/28A/33	SHEET 2 OF 4





SHORELINE PROTECTION
TYPICAL SECTION 2:1 SLOPE
N.T.S.



-7.0 ELEVATION
TYPICAL SECTION - 2:1 SLOPE
N.T.S.

APPLICATION BY U. S. Department of Commerce National Oceanic and Atmospheric Administration National Marine Fisheries Service	LOUISIANA DEPARTMENT OF NATURAL RESOURCES COASTAL ENGINEERING DIVISION 417 N. STATE STREET BATON ROUGE, LOUISIANA 70802	Lake Chaparral Marsh Creation and Hydrologic Restoration Project WEIR No. 3 BREACH REPAIRS	WEIR No. 3 SECTIONS
DRAWN BY: S. TRICIC	DESIGNED BY: B. BAGBY	STATE PROJECT NUMBER: TC-26 FEDERAL PROJECT NUMBER: PTE-23/26A/33	DATE: FEBRUARY 2008 SHEET # OF 4

PGP SPECIAL CONDITIONS

Rev 06/2007

1. Activities authorized under this programmatic general permit (PGP) shall not be used for piecemeal work and shall be applied to single and complete projects. All components of a single and complete project shall be treated together as constituting one action. Multi-phased projects shall be treated as constituting one single and complete project. This general permit shall not be used for any activity that is part of an overall project for which an individual permit is required.
2. No activity is authorized under this general permit which may adversely affect significant cultural resources listed or eligible for listing in the National Register of Historic Places until the requirements for Section 106 of the National Historic Preservation Act are met. Upon discovery of the presence of previously unknown historic and/or prehistoric cultural resources, all work must cease and the permittee must notify the State Historic Preservation Office and the Army Corps of Engineers, New Orleans District Regulatory Branch (CEMVN). The authorization is suspended until it is determined whether or not the activity will have an adverse effect on cultural resources. The authorization may be reactivated or modified through specific conditions if necessary, if it is determined that the activity will have no adverse effect on cultural resources. The CEMVN-PGP authorization will be revoked if it is determined that cultural resources would be adversely affected, and an individual permit may be necessary.
3. The Chitimacha Tribe of Louisiana has stated that the project area is part of the aboriginal Chitimacha homelands. If during the course of work at the site, prehistoric and/or historic aboriginal cultural materials are discovered, the applicant will contact the Chitimacha Tribe of Louisiana at P.O. Box 661, Charenton, LA 70523, and CEMVN. CEMVN will initiate the required Federal, State, and Tribal coordination to determine the significance of the cultural materials and the need, if applicable, for additional cultural resource investigations.
4. There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein. The permittee will, at his or her expense, install and maintain any safety lights, signals, and signs prescribed by the United States Coast Guard, through regulations or otherwise, on authorized facilities or on equipment used in performing work under the authorization.
5. No activity may substantially disrupt the movement of those species of aquatic life indigenous to the waterbody, including those species which normally migrate through the area, unless the activity's primary purpose is to block or impound water.
6. If the proposed activity involves the installation of aerial transmission lines, submerged cable, or submerged pipelines across navigable waters of the United States the following is applicable:

The National Ocean Service (NOS) has been notified of this authorization. You must notify NOS and this office in writing, at least two weeks before you begin work and upon completion of the activity authorized by this permit. Your notification of completion must include a drawing which certifies the location and configuration of the completed activity (a certified permit drawing may be used). Notification to NOS will be sent to the following address: National Ocean Service, Office of Coast Survey, N/CS261, 1315 East West Highway, Silver Springs, Maryland 20910-3282.

7. For pipelines under an anchorage or a designated fairway in the Gulf of Mexico the following is applicable:

The National Ocean Service has been notified of this authorization. You must notify NOS and this office in writing, at least two weeks before you begin work and upon completion of the activity authorized by this permit. Within 30 days of completion of the pipeline, 'as built' drawings certified by a professional engineer registered in Louisiana or by a registered surveyor shall be furnished to this office, the U.S. Coast Guard, Sector New Orleans Command Center, 201 Hammond Highway, Metairie, Louisiana 70005, and to the Director, National Ocean Service, Office of Coast Survey, N/CS261, 1315 East West Highway, Silver Springs, Maryland 20910-3282. The plans must include the location, configuration and actual burial depth of the completed pipeline project.

8. If the proposed project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.) in the waterway, you are advised to notify the U.S. Coast Guard for their determination as to the need for a Notice to Mariners. Notification, with a copy of your permit approval and drawings, should be mailed to the U.S. Coast Guard, Sector New Orleans Command Center, 201 Hammond Highway, Metairie, Louisiana 70005, about 1 month before you plan to start work. Telephone inquiries can be directed to (504) 846-5923.

9. All activities authorized herein shall, if they involve, during their construction or operation, any discharge of pollutants into waters of the United States, be at all times consistent with applicable water quality standards, effluent limitations and standards of performance, prohibitions, pretreatment standards and management practices established pursuant to the Clean Water Act (PL 92-500: 86 Stat 816), or pursuant to applicable state and local laws.

10. Substantive changes to the Louisiana Coastal Resources Program may require immediate suspension and revocation of this permit in accordance with 33 CFR 325.7.

11. Irrespective of whether a project meets the criteria of this permit, the Corps of Engineers retains discretionary authority to require an individual Department of the Army permit when circumstances of the proposal warrant this requirement.

12. Any authorization granted under this permit may be either modified, suspended, or revoked in whole or in part if the Secretary of the Army or his authorized representative determines that there has been a violation of any of the terms or conditions of this permit or that such action would otherwise be in the public interest.

13. The Corps of Engineers may suspend, modify, or revoke this general permit if it is found in the public interest to do so.

14. Activities proposed for authorization under the PGP must comply with all other necessary federal, state, and/or local permits, licenses, or approvals. Failure to do so would result in a violation of the terms and conditions of CEMVN-PGP.

- [illegible]

cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

24. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

25. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of the find. We will initiate the Federal and State coordination required to determine if the discovery warrants a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

26. If you sell the property associated with this permit, you must provide this office with a copy of the permit and a letter noting your agreement to transfer the permit to the new owner and the new owners agreement to accept the permit and abide by all conditions of the permit. This letter must be signed by both parties.

27. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit.

28. Many local governing bodies have instituted laws and/or ordinances in order to regulate dredge and/or fill activities in floodplains to assure maintenance of floodwater storage capacity and avoid disruption of drainage patterns that may affect surrounding properties. If your project involves dredging and/or placement of fill, you must contact the local municipal and/or parish governing body regarding potential impacts to floodplains and compliance of your proposed activities with local floodplain ordinances, regulations or permits.

29. If the proposed work includes the installation of pipeline(s) in waterways, the permittee will maintain the burial depth below the mudline, as shown on the attached drawings. Maintenance operations under this permit include lowering the pipeline(s) to conform to erosive changes of the mudline contour. Burial of the pipeline(s) below the elevation shown on the drawings is authorized for maintenance of the required burial depth or if erosion is expected at the site.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE



FACSIMILE TRANSMITTAL FORM

NATIONAL MARINE FISHERIES SERVICE

HABITAT CONSERVATION DIVISION - BATON ROUGE BRANCH

c/o Louisiana State University, Baton Rouge, LA 70803-7535

DELIVER TO:

by Maria

(337) 281-2106

FROM:

RICHARD HARTMAN
NATIONAL MARINE FISHERIES SERVICE
(225) 389-0508 ext 203
(225) 389-0506 fax
Richard.Hartman@noaa.gov

DATE:

NUMBER OF PAGES:

_____ (plus transmittal form)

SUBJECT:

COMMENTS:

BOBBY JINDAL
GOVERNOR

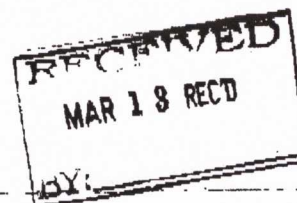


SCOTT A. ANGELLE
SECRETARY

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL RESTORATION AND MANAGEMENT

March 11, 2008

Richard Hartman
NOAA
National Marine Fisheries Service
Louisiana State University
Baton Rouge, Louisiana 70803



RE: **C19970313, Coastal Zone Consistency Modification**
National Marine Fisheries Service
Direct Federal Action
Proposed repair of breach and Wier # 3 on Point au Fer Island, Lake Chapeau Marsh
Creation and Hydrologic Restoration CWPPRA Project TE-26, **Terrebonne Parish,**
Louisiana

Dear Mr. Hartman:

The above referenced maintenance has been reviewed for consistency with the approved Louisiana Coastal Resources Program (LCRP) as required by Section 307 of the Coastal Zone Management Act of 1972, as amended. The maintenance activity, as proposed in the application, is consistent with the LCRP.

If you have any questions concerning this determination please contact Brian Marcks of the Consistency Section at (225)342-7939 or 1-800-267-4019.

Sincerely yours,

Jim Rives
Administrator

JR/GD/bgm

cc: Pete Serio, COE-NOD
Dave Burkholder, CED
Rod Pierce, CMD FI
Venise Ortego, LDWF
Thomas Griggs, LDEQ
James Miller, Terrebonne Parish

Coastal Management Division • Post Office Box 44487 • Baton Rouge, Louisiana 70804-4487
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