OPERATION, MAINTENANCE, AND REHABILITATION
PLAN FOR THE
GIWW / CLOVELLY PROJECT
BA-02

JULY 30, 2002

USDA NRCS
Natural Resources Conservation Service
OPERATION, MAINTENANCE, AND REHABILITATION PLAN FOR GIWW TO CLOVELLY HYDROLOGIC RESTORATION
BA-02

JULY 30, 2002

Prepared by:
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OPERATION, MAINTENANCE, AND REHABILITATION PLAN

GIWW TO CLOVELLY HYDROLOGIC RESTORATION

(BA-02)

The Louisiana Department of Natural Resources (LDNR) and the Natural Resources Conservation Service (NRCS) agree to carry out the terms of this Operation, Maintenance, Repair, and Rehabilitation Plan (hereinafter referred to as the “Plan”) of the accepted, completed project features in accordance with the Cost Sharing Cooperative Agreement 68-7217-4-57, DNR Agreement No. 25030-93-11 dated November 13, 1992 (Attachment I).

The project features covered by this plan are inclusive of and are identified as the GIWW to Clovelly Hydrologic Restoration Project (BA-02). The intention of the provisions of this plan is to maintain this project in a condition that will provide the anticipated benefits that the project was based on. There is no requirement that this project function to any standard beyond the economic life; except that it is not left as a hazard to navigation or a detriment to the environment.

Construction of the GIWW to Clovelly 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 GIWW to Clovelly Project was approved on the first Priority Project List.


1. PROJECT DESCRIPTION, PURPOSE, AND LOCATION

The GIWW to Clovelly Hydrologic Restoration Project consists of 14,948 acres (6,049 ha) located in the Barataria Basin near the Gulf Intracoastal Waterway (GIWW) in Lafourche Parish, Louisiana. The project is bounded by the Gulf Intracoastal Waterway to the north and to the northeast, Bayou Lafourche to the west, Superior Canal to the south, Bayou Perot, Little Lake and Bayou L’Ours to the east (Attachment II).

The GIWW to Clovelly Hydrologic Restoration Project involves the installation and maintenance of structures in 2 phases. Phase I structures were completed in November 1997 and Phase II structures were completed in October 2000. These structures were designed to reduce the
adverse tidal effects in the project area and promote freshwater introduction to better utilize available freshwater and sediment retention. If these objectives are met, it is anticipated that the rate of shoreline erosion will be reduced and a hydrologic regime, conductive to sediment and nutrient deposition, will encourage the re-establishment of emergent and submergent vegetation in eroded areas to a more historic low energy environment.

Phase I, Construction Unit No. 1, has a twenty-year (20 year) economic life which began in November 1997 and Phase II, Construction Unit No. 2, begins its 20 year economic life in October 2000.

The principal project features of Construction Unit No. 1 include:

- Site 2 - Fixed crest rock weir with boat bay.
- Site 4 - Fixed crest rock weir with boat bay.
- Site 7 - Fixed crest rock weir with boat bay.
- Site 8 - Rock rip rap channel plug.
- Site 43 - Rock rip rap channel plug.
- Site 91 - Rock plug with culvert and flap gate.
- Site 8A - Rock rip rap channel lining.
- Site 4A - Rock rip rap channel plug.

The principal project features of Construction Unit No. 2 include:

- Site 1 - Fixed crest rock weir with boat bay.
- Site 4B - Rock rip rap channel plug.
- Site 14A - Fixed crest rock weir with barge bay.
- Site 35 - Variable crest weir, water control structure.
- Site 90 - Rock rip rap channel plug.
- 5,665 LF Lake Rim Restoration.
- 5,023 LF Rock Bank Stabilization
- 11,711 LF Earthen Bank Stabilization

2. **CONSTRUCTION COMPLETION**

The GIWW to Clovelly Project Completion Report is included in Attachment III of this Plan and the “As-Built” drawings are included in Appendix IV. Within this completion report is a summary of information and significant events including: project personnel; final as-built project features and benefited acres; construction cost and CWPPRA project estimates; construction oversight costs; construction activities and change orders; pipeline and utility crossing owner information; and other significant milestone dates and comments.

The project “as-built” construction drawings are updated with all field changes and modifications that occurred.
3. **PROJECT PERMITS**

Project permit applications were completed and submitted to appropriate agencies and permits were received prior to construction. These permits and permit amendments are included in Attachment V. Provisions for renewal of certain Federal and State Permits may be required.

4. **ITEMS REQUIRING MAINTENANCE AND REHABILITATION**

The following completed structural components project features jointly accepted by LDNR and NRCS will require operation, maintenance, repair, and/or rehabilitation throughout the 20 year life of the project.

**Phase I. Construction Unit No.1**

A. **Site/Structure #2** - 200 linear ft. rock riprap fixed crest weir with a 15 linear ft. boat bay located south of the Clovelly Canal, west of Bay L’Ours and northeast of Superior Canal and Site 91. The crest of the weir is set at 2.3 ft. The invert of the boat bay is set at -5.1 ft. Aluminum warning signs (4 each) supported by pipes, gussets and base plates are galvanized or painted.

B. **Site/Structure #4** - 160 linear ft. rock riprap fixed crest weir with a 20 ft. boat bay located south of Clovelly Canal, west of Bay L’Ours, just north of Site 2, and northeast of Superior Canal and Site 91. The crest of the weir is set at 2.4 ft. The invert of the boat bay is set at -3.9 ft. Aluminum warning signs (4 each) supported by pipes, gussets and base plates are galvanized or painted.

C. **Site/Structure #7** - 200 linear ft. rock riprap fixed crest weir with a 20 ft. boat bay located south of the Clovelly Canal, west of Little Lake and north of Site 4 in Bayou De La Gauche. The crest of the weir is set at 2.4 ft. The invert of the boat bay is set at -4.4 ft. Aluminum warning signs (4 each) supported by pipe, gusset and base plates are galvanized or painted.

D. **Site/Structure #8** - 65 linear ft. rock riprap fixed crest weir with an 8’ wide boat bay located in a pipeline channel south of the Clovelly Canal and west of Little Lake. The crest of the weir was set at +1.0 ft. AML (above marsh level). Marsh level was determined to be 1.8 ft. The invert of the boat bay was set at -3.5 ft. Aluminum warning signs (2 each) supported by pipe, gusset and base plates are galvanized or painted.

E. **Site/Structure #43** - 85 linear ft. rock riprap channel plug located in a pipeline channel, south of the Clovelly Canal, east of Clovelly Farms, and west of Little Lake. The crest of the plug is set at an elevation of 2.45 ft. An aluminum warning sigh supported by pipe, gusset and base plate are galvanized or painted.

F. **Site/Structure #91** - 120 linear ft. rock filled channel plug located in a pipeline channel off of
Superior Canal, south of Clovelly Canal, west of Brenton Canal and east of Superior Canal, with a 10 gauge corrugated aluminum pipe (36" in diameter) through the plug embankment. The invert of the pipe is set at an invert elevation of -2.87 ft. The pipe is approximately 44 ft. long supported by 8 - 12" diameter creosote coated timber piles 50 ft. long. An aluminum flap gate is attached to the canal side of the structure. A 16 ft. by 21 ft. rock riprap scour pad 2 ft. thick is located at the opening of the corrugated pipe on the canal side of the structure. The crest of the rock riprap plug is set at an elevation of 3.2 ft.

G. Site/Structure #4A - 90 linear ft. rock riprap channel plug located along the bank of Little Lake northeast of Site No. 4. The channel plug has an 8 ft. wide crest with 3:1 side slopes. The crest was set at +2.0 ft. AML (above marsh level). Marsh level was determined to be +1.47'. Prior to placement of riprap material, the existing channel bottom was lined with a 84 ft. x 30 ft. geogrid mat.

H. Site/Structure #8A - 50 linear ft. rock riprap channel plug located along the bank of Little Lake north of the Clovelly Canal and the Exxon Pipeline right-of-way. The channel plug has an 8 ft. wide crest with 3:1 side slopes. The crest was set at +2.0 ft. AML (above marsh level). Marsh level was determined to be +1.51'. Prior to placement of the riprap material, the existing channel bottom was lined with a 84 ft. x 30 ft. geogrid mat.

Phase II, Construction Unit No.2

A. Site/Structure #1 - 263 linear ft. rock riprap fixed crest weir with a 20 ft. boat bay across Superior Canal located east of the west fork of Bayou L’Ours, south of Clovelly Farms, Clovelly Canal and site 90, and west of Bruske Lake. The crest of the weir is set at 4.0 ft. The invert of the boat bay is set at -6.4 ft. NAVD. Navigation Aid Signs (4 each) and warning signs (4 each) supported by pipes, gussets and base plates are galvanized or painted.

B. Site/Structure #90 - 213 linear ft. Rock riprap channel plug located across a pipeline channel north of Site 1, south of Clovelly Farms and Clovelly Canal, and west of Bruske Lake. The crest of the plug is set at an elevation of 4.0 ft. Aluminum warning signs (4 each) supported by pipes, gussets and base plates are galvanized or painted.

C. Site/Structure #4B - 511 linear ft. rock riprap plug along the west bank of Little Lake northeast of Site 4. The crest of the plug is set at 3.5 ft. Aluminum warning signs (3 each) supported by pipes, gussets and base plates are galvanized or painted.

D. Site/Structure #14A - 1,665 linear ft. rock riprap weir with a 80 ft. barge bay crossing Clovelly Canal is located west of Little Lake and east of Clovelly Farms. The crest of the weir is set at 3.0 ft. The invert of the 80 ft. barge bay is set at -6.5'. Navigational aid signs (4 each) along with lights and batteries (4 each) supported by 12 inch diameter wood pile cluster are secured by stainless steel clamps and brackets and galvanized rods. Aluminum warning signs (4 each) supported by galvanized pipes, gussets and base plates are located on either side of
the structure.

E. Site/Structure #35 - 80 linear ft. sheet pile variable crest weir with an ten (10) ft. wide variable crest section located in a pipeline channel off of the Benton Canal, south of Clovelly Canal, west of Brenton Canal and east of Superior Canal. The structure consist of one (1) - 10 ft. wide variable crest section containing an ten (10) ft. wide stop log bay with twelve (12) - 6" x 6" x 9'-8" long stop logs secured by log guides, locking channels and locks. The stop logs can be adjusted from 1.0 ft. to -3.0 ft. To access, install, and remove stop logs is a rotatable crane with a hand winch mounted on a steel deck, walkway grating, lifting bars and chain hoist. On either side of the fixed crest sections of the structure is an earthen wing wall section set at elevation 3.0 ft. to tie-in to the existing embankments. Aluminum warning signs (2 each) are set at the variable crest section and stop log bay.

F. Lake Rim Restoration and Bank Stabilization - maintenance of approximately 22,399 linear ft. of rock armored earthen embankment along Brenton Canal, Bay L’ Ours and various oil field canals.

All elevations above are based on the NAVD88 datum.

5. OPERATION AND MAINTENANCE BUDGET

The cost associated with Operations, Maintenance, and Rehabilitation of the features outlined in Section 4 for the twenty (20) year project life is included and summarized in Attachment VI.

Cost for Operations - original Operation and Maintenance Budget does not include cost for operation of variable crest weir structure at Site No. 35. Operation and Maintenance Budget amendment will be required to include these cost.

6. WATER MANAGEMENT - OPERATION OF STRUCTURES

Water Control Structure Operational Schedule:

The structures shall be operated according to the following operational schedule:

1. The sill height of the rock weirs shall be at least 0.5 ft. below marsh level (BML) or lower.

2. Variable Crest Weir - the stop logs will be set at 0.5 ft. BML from April to November and removed from November to April (weir sill level = 2.0 ft. BML) to allow for sediment and nutrient inflow during spring.
7. **RESPONSIBILITIES – OPERATIONS**

A. **LDNR will:**

1. In accordance with the Cost Share Cooperative Agreement 68-7217-4-57, DNR Cooperative Agreement No. 25030-93-11, assume all responsibilities for maintenance and rehabilitation of the accepted and completed project features identified in Section 4.

2. Submit an annual report to NRCS detailing the structural operations completed for that year.

3. Jointly approve any variations in the Structure Operation Schedule outlined in Section 6 with NRCS.

4. Provide a total contribution equal to the amount outlined in the Cost Sharing Agreement for the operation cost needed for the twenty (20) year life of the project.

B. **NRCS will:**

1. Jointly approve any variations in the Structure Operation Schedule outlined in Section 6 with LDNR.

2. Provide a total contribution equal to the amount outlined in the Cost Sharing Agreement for the operation cost needed for the twenty (20) year life of the project.

3. Upon the request of LDNR and to the extent its resources allow, provide consultation assistance for the operation of the project.

8. **RESPONSIBILITIES - MAINTENANCE AND REHABILITATION**

A. **LDNR will:**

1. In accordance with the Cost Sharing Agreement, assume all responsibilities for maintenance and rehabilitation of the accepted completed project features identified in Section 4.

2. Conduct joint site inspections with NRCS of the project site at least annually and after major storm events if determined to be necessary by LDNR and/or NRCS. LDNR will submit to NRCS a report detailing the condition of the project features and recommendations for any corrective action. If LDNR recommends that corrective actions are needed, the report will include the entire estimated cost for engineering and design, supervision and inspection, construction, contingencies, and an assessment of the urgency
of such action. Annual inspection reports may be compiled under attachment VIII - Annual Inspections.

3. Perform or have performed any corrective actions needed, if such corrections have been approved by LDNR and NRCS. NRCS will participate with LDNR, or its appointed representative, in the engineering and design phases of the corrective actions for the project. Oversight of engineering and construction of the corrective actions for the project will be the responsibility of LDNR or its appointed representative. At least 30 calendar days prior to the date of formal request for construction bids, LDNR or its appointed representative shall provide NRCS with final copies of all project corrective action designs and specifications for review and concurrence by NRCS. LDNR or its appointed representative shall approve the final designs and specifications prior to proceeding with bid solicitations on all project corrective action construction contracts in coordination with NRCS. Any plan and/or specification changes both before and after award of construction contracts, shall be approved by LDNR in coordination with NRCS.

4. LDNR and NRCS representatives shall schedule meetings as necessary during the period of construction for corrective actions and shall make such recommendations as they deem necessary.

5. Provide a total contribution equal to the amount outlined in the Cost Share Agreement for the maintenance and rehabilitation cost needed for the 20-year life of the project.

B. NRCS will:

1. Conduct joint inspections with LDNR of the project site at least annually and after major storm events if determined to be necessary by LDNR or NRCS.

2. Provide guidance for the development of plans and implementation of the project, review final copies of any maintenance and rehabilitation project designs and specifications, and provide review and approval of all planning and construction details prior to formal request for construction bids or any corrective actions for the project.

3. Provide a total contribution equal to the amount outlined in the Cost Share Agreement for the maintenance and rehabilitation cost needed for the twenty (20) year life of the project.
The undersigned parties, acting on behalf of their respective agencies, agree to operate, maintain, and rehabilitate the GIWW to Clovelly Hydrologic Restoration (BA-02) according to this document, referenced Cooperative Agreement, plans, and all applicable permits and laws.

NATURAL RESOURCES CONSERVATION SERVICE

By: Donald L. Vohrent Date: 8/12/02
Title: State Conservationist

LOUISIANA DEPARTMENT OF NATURAL RESOURCES

By: [Signature] Date: 9/16/02
Title: Deputy Assistant Secretary
ATTACHMENT I

GIWW TO CLOVELLY HYDROLOGIC RESTORATION

COST SHARE AGREEMENT
COST SHARING AGREEMENT

9/23/92
BETWEEN

USDA - SOIL CONSERVATION SERVICE
AND
STATE OF LOUISIANA
FOR CONSTRUCTION, OPERATION, MAINTENANCE, REHABILITATION
AND MONITORING OF THE
GIWW TO CLOVELLY HYDROLOGIC RESTORATION PROJECT

THIS AGREEMENT, entered into this 13th day of November, 1992, by and between the U.S. Department of Agriculture, represented by the Soil Conservation Service, (hereinafter referred to as "SCS"), acting by and through the State Conservationist, and State of Louisiana (hereinafter referred to as the "DNR"), acting by and through the Secretary, Department of Natural Resources (DNR).

WITNESSED, THAT:

WHEREAS, construction of the GIWW to Clovelly Hydrologic Restoration Project (BA-2) was authorized by the Federal Coastal Wetlands Planning Protection and Restoration Act of 1990 (Public Law 101-646, Title III) and for local sponsorship by the Louisiana Coastal Wetlands Conservation and Restoration Plan by the State in April, 1990; and

WHEREAS, Section 303(f) of the Coastal Wetlands Planning Protection and Restoration Act of 1990 (CWPPRA), specifies the cost-sharing requirements applicable to the Project, and states that total project costs including construction, operation, maintenance, rehabilitation, and monitoring is to be 75% Federal (SCS) and 25% non-Federal (DNR); and

WHEREAS, Section 303 (e) of the CWPPRA states that the Secretary of the Army shall not fund the identified project unless said project is subject to such terms and conditions necessary to ensure that wetlands restored, enhanced, or managed through the project will be administered for the long-term conservation of such lands and waters and dependent fish and wildlife populations; and

WHEREAS, the SCS is authorized by Federal law to enter into a cost sharing agreement with the DNR to provide financial cost-share assistance for the construction, operation, maintenance, monitoring, and rehabilitation of the Project; and
WHEREAS, La. R.S. 49:213 and La. R.S. 49:214 state that the Secretary of the DNR may enter into cost-sharing agreements with the federal government in order to conserve, restore, create and enhance vegetated wetlands in coastal Louisiana in accordance with prescribed legislative oversight; and

WHEREAS, the DNR has agreed to pay 5% of the total Project(s) cost in actual cash and the remaining balance (20%) of its share in the form of in-kind contributions; and

WHEREAS, the DNR is willing to participate in cost-sharing and financing in accordance with the terms of this Agreement:

NOW, THEREFORE, the parties agree as follows:

ARTICLE I - DEFINITIONS AND GENERAL PROVISIONS

For purposes of this Agreement:

a. The term "Project" shall mean that work authorized by Congress as specified above for the construction of the BA-2 GIWW to Clovelly Hydrologic Restoration Project. The BA-2 Project is located in central LaFourche Parish--southeast of the GIWW. The project encompasses about 41,000 acres of emergent fresh to brackish marsh and 19,000 acres of open water. The project would restore historic hydrologic conditions by the construction of plugs in abandoned oil field canals, weirs, low level dikes, and vegetative plantings to reduce shoreline erosion. Pre- and post-project monitoring will also be included in order to evaluate the effectiveness of project implementation/operation in achieving desired vegetative response.

b. The term "total Project costs" shall mean all costs incurred by the DNR and the SCS directly related to implementation of the Project. Such costs shall be those costs incurred after November 18, 1991; and which shall, but not necessarily be limited to such following: actual costs of applicable geotechnical, detailed engineering and design; actual construction costs; construction management costs; operation costs; monitoring costs; the cost of landrights acquisition, easements, servitudes, rights-of-way; utility and facility alterations or relocations; maintenance; and rehabilitation for the Project.

c. The term "total first costs" shall mean all costs incurred by the DNR and the SCS directly related to completion of the construction phase of the project as identified in the official CWPPRA authorization document prepared by the CWPPRA Task Force (November 18, 1991) and submitted to Congress for approval.

d. The term "period of construction" shall mean the time from the advertisement of the first construction contract to the time of acceptance of the Project by the Contracting Officer. Construction of the Project or a functional portion shall not be considered complete until accepted by the Contracting Officer.
e. The term "Contracting Officer" shall mean the warranted Contracting Officer of the SCS awarding the contract.

f. The term "relocations" shall mean alteration, modifications, lowering or raising in place, and/or new construction related to, but not limited to, existing: buildings, pipelines, public utilities (such as municipal water and sanitary sewer lines, telephone lines, and storm drains), aerial utilities, cemeteries, and other facilities, structures, and improvements determined by the SCS to be necessary for the construction, operation, maintenance, monitoring, and rehabilitation of the Project.

g. The term "fiscal year" shall mean one fiscal year of the United States Government, unless otherwise specifically indicated. The Government fiscal year begins on October 1 and ends on September 30.

h. The term "construction management costs" shall mean costs incurred by the SCS directly supervising and administering a construction contract, to include related overhead costs, as specified in applicable contracting regulations.

i. All project monitoring requirements will be identified in a project monitoring plan developed specifically for the project and mutually agreed to by the SCS and the DNR. The DNR will be responsible for collection of monitoring data and assimilation as part of the local cost-share responsibilities. Monitoring will be conducted for the expected life of the project or as agreed by the SCS and the DNR.

j. The term "utility" shall mean pipelines, cables, and similar facilities.

k. The term "maintenance" shall mean any action completed after the construction period that is required to maintain the project at "as built" standards, and costing less than twenty percent of original construction cost.

l. The term "rehabilitation" shall mean any action completed after the construction period that is required to maintain the project at "as built" standards, and costing twenty percent or more of the original construction cost.

m. The term "operations" shall mean any action associated with the actual operations of the completed project as described in the Operations Plan and Schedule. Said Operations Plan and Schedule will be jointly developed and approved by SCS and DNR prior to letting any construction bid related to the Project.

n. The term "operation, maintenance, rehabilitation, and monitoring cost" shall include all costs directly related to operation, maintenance, rehabilitation, and monitoring of the Project as specified in Article VIII of this Agreement.
o. The term "Obligation" refers to amount of orders placed, contracts awarded, services rendered, or other commitments made during a given period which will require outlay during the same or some future period.

p. The term "monitoring Plan" shall mean a specific plan prepared and mutually agreed to by SCS and the DNR to provide specific direction and guidance concerning all monitoring requirements parameters and procedures for the Project.

ARTICLE II - OBLIGATIONS OF THE PARTIES

a. No Federal funds may be used to meet the DNR share of Project cost under this agreement unless the expenditure of such funds is expressly authorized by statute as verified in writing by the granting agency.

b. The DNR shall:

1. As further specified during the period of construction, fund a total contribution equal to 25 percent of the total Project cost. Said contributions will include cash and/or credit granted from landrights, easements, servitudes, and rights-of-way obtained through or owned by the DNR, or relocations credit granted for Project features furnished by the DNR, and all administrative and management costs required by the DNR to fulfill the obligations specified in this Agreement including pre- and post-project monitoring, geotechnical investigation, some engineering services, and operating, maintenance, and/or rehabilitation responsibilities accepted by the DNR.

2. Implement the project monitoring plan in accordance with a plan jointly developed with SCS and as further specified in Article VIII(b), assure the performance of the long-term monitoring plan.

3. Provide the necessary geotechnical investigations and specific engineering services associated with the project, subject to the cost-sharing provisions identified (75% Federal/25% non-Federal) and as mutually agreeable to both DNR and SCS or its engineering representative. Specific engineering services to be provided by DNR may include design surveys, plan preparation, post-construction surveys, etc. All such services will be approved by and subject to the supervision and guidance of the SCS engineering representative. DNR services related to these items will not exceed $150,000 dollars.

4. Acquire all landrights, servitudes, rights-of-way, easements and borrow and disposal areas associated with the project which are determined to be necessary, subject to cost-sharing terms previously identified (75% Federal/25% non-Federal).

5. Jointly develop and approve a Project Operations Plan and Schedule which will identify operations to achieve desired vegetative response and establish operation actions for
cost-sharing. Provide for 25% of operational costs identified in this plan according to Article VIII.

6. Assume all responsibilities for operation, maintenance and rehabilitation of the Project upon acceptance of the completed Project. SCS will reimburse DNR for 75% of such costs subject to availability of funds (Article XVI).

c. The SCS shall:

1. As further specified during the period of construction, fund 75% of the total project costs related to construction, including any relocation costs associated with the Project.

2. Subject to the limitations set forth in Article VIII, and subject to the availability of appropriations, reimburse the DNR for 75% of the approved cost of monitoring the Project upon receipt of the request for reimbursement.

3. Reimburse the DNR for 75% of the actual costs incurred associated with all geotechnical and engineering services provided for the project, and acquiring all landrights (easements, servitudes, and rights-of-way, including suitable borrow and dredged material disposal areas) as determined by the SCS to be necessary for Project construction, operations, monitoring, maintenance, and rehabilitation.

4. Provide all engineering, design, and construction services associated with the project, subject to the cost-sharing provisions identified (75% Federal/25% non-Federal).

5. Contract for the construction of the project measure in accordance with the Federal Acquisition Regulation (FAR), Agriculture Acquisition Regulation (AGAR) and Soil Conservation Service Acquisition Regulation (SCSAR).

6. Provide authorized technical services, including but not limited to obtaining basic information: preparation of drawings, design, and specifications; and performance of layout, inspection services, and quality assurance during construction.

7. Arrange for and conduct final inspection of the completed works of improvement with the DNR to determine whether all work has been performed in accordance with the contractual requirements. Accept work from the contractor and notify the DNR of acceptance.

**ARTICLE III - LANDRIGHTS, FACILITIES, AND PUBLIC LAW 91-646 RELOCATION ASSISTANCE**

a. On Non-Federal Lands:
The DNR shall acquire all landrights, easements, servitudes, rights-of-way, and dredged material disposal areas determined to be necessary for construction of the Project and as mutually agreed to by SCS. Prior to the advertisement of any construction contract, the DNR shall provide certification to the SCS that all landrights, easements, servitudes, rights-of-way and dredged material disposal areas required have been acquired as part of this Agreement and shall furnish to the SCS evidence supporting the DNR actual rights-of-way acquired for project construction, operation, monitoring, and maintenance.

b. The State shall comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring landrights, easements, and rights-of-way for construction and subsequent operation and maintenance of the Project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

ARTICLE IV - VALUE OF LANDRIGHTS AND FACILITIES

a. The value of the landrights, easements, servitudes, and rights-of-way to be included in total Project costs and credited towards the DNR's share of total Project costs will be determined in accordance with the following procedures:

1. The costs associated with securing all landrights, easements, servitudes, and rights-of-way to be acquired by the DNR (IIIa) shall be the actual costs, including but not limited to expenses associated with securing legal landrights instruments from all sources (legal reviews, recording fees, etc.) associated with project activities. An estimate of such costs will be prepared by DNR and approved by SCS for credit allowance as part of the DNR cost-share. Credit allowance for any costs above this estimate must be approved by SCS.

2. Any costs incurred for relocations will be included in total Project costs and will be accomplished as part of project construction through the agreed to cost-share arrangements (75% Federal, 25% non-Federal).

ARTICLE V - CONSTRUCTION PHASING AND MANAGEMENT

a. To provide for consistent and effective communication between the DNR and the SCS during the period of construction, the DNR and the SCS shall appoint representatives to coordinate scheduling, plans, specifications, modifications, contract costs, and other matters relating to construction of the Project.

b. The DNR will participate with the SCS, or its appointed representative, in the engineering and design phases of the Project. Oversight of engineering and construction of the Project will be the responsibility of the SCS or its appointed representative.
c. The representatives appointed above shall meet as necessary during the period of construction and shall make such recommendations as they deem warranted to the Contracting Officer.

d. The Contracting Officer shall consider the recommendations of the representatives in all matters relating to construction of the Project, but the Contracting Officer, having ultimate responsibility for construction of the Project, has complete discretion to accept, reject, or modify the recommendations.

ARTICLE VI - METHOD OF PAYMENT

a. DNR shall provide, during the period of construction, the cash payments required under Article II of this Agreement. Total project costs are presently estimated to be $8,142,000. In order to meet its share, DNR will contribute, in-kind or in cash, 25% of the total project costs presently estimated to be $2,035,500. DNR’s minimum cash contribution (5%) based on the present project cost estimate will be $407,100. The dollar amounts set forth in this Article are based upon SCS’s best estimates which reflect projection of costs, price level changes, and anticipated inflation. Such cost estimates are subject to adjustments based upon cost actually incurred and are not to be construed as the total financial responsibilities of SCS or DNR.

b. DNR shall provide its required cash contribution in proportion to the rate of Federal expenditures during the period of construction in accordance with the following provisions:

1. For purposes of budget planning, SCS shall notify DNR by October 1 of each year of the estimated funds that will be required from DNR to meet its share of total project costs for the subsequent fiscal year.

2. No later than 60 calendar days prior to the award of the first construction contract, SCS shall notify DNR of the DNR’s share of total project costs, including its share of costs attributable to the Project incurred prior to the initiation of construction, for the first fiscal year of construction. No later than 30 calendar days thereafter, DNR shall verify to the satisfaction of SCS or its representative that it has deposited the requisite amount in an escrow account with interest accruing to DNR.

3. For the second and subsequent fiscal years of project implementation, no later than 60 calendar days prior to the beginning of the fiscal year, DNR shall make the necessary funds available to SCS through the funding mechanism specified in Article VI.b.2. of this Agreement. As construction of the Project proceeds, SCS shall adjust the amounts required to be provided under this paragraph to reflect actual costs.

4. If at any time during the period of construction SCS determines that additional funds will be needed from DNR, SCS shall so notify DNR, and DNR, no later than 45 calendar days from receipt of such notice, shall make the necessary funds available through the funding mechanism specified in Article VI.b.2. of this Agreement.
c. SCS will draw on the escrow account provided by DNR through the Corps (see VI.g) such sums as SCS deems necessary to cover contractual and in-house fiscal obligations attributable to the Project as they are incurred, as well as costs incurred by SCS prior to the initiation of construction.

d. The escrow account will be managed for SCS by the New Orleans District, U.S. Army Corps of Engineers. Funds will be withdrawn from the account and disbursed to SCS as requested.

e. Upon completion of the Project and resolution of all relevant contract claims and appeals, SCS shall compute the total project costs and tender to DNR a final accounting of DNR's share of project costs. In the event the total contribution by DNR is less than its minimum required share of total project costs, DNR shall, no later than 90 calendar days after receipt of written notice, make a cash payment to the SCS of whatever sum is required to meet its minimum required share of total project costs, subject to the availability of appropriations.

f. In the event DNR has made cash contributions in excess of 5 percent of total project costs which result in DNR having provided more than its required 25 percent share of total project costs, SCS shall, no later than 90 calendar days after the final accounting is complete, subject to the availability of appropriations, return said excess to DNR; however, DNR shall not be entitled to any refund of the 5 percent cash contribution required pursuant to Article II.c. of this Agreement.

g. If DNR's total contribution under this Agreement (including landrights, easements, rights-of-way, relocations, dredged material disposal areas, and work-in-kind provided by DNR and approved by SCS) exceeds 25 percent of total project costs, SCS shall verify the actual exceeded costs and direct the U.S. Army Corps of Engineers, subject to the availability of appropriations for that purpose, and the minimum 5 percent cash requirement, refund the excess to DNR no later than 90 calendar days after the final accounting is complete.

ARTICLE VII - DISPUTES

Before any party to this Agreement may bring suit in any court concerning an issue relating to this Agreement, such party must first seek in good faith to resolve the issue through negotiation or other forms of non-binding alternative dispute resolution mutually acceptable to the parties.

ARTICLE VIII - MONITORING, OPERATING, MAINTENANCE, AND REHABILITATION

a. After the SCS has accepted the completed Project, or the functional portion of the Project, the DNR shall assume long-term monitoring responsibilities. At this same time, DNR will also assume responsibilities for operations, maintenance and rehabilitation of the completed Project or functional portion of the Project. These responsibilities will remain in effect for the
expected life of the Project which is twenty years from the date of acceptance of the completed Project or functional portion of the Project.

b. DNR grants SCS the right to enter, at reasonable times and in a reasonable manner, upon land which it owns or maintains access easements to the Project for the purpose of inspection related to monitoring, operating, maintaining, replacing, or rehabilitating the Project. If an inspection shows that DNR for any reason is failing to fulfill its obligations under this Agreement, SCS will send a written notice to DNR concerning a need for compliance. If the DNR persists in such failure for 30 calendar days after receipt of the notice, then SCS shall have a right to cancel the federal assistance portion of this Agreement for any additional expenses related to monitoring, operation, maintenance and rehabilitation costs of the Project.

ARTICLE IX - RELEASE OF CLAIMS

The SCS shall hold and save the DNR free from all damages arising from the construction, monitoring, operation, maintenance, and rehabilitation of the Project, except for damages due to the fault or negligence of the DNR or its contractors.

ARTICLE X - MAINTENANCE OF RECORDS

The SCS and the DNR shall keep books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to this Agreement to the extent and in such detail as will properly reflect total Project costs. The SCS and the DNR shall maintain such books, records, documents, and other evidence for a minimum of three years after completion of construction of the Project and resolution of all relevant claims arising therefrom, and shall make available at their offices at reasonable times, such books, records, documents, and other evidence for inspection and audit by authorized representatives of the parties to this Agreement. In addition, the SCS and DNR shall keep books, records, documents, and other evidence pertaining to cost and expenses incurred pursuant to this Agreement to the extent and such detail as will properly reflect all monitoring, operation, maintenance, and rehabilitation costs in the same manner as above and for three years after final operation of the Project and resolution of all claims arising therefrom.

ARTICLE XI - GOVERNMENT AUDIT

The SCS shall conduct an audit when appropriate of the DNR’s records for the Project to ascertain the reasonableness and allowability of its costs for inclusion as credit against the non-Federal share of Project costs.

ARTICLE XII - STATE AUDIT

The DNR shall conduct an audit when appropriate of the SCS’s records for the Project to ascertain the reasonableness and allowability of its costs for inclusion as credit against the Federal share of Project costs.
ARTICLE XIII - RELATIONSHIP OF PARTIES

The parties to this Agreement act in an independent capacity in the performance of their respective functions under this Agreement, and neither party is to be considered the officer, agent, or employee of the other.

ARTICLE XIV - OFFICIALS NOT TO BENEFIT

No member of or delegate to the Congress, or resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom.

ARTICLE XV - COVENANT AGAINST CONTINGENT FEES

The DNR warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the DNR for the purpose of securing business. For breach or violation of this warranty, the SCS shall have the right to annul this Agreement without liability, or, in its discretion, to add to the Agreement or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

ARTICLE XVI - TERMINATION OR SUSPENSION

a. If the SCS or DNR fails to receive annual appropriations for the Project in amounts sufficient to meet Project expenditure for the then-current or upcoming fiscal year, the SCS or DNR shall so notify the other party. After 60 calendar days either party may elect without penalty to terminate this Agreement pursuant to this Article or to defer future performance hereunder; however, deferral of future performance under this Agreement shall not affect existing obligations or relieve the parties of liability for any obligation previously incurred. In the event that either party elects to terminate this Agreement pursuant to this Article, both parties shall conclude their activities relating to the Project and proceed to a final accounting in accordance with Article VI of this Agreement. In the event that either party elects to defer future performance under this Agreement pursuant to this Article, such deferral shall remain in effect until such time as the SCS or DNR receives sufficient appropriations or until either party elects to terminate this Agreement.

b. Notwithstanding any other provisions of this Agreement, if the award of any contract for construction of the Project would result in the total obligations and expenditures for construction of the Project exceeding 125% of the authorized total first costs of $4,301,000 the award of that contract and subsequent contracts shall be deferred until such time as all parties to this Agreement agree to resume construction of the Project.

c. In the event any hazardous substances are discovered on any land or water areas required to construct, operate and maintain the project, the SCS and DNR shall mutually
determine whether to initiate construction of the Project. If such a discovery is made after
initiation of construction, either party (SCS or DNR) may elect to terminate additional project
construction obligations. A decision to terminate construction shall not relieve either party of
obligations and responsibilities encumbered prior to the date of notification of such action on
previously completed portions of the project.

ARTICLE XVII - OBLIGATIONS OF FUTURE APPROPRIATIONS

Nothing herein shall constitute, or be deemed to constitute, an obligation of future
appropriations by the legislature of the State of Louisiana when obligating future appropriations
would be inconsistent with the State’s constitutional or statutory limitations.

ARTICLE XVIII - NOTICES

a. All notices, requests, demands, and other communications required or permitted to
be given under this Agreement shall be deemed to have been duly given if in writing and
delivered personally, given by prepaid telegram, or mailed by first-class (postage pre-paid),
registered, or certified mail, as follows:

If to the Local Sponsor:

Secretary, Department of Natural Resources
P.O. Box 94396
Baton Rouge, LA 70804-9396

If to the Government:

USDA Soil Conservation Service
3737 Government Street
Alexandria, LA 71302

b. A party may change the address to which such communications are to be directed by
giving written notice to the other party in the manner provided in this Article.

c. Any notice, request, demand, or other communication made pursuant to this Article
shall be deemed to have been received by the addressee at such time as it is personally delivered
or seven calendar days after it is mailed, as the case may be.

ARTICLE XIX - CONFIDENTIALITY

To the extent permitted by the laws governing each party, the parties agree to maintain
the confidentiality of exchanged information when requested to do so by the providing party.
ARTICLE XX - PROJECT COST LIMITS

The DNR and SCS are aware that the PL 101-646 Task Force has established a total Project cost of $8,142,000 for this particular Project. Any costs in excess of 125% of this established figure will require review and approval of the Task Force, and Amendment of this Agreement.

ARTICLE XXI - EQUAL OPPORTUNITY AND CIVIL RIGHTS

a. The program or activities conducted under this agreement will be in compliance with the nondiscrimination provision contained in the Titles VI and VII of the Civil Rights Act of 1964, as amended; the Civil Rights Restoration Act of 1987 (Public Law 100-259); and other nondiscrimination statutes: namely, Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, and the Age Discrimination Act of 1975. They will also be in accordance with regulations of the Secretary of Agriculture (7 CFR-15, Subparts A & B), which provide that no person in the United States shall on the grounds of race, color, national origin, age, sex, religion, marital status, or handicap be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal financial assistance from the Department of Agriculture or any agency thereof.

b. SCS shall not discriminate on the basis of sexual orientation.
USDA - SOIL CONSERVATION SERVICE

BY: Horace J. Austin
   (signature)

Horace J. Austin
   (typed name)

State Conservationist
   (title in full)

DATE: 10-22-72

JOHN F. ALES, SECRETARY
DEPARTMENT OF NATURAL RESOURCES

BY: N.J. Damico
   (signature)

N.J. Damico, Deputy Secretary
   (typed name)

DATE: 11-13-72
ATTACHMENT II

GIWW TO CLOVELLY HYDROLOGIC RESTORATION

PROJECT FEATURES
ATTACHMENT III

GIWW TO CLOVELLY HYDROLOGIC RESTORATION

PROJECT COMPLETION REPORT
July 26, 2002

Mr. George Boddie  
Project Manager  
Coastal Restoration Division  
UNO Box 1102  
New Orleans, LA 70148

Mr. Tom Podany  
Chief, CWPPRA Program Manager  
US Army Engineer District, New Orleans  
P.O. Box 60267  
New Orleans, Louisiana 70506

Gentlemen:

Re: PL-646 – BA-2  
GIWW to Clovelly Hydrologic Restoration Project

The referenced project has been completed. Enclosed are a Project Completion Report and a copy of the As-Built drawings for the project.

Please direct any questions concerning this Project Completion Report to my attention at (318) 473-7791.

Sincerely,

/s/

Bradley A. Sticker, P.E.  
Civil Engineer

Enclosure

cc: Bruce Lehto, ASTC/Water Resources, NRCS, Alexandria, LA (electronic distribution)  
Britt Paul, Water Resources Planning Staff Leader, NRCS, Alexandria, LA (electronic distribution)  
Dr. Bill Good, LDNR – CRD, Baton Rouge, LA (electronic distribution)  
Garrett Broussard, LDNR – CRD, Baton Rouge, LA (electronic distribution)  
Ed Giering, State Conservation Engineer, NRCS, Alexandria, LA (electronic distribution)  
Gene Loupe, District Conservationist, Thibodaux, LA (electronic distribution)  
Charles Phillips, Contracting Officer, NRCS, Alexandria, LA (electronic distribution)  
Dale Garber, COTR, NRCS, Thibodaux, LA (electronic distribution)  
Cherie LaFleur, Design Engineer, NRCS, Alexandria, LA (electronic distribution)  
Ronnie Faulkner, Design Engineer, NRCS, Alexandria, LA (electronic distribution)
PROJECT COMPLETION REPORT

PROJECT NAME: CWPPRA/STATE PROJECT NO.
GIWW to Clovelly Hydrologic Restoration BA 2

Report Date: July 26, 2002
BY: Natural Resources Conservation Service

1. Project Managers/Contracting Officer:

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Telephone</th>
</tr>
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<tr>
<td>DNR Project Manager</td>
<td>George Boddie</td>
<td>(504) 288-7153</td>
</tr>
<tr>
<td>DNR Construction Project Manager</td>
<td>Brian Babin</td>
<td>(985) 447-0956</td>
</tr>
<tr>
<td>DNR Monitoring Manager</td>
<td>John Rapp</td>
<td>(985) 447-0993</td>
</tr>
<tr>
<td>Federal Agency Project Manager</td>
<td>Britt Paul</td>
<td>(318) 473-7816</td>
</tr>
<tr>
<td>Federal Agency Contracting Officer</td>
<td>Charles Phillips</td>
<td>(318) 473-7796</td>
</tr>
</tbody>
</table>

2. Location and description of projects as approved for construction by Task Force.
West Fork Bayou L'Ours Watershed (BA-2 Portion) is a wetland protection and enhancement project that encompasses the marshes of Lafourche Parish southeast of the Gulf Intracoastal Waterway (GIWW), east of Bayou Lafourche, and north of the Superior Canal. The project area contains approximately 60,000 acres of fresh and low-salinity wetlands. The project is in the West Fork Bayou L'Ours watershed which comprises 133,900 acres in the southeastern portion of Lafourche Parish, Louisiana, and is bounded on the west and south by West Fork Bayou L'Ours; on the east by Bayou Perot, Little Lake and Bay L'Ours; and on the north by the GIWW.

This project has several purposes: reduce marsh erosion; reduce saltwater intrusion and subsequent land loss; increase economic returns from trapping, recreational opportunities, and commercial fisheries; sustain marsh habitat for the continued existence of territorial, migratory, and threatened or endangered wildlife; improve water quality; and to achieve marsh reclamation.

3. Final, as-built features, boundaries and resulting acreage (use attachments if necessary).
Construction Unit #1 consisted of the installation of 8 structures to the west of Little Lake and Bay L'Ours. The installation consisted of 3 rock plugs, 4 rock weirs, and a 36” diameter corrugated aluminum pipe with a flap gate supported by pilings. The previously submitted “As Built” plans identify the locations and features as installed.

Construction Unit #2 consisted of the installation of 2 rock plugs, 2 rock weirs, 1 variable crested sheet pile weir, approximately 5665 linear feet of shore protection on the southwest shore of Bay L'Ours, and approximately 1171 linear feet of earthen bank stabilization and 5023 linear feet of rock bank stabilization. The locations and constructed dimensions of the features of Construction Unit #2 can be seen in the attached “As Built” plans.

Actual Benefitted Acres 2,052

4. Key project cost elements

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<th>Cost Incurred as of Construction Completion</th>
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** Most recent estimate from CWPPRA Project estimates Report produced by USACOE.
### 5. Items of Work (Construction Unit #2 Only)

#### BASE BID

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<th>Estimated Amount</th>
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<th>Final Amount</th>
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#### ADDITIVE A

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**ORIGINAL ESTIMATED AMOUNT** $3,550,405  **ORIG. BID AMOUNT** $3,975,435.00

#### MODIFICATION #13

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<th>Bid Unit Price</th>
<th>Final Amount</th>
<th>% Over or under</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>Rock Riprap 650# Site 14 A Ext</td>
<td>300</td>
<td>Tons</td>
<td>$36.50</td>
<td>$10,950.00</td>
<td>300</td>
<td>$36.50</td>
<td>$10,950.00</td>
<td>0%</td>
</tr>
<tr>
<td>24</td>
<td>Geotextile</td>
<td>178</td>
<td>S.Y.</td>
<td>$6.00</td>
<td>$1,068.00</td>
<td>178</td>
<td>$6.00</td>
<td>$1,068.00</td>
<td>0%</td>
</tr>
</tbody>
</table>

#### MODIFICATION #14

<table>
<thead>
<tr>
<th></th>
<th>Work</th>
<th>Est. Quan.</th>
<th>Unit</th>
<th>Estimated Unit Price</th>
<th>Estimated Amount</th>
<th>Final Quan.</th>
<th>Bid Unit Price</th>
<th>Final Amount</th>
<th>% Over or under</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>650# Rock Site 4 B</td>
<td>120</td>
<td>Tons</td>
<td>$39.00</td>
<td>$4,680.00</td>
<td>403</td>
<td>$39.00</td>
<td>$15,717.00</td>
<td>-70%</td>
</tr>
<tr>
<td>26</td>
<td>650 # Rock Lake Rim</td>
<td>1230</td>
<td>Tons</td>
<td>$36.50</td>
<td>$44,895.00</td>
<td>1,478</td>
<td>$36.50</td>
<td>$53,947.00</td>
<td>-17%</td>
</tr>
<tr>
<td>27</td>
<td>Rock Riprap 200#</td>
<td>3375</td>
<td>Tons</td>
<td>$35.50</td>
<td>$119,812.50</td>
<td>2,354</td>
<td>$35.50</td>
<td>$83,567.00</td>
<td>43%</td>
</tr>
<tr>
<td>28</td>
<td>Rockfill</td>
<td>1400</td>
<td>Tons</td>
<td>$42.50</td>
<td>$59,500.00</td>
<td>1,010</td>
<td>$42.50</td>
<td>$42,925.00</td>
<td>39%</td>
</tr>
</tbody>
</table>

**MODIFICATION #15**

<table>
<thead>
<tr>
<th></th>
<th>Work</th>
<th>Est. Quan.</th>
<th>Unit</th>
<th>Estimated Unit Price</th>
<th>Estimated Amount</th>
<th>Final Quan.</th>
<th>Bid Unit Price</th>
<th>Final Amount</th>
<th>% Over or under</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>Negotiated Equitable Adjustment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$665,753.00</td>
<td>-70%</td>
</tr>
</tbody>
</table>

**TOTAL FINAL AMOUNT** $4,836,504.62

*Modification #5 – reduced item by $5000

**Modification #6 – increased item by 904.60

***Modification #11 – Removed bid CLIN 16 reduced by $24,750, increased CLIN 18 by $21,450*
6. Construction and construction oversight

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Constr. Unit #1</th>
<th>Constr. Unit #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime construction contractor</td>
<td>All South General Contractor</td>
<td>Regency Construction</td>
</tr>
<tr>
<td>Subcontractor</td>
<td>N/A</td>
<td>Bertucci Contracting Corp.</td>
</tr>
<tr>
<td>Subcontractor</td>
<td>N/A</td>
<td>Jag Construction</td>
</tr>
<tr>
<td>Original construction contract</td>
<td>$394,788.00</td>
<td>$3,975,435.00</td>
</tr>
<tr>
<td>Change orders</td>
<td>$17,760.00</td>
<td>$879,831.60</td>
</tr>
<tr>
<td>Over/Under Runs</td>
<td>$32,974.60</td>
<td>-$18,761.98</td>
</tr>
<tr>
<td>Damages</td>
<td>-821.72</td>
<td>$0.00</td>
</tr>
<tr>
<td>Total Construction Contract Cost</td>
<td>$444,700.88</td>
<td>$4,836,504.62*</td>
</tr>
</tbody>
</table>

*With navigation lights small purchase added to CU#2, the total cost is $4,850,980.64

| Const. oversight contractor       | N/A                                    | Const. amt.                           |
| Cons. O.S./Admin. agency          | USDA NRCS                              | Est. amt.                             |

7. Major equipment used (Construction Unit #2 Only).
   - AB-3 Spud Barge with Bucyrus Erie 88-B Crane
   - AB-4 Spud Barge with Bucyrus Erie 88-B Crane
   - AB-11 Spud Barge with Bucyrus Erie 88-B Crane
   - BB-105 Spud Barge with Linkbelt CS2800 Long Reach Excavator
   - FS-117 Spud Barge with Linkbelt 3400 Long Reach Excavator
   - Marsh buggy Excavator
   - Front End Loader
   - 3 – Tug Boats
   - Spud Barge with Link – Belt Crane (subcontractor)
   - Rock Barges

8. Discuss construction sequences and activities, problems encountered, solutions to problems, etc. (CU #2 Only)
   1. The Contractor started placing geotextile and rockfill at Sites 14-A, 1, and 90 to allow for the 40 day waiting period.
   2. Started placing earthfill material along the embankment stabilization.
   3. Started placing geotextile and rockfill along the bank stabilization which had a 40 day waiting period.
   4. Once the rockfill was placed they began placing riprap along the bank stabilization starting at the mouth of the Briton Canal. Also, placed riprap on the structures and along the lake rim stabilization.
   5. Began driving sheet piles for Site 35 variable crest weir.
   6. Completed placing rock at sites 1 and 90 and began placing riprap at site 4-B.
   7. Completed placing riprap at the lake rim restoration and the bank stabilization.
   8. Completed site 35 and installed the stoplogs.
   9. Completed site 14-A and 4-B.
   10. Completed placing earthen material along the bank stabilization.
   11. Installed the warning signs and supports.
   12. Cleaned up the sites and removed all equipment.

9. Construction change orders and field changes (Construction Unit #2 Only).
   - Modification #1 – Increased performance time from 256 to 289 calendar days due to Additive A being awarded.
   - Modification #2 – Corrected “Type C” sign details on sheet 23 of the drawings. (No cost or time change)
   - Modification #3 – Required contractor to measure partial barges where materials were being placed on multiple CLIN’s. (No cost or time change)
• Modifications #4 – Allowed use of originally specified epoxy coated cable or stainless steel cable for the navigation pile clusters. (No cost or time change)

• Modification #5 – Allowed prime contractor to reduce his required workforce from 50% to 25%. CLIN 1 Mobilization was reduced from $195,000 to $190,000 for a total of $5,000 reduction in the contract amount. (No time change)

• Modification #6 – Strengthened the crane base plate and supports at site 35. CLIN 11 was increased from $15,000 to $15,904.60 for an increase of $904.60 in the contract amount. (No time change)

• Modification #7 – Not issued

• Modification #8 – Unilateral modification requiring the contractor to place the rockfill for the lake rim restoration portion of the work to the lines as shown in the revised sheet 22 and revised specification page 25-5 and 25-6. This was done to correct an error in the original specification that required the contractor to place more rockfill in the lake rim restoration section than was intended. (No cost or time change at the time of issuance)

• Modification #9 – Unilateral modification that limited the contractor to ordering no more than 23,253 tons of rockfill for CLIN 7. (No cost or time change at the time of issuance)

• Modification #10- Unilateral modification that removed geotextile from beneath the earthen embankment with the exception where the fill height exceeded 3'. The quantities for CLIN 13 and 21 were reduced by 7,675 s.y. and 4,705 s.y. respectively. (No cost or time change at the time of issuance)

• Modification #11- Changed requirement for a rockfill core at site 4b and utilized all rock riprap for the structure construction. CLIN 16 was removed from the contract for a $24,750 reduction. Increased CLIN 18 by 550 tons at $39.00 per ton for an increase of $21,450.

• Modification #12- Changed the location of the warning sign placement along the lake rim restoration to align with the center of the fish dips in the area. (No cost or time change)

• Modification #13- Added CLIN’s 23 (Rock riprap 650# site 14A extension) and 24 (Geotextile site 14A extension) in order to extend the length of site 14A. The total dollar value of the contract was increased by $12,018 and one additional day was added to the performance time.

• Modification #14- Added four CLIN’s (25, 26, 27, & 28) to add additional rockfill and riprap to various locations to bring the structures to required grades. The total dollar value of the contract was increased by $228,887.50 and the performance time was increased by 10 days.

• Modification #15- Added CLIN 29 which was a negotiated equitable adjustment to the contract for change orders 8, 9, and 10, and other negotiated changes to the contract. The total dollar value of the contract was increased by $665,753 and the performance time was increased by 42 days.

10. Pipeline and other utility crossings.

<table>
<thead>
<tr>
<th>Structure</th>
<th>Owner</th>
<th>Rep. To Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oyster Leases in Project Access Route</td>
<td>Whitney Lombas</td>
<td>Whitney Lombas (504)572-2897 (Pager)</td>
</tr>
<tr>
<td>Lake Rim and Bank Stabilization</td>
<td>Entergy</td>
<td>Claude Maralda (504)670-3780</td>
</tr>
<tr>
<td>14-A</td>
<td>Exxon Pipeline</td>
<td>Benton Acrement (504)537-4805</td>
</tr>
<tr>
<td>Bank Stabilization</td>
<td>Stone Energy</td>
<td>Phillip Lalande (318)237-0410</td>
</tr>
<tr>
<td>Bank Stabilization</td>
<td>Ridgelake Energy, Inc</td>
<td>John Rubin (504)837-0444</td>
</tr>
</tbody>
</table>

11. Safety and Accidents (Construction Unit #2 Only).

Excellent Safety Record with no Accidents Reported.

Two Tug Boats pumped their bilge and created an oil spill that was cleaned up promptly and reported to Coast Guard.

12. Additional comments pertaining to construction, completed project, etc.

Lafourche Parish expressed their concern that navigation lights were not installed at site 14-A. A small purchase contract was awarded to install four navigation lights on the existing pile clusters. Also, conspicuity tape was installed on all piles for additional safety to keep boaters from running into the structures. The cost for this additional work was $14,476.02.
13. **Significant Construction Dates:**

<table>
<thead>
<tr>
<th>ACTION</th>
<th>Construction Unit #1 Date</th>
<th>Construction Unit #2 Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bid I.D. (Construction, Vegetation, etc.)</td>
<td>Construction</td>
<td>Construction</td>
</tr>
<tr>
<td>Bid Opening</td>
<td>3/6/1997</td>
<td>12/15/1999</td>
</tr>
<tr>
<td>Construction Contract Award</td>
<td>3/12/1997</td>
<td>1/18/2000</td>
</tr>
<tr>
<td>Preconstruction Conference</td>
<td>3/19/1997</td>
<td>2/15/2000</td>
</tr>
<tr>
<td>Notice to Proceed</td>
<td>4/1/1997</td>
<td>2/22/2000</td>
</tr>
<tr>
<td>Construction Completion</td>
<td>10/6/1997</td>
<td>10/13/2000</td>
</tr>
</tbody>
</table>

**Other significant Project Dates**

<table>
<thead>
<tr>
<th>ACTION</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Implementation closeout**</td>
<td></td>
</tr>
<tr>
<td>Start of Preconstruction Monitoring***</td>
<td></td>
</tr>
<tr>
<td>Preconstruction Aerial Photography</td>
<td></td>
</tr>
<tr>
<td>Monitoring Plan Completion***</td>
<td></td>
</tr>
</tbody>
</table>

** Final implementation closeout is made by either the DNR Project Manager or the Federal Agency Contracting Officer depending on which organization had lead role for construction of project.

*** To be completed by DNR Project Manager.
NRCS SUPPLEMENT TO COMPLETION REPORT

CONTRACT ADMINISTRATION

List any significant problems encountered in the administration of the construction contract and recommended solution for future contract of like nature.

<table>
<thead>
<tr>
<th>DESCRIPTION OF PROBLEM ENCOUNTERED</th>
<th>RECOMMENDATIONS FOR FUTURE CONTRACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unilateral modifications were issued (change orders) and no equitable adjustment was made at the time the order was given.</td>
<td>In the event unilateral modifications are required, an equitable adjustment of time and dollars should be included in the modification if appropriate.</td>
</tr>
</tbody>
</table>

CONSTRUCTION PLANS

List any items pertinent to the plans that caused problems, need clarification or changes for future contracts of this nature.

<table>
<thead>
<tr>
<th>DESCRIPTION OF ITEM IN PLANS</th>
<th>RECOMMENDATIONS FOR FUTURE CONTRACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Navigation Aids</td>
<td>1. Recommend using ¾” Stainless Steel cable to wrap pilings and using two - 1” diameter Stainless Steel rods to bolt the pilings together. The rods shall be spaced approximately 8” apart so the cable can be wrapped between the rods and thus held in place. 2. Install warning lights on Navigation Aids for safety purposes.</td>
</tr>
<tr>
<td>2. Directional Signs and Temporary Warning Signs</td>
<td>1. Recommend using 6” diameter pipe for support of directional signs at boat or barge bays. 2. Require contractor to install temporary sign supports of sufficient strength and height. Require contractor to maintain these according to planned height and location during construction.</td>
</tr>
<tr>
<td>3. Settlement Pipes</td>
<td>1. Install a minimum 3” diameter pipe for settlement plates. 2. If a threaded cap is used, require the contractor to cold galvanize the threads prior to final inspection.</td>
</tr>
<tr>
<td>4. Paint Schedule</td>
<td>1. Recommend having a paint schedule on plans for steel work to clarify the requirements.</td>
</tr>
<tr>
<td>5. Fish Dips</td>
<td>1. Where fish access dips are required, the warning signs need to be shown on the plans to be located at the center of each dip in order to protect boaters from the underwater obstructions.</td>
</tr>
<tr>
<td>6. Typical Sections</td>
<td>1. Ensure that the typical sections in the plans and placement methods described in the specifications are consistent with the sections and methods used to estimate quantities.</td>
</tr>
</tbody>
</table>
CONSTRUCTION SPECIFICATIONS

List any significant items in the construction specifications which caused problems, need clarification or changes for future contracts of this nature.

<table>
<thead>
<tr>
<th>DESCRIPTION OF ITEM IN SPECIFICATIONS</th>
<th>RECOMMENDATIONS FOR FUTURE CONTRACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rockfill</td>
<td>1. For structures with rockfill cores for reduced permeability, it is recommended not to overbuilding the rockfill portion above the final lines and grades for the rockfill. This is because the amount of anticipated settlement that may not occur leaving excess rockfill. If the rockfill settles, it is recommended the difference by made up in additional riprap to avoid having to remobilize more rockfill to the site.</td>
</tr>
<tr>
<td></td>
<td>2. If possible, recommend only building rock section with one size riprap and not using rockfill and riprap.</td>
</tr>
<tr>
<td></td>
<td>3. If permeability is a concern, consider using alternative methods such as a vinyl sheet pile cutoff wall or lightweight bagged materials in the center of the rock riprap structure to reduce permeability.</td>
</tr>
<tr>
<td>2. Rip-Rap</td>
<td>1. The specification should require that rip-rap should be built to grade plus a specified vertical tolerance and the final grade shall meet the planned grade at time of final inspection, therefore if settlement does occur the contractor may have to come back and place more rip-rap prior to final inspection. The exception to this would be where staged construction is required for foundation stability.</td>
</tr>
<tr>
<td>2. Earth Embankment</td>
<td>1. Do not recommend using geotextile under earthfill sections when the fill height is 3 feet or less.</td>
</tr>
<tr>
<td></td>
<td>2. Recommend bidding this work by the linear feet and specifying the contractor to place multiple lifts to meet final planned grade.</td>
</tr>
<tr>
<td></td>
<td>3. Recommend seeding any earthfill areas placed.</td>
</tr>
</tbody>
</table>

GENERAL COMMENTS

List any significant items which worked well and should be repeated or which caused problems, need clarification or changes for future contracts of this nature.

<table>
<thead>
<tr>
<th>DESCRIPTION OF ITEM</th>
<th>RECOMMENDATIONS FOR FUTURE CONTRACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Geotextile</td>
<td>1. In estimating the quantity of geotextile required for linear features (foreshore dikes, etc.), the length of the geotextile needs to be determined by measuring the outside lengths of curves and PI’s. Also if soft foundation soils are present, the length of the geotextile required needs to be increased due to the differential settlement that will occur by approximately 10%. This will be site specific.</td>
</tr>
<tr>
<td>2. Excavation for Floatation</td>
<td>1. If possible in future contracts consideration to increasing floatation access channel widths to 80’ to allow larger equipment access and possibly increase competition.</td>
</tr>
</tbody>
</table>
NOTICE:
48 HOURS BEFORE MOI
CALL 1-800-272-3
TO LOCATE UTILITY

NOTE: Intracoastal Waterway meets
within project area.

Known pipelines and utilities are
However, it is possible that some
not shown. The contractor is
for such pipelines and utilities
then immediately to the contractor.
PROFILE ON CENTERLINE

CONSTRUCTION LIMITS

<table>
<thead>
<tr>
<th>Construction Width</th>
<th>Construction Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>200'</td>
<td>300'</td>
</tr>
</tbody>
</table>

Plan

LIMITS OF Fill (Mold)

NOTES:

1. EHC = HARDY LEVEL
2. EHI = ELEVATION HIGHER INTERCEPT
3. EB = ELEVATION BELOW
4. ELEVATION VARIABLE - SL

"AS-BUILT"

SECT OF AGRICULTURE & CONSERVATION SERVICE
NOTES:

1. BM = Below Mean Level; AM = Above Mean Level.
2. Elevations are site-specific and are based on assumed H/S.
3. C.O.F. will establish Marsh Level in the Field.
4. Geogrid to Conform to Existing Channel Bottom.
5. Install Aluminum Flag Gate and Rock Armoured Scour Pad Only on Canal Side of Structure.
6. See Sheet 10 or 23 for Timber Support Details.
7. The Corrugated Aluminum Pipe shall be 10 Gauge Aluminum with a max of 3 x 1 corrugations.
8. All Timber shall be A2 or Better Southern Yellow Pine and pressure treated to a minimum of DV/SP. Net retention with a groove for Solution.
SECTION D-O-1A
Site 91

NOTES:

1. Type I (helical) corrugated pipe shall have ends reformed to annular corrugations. The reformed annular corrugations shall have the same pitch and depth as the helical corrugations.
2. Anchor Geogrid as per manufacturers recommendation.

Scale in Feet

AS-BUILT

FLS - SITE 91
UNIT NO.1
CURE WATERSHED
PARISH
LA.
AGRICULTURE
NRCS

LA. 245
TABLE 1
(Pipe Support for 30'-6" Dia. Pipe)

<table>
<thead>
<tr>
<th>Item</th>
<th>Number</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot; Composite Steel Pipe</td>
<td>8</td>
<td>30'</td>
</tr>
<tr>
<td>3/4&quot; Forged Iron</td>
<td>300</td>
<td>30'</td>
</tr>
<tr>
<td>3/4&quot; Forged Iron</td>
<td>400</td>
<td>30'</td>
</tr>
<tr>
<td>1&quot; Line Rods (4)</td>
<td>400</td>
<td>30'</td>
</tr>
<tr>
<td>1 1/2&quot; Line Rods (4)</td>
<td>400</td>
<td>30'</td>
</tr>
<tr>
<td>1 1/2&quot; Tinned Blocking Spacers</td>
<td>8</td>
<td>24'</td>
</tr>
<tr>
<td>Note for 20'-6&quot; Bolts</td>
<td></td>
<td>120</td>
</tr>
</tbody>
</table>

NOTES:
1. All metal hardware (flange rods, nuts, bolts, washers, clamps, etc.) shall be galvanized and conform to material specifications set and used.
2. Paint all exposed metal with coal tar epoxy.

Dimensions for Pipe Support are Symmetrical Along Vertical Axis

END VIEW
(Not To Scale)

ELEVATION VIEW
(Not To Scale)
CHANNEL PLUG SCHEDULE

<table>
<thead>
<tr>
<th>SITE NO.</th>
<th>WIDTH M</th>
<th>ESTIMATED QUANTITIES ITEMS</th>
<th>CONSTRUCTION LIMITS</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>60'</td>
<td>412</td>
<td>100'</td>
<td>200'</td>
</tr>
<tr>
<td>43</td>
<td>35'</td>
<td>305</td>
<td>120'</td>
<td>200'</td>
</tr>
</tbody>
</table>

1/ SITE NOT LOCATED ON A KNOWN PIPELINE.

---

TABLE 2

<table>
<thead>
<tr>
<th>SITE NUMBER</th>
<th>D3</th>
<th>D2</th>
<th>D1</th>
<th>D4</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>20</td>
<td>14</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>43</td>
<td>30</td>
<td>25</td>
<td>15</td>
<td>20</td>
</tr>
</tbody>
</table>

NOTES:
1. 35 FOR TYPICAL SECTION ON CHANNEL PLUG.
2. 35 FOR TYPICAL SECTION OF CHANNEL PLUG.
3. USE PLACING ROCKFILL.

"AS-BUILT"
THE GEORID SHALL EXTEND A MINIMUM OF 5' PAST THE LIMITS OF THE ROCKFILL. THE DIMENSIONS OF THE GEORID FOR SITE 4A ARE 198'.

PROFILE ON CENTERLINE - SITE NO. 4A

1. AML = ABOVE MARSH LEVEL
2. ELEVATIONS ARE SITE SPECIFIC AND ARE BASED ON ASSUMED HT. 0.
3. COTR WILL ESTABLISH MARSH LEVEL IN THE FIELD.

THE GEORID SHALL EXTEND A MINIMUM OF 5' PAST THE LIMITS OF THE ROCKFILL. THE DIMENSIONS OF THE GEORID FOR SITE 3A ARE 188'.

PROFILE ON CENTERLINE - SITE NO. 3A

SCALE IN FEET

"AS-BUILT"
TYPICAL CROSS SECTION

1. Neoprene washers shall be placed between steel frame and aluminum sign. Signs shall be made from 3/16" plate aluminum.

EXISTING CHANNEL BOTTOM

20' - 4.5" O.D. PIPE SCH. 40V

WARNING SIGN

CENTRAL LINE OF STRUCTURE

WARNING SIGN

INSET NO. 1

EXISTING CHANNEL BOTTOM

20' - 4.5" O.D. PIPE SCH. 40V

SEE INSET NO. 1 BELOW

DIRECTIONAL SIGN PLACEMENT

DIRECTIONAL SIGN DETAILS

2" radius

ORANGE

1" radius

WHITE

BLACK

INSET NO. 1

NOT TO SCALE
West Fork Bayou L’Ours Watershed
Project BA-2, Construction Unit 2

Built Under The Coastal Wetlands, Planning,
Protection & Restoration Act
Public Law 101-646

"AS-BUILT"

By
Lafourche Parish Council
Lafourche - Terrebonne Soil & Water Conservation District
Louisiana Department Of Natural Resources
With The Assistance Of
NATURAL RESOURCES CONSERVATION SERVICE
OF THE
U. S. DEPARTMENT OF AGRICULTURE
1998

LEGEND

LOCATION MAP

INDEX TO DRAWINGS

LOCATION MAP

Approximate scale in miles
SITE 1 - LONGITUDINAL SECTION
X-SECTION TAKEN AT ORANGE POST - FROM WEST TO EAST

SITE 90 - LONGITUDINAL SECTION
X-SECTION TAKEN 90° EAST OF ORANGE POST

"AS-BUILT"

SITE 1 - PLAN
X-SECTION TAKEN AT ORANGE POST

NOTES:
1. SEE SHEET 23 AND 24 FOR SIGN DETAILS.
2. TIE-IN BETWEEN STRUCTURES AND BANK STABILIZATION TO BE DETERMINED IN THE FIELD BY THE CORP.
3. TRANSITION FROM 14" CREST WIDTH TO 4" CREST WIDTH AT ONE FOOT LONGITUDINAL TO ONE FOOT NORMAL ALONG LONGITUDINAL Axis.
NOTES:
1. GEOFABRIC TO CONFORM TO EXISTING CHANNEL BOTTOM.
2. SEE SHEET 6 FOR ESTIMATED QUANTITIES.
NOTE:
1. Sheet pile shall conform to ASTM Specification A572 or A590, and have minimum section modulus of 8.0 in.²/ft per feet of pile length.
2. All channel sections and plate shall conform to ASTM A572 or A590.
3. All dimensions and channel dimensions are typical and are subject to change based on manufacturer's specifications.
4. Sheet piles will be driven in the "normal configuration" as shown.

STRUCTURE LAYOUT
NOTE:
This connection varies based on the location of the
Channel Cap with respect to the pile and cannot be
implemented until the piles and the location
of the opening has been identified. The contractor
shall submit a method of connecting the Channel Cap
to the pile and all drawings for approval prior to
connection. The contractor may request the
connection detail design to be drawn by the
contractor design staff when developing this connection.

NOTE:
Connection of Channel Cap to Sheet Pile at Bottom of Variable Crest
Revolving Unit No. 30 shall be sealing at all times. The
holes in the Sheet Pile shall be Field Drilled.

3/4" x 2-1/4" Bolt with Washers 1 A 352-Grade 50 Steel

6 x 4 x 5/16" Clip

Typical Sheet Pile Details

Normal Configuration

Typical Plan View of Wing Wall Rockfill

Wingwall Details

Notes:
1. Sheet pile shall conform to ASTM Specification A572, or 50
   and have minimum tensile modulus of 80,000 psi per foot of
   pile length. All channels, angles, and plate shall conform to
   ASTM A572 or 50.
2. All sheet and channel dimensions are nominal and are subject
to change based on manufacturer/supplier.
3. Minimum web and flange thickness of sheet piles shall be 0.25".
4. Sheet piles will be driven in the "Normal Configuration" as shown.
CRANE BASE PLATE SUPPORT
PLAN VIEW

"AS-BUILT"

SECTION AS SHOWN

NOTES:

1. STEEL SHEET PILING SHALL BE NOTCHED FOR 6" x 4" x 24" LEG TO PASS THROUGH CONTINUOUS.
2. CRANE BASE PIPE AND COUPLERS, SHEET PILING, 2" x 2" x 24" AND GRATING NOT SHOWN FOR CLARITY.
"AS-BUILT"

PIPE RAIL PLAN

PIPE RAIL FRONT ELEVATION

PIPE RAIL LEFT ELEVATION

PIPE RAIL ISOMETRIC N.T.S
"AS-BUILT"

Hand which shall be rated at 1500 lbs minimum and shall be stainless steel and include an automatic brake, which shall be activated upon opening and closing. Hand shall be secured to beam according to manufacturer’s recommendations. Hand shall have a lock-down device to prevent unauthorized operation. Contractor shall provide shop drawings of the hand which, including all connections, shall be approved by both the owner and the manufacturer. Hand shall be constructed of 316 stainless steel and shall be a minimum of 3/16" in length. Thread winch cable through center line of 11/2" hole in hand and secure with four stainless steel cable clamps. Hand shall be designed to rotate 360 degrees operationally. Crane body shall be adjustable and include a rotate 360 degree swivel. Crane base plate shall be 1/4 inch thick. 1/2 inch square, galvanized base plate.

Note: This connection varies based on the location of the channel cap with respect to the pile and cannot be designed until the pile is in place and the location determined. The connection shall be designed such that the channel cap is located directly over the top of the pile. The holes in the sheet pile shall be field drilled.

**Details of 3/16" Eye Bolt**

**Elevation**

Stop Log Locking Mechanism (2 req.)

**Plan**

Stop Log (6 req.)

**Isometric**

Stop Logs & Crane
PROFILE - STA. 0+00 - STA. 80+00
BANK STABILIZATION

PROFILE - STA. 80+00 - STA. 160+00
BANK STABILIZATION

NOTES:
1. GEOTEXTILE TO CONFORM TO EXISTING CHANNEL BOTTOM
2. X-SECTION WITH EXCAVATION REQUIRE A MINIMUM OF 2 FT. OF ROCK RIPRAP
3. SEE SHEET 21 FOR ESTIMATED QUANTITIES
4. SEE SHEET 22 FOR TYPICAL X-SECTIONS
PROF-LB.
PROF-STA. 0'00-77+83
ISLAND BANK STABILIZATION

NOTES:
1. GEOTEXTILE TO CONFORM TO EXISTING CHANNEL BOTTOM.
2. SEE SHEET 22 FOR TYPICAL X-SECTIONS.

400 0 400 800
Scale in Feet

BANK STABILIZATION
STA. 3'400 - 160'000
ACTUAL
BASE BID
ESTIMATED QUANTITIES
ROCK RIPRAP 165000T
ROCK RIPRAP 12000T
ROCKFILL 22000T
EARTHILL 37500T
GEOTEXTILE 25100T
EXCAVATION 0 3'040 CY

ADDITIONAL ESTIMATED QUANTITIES
EARTHILL 305 CY
GEOTEXTILE 540 SY

BANK STABILIZATION
STA. 160'00 - 320'00
BASE BID
ESTIMATED QUANTITIES
EARTHILL 811 490 CY
GEOTEXTILE 0 - SY

ADDITIONAL
ESTIMATED QUANTITIES
EARTHILL 1420 640 CY
GEOTEXTILE 1200 490 SY

BANK STABILIZATION
STA. 320'00 - 480'00
BASE BID
ESTIMATED QUANTITIES
EARTHILL 1207 295 CY
GEOTEXTILE 166 67 - 995 - SY

ADDITIONAL
ESTIMATED QUANTITIES
EARTHILL 2060 570 CY
GEOTEXTILE 1000 880 SY

BANK STABILIZATION
STA. 480'00 - 640'00
ADDITIONAL
ESTIMATED QUANTITIES
EARTHILL 2255 875 CY
GEOTEXTILE 2100 540 SY

ISLAND BANK STABILIZATION
STA. 0'00 - 77+83
BASE BID
ESTIMATED QUANTITIES
EARTHILL 1060 965 CY
GEOTEXTILE 110 440 SY

...
PLAN
TYPE V - NAVIGATION AID SUPPORT

NOTES:
1. ALL 9/16" DIA. ALL THREAD TIE RODS SHALL BE SECURED BY NOTCHED IN PLACE GJIS WASHERS AND TACK WELDED NUTS.
3. THE 9/32" DIA. CABLE SHALL BE SECURED USING 3 STAINLESS STEEL CLAMPS.
4. THE 9/16" DIA. ALL-THREAD TIE RODS SHALL BE A MINIMUM OF 6" BELOW TOP OF BATTER PILE AND 3" VERTICAL CLEARANCE FROM ADJACENT TIE ROD.
5. ALL TIMBER PILES FOR FOUR PILE NAVIGATION AID DOLPHIN SHALL BE 12" x 60".

ELEVATION VIEW

TOP VIEW
8+96.3  9+46.3  9+96.3  10+46.3  10+96.3  11+46.3

11+96.3  12+46.3  12+96.3  13+46.3  13+96.3  14+46.3

14+96.3  15+46.3  15+96.3  11+03.41

"AS-BUILT"
"AS-BUILT"
ATTACHMENT V

GIWW TO CLOVELLY HYDROLOGIC RESTORATION

PROJECT PERMITS
&
PERMIT AMENDMENTS
December 13, 1991

Mr. Benny Landreneau, Assistant Conservationist for Water Resources
3737 Government Street
Alexandria, Louisiana 71302

REF: PARTICIPANT LAFOURCHE PARISH - COASTAL ZONE MANAGEMENT ADVISORY COMMITTEE MEETING ON DECEMBER 10, 1991, GALLIANO, LA

Dear Mr. Landreneau:

The purpose of this letter is just to say "THANK YOU!" As you know, we've taken special pride in our "Plan of Action" in Lafourche Parish; but, I have always felt that you provide us, in turn, the additional support needed toward our continuing efforts to permit, fund, and implement the Plan of Action.

Also, as per your request at the meeting, enclosed please find a copy of our signed Corps of Engineers permit for our "Plan of Action".

With many thanks and holiday good wishes, I am,

Sincerely,

LAFOURCHE PARISH COUNCIL

Harold "Hat" J. Bergeron
CZM Coordinator

HJB/ddo

Enclosure
It is necessary that you notify the District Engineer, in writing, prior to commencement of work and also upon its completion. The enclosed Notice of Authorization, ENG Form 4336, is to be conspicuously displayed at the site of work.

Sincerely,

Albert C. Guillot
Assistant Chief
Operations and Readiness Division

Enclosure
DEPARTMENT OF THE ARMY PERMIT

Permittee: Lafourche Parish Council

Permit No.: SE(Lafourche Parish Wetlands)743

Issuing Office: New Orleans District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: To dredge for material to construct and maintain overflow banks, marsh areas, and plugs, and install and maintain culverts, fixed crest weirs with boat bays, a variable crest weir and rock weirs with navigation openings, in accordance with the drawings attached in 42 sheets, undated, and revised June 14, 1991.

Project Location: In Lafourche Parish, in an area southerly from U.S. Highway 90 and between Raceland and Des Allemands, Louisiana to the Clovelly Oil and Gas Field, and easterly from the Bayou Lafourche Ridge and westerly from Bayou Des Allemands, Lake Salvador, Bayou Perot, and Little Lake.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on November 30, 1996. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. 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 in compliance with General Condition 4 below. 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.

3. 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 what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

ENG FORM 1721, Nov 86

EDITION OF SEP 82 IS OBSOLETE.

(33 CFR 320-330)
e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.1 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

[Signature]
(PERMITTEE)

[Date]
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

[Signature]
(CERTIFICATION)

[Date]
(DATE)

Albert J. Guillot, Assistant Chief, Operations and Readiness Division
for James V. Hall, Deputy District Engineer

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

[Signature]
(TRANSFEREE)

[Date]
(DATE)
SPECIAL CONDITIONS:

7. The permittee shall operate the water control structures according to the following schedules:
   
a. The flapgates on the inside of the culverted structures along the Gulf Intracoastal Waterway (GIWW) shall remain in the down position (flapping) at all times. The screwgates shall remain open at all times except when the GIWW salinity exceeds 2 ppt. at site number 71. Monitoring of the salinities shall be done on a weekly basis when the screwgates are closed. After one year of monitoring data has been collected, an interagency team composed of representatives from the U.S. Army Corps of Engineers (CE), Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), Soil Conservation Service (SCS), Louisiana Coastal Management Division (CMD), Louisiana Coastal Restoration Division (CRD), Louisiana Department of Wildlife and Fisheries (LDWF), Louisiana Department of Environmental Quality (DEQ) and the Lafourche Parish Council (LPC) shall reassess the salinity closure limits to insure that the structures remain open 75% of the time.

b. Rock weir elevations shall not exceed a height of 0.5 of a foot below marsh elevation (BML). The navigation channels shall be of sufficient depth and width and maintained to provide boat passage at mean low water.

c. The stop logs in the variable crest weir shall be set at 0.5 of a foot BML from April to November and removed from November to April to allow for sediment and nutrient inflow during the spring.

8. Construction of the overflow bank shall not block natural tidal channels into the marsh. Only those channels resulting from shoreline erosion or retreat into interior ponds and/or waterways or in broken marsh areas shall be blocked. Overflow banks shall not be constructed on top of existing solid marsh where the natural bank is equal to or greater than 0.5 of a foot above marsh elevation. Vegetated shorelines and tidal waterways that are not in an eroded condition shall not have dredged material deposited on them. Overflow banks shall not exceed adjacent marsh elevations by more than 0.5 of a foot under any circumstance.

9. In areas of "no channelized water exchange", the permittee shall deposit dredged material only in shallow open water areas where depths do not exceed -2.0 feet NGVD. The height and width of the deposited material shall not exceed that of the existing spoil bank which it ties into.

10. The permittee shall install a flappaged culvert in the earthen plug at site No. 72 should an impounded situation arise in the marsh adjacent to the site.

11. Final plug heights shall not exceed 3.0 feet NGVD or the height of the spoil bank which it ties into, which ever is greater.

12. The permittee shall obtain dredged material from open waters outside of the marsh area. The permittee shall avoid dredging in areas supporting submergent vegetation.
13. Retention dikes around marsh restoration sites along Temple Bay, Little Lake and Bay L'Ours shall not exceed an elevation of 2.0 feet NGVD during hydraulic placement of dredged material. The dikes shall be allowed to settle or erode to an elevation not to exceed 0.5 of a foot above natural marsh elevation after the initial placement of the material is complete.

14. Should a review of the area indicate waterlogging or impoundment conditions exist as a result of project implementation, the permittee shall take corrective action (i.e. gapping spoil banks and/or adding control structures) to return the area to a more normal hydrologic regime after obtaining the necessary authorization from the CMD and the CE.

15. The permittee shall monitor the management area as outlined in the Coastal Restoration Division and Lafourche Parish documents entitled "Monitoring Plan for BA-2 GIWW to Clovelly Project" and "Monitoring Plan Project No. BA-6 U.S. 90 to GIWW Wetland (copy attached). Should monitoring of the project area cease for any reason, abandonment of the management will be assumed to have occurred.

16. The permittee shall provide an annual report to the CE, CMD and other interested resource and regulatory agencies. The annual report shall include water level readings and salinity data, control structure operation and maintenance, changes in emergent vegetation and habitats, and land/water ratios based on the analysis of aerial photography. The annual report shall also evaluate whether the management goals of salt water intrusion, erosion control, land loss prevention, freshwater and sediment introduction and water level control are being achieved.

17. The management plan shall be reviewed by the interagency team composed of the permittee and representatives of the regulatory and resource agencies within five years of permit issuance or as requested by the permittee and/or by members of the team to discuss the contents of the annual report. The interagency team will have the opportunity to participate in and contribute to the formulation and modifications of the monitoring efforts as well as any modifications to the plan itself as required to reduce project related direct and secondary adverse impacts.

18. All future modifications in the character of work or control structure operation shall be submitted to the CMD or CE for possible permit modification or revision.

19. The permittee is aware that implementation of mariculture practices within the management area shall require authorization under separate individual permit where the project requires dredging or installation of structures requiring Section 10 and Section 404 permits.

20. Maintenance dredging for material to maintain overflow banks, plugs and marsh restoration areas is authorized under this permit for a period of ten (10) years from the date of permit issuance. Maintenance operations shall not exceed specifications as shown on permit drawings without proper authorization from the regulatory agencies. Material for maintenance of these structures shall be obtained from open water sites not supporting submergent vegetation and outside of the management area or hauled from nonwetland sites.
21. The permittee shall be required to remove, or make inoperable, structures authorized by this permit to assure unimpeded water exchange should the management plan be abandoned. Maintenance activities of overflow banks and plugs shall be discontinued if the plan is abandoned unless authorization of such activities is obtained under separate individual permit.

22. Wetlands that are not specifically part of the project site but are disturbed during construction, including the temporary crossing of wetland areas, shall be restored by the permittee to their preproject elevations and conditions including replanting if deemed necessary.

23. The permittee shall utilize mats and confine activities to matted areas when work is done by heavy equipment in wetland areas. When work is completed, the mats will be removed.

24. The permittee shall be aware that no work may be performed under this permit that impacts real interests under the jurisdiction of the New Orleans District until a waiver or real estate instrument is issued to the permittee by the Real Estate Division of this District.

25. The permittee shall not place structures across any state-owned water bottom without the approval of the Louisiana Department of Natural Resources, Division of State Lands. The permittee will be responsible for contacting the Division of State Lands to ascertain which, if any, of the structures will be placed over state-owned water bottoms.

26. Barriers will be visible to the boating public both day and night so as to reduce the possibility of boat collision with the barriers.

27. The permittee shall be aware that under 33 CFR 330.4(a)(1), signs may be placed as aids to navigation warning boaters of upcoming barriers in the waterways provided they are approved and installed with the requirements of the US Coast Guard.

28. You must install and maintain, at your expense, any safety lights, signs and signals prescribed by the US Coast Guard, through regulations or otherwise, on your authorized facilities.

29. The permittee shall make such changes in the permitted project or in its configuration as may be necessary to satisfactorily meet future changes in the location or the section of existing Federal and/or state project waterways or levees, or changes in the generally prevailing conditions in the vicinity that may be required in the public interest. The permittee shall bear the cost of such changes.

30. The permittee shall coordinate with the State Historic Preservation Officer to assure that the proposed project does not inadvertently adversely affect archaeological sites that occur along the shores of Bayou Des Allemands, Lake Salvador, the Gulf Intracoastal Waterway and Little Lake.
31. The permittee shall provide to the Corps of Engineers a schedule of construction (timeframe) for the Clovelly Canal closure prior to commencement of project construction.

32. The permittee is aware that the Section E hurricane protection levee will be raised beginning in Jan 93, with another raising in 1998. The use of the Clovelly Canal will be requested of the levee board as a bucket dredged water access route. (NOTE: the Section E HPL extends from Breton Canal, north of the NW corner of Clovelly Farms).

33. The permittee is advised that work shown on maps D-5, D-6, D-7, E-5, and F-5 are within areas where the Government has disposal easements and the Government intends to exercise its rights to utilize these areas during maintenance dredgings.
December 4, 1991

A permit to dredge for material to construct and maintain overflow banks, marsh areas and plugs and install and maintain culverts, fixed crest weirs with boat bays, a variable crest weir and rock weirs with navigation openings, in Lafourche Parish, in an area southerly from U.S. Hwy. 90 between Raceland and Des Allemands, Louisiana to the Clovelly Oil and Gas Field, and easterly from the Bayou Lafourche Ridge and westerly from Bayou Des Allemands, Lake Salvador, Bayou Perot and Little Lake, has been issued to Lafourche Parish Council on December 4, 1991.

Address of Permittee

Thibodaux, Louisiana 70301

Permit Number

SE(Lafourche Parish Wetlands)743

For the District Commander

Albert J. Guillot

NG FORM 4338, Jul 81 (33 CFR 320-330) EDITION OF JUL 70 MAY BE USED
MONITORING PLAN

Project No. BA-2 GIWW to Clovelly Wetland

October 7, 1991

Project Objective - Re-establish hydrologic conditions that existed before major land use alterations (i.e.: oil field canals)

Measure effectiveness with data from
monitoring element #: Project Goals:
1, 2, 5, 6, 7 1) Greater freshwater retention to prevent rapid salinity increases and resultant loss of vegetation.
3, 5, 6, 7 2) Water exchange through sheet-flow as opposed to an expanding network of tidal channels with progressive erosion of the dissected wetlands.
3, 4 3) Enhance sediment input.

Monitoring elements needed to evaluate progress in meeting the project objective and goals:

*1) Salinity. (All 4 monitoring stations)

2) Measure emergent vegetation to open water ratio by comparison of aerial photography.

3) Measure marsh surface elevation changes (accretion, erosion) by installing feldspar marker plots throughout the project area. See monitoring station Location Map for proposed locations.

4) Soil samples taken from project and analysis (analysis needed but not limited to - pH, O.M., extractable cations, total acidity and heavy metal analysis)

*5) Water level. (All 4 monitoring stations)

*6) Flow (velocity and direction)-(at 1 monitoring station)

*7) Rainfall (at 1 monitoring station)

* Monitoring stations will be equipped to measure these parameters. Four stations, one outside the project and three inside, will be installed and maintained by DNR/CRD. See monitoring station Location Map.
MONITORING PLAN (continued)

NOTE: Location of monitoring stations and marker plots are proposed. CRD will accept suggestions on alternate sites.

NOTE: Evaluating sheet flow will be done by comparison of water levels and existing marsh levels (MSL marsh level elevation will be established.)

NOTE: Monitoring requirements from CUP and 404 Permits will be included in the final plan.
DEPARTMENT OF THE ARMY PERMIT

Permittee_Lafourche Parish Council

Permit No. SE(Lafourche Parish Wetlands)743

Issuing Office New Orleans District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: To dredge for material to construct and maintain overflow banks, marsh areas, and plugs, and install and maintain culverts, fixed crest weirs with boat bays, a variable crest weir and rock weirs with navigation openings, in accordance with the drawings attached in 42 sheets, undated, and revised June 14, 1991.

Project Location: In Lafourche Parish, in an area southerly from U.S. Highway 90 and between Raceland and Des Allemands, Louisiana to the Clovelly Oil and Gas Field, and easterly from the Bayou Lafourche Ridge and westerly from Bayou Des Allemands, Lake Salvador, Bayou Perot, and Little Lake.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on November 30, 1996. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. 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 in compliance with General Condition 4 below. 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.

3. 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 what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

ENG FORM 1721, Nov 86 EDITION OF SEP 82 IS OBSOLETE. (33 CFR 320-330)
e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant’s Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 309.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

[Signature]
(PERMITTEE)

[Date]
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

[Signature]
(ENGINEER)

[Date]
(DATE)

Albert J. Guillot, Assistant Chief, Operations and Readiness Division
for James T. Hall, Deputy District Engineer

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

[Signature]
(TRANSFEREE)

[Date]
(DATE)

Note: Page 2 is blank.
7. The permittee shall operate the water control structures according to the following schedules:

a. The flapgates on the inside of the culverted structures along the Gulf Intracoastal Waterway (GIWW) shall remain in the down position (flapping) at all times. The screwgates shall remain open at all times except when the GIWW salinity exceeds 2 ppt. at site number 71. Monitoring of the salinities shall be done on a weekly basis when the screwgates are closed. After one year of monitoring data has been collected, an interagency team composed of representatives from the U.S. Army Corps of Engineers (CE), Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), Soil Conservation Service (SCS), Louisiana Coastal Management Division (CMD), Louisiana Coastal Restoration Division (CRD), Louisiana Department of Wildlife and Fisheries (LDWF), Louisiana Department of Environmental Quality (DEQ) and the Lafourche Parish Council (LPC) shall reassess the salinity closure limits to insure that the structures remain open 75% of the time.

b. Rock weir elevations shall not exceed a height of 0.5 of a foot below marsh elevation (BML). The navigation channels shall be of sufficient depth and width and maintained to provide boat passage at mean low water.

c. The stop logs in the variable crest weir shall be set at 0.5 of a foot BML from April to November and removed from November to April to allow for sediment and nutrient inflow during the spring.

8. Construction of the overflow bank shall not block natural tidal channels into the marsh. Only those channels resulting from shoreline erosion or retreat into interior ponds and/or waterways or in broken marsh areas shall be blocked. Overflow banks shall not be constructed on top of existing solid marsh where the natural bank is equal to or greater than 0.5 of a foot above marsh elevation. Vegetated shorelines and tidal waterways that are not in an eroded condition shall not have dredged material deposited on them. Overflow banks shall not exceed adjacent marsh elevations by more than 0.5 of a foot under any circumstance.

9. In areas of "no channelized water exchange", the permittee shall deposit dredged material only in shallow open water areas where depths do not exceed -2.0 feet NGVD. The height and width of the deposited material shall not exceed that of the existing spoil bank which it ties into.

10. The permittee shall install a flapped culvert in the earthen plug at site No. 72 should an impounded situation arise in the marsh adjacent to the site.

11. Final plug heights shall not exceed 3.0 feet NGVD or the height of the spoil bank which it ties into, which ever is greater.

12. The permittee shall obtain dredged material from open waters outside of the marsh area. The permittee shall avoid dredging in areas supporting submergent vegetation.
MONITORING PLAN

Project No. BA-6 U. S. 90 to GIWW Wetland

October 7, 1991

Project Objective - Re-establish hydrologic conditions that existed before major land use alterations (i.e. - oil field canals)

Measure effectiveness with data from monitoring element #:  

<table>
<thead>
<tr>
<th>Element</th>
<th>Project Goals</th>
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<tbody>
<tr>
<td>2, 3, 4</td>
<td>1) Prevent loss of vegetated wetlands</td>
</tr>
<tr>
<td>1, 5</td>
<td>2) Maintain the area as fresh marsh</td>
</tr>
<tr>
<td>4, 5</td>
<td>3) Prevent excessive water levels (ponding)</td>
</tr>
<tr>
<td>4</td>
<td>4) Encourage water exchange through sheet flow as opposed to discharge through the existing network of canals.</td>
</tr>
</tbody>
</table>

Monitoring elements needed to evaluate progress in meeting the project objective and goals:

1) Salinity. (All 3 monitoring stations)

2) Measure emergent vegetation to open water ratio by comparison of aerial photography.

3) Soil samples taken from project and analysis (analysis needed but not limited to - pH, O.M., extractable cations, total acidity and heavy metal analysis)

4) Water level. (All 3 monitoring stations)

5) Rainfall

* Monitoring stations will be equipped to measure these parameters. Three stations, one outside the project and two inside, will be installed and maintained by DNR/CRD. See monitoring station Location Map.

NOTE: Location of monitoring stations are proposed. CRD will accept suggestions on alternate sites.
NOTE: Evaluating sheet flow will be done by comparison of water levels and existing marsh levels (MSL marsh level elevation will be established.)

NOTE: Monitoring requirements from CUP and 404 Permits will be included in the final plan.
NOT TO SCALE

LEGEND

- MONITORING STATIONS
- CONTROL MONITORING STATION

PROJECT NO. BA-6
U.S. 90 TO GIWW WETLAND
MONITORING PLAN
L.A. DEPT. OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION
CROWLEY PLANNING STAFF
KEY

PROPOSED MARSH CREATION/RESTORATION (See page 3)

BORROW AREAS FOR MARSH CREATION/RESTORATION

PROPOSED OVERFLOW BANK (See page 4)

NO CHANNELIZED WATER EXCHANGE (See page 5)
(continuous marsh bank or spoil)

PROPOSED PLUG (See page 6 and 7)

PROPOSED PLUG WITH CULVERT (See page 8)
(to allow for sediment import)

PROPOSED WATER CONTROL STRUCTURE (See page 9, 10, 11)

PUMP STATION (See page 12)

PUMP STATION DISCHARGE (See page 12)

EXISTING WATER CONTROL STRUCTURE

EXISTING PLUG

PLEASE USE DESIGNATED NUMBERS OR LETTERS ON MAPS TO IDENTIFY UNITS ON ATTACHED SCHEDULES.
Turbidity screens will be used to limit turbidity to the area being restored.
NATURAL OVERFLOW BANK WILL BE RESTORED

Only breaches into open pond areas will be plugged.
Natural tidal channels that do not go into shallow pond areas will be left open.
NO CHANNELIZED WATER EXCHANGE

To be filled to existing adjacent spoil - Not to exceed + 3.0' NGVD

Lafourche Parish Council
Post Office Drawer 5548
Thibodaux, LA 70301

WETLAND PROTECTION AND MAINTENANCE BETW. U.S. HIGHWAY 90 AND THE CLOVELLY WETLAND

Phase 1: GIWW to Clovelly Wetlands
Phase 2: U.S. 90 to GIWW
ALTERNATIVE NO. 1 - Temporary plug which can be opened with material being stockpiled. Plug can be closed as needed.

See Page 6 for additional dredge/fill information.

Driven sheet pile

Erosion spans should be driven inland 10-15 feet.

Channel

Bottom of Channel

ALTERNATIVE NO. 2 - Moveable structure can be moved to allow for passage.

This alternative may be: 1) a gate/lock...structure; 2) a barge that can be sunk and floated; or 3) other moveable apparatus which creates a seal when closed and can be opened as needed.

Driven sheet pile

Erosion spans should be driven inland 10-15 feet.

Channel

Bottom of Channel

Moveable Structure

---

Alternative 2 - Moveable Structure

Alternative 1 - Temporary Fill

Temporary Plug - Material may be stockpiled on side

---

Leaves Parish Council
Post Office Drawer SS06
Thibodaux, LA 70301

WETLAND PROTECTION AND MAINTENANCE BETWEEN U.S. HIGHWAY 90 AND THE CLOVELLY WETLANDS

Phase 1: SITING TO CLOVELLY WETLANDS
## SCHEDULE FOR PROPOSED PLUGS (Phase 1)

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Width ft</th>
<th>Depth ft</th>
<th>Total Length ft</th>
<th>Volume cu. ft</th>
<th>Width of Plug</th>
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</thead>
<tbody>
<tr>
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<td>25.5</td>
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<td>50</td>
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<td>5.0</td>
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<td>5</td>
<td>180</td>
<td>466.5</td>
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<td>188.5</td>
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<td>5.9</td>
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<td>150</td>
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<td>1094</td>
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<td>110</td>
<td>359</td>
<td>5.3</td>
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## SCHEDULE FOR PROPOSED PLUGS (Phase 2)

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<tr>
<th>Site No.</th>
<th>Width ft</th>
<th>Depth ft</th>
<th>Total Length ft</th>
<th>Volume cu. ft</th>
<th>Width of Plug</th>
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<td>173</td>
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<td>72</td>
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<td>195</td>
<td>198</td>
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<tr>
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<td>30</td>
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<tr>
<td>88</td>
<td>125</td>
<td>6</td>
<td>148</td>
<td>599</td>
<td>5.9</td>
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<tr>
<td>89</td>
<td>80</td>
<td>6</td>
<td>100</td>
<td>383</td>
<td>5.9</td>
</tr>
</tbody>
</table>
DETAIL OF RIPRAP DEGRADATION
AT LOOP PIPELINE CROSSING
SITE 90

± 120 cubic yards of existing shell riprap at pipeline crossing will be pulled down into canal.
SCHEDULE FOR
PROPOSED PLUGS WITH CULVERTS
(to allow for sediment import)
(Phase 1)

<table>
<thead>
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<th></th>
<th></th>
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<th></th>
<th></th>
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</thead>
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<td>11 1</td>
<td>6</td>
<td>13 1</td>
<td>54 4</td>
<td>5 9</td>
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<tr>
<td>7 1</td>
<td>14 5</td>
<td>5</td>
<td>16 5</td>
<td>60 4</td>
<td>5 3</td>
</tr>
<tr>
<td>8 0</td>
<td>12 1</td>
<td>5. 5</td>
<td>14 1</td>
<td>54 7</td>
<td>5 6</td>
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<td>8 1</td>
<td>9 4</td>
<td>4</td>
<td>11 4</td>
<td>29 2</td>
<td>4 7</td>
</tr>
<tr>
<td>8 2</td>
<td>8 5</td>
<td>4. 5</td>
<td>10 5</td>
<td>29 2</td>
<td>5 0</td>
</tr>
</tbody>
</table>

CULVERT: Diameter - 48"
Length - 30' minimum

Screw Type Lift-Gate
Gate Support Frame
Drained sheet pile
Piling

Mean High Water
Mean Low Water
Canal to GIWW
Metal Culvert

TYPICAL PLUG WITH CULVERT

NOTE: Screw gates will remain open and closed only when salinity levels in the GIWW exceed 2.ppt.

FOR PLANNING USE ONLY. NOT TO BE USED FOR DESIGN

6/4/9

 Lafourche Parish Council
 Post Office Drawer 5546
 Thibodaux, LA 70301

WETLAND PROTECTION AND MAINTENANCE BETWEEN U.S. HIGHWAY 90 AND THE CLOVELLY WETLANDS

Phase 1: GIWW to Clovely Wetlands
DETAIL OF SPOIL BANK DEGRADATION
FOR SITES 71, 80, 81 & 82

Existing Spoil Bank

Metal Culvert
(See Page 8 for details)

± 50'

± 200'

NO MORE THAN 450 TOTAL CUBIC YARDS
OF MATERIAL WILL BE DISPLACED AT
EACH SITE.

Degrade Existing Spoil E
To Marsh Level

Existing Spoil Banks Will Be
Pulled Into Canal

Marsh

Lafourche Parish Council
Post Office Drawer 554
Thibodaux, LA 70301

WETLAND PROTECTION AND MAINTENANCE
U.S. HIGHWAY 90 AND THE CLOPELY WET.

Phase I: S10E to Clopely Wetlands
PROPOSED PLUG WITH TWO FLAPGATED CULVERTS
SITE 88

REVISED: 6/24/9

CULVERTS: Diameter: 48
Length: 30 minimum

Driven sheet pile

Gated Support Frame

Piling

Degraded Existing Spoil Banks
To Marsh level

Existing Spoil Banks

Existing Spoil Banks Will Be
Pulled Into Canal

Company Canal

Existing Spoil Bank

Culverts

50' GAPS WILL BE DEGRADED IN
EXISTING SPOIL BANKS EVERY 500'

Degraded Existing Spoil Banks
To Marsh Level

Existing Spoil Banks Will Be
Pulled Into Canal

Lafourche Parish Council
Post Office Drawer 5542
Thibodaux, LA 70301

WETLAND PROTECTION AND MAINTENANCE
U.S. HIGHWAY 90 AND THE CLODELL:

Phase 2: U.S. 90 to G1WW Wals

- 400 CUBIC YARDS OF MATERIAL PULLED INTO CANAL
FLAPGATED CULVERT

SITE 91

Flapgated culvert will be installed in existing breach (hydrological connection) between broken marsh and canal.

± 150 cubic yards of material will be dredged from adjacent canal and place on top of culvert and brought to grade with existing spoil banks.

Culvert: Diameter - 36"
Length - 30' minimum

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Thibodaux, LA 70301

WETLAND PROTECTION AND MAINTENANCE II
U.S. HIGHWAY 90 AND THE CLOVELLY WETLANDS

Phase I: GIWW to Clovelly Wetlands
SCHEDULE FOR PROPOSED WATER CONTROL STRUCTURES
ROCK WEIRS
(Phase 1)

<table>
<thead>
<tr>
<th>SITE NO.</th>
<th>WIDTH FT.</th>
<th>DEPTH FT.</th>
<th>EXISTING AREA ACU. YD.</th>
<th>MAXIMUM WIDTH OF BASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>135</td>
<td>9</td>
<td>815</td>
<td>3.5</td>
</tr>
<tr>
<td>4</td>
<td>112</td>
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<td>421</td>
<td>2.3</td>
</tr>
<tr>
<td>7</td>
<td>145</td>
<td>9.5</td>
<td>669</td>
<td>3.6</td>
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</tbody>
</table>

SCHEDULE FOR PROPOSED WATER CONTROL STRUCTURES
ROCK WEIRS
(Phase 2)

<table>
<thead>
<tr>
<th>SITE NO.</th>
<th>WIDTH FT.</th>
<th>DEPTH FT.</th>
<th>EXISTING AREA ACU. YD.</th>
<th>MAXIMUM WIDTH OF BASE</th>
</tr>
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<tbody>
<tr>
<td>7</td>
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<td>792</td>
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<td>11.5</td>
<td>753</td>
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<td>702</td>
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</tr>
<tr>
<td>7.8</td>
<td>140</td>
<td>6</td>
<td>732</td>
<td>1.7</td>
</tr>
</tbody>
</table>

TYPICAL ROCK WEIR

FOR PLANNING USE ONLY

CHANNEL OPENINGS
VERTICAL: ≥ 4' DEPTH AT LOW T
HORIZONTAL: ≥ 50' WIDTH AT LOW

Letourneuf Parish Council
Fax: Office Drawer 5546
Thibodaux, LA 70301

WETLAND PROTECTION AND MAINTENANCE FOR
U.S. HIGHWAY 90 AND THE CLOVELLY WETLANDS

Phase 1: FLWW to Clovelly Wetland
Phase 2: U.S. 90 to FLWW
**SCHEDULE FOR PROPOSED WATER CONTROL STRUCTURES**

**FIXED CREST WEIRS WITH BOAT BAYS (Phase 1)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Width (ft)</th>
<th>Depth</th>
<th>Existing Area (sq. ft)</th>
<th>Total Crest Area (sq. ft)</th>
<th>Access Slot Length (ft)</th>
<th>Access Slot Area (sq. ft)</th>
<th>Normal Crest Area (sq. ft)</th>
<th>Normal Crest Area (sq. ft)</th>
<th>Total Weir Area (sq. ft)</th>
<th>Ratio Weir Area</th>
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<tbody>
<tr>
<td>1</td>
<td>111</td>
<td>150</td>
<td>9</td>
<td>534</td>
<td>120</td>
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<td>120</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>130</td>
<td>6</td>
<td>352</td>
<td>208</td>
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**SCHEDULE FOR PROPOSED WATER CONTROL STRUCTURES**

**FIXED CREST WEIRS WITH BOAT BAYS (Phase 2)**

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<th>Normal Crest Area (sq. ft)</th>
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<th>Total Weir Area (sq. ft)</th>
<th>Ratio Weir Area</th>
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<td>40</td>
<td>841</td>
<td>421</td>
<td>821</td>
<td>15.3</td>
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</tbody>
</table>

**TYPICAL WATER CONTROL STRUCTURE**

![Diagram of typical water control structure](image)

- Driven sheet pile
- Varies
- Existing Marsh
- Marsh Level
- Boat Bay
- Existing Marsh

PLEASE NOTE THAT A MINIMUM 4' X 15' BOAT BAY WILL PROVIDE ACCESS FOR BOATERS AS WELL AS MARINE ORGANISMS.
LOW LEVEL WATER CONTROL STRUCTURE
"VARIABLE CREST"

NOTE: Weir is proposed for sediment introduction and will remain open from November to April. Stop logs will be set at .5 ft. below marsh level from April to November. Operation is not related to salinity levels.
<table>
<thead>
<tr>
<th>DESIGNATION</th>
<th>STATION NO.</th>
<th>PUMP NAME</th>
<th>DISCHARGE</th>
<th>OUTFLOW</th>
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<tbody>
<tr>
<td>A</td>
<td>21</td>
<td>Delta Allemands</td>
<td>2,400 GPM</td>
<td>Into waterway adjacent to Bayou Des Allemands</td>
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<tr>
<td>B</td>
<td>21</td>
<td>Clothsider</td>
<td>55,000 GPM</td>
<td>Into canal which in turn outfalls into the</td>
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<td></td>
<td></td>
<td></td>
<td>Company Canal</td>
</tr>
<tr>
<td>C</td>
<td>22</td>
<td>Little Clothsider</td>
<td>8,300 GPM</td>
<td>Into canal which in turn outfalls into the</td>
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<td>Company Canal</td>
</tr>
<tr>
<td>D</td>
<td>23</td>
<td>Bowerplace</td>
<td>27,500 GPM</td>
<td>Into adjacent bottomland hardwoods</td>
</tr>
<tr>
<td>E</td>
<td>24</td>
<td>Natural Gas</td>
<td>55,000 GPM</td>
<td>Into adjacent cypress/tupelo swamp</td>
</tr>
<tr>
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<td>25</td>
<td>Jesse DuRusse</td>
<td>55,000 GPM</td>
<td>Into adjacent cypress swamp</td>
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<td>G</td>
<td>20</td>
<td>Ravenwood</td>
<td>34,500 GPM</td>
<td>Into the Company Canal</td>
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<td>H</td>
<td>19</td>
<td>Rita</td>
<td>20,000 GPM</td>
<td>Into the Company Canal</td>
</tr>
<tr>
<td>I</td>
<td>13</td>
<td>Valentine (old)</td>
<td>142,000 GPM</td>
<td>Into canal which in turn outfalls into the</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GIWW</td>
</tr>
<tr>
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<td>J</td>
<td>9</td>
<td>T-Bois</td>
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<td>K</td>
<td>9</td>
<td>T-Bois (Eunice</td>
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<td>Allemand)</td>
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**PUMP STATION INFORMATION**

(Region D - South of GIWW)

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<td>Delta Farms</td>
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**PUMP STATION INFORMATION**

(Privately Operated)

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COASTAL USE PERMIT/CONSISTENCY DETERMINATION

C.U.P. No. P901117(Amended)
C.O.E. No. LMN03-SE(Lafourche Parish Wetlands)743

NAME AND ADDRESS: LAFOURCHE PARISH COUNCIL: P.O. Drawer 5548, Thibodaux, LA 70301


PROJECT DESCRIPTION: SEE NEXT PAGE

AMENDED PERMIT
(Supersedes Permit Issued June 20, 1991)

In accordance with the rules and regulations of the Louisiana Coastal Resources Program and Louisiana R.S. 49, Sections 213.1 to 213.21, the State and Local Coastal Resources Management Act of 1978, as amended, the permittee agrees to:

1. Carry out or perform the use in accordance with the plans and specifications approved by Department of Natural Resources.
2. Comply with any permit conditions imposed by the Department of Natural Resources.
3. Adjust, alter, or remove any structure or other physical evidence of the permitted use if, in the opinion of the Department of Natural Resources, it proves to be beyond the scope of the use as approved or is abandoned.
4. Provide, if required by the Department of Natural Resources, an acceptable surety bond in an appropriate amount to ensure adjustment, alteration, or removal should the Department of Natural Resources determine it necessary.
5. Hold and save the State of Louisiana, the local government, the department, and their officers and employees harmless from any damage to persons or property which might result from the use, including the work, activity, or structure permitted.
6. Certify that the use has been completed in an acceptable and satisfactory manner and in accordance with the plans and specifications approved by the Department of Natural Resources. The Department of Natural Resources may, when appropriate, require such certification to be given by a registered professional engineer.
7. All terms of the permit shall be subject to all applicable federal and state laws and regulations.
8. This permit, or a copy thereof, shall be available for inspection at the site of work at all times during operations.
9. The applicant will notify the Coastal Management Division of the date on which initiation of the permitted activity described under the "Coastal Use Description" began. The applicant shall notify the Coastal Management Division by mailing the enclosed green initiation card on the date of initiation of the coastal use.
10. Unless specified elsewhere in this permit, this permit authorizes the initiation of the coastal use described under "Coastal Use Description" for two years from the date of the signature of the Secretary or his designee. If the coastal use is not initiated within this two year period, then this permit will expire and the applicant will be required to submit a new application. Initiation of the coastal use, for purposes of this permit, means the actual physical beginning of the use activity for which the permit is required. Initiation does not include preparatory activities, such as movement of equipment onto the coastal use site, expenditure of funds, contracting out of work, or performing activities which by themselves do not require a permit. In addition, the permittee must, in good faith and with due diligence, reasonably progress toward completion of the project once the coastal use has been initiated.
11. This Coastal Use Permit authorizes periodic maintenance, but such maintenance activities must be conducted pursuant to the specifications and conditions of this permit.
12. The following special conditions must also be met in order for the use to meet the guidelines of the Coastal Resources Program:
PROJECT DESCRIPTION:

Implement five types of measures to restore natural hydrologic conditions and to better utilize available freshwater resources for the purpose of protecting and maintaining 123,000 acres of vegetated coastal wetlands. Project implementation will be sequenced as Phase I below the GIWW and Phase II above the GIWW. The objectives are to: 1) enhance the overland-flow component of water exchange (sheetflow) between bays and adjacent wetlands and reduce rapid water exchange through canals; 2) route freshwater from direct rainfall and forced drainage through the marsh to provide greater freshwater residence for abatement of saltwater intrusion and to improve water quality; 3) isolate major oil-field complexes and associated transportation and pipeline canals from the adjacent wetland complex to reduce rapid loss of freshwater and saltwater introduction; 4) restore wetlands along bay boundaries to maintain wetland integrity, and 5) prevent adverse increases of tidal water exchange through enlargement of tidal channels and breaching into ponds. To reduce rapid water exchange and loss of fresh water through canals, 31 plugs will be installed or restored at canal entrances using 16,007 cu. yds. of dredged material derived from adjacent canal bottoms. Plugs along the GIWW will have culverts for introduction of sediment laden water.

Integrity of the marsh boundary of the project area will be restored and maintained through restoration of the marsh shore up to 1,000' wide along Temple Bay, Little Lake and Bay l'Ours using up to 999,666 cu. yds. of dredged material from nearby bay bottoms and through closure of those breaches that adversely affect integrity of the project marsh. Such breaches will also be closed along Bayou des Allemands and Delta Farms, through placement of dredged material up to 50' wide and not to exceed natural marsh elevations. Natural overflow across the project area boundary will be maintained. Channelized water exchange between selected mineral industry canals and the marsh will be eliminated by closure of breaches in the canal banks associated with the following oil and gas fields: Bayou des Allemands, Delta Farms, Larose, Little Temple, Clovelly, and Cutoff, and along the Company Canal and Clovelly Canal. Access through natural tidal channels will be maintained, but 8 entrances stabilized with rock weirs with navigation openings of no less than 50' x 4'. To reduce the rate of channelized water exchange 10 fixed crest weirs with 4' x 10' boat bays will be installed at locations along Bayou Amoreaux, Delta Farms, and the GIWW. A variable crested weir will be installed along a Clovelly Oil Field canal to provide for suspended solid introduction from that source. Movement through the marsh and utilization of freshwater is improved by the installation of 2 large culverts adjacent to Clovelly Farms and by utilization and routing of freshwater from 23 pumping stations. Only that portion of the activity occurring in the Louisiana Coastal Zone is subject to permitting by the Coastal Management Division.
The water control structures, spoil bank maintenance and repair and other restoration plan components shall be constructed and operated according to the management plan of April 1989, the revisions of January 18, 1991 and the final revisions submitted on June 18, 1991.

b. Natural tidal channels that do not connect with shallow pond areas will be left open. Overflow banks will not be constructed on top of existing solid marsh where the natural bank is greater than 0.5 ft. or more above marsh level. Vegetated shorelines and tidal waterways which are not in an eroded condition will not have spoil deposited on them.

c. Should a La. Dept. of Natural Resources review of the area indicate that waterlogging or impoundment conditions exist as a result of structures installed due to this plan being implemented, Lafourche Parish shall be directed to take corrective actions (i.e. gapping spoil banks and/or adding control structures) to return the area to a more normal hydrologic regime according to the provisions of condition "n".

d. The plug planned for site No. 72 adjacent to Pump Station R shall be replaced with a flappaged culvert should an impoundment situation arise in the marsh.

e. Spoil taken for marsh creation in open water areas shall not be borrowed from areas which support submergent vegetation.

f. Water Control Structure Operational Schedule:

The structures shall be operated according to the following operational schedule:

1. Freshwater and Sediment Diversion Flappaged Culverted Structures near the Gulf Intracoastal Waterway (GIWW).
   The outside screwgates on culverts on the southern bank of the GIWW shall be open at all times except when the salinity exceeds 2 parts per thousand (ppt) at site Number 71.

2. The sill height of the rock weirs shall be at least 0.5 ft. Below Marsh Level (BML) or lower.

3. Variable Crest Weir:
   The stop logs will be set at 0.5 BML from April to November and removed from November to April (weir sill level = 2 ft. BML) to allow for sediment and nutrient inflow during the spring.
g. Monitoring Provisions:

1. The management area shall be monitored to adequately evaluate whether the management goals of salt water intrusion, erosion, and land loss prevention in addition to freshwater, sediment introduction and water level control are being achieved.

2. An annual report, which evaluates the degree to which these goals are being achieved, shall be submitted to CMD, the U.S. Army Corps of Engineers (COE) and all other interested regulatory advisory agencies. The annual report shall include monthly water level and salinity data, control structure operation and maintenance and changes in emergent vegetation, habitats and land/water ratios based on the analysis of aerial photography taken every three years.

3. The monitoring plan will be that presented by the Coastal Restoration Division and Lafourche Parish in their document entitled "Monitoring Plan for BA-2 GIMM to Clovelly" project. DHR shall have the flexibility to allow changes in monitoring program in the future as long as the plan's goals are being sufficiently monitored.

h. The plan area shall be evaluated after five years by the Interagency Review Team to determine if a change in the management plan or control structure operational scheme is needed.

i. Should the management plan be abandoned, all water control structures shall have their stop logs removed and/or their flaps either removed or placed in the open locked position so that water is allowed to exchange through the structures unimpeded.

j. All logs and stumps unearthed during dredging will be buried beneath the bottom of the waterway, placed on shore, or removed to a disposal site on land.

k. That should changes in the location or the section of the existing waterways, or in the generally prevailing conditions in the vicinity be required in the future, in the public interest, the applicant shall make such changes in the project concerned or in the arrangement thereof as may be necessary to satisfactorily meet the situation and shall bear the cost thereof.
1. (i) The expiration date of this amended permit is five (5) years from the date of the signature of the Secretary or his designee on the original permit which was June 20, 1991.

(ii) Upon expiration of this amended permit, a new Coastal Use Permit will be required for completion of any unfinished or uncommenced work items and for any maintenance activities involving dredging or fill that may become necessary. Other types of maintenance activities may also require a new Coastal Use Permit.

m. Maintenance activities to include dredging are authorized by this permit for five years after permit issuance. All maintenance activities authorized by this permit shall be conducted pursuant to the specifications and conditions of the permit.

n. All future modifications in the character of work or control structure operation shall be submitted to the CMD for possible permit modification or revision. Implementation of mariculture practices within the management area shall require permit modification and interagency review prior to commencement.

o. The permittee shall notify CMD of the date on which the approved work began on site using the enclosed green commencement card upon initiation of the permitted activity.

p. Prior to the commencement of work, Lafourche Parish shall obtain the necessary La. Department of Wildlife and Fisheries permits or authorizations for a Scenic Streams permit for work on Bayou des Allemands.

q. In order to ensure the safety of all parties, the location of the Chevron Pipe Line Company pipeline that runs from the Venice Plant to the Faustina Meter Station shall be verified and staked prior to commencing work. Additionally, D. C. Breland (504)396-3325, shall be contacted to coordinate verification of the line stakeout once completed.

By accepting this permit the applicant agrees to its terms and conditions.

I affix my signature and issue this permit this 19th day of February, 1993.

DEPARTMENT OF NATURAL RESOURCES

__________________________
TERRY W. HOWEY, DIRECTOR
Coastal Management Division

This agreement becomes binding when signed by the Director of the Coastal Management Division, Department of Natural Resources.
United States Army Corps of Engineers

March 20 1997

A permit to install and maintain two plugs, a weir and 6400 feet of rock weir and dredge and maintain access canal in Little Lake, Clovelly Canal and canals in the Clovelly Oil and Gas Field at

has been issued to Lafourche Parish Council on March 20, 1997

Address of Permittee Office of Coastal Zone Management
101 West 112th Street
Cut Off, Louisiana 70345

Permit Number EB-19-970-0428

for the District Commander

Donald J. Clement
Gentlemen:

Additional drawings attached in nine sheets, furnished with your application dated May 14, 1996, covering the installation and maintenance of two plugs, a weir and about 6,400 feet of rock weir and dredging and maintenance of an access channel in the Little Lake, Clovelly Canal, and canals in the Clovelly Oil and Gas Field, are approved and will be included in your plans for the work authorized by the Secretary of the Army in permit dated December 4, 1991, from the District Engineer at New Orleans, Louisiana.

The following special condition is added to the permit:

34. The permittee shall not operate heavy equipment within the limits of site 16LF24 as identified on the attachment to the State of Louisiana Office of Cultural Development, Division of Archaeology's letter dated December 23, 1996, and attached to this letter of approval.

All other conditions to which the work is made subject remain in full force and effect.

The attached Notice of Authorization, ENG Form 4336, is to be conspicuously displayed at the site of work.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

Donald J. Clement
Acting Assistant Chief
Operations Division
for
William L. Conner
Colonel, U.S. Army
District Engineer

Attachments
KEY

PROPOSED MARSH CREATION/RESTORATION

BORROW AREAS FOR MARSH CREATION/RESTORATION

PROPOSED OVERFLOW BANK

NO CHANNELIZED WATER EXCHANGE (continuous marsh bank or spoil)

PROPOSED PLUG

PROPOSED PLUG WITH CULVERT (to allow for sediment import)

PROPOSED WATER CONTROL STRUCTURE

PUMP STATION

PUMP STATION DISCHARGE

EXISTING WATER CONTROL STRUCTURE

EXISTING PLUG

CANAL BANK RESTORATION

LAKE RIM RESTORATION (including flotation canal and spoil)

PLEASE USE DESIGNATED NUMBERS OR LETTERS ON MAPS TO IDENTIFY UNITS ON ATTACHED SCHEDULES.
### SCHEDULE FOR PROPOSED PLUGS (Phase 1)

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*Replaces page 29 of May 96 Revision packet.*
WEIR W/ 80-FOOT-WIDE, 8-FOOT-DEEP BARGE BAY

REPLACES PAGES 36+37 OF MAY 96 REVISION PACKET
CANAL BANK RESTORATION

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CROSS SECTION
(NOT TO SCALE)

SIDE VIEW OF "FISH DIP"

ADD AS PAGE 38
TO MAY 1996 REVISION PACKET
LAKE RIM RESTORATION

LAKE RIM

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FLOTATION CHANNEL

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CROSS SECTION
LAKE RIM, FLOTATION CHANNEL, SPOIL DEPOSITION
(NOT TO SCALE)

SIDE VIEW OF "FISH DIP"

ADD AS PAGE 39
TO MAY 1996 REVISION PACKET
LAKE RIM AND CANAL BANK RESTORATION
BAYOU L'OURS BA-2 SOUTH UNIT
10/96 REVISION INCLUDES:

- Add Structure 14A
- Add Lake Rim
- Add Canal Bank Restoration
10/96 REVISION INCLUDES:

Revised Locations for Plugs 1 and 90
Revised Locations for "No Channelized Water Exchange"
  (continuous marsh bank or spoil)
10/96 REVISION INCLUDES:

Revised Locations for "No Channelized Water Exchange"
(continuous marsh bank or spoil)
Add Canal Bank Restoration
EXHIBIT "B"

Name of Waterbody, if known or applicable

-The project is from South of the Gulf Intracoastal Waterway to the Clovelly Oil and Gas Field, East of the Bayou Lafourche Ridge, and West of the Bayou Des Allemands, Lake Salvador, Bayou Perot, and Little Lake shores.

  T-16-S,R-21-E, T-16-S, R-22-E, T-16-S, R-23-E,
  T-17-S, R-20-E, T-17-S, R-21-E, T-17-S, R-22-E,

- With regard to questions 20-22, the following information is supplied from the original permit application (P901117) modified by the relocation of two structures (1 & 90), the addition of one structure (14A), and the deletion of BA-^ structures.

| Plugs                        | + 17,690 cubic yards |
| Plugs with culverts          | + 2,279 cubic yards  |
| Fixed Crest Weirs w/boat bay | + 450 cubic yards    |
| Variable crest weir          | + 50 cubic yards     |
| Fixed crest Plug w/boat bay  | + 5,900 cubic yards  |
| Rock weirs                   | + 1,905 cubic yards  |
| Overflow banks               | Up to 200,000 cubic yards |
| Continuous spoil bank        | Up to 20,000 cubic yards |
| Marsh Creation:              |                     |
| Canal bank restoration       | + 18,200 cubic yards |
| Lake Rim Restoration         | + 23,230 cubic yards |
| Flotation Channel            | + 114,000 cubic yards |
December 23, 1996

Dr. James Barlow  
Department of the Army  
Corps of Engineers, New Orleans District  
Regulatory Functions Branch  
P.O. Box 60267  
New Orleans, Louisiana 70160-0267  

Re:  
EB-19-970-0428  
Plugs, Weirs, and Shoreline Protection  
 Lafourche Parish Council  
Lafourche Parish, Louisiana

Dear Dr. Barlow:

Reference is made to the Joint Public Notice dated November 25, 1996, regarding the above. A review of our files indicates that there is one archaeological site, 16LF24, located in one of the areas designated for marsh creation/restoration (see enclosed map and site form). In order to avoid affecting this site, we request that no heavy equipment be allowed to enter the site boundaries as shown on the map. The placement of spoil and rip-rap on this site will have no effect, and as such, we have no objections to either of these activities.

Should you have any questions, please contact Mr. Mike Mahady in the Division of Archaeology at (504) 342-8170.

Sincerely,

Gerri Hobdy  
State Historic Preservation Officer

Enc: as stated

c:  
Lafourche Parish Council  
101 West 12th Street  
Cut Off, Louisiana 70345
STATE OF LOUISIANA
SITE RECORD UPDATE FORM

Site Name: Little Lake #10
State Survey No.: 16 LF 24

Other Site Designations

Instructions for Reaching Site: Put boat in at Clovelly Public Boat Launch, head west out of Clovelly Canal. Then head southwest into Little Lake. Site is located on western shore of Little Lake just south of Bayou Des Amoreux.

Parish: Lafourche

USGS Quad: (name, date series) Bay L'Ours, Louisiana, 1973, 7.5 min. (34-7-1)

Township: 18S
Range: 22E

UTM Coordinates: Zone 15
Easting: ____________________
Northing: ____________________
Latitude: ____________________
Longitude: ____________________

PHYSICAL SETTING

Land Form: Natural Levee
Geologic Processes: Erosion/subsidence
Elevation: 0 ft (MSL)

Slope: ____________________ Site Position with Respect to Terrain: Edge of marsh at lakeshore.

Nearest Water: Little Lake
Flooding: ____________________

Soil Characteristics: Lafitte-Clovelly

Floral Communities: Deltaic species

Faunal Communities: Deltaic species

Other Potential Resources

Nearest known Site: 16 LF 25

SITE DESCRIPTION

Site Size: 350 x 20 m
Plan: Linear
Orientation: North-south trend
Stratigraphy: ____________________

Artifact Density: Moderate to High
Artifact Distribution: Scattered

Cultural Features: Wave washed shell ridge and intact shell midden.

Cultural Affiliation: Prehistoric - possible Baytown; Coles Creek

Presumed Function: Extraction Locale

COLLECTIONS

Survey Method: Pedestrian survey, probing, and auguring.
Assessment of Collecting Conditions: Good
Description of Material: Prehistoric aboriginal sherds, historic material

CONDITIONS

Present Use: None
Erosion or Disturbance: Erosion and subsidence
Probable Future Destruction: Erosion, subsidence, and construction disturbance for marsh restoration.

SITE EVALUATION

Research Potential: This site could yield information on subsistence patterns, regional chronology, and the relation of archaeological sites to the geomorphology of the area.

State or National Register Eligibility: Potentially eligible

Recommendations: No further work is recommended at this time. However, if future construction were to endanger the site, testing procedures should be implemented.

QUAD MAP OF SITE AREA

RECORDS

Owner and Address: General Ag. Services and Land Co.
Tenant and Address: 
Informants: None
Previous Investigations: McIntire 1952
Previous Collections and Availability: LSU 52-233

References: 32-1736
Photographs and Maps: CEI topos and photos
Remarks: This site is in fairly good condition and has intact midden present. It is potentially eligible for inclusion on the National Register. If further disturbance is to take place, the site should be tested.

Recorded by: Stephanie L. Perrault (CEI) Date: October 1993
March 22, 1999

Mr. James Barlow
Regulatory Functions Branch
U.S. Army Corps of Engineers
PO Box 60267
New Orleans, LA 70160-0267

Mr. Larry Wiesepape
Certificate Coordinator
Department of Environmental Quality
Office of Water Resources
PO Box 82215
Baton Rouge, LA 70884-2215.

Gentlemen:

RE: Permit Modification; COE Permit LMNOD-SE (Lafourche Parish Wetlands) 743 Coastal Zone Consistency C960223
Water Quality Certification 960716-09

As we are nearing construction of the 2nd and final unit of the GIWW to Clovelly Project (BA-2) under PL-646, I am requesting the following modifications to the above referenced permit:

1) Addition of an access channel at site 14A
2) Addition of an access channel along Breton Canal

The locations and details of these two additions are shown on the attached drawings.

Your swift attention to this request would be greatly appreciated. If you have any questions or need further information, please contact Mr. Britt Paul, NRCS Project Manager at (318) 473-7816.

Sincerely,

[Signature]

LABORCHE PARISH COUNCIL
Grady Galiano
CZM Administrator
Attachment

cc: Britt Paul, Water Resources, Alexandria, LA
    Quin Kinler, NRCS-Baton Rouge, LA
    Tim Landreneau, Thibodaux Field Office, Thibodaux, LA
    George Boddie, LDNR-CRD, Baton Rouge, LA
April 3, 2007

Donald W. Gohmert,
State Conservationist
Natural Resources Conservation Service
3737 Government Street
Alexandria, Louisiana 71302

RE: C960223, Coastal Zone Consistency Modification

Natural Resources Conservation Service
Direct Federal Action
Modification of the GIWW to Clovelly Hydrolecic Restoration CWPPRA Project (BA-2), to remove vegetation in a conveyance channel blocking water flow to structure #35, Lafourche Parish, Louisiana

Dear Mr. Gohmert:

The above referenced project modification 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 modification, 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,

Jim Rives
Acting Administrator

JR/JH/bgm

cc: Vince Melvin, Lafourche Parish CZM
    Brian Babin, CRD
    John Herman, NOD-COE
    Venise Ortega, LDWF
    Kirk Kilgen, CMD/FI

RECEIVED

APR 11 2007
Dorothy S. Harris  
Acting State Conservationist  
Natural Resources Conservation Service  
3737 Government Street  
Alexandria, Louisiana 71302  

RE: C960223, Coastal Zone Consistency Modification  
Natural Resources Conservation Service  
Direct Federal Action  
Modification of the GIWW to Clovelly Hydrolgic Restoration CWPPRA Project (BA-2), to  
repair several breaches caused by hurricanes Katrina and Rita, Lafourche Parish, Louisiana  

Dear Ms. Harris:  

The above referenced project modification 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 modification, 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,  

Jim Rives  
Acting Administrator  

cc: Vince Melvin, Lafourche Parish CZM  
Brian Babin, CRD  
John Herman, NOD-COE  
Venise Ortego, LDWF  
Kirk Kilgen, CMD/FI  

RECEIVED  
JUL 12 2007
Operations Division
Central Evaluation Section

February 9, 2007

SUBJECT: MVN 2007-548-CY

Lafourche Parish Council
101 West 112th Street
Cut Off, Louisiana 70345

Gentlemen:

The proposed work, to re-establish flow through an existing channel by unplugging flotant marsh that had been pushed in by Hurricanes Katrina and Rita, near Galliano, Louisiana, in Lafourche 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 cleanout activities 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.

RECEIVED

FEB 13 2007
Should you have any further questions concerning this matter, please contact John M. Herman of this office at (504) 862-1581.

Sincerely,

[Signature]

Ronald J. Ventola
Chief, Regulatory Branch

Enclosures
Operations Division
Central Evaluation Section

SUBJECT: MVN 2007-548-CY

Lafourche Parish Council
101 West 112th Street
Cut Off, Louisiana 70345

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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.
PGP SPECIAL CONDITIONS

1. Activities authorized under this general permit 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 single and complete project. All planned phases of multi-phased projects shall be treated together 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 Corps of Engineers. 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 NOD-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 the Army Corps of Engineers, New Orleans District (CEMVN) Regulatory Branch. 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 Commander (m), Eighth Coast Guard District, ATTN: Vessel Traffic Management Branch, 501 Magazine Street, New Orleans, Louisiana 70130-3396, 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 a federally maintained waterway, you are advised to notify the U.S. Coast Guard so that a Notice to Mariners, if required, may be prepared. 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 if 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 other conditions 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 individual 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 NOD-PGP.
15. The permittee shall permit the District Engineers or his authorized representative(s) or designee(s) to make periodic inspections of the project site(s) and disposal site(s) if different from the project site(s) at any time deemed necessary in order to assure that the activity being performed under authority of this permit is in accordance with the terms and conditions prescribed herein.

16. This general permit does not convey any property rights, either in real estate or material, or any exclusive privileges; and it does not authorize any injury to property or invasion of rights or any infringement of federal, state, or local laws or regulations nor does it obviate the requirements to obtain state or local assent required by law for the activity authorized herein.

17. In issuing authorizations under this permit, the federal government will rely upon information and data supplied by the applicant. If, subsequent to the issuance of an authorization, such information and data prove to be false, incomplete, or inaccurate, the authorization may be modified, suspended, or revoked, in whole or in part.

18. For activities resulting in sewage generation at the project site, such sewage shall be processed through a municipal sewage treatment system or, in areas where tie-in to a municipal system is not practical, the on-site sewerage system must be approved by the local parish sanitarian before construction.

19. Any modification, suspension, or revocation of this permit or any individual authorization granted under this permit will not be the basis for any claim for damages against the United States.

20. Additional conditions deemed necessary to protect the public interest may be added to the general permit by the District Engineer at any time. If additional conditions are added, the public will be advised by public notice. Individual authorizations under this PGP may include special conditions deemed necessary to ensure minimal impact and compliance with this PGP.

21. A review of cumulative losses under the general permit will be accomplished yearly in or around the month of October. A report of losses will be furnished to the Environmental Protection Agency, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the Louisiana Department of Wildlife and Fisheries. Comments from reviewing agencies will be considered in determination as to whether modifications to the general permit are needed. Should the District Engineer make a determination not to incorporate a change proposed by a reviewing agency, after normal negotiations between the respective agencies, the District Engineer will explain in writing to the reviewing agency the basis and rationale for his decision.

22. The New Orleans District will periodically review NOD-PGP and its terms, conditions, and processing procedures and will decide to either modify, reissue, or revoke the permit. If the PGP is not modified or reissued within 5 years of its effective date, it automatically expires and becomes null and void. Activities which have commenced or are under contract to commence in reliance upon prior authorization of NOD-PGP will remain authorized provided the activity is completed within 12 months of the date of NOD-PGP expiration, modification, or revocation, unless the Corps of Engineers has determined that the specific activity does not qualify for authorization under NOD-PGP and exercises Corps authority to modify, suspend, or revoke the authorization in accordance with DOA regulations at 33 CFR 325.7.
23. Activities which qualify as non reporting nationwide permits and which commenced or were under contract to commence prior to June 1, 1998, are valid for a period of two years from the commencement/contract date. Those activities which have received authorization under the nationwide and regional general permit programs expire as indicated on the permit authorization. Requests received on or after June 1, 1998, will be evaluated for compliance under NOD-PGP.

24. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall 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.

25. 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 in compliance with General Condition 4 below. 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.

26. 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 what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

27. 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.

28. 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.

29. 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. Your project involves dredging and/or placement of fill, therefore, 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.
Operations Division
Central Evaluation Section

SUBJECT: MVN 2007-4248-CY

Lafourche Parish Council
101 West 112th Street
Cut Off, Louisiana 70345

Gentlemen:

Additional drawings enclosed in 17 sheets, furnished with your application dated October 29, 2007, requesting Department of the Army authorization to dredge and deposit fill and/or aggregate material, conduct maintenance of canal banks, and install and maintain rock weirs, rock shorelines, and navigational aids for the purpose of maintaining constructed features of the GIWW to Clovelly Hydrologic Restoration Project (CWPPRA Project BA-02) located in Lafourche Parish, are approved and will be included in your plans for the work authorized by the Secretary of the Army in permit dated December 4, 1991, and time extension dated October 10, 1996, from the District Engineer at New Orleans, Louisiana.

A copy of the first page of this permit approval letter must be conspicuously displayed at the project site. Also, you must keep a copy of this signed letter, with attached drawings, at the project site until the work is completed.

The time limit for completion of this work is extended to March 31, 2013.

The following special conditions are being made a part of this authorization. All other special conditions to which the work is made subject, remain in full force and effect:

1. 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 permittee will contact the Chitimacha Tribe of Louisiana at P.O. Box 661, Charenton, LA 70523, and the US Army Corps of Engineers, New Orleans District (CEMVN) Regulatory Branch. 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.

2. Maintenance dredging, including dredging for material to maintain project features authorized herein, is approved for a period of ten (10) years from the date of permit issuance. Maintenance operations shall not exceed specifications as shown on the permit drawings without prior approval from CEMVN.
If the structure or work authorized is not completed on or before the date herein specified, this authorization, if not previously revoked or specifically further extended, will cease and become null and void.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

Pete J. Serio
Chief, Regulatory Branch
for
Alvin B. Lee
Colonel, U.S. Army
District Commander

Enclosures
NOTES:
1. ACCESS DREDGING MAY BE REQUIRED TO REACH SITES 2, 4, 4A, 4B, 7, 8, AND 8A.
2. FLOATATION DREDGING MAY BE REQUIRED AT SITES 14A, 4A, 4B, AND THE ROCK SHORELINE PROTECTION.
**TYPE 3 X-SECTION**

N.T.S.

**NOTES:**

1. TYPE 3 BANK STABILIZATION SHALL BE USED WHEN EXISTING BANK IS BELOW MARSH ELEVATION, LESS THAN 3' OF FILL IS NEEDED AND NO GEOTEXTILE IS REQUIRED.
2. TYPE 4 BANK STABILIZATION SHALL BE USED WHEN EXISTING BANK IS AT MARSH ELEVATION OR HAS ERODED BACK FROM ORIGINAL BANK LINE.
3. TYPE 5 BANK STABILIZATION SHALL BE USED WHEN EXISTING BANK IS BELOW MARSH ELEVATION AND MORE THAN 3' OF FILL IS REQUIRED.
4. TYPE 6 BANK STABILIZATION SHALL BE USED WHEN EXISTING BANK IS BELOW MARSH ELEVATION, LESS THAN 3' OF FILL IS NEEDED AND GEOTEXTILE IS REQUIRED.
5. ALL ELEVATIONS ARE IN NAVD 88 FEET.

APPLICATION BY:
LAPORTE PARISH COUNCIL
101 WEST 112TH STREET
CUTOFF, LA 70345

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

GIWW to Clovelly Hydrologic Restoration Project (BA-02)
MAINTENANCE PLAN

BANK STABILIZATION SECTIONS

STATE PROJECT NUMBER: BA-02
FEDERAL PROJECT NUMBER: BA-02

DRAFTED BY: S. TRINCH
DESIGNED BY: B. BASS
APPROVED BY: D. BURKHOLDER

DATE: NOVEMBER 2007

SHEET 8 OF 17
CONSTRUCTION LENGTH ("F")
LIMITS OF FILL

PLAN VIEW
N.T.S.

X-SECTION
N.T.S.

CENTERLINE PROFILE
N.T.S.

ROCK WEIR W/BOAT BAY SCHEDULE

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NOTE
ALL ELEVATIONS ARE IN NAVD 88 FEET.

APPLICATION BY:
LAPORTE PARISH COUNCIL
101 WEST 117TH STREET
CUTOFF, LA 70530

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

GIWW to Clovelly Hydrologic Restoration Project (BA-02)
MAINTENANCE PLAN

STATE PROJECT NUMBER: BA-02
FEDERAL PROJECT NUMBER: BA-02
DATE 09/08/2003
SHEET 8 OF 17

DRAWN BY: S. TRICHE
DESIGNED BY: B. BASIN
APPROVED BY: D. BURKHOLDER

ROCK WEIR W/BOAT BAY SITE #'S 1, 2, 4, 7, 8
SITE 14A - LONGITUDINAL SECTION

SITE 14A - PLAN

*NOTE
ALL ELEVATIONS ARE IN NAVD 88 FEET.

APPLICATION BY:
LAFOURCHE PARISH COUNCIL
121 WEST 11TH STREET
CUTOFF, LA 70535

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

GIWW to Clavelly Hydrologic Restoration Project (BA-02)
MAINTENANCE PLAN

DATE: Nov. 2007

STATE PROJECT NUMBER: BA-02
FEDERAL PROJECT NUMBER: BA-02

SHEET 9 OF 17
NOTES:
1. ACCESS DREDGING MAY BE REQUIRED TO REACH SITES 2, 4, 4A, 4B, 7, 8, AND 8A.
2. FLOATATION DREDGING MAY BE REQUIRED AT SITES 14A, 4A, 4B, AND THE ROCK SHORELINE PROTECTION.

*NOTE: ALL ELEVATIONS ARE IN NAVD 88 FEET.
ATTACHMENT VI

GIWW TO CLOVELLY HYDROLOGIC RESTORATION

OPERATION, MAINTENANCE AND REHABILITATION

BUDGET
OPERATION AND MAINTENANCE BUDGET

BA-02 GIWW TO CLOVELLY WETLAND RESTORATION

LEAD AGENCY: Natural Resources Conservation Service

PROJECT FEATURES:

- Canal Plugs
- Rock Weirs
- Fixed Crest Weir with boat bays
- Variable Crest Weir
- Rebuild low earthen overflow banks (changed to lake rim restoration with rock).

OPERATION AND MAINTENANCE / REHABILITATION ASSUMPTIONS

1. The plugs/weirs are functional with settlements up to one foot; if greater than one foot settlement occurs, these plugs will require additional capping with 250 lb. stone at 7 and 10 years:
   
   Year 7  50% Cap Replacement (18" 250 lb. stone - 9,500 tons)
   Year 15 50% Cap Replacement (18" 250 lb. stone - 9,500 tons)

2. Restore lake rim and canal banks at year 7 and lake rim only at year 15:
   
   Year 7  25% lake rim and canal bank rehabilitation with rock (13,250 tons)
   Year 15 lake rim rehabilitation with rock (7,000 tons)

3. Replace signage at each boat bay
   
   Year 7 100% Replacement
   Year 15 100% Replacement
**OPERATION AND MAINTENANCE COST CONSIDERATIONS:**

(Based on a 20 year project life; cost include inflation)

A. **ANNUAL INSPECTIONS:**
   
   (2 Field day with 3 team members including federal participant, boat and report form Schedule A-2)
   
   $92,756

B. **ANNUAL COST OF OPERATIONS:**
   
   (No operations required for this project)
   
   $0

C. **PREVENTATIVE MAINTENANCE**
   
   (Not required for this project)
   
   $0

D. **COST FOR MAINTENANCE PROJECT AT YEAR 7 (2005)**
   
   (Includes a ten percent construction contingency (cc) and inflation factor of 1.1968.)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Contractor Mobilization/Demobilization</td>
<td>$82,500</td>
</tr>
<tr>
<td>($75,000 x 1.1 cc)</td>
<td></td>
</tr>
<tr>
<td>2. Cap 18&quot; 250 lb. stone on pugs and weirs:</td>
<td>$83,600</td>
</tr>
<tr>
<td>(9,500 tons x $20/ton x 40% x 1.1 cc)</td>
<td></td>
</tr>
<tr>
<td>3. Replace warning signs, 2 at each boat bay</td>
<td>$5,500</td>
</tr>
<tr>
<td>($500/sign x 2 each x 5 boat bay x 1.1 cc)</td>
<td></td>
</tr>
<tr>
<td>4. Rehabilitation lake rim with rock</td>
<td>$291,500</td>
</tr>
<tr>
<td>(13,250 tons x $20/ton x 1.1cc)</td>
<td></td>
</tr>
<tr>
<td>Contractor Subtotal</td>
<td>$463,100</td>
</tr>
</tbody>
</table>

Contractor Cost with Inflation ($463,100 x 1.1968) | $554,238 |

5. **Design Cost/ Administration**
   
   (2 week project $9,060 x 1.1968 from Schedule C-2)
   
   $10,843

6. **Engineering Consultant Design, Survey and Inspection**
   
   Basic Services:
   
   ($7.6% x 579,265, from Schedule E-2)
   
   $42,122

   Survey Supplemental Services:
   
   (7 days at $1,250/day x 1.1968 from Schedule E-2)
   
   $10,472
Resident Inspection: $18,311
(20 workday x $765/day x 1.1968 from Schedule E-3)

TOTAL FOR MAINTENANCE YEAR 7: $625,143

E. COST FOR MAINTENANCE PROJECT AT YEAR 15 (2013)
(Includes a ten percent construction contingency (cc) and inflation factor of 1.4696.)

1. Contractor Mobilization/Demobilization ($50,000 x 1.1 cc) $55,000
2. Cap 18" 250 lb. stone on plugs and weirs: (9,500 tons x $20/ton x 40% x 1.1 cc) $83,600
3. Replace warning signs, 2 at each boat bay ($500/sign x 2 each x 5 boat bay x 1.1 cc) $5,500
4. Rehabilitation lake rim with rock (7,000 tons x $20/ton x 1.1cc) $154,000
Contractor Subtotal $298,100

Contractor Cost with Inflation ($298,100 x 1.4696) $438,087

5. Design Cost/ Administration (2 week project $9,060 x 1.4696 from Schedule C-2) $13,315


Basic Services: $39,428
(9% x $298,100 x 1.4696 from schedule E-2)

Survey Supplemental Services: $12,859
(7 days at $1,250/day x 1.4696 from Schedule E-2)

Resident Inspection: $13,491
(12 workday x $765/day x 1.4696 from Schedule E-3)

TOTAL FOR MAINTENANCE YEAR 15: $517,180
Previously Expended Funds (through June 10, 1998)  $ 25,03

TOTAL ESTIMATED OPERATION AND MAINTENANCE COST  $1,235,079

OPERATION AND MAINTENANCE (O&M) BUDGET SUMMARY
BA-02  GIWW TO CLOVELLY WETLAND RESTORATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Original O&amp;M Budget</td>
<td>$1,952,936</td>
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<tr>
<td>Revised O&amp;M Budget</td>
<td>$1,235,079</td>
</tr>
<tr>
<td>Budget Increase (Decrease)</td>
<td>$717,857</td>
</tr>
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</table>
CWPPRA Operation and Maintenance Funding Assessment Meeting of 2/12/98

Project No. 84-02  Project Name GIWW + Obielly

Attending:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>George Balliet</td>
<td>Burr Bar</td>
</tr>
<tr>
<td>weird Tom Stichter</td>
<td></td>
</tr>
<tr>
<td>Van Cole</td>
<td></td>
</tr>
<tr>
<td>Gary Baldwin</td>
<td></td>
</tr>
</tbody>
</table>

Project Completion:

<table>
<thead>
<tr>
<th>Scheduled</th>
<th>Anticipated</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/30/95</td>
<td>9/30/98</td>
</tr>
</tbody>
</table>

Funding Impact: 3/4 year behind schedule.

Basis of O & M authorized funding Requirements:

| Authorized | Project Done - Hedrick |

Basis of P & O/CLDR assumption funding Requirements:

| Used with Modification | None but Agreement with Lake Parin |

Funding Impact: None, but Agreement with Lake Parin.

Permit/Cost Share/Cooperative Agreement in concert with LDNR/Lead Agency Responsibilities with programmed funding:

- YES
- NO

Action Required: No

State vs. Federal O & M Cost Estimate:

<table>
<thead>
<tr>
<th>DNR</th>
<th>Lead Agency</th>
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<tbody>
<tr>
<td>1,301,699</td>
<td>1,301,699</td>
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Consensus Recommendation:

<table>
<thead>
<tr>
<th>Award Option</th>
<th>Lead Current Estimate Date</th>
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<tbody>
<tr>
<td></td>
<td>Operations, 2001</td>
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<table>
<thead>
<tr>
<th>Inspector</th>
<th>Participation in Contract Agreement Hours/Payment Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adequate in Construction Progress reports</td>
</tr>
</tbody>
</table>

Agency Representative: [Signature]  LDNR Representative [Signature]

ATTACHMENT VII

GIWW TO CLOVELLY HYDROLOGIC RESTORATION

STRUCTURE OPERATIONS

The purpose of this attachment is to compile structure operation reports for operable structures throughout the project life. Upon completion of structure adjustments, the contracting party tasked to perform the operations will be required to provide LDNR with a detailed report containing the following information:

- Condition of water control structures and stop logs with photos
- Description of structures in need of maintenance
- Dates and time of structure adjustments and weather conditions
- Number of stop logs removed and replaced
- Personnel and equipment used to perform work
- Elevations of stop logs before and after adjustments
- Water levels on either side of structures
- Person contacted for access to property and copy of access permit should one be required.
APRIL 2002
DNR CONTRACT NO. 2503-00-39
STRUCTURE OPERATION
AND
INSPECTION

BA-23 BARATARIA WATERWAY SHORELINE PROTECTION PROJECT
P&O JOB # 10-1630

BA-02 GIWW / CLOVELLY HYDROLOGIC RESTORATION PROJECT
P&O JOB # 10-1631

TE-28 BRADY CANAL HYDROLOGIC RESTORATION PROJECT
P&O JOB # 10-1632

BY

PYBURN & ODOM MCA
BATON ROUGE, LOUISIANA

APRIL 24, 2002
April 25, 2002

Mr. Clark Allen  
Coastal Restoration Division  
Louisiana Department of Natural Resources,  
P.O. Box 44027, Capital Station  
Baton Rouge, LA 70804-4027

SUBJECT: DNR Contract No. 2503-00-39 – Surveying & Engineering Services  
Structure Operation and Inspection  
P&O Project Nos. 10-1630, 10-1631, & 10-1632

Dear Mr. Allen:

In accordance with your letter and scope of work dated March 1, 2002 and subsequent verbal instructions, our field party inspected and operated the following listed navigation lights, flap gates and weirs:

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>ITEM OF WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA-23 Barataria Waterway</td>
<td>Inspected the condition of the crest weir and removed the stoplogs at Site 1.</td>
</tr>
<tr>
<td>Ba-02 GIWW / Clovelly Farms</td>
<td>Inspected &amp; cleaned flap gate at Site 91. Inspected The variable crest weir and installed stoplogs at Site 35. Inspected navigation lights at Site 14A.</td>
</tr>
</tbody>
</table>

Enclosed please find three (3) bound reports showing the results and photographs of our inspection and operation of the above listed structures.
Mr. Clark Allen  
Louisiana Department of Natural Division  
April 25, 2002  
Page Two

We appreciate having the opportunity of providing these services to DNR. Please contact us if you have any questions or require additional information.

Very truly yours,

Michael P. Maillet, P.L.S.  
Chief Surveyor

cc. w/encl.  Mr. Brian Babin  
DNR/CRD  
Nicholls State University  
P.O. Box 2079  
Thibodaux, LA 70310

I:Projects/10-1630/Letters/02C113
SITES 14A, 91 & 35
FIELD TRIP REPORT

PROJECT: BA-02 GIWW / Clovelly Hydrologic Restoration Project
LOCATION: Barataria Basin, Lafourche Parish
PURPOSE: Inspect the four (4) navigation lights at Site 14a, inspect and test the flapgated culvert structure at Site 91, and operate and adjust the variable crest weir structure at Site 35.
PARTICIPANTS: Mike Maillet, Brian Miller and Joey Laville
DATES: March 28, 2002 and April 3, 2002
CONDITIONS: Sunny / Warm

Mike Maillet, Brian Miller, and Joey Laville arrived at the public boat launch at Clovelly Farms at approximately 10:30 a.m. Permission to gain access to the property was obtained from Mr. Carroll Adams on March 28, and April 3, 2002. The Field Data Report and field notes may be found in Appendix A.

NAVIGATION LIGHTS (SITE 14a):

On March 28, 2002, 11:15 a.m., we inspected the four (4) navigation lights at Site 14a, located at the end of the Clovelly Farms Canal at Little Lake. The four lights, as well as their pilings and solar panels, appeared to be in good condition. The lights and solar panels also appeared to be clean. An attempt was made to test the light by covering it and the solar panel at No. 4; however, the light would not come on. Photos of the navigation lights are shown in Appendix B.

FLAPGATED CULVERT STRUCTURE (SITE 91):

The flapgated culvert structure at Site 91 was inspected visually and mechanically at 12:30 p.m. The structure appeared to be in good condition, and when opened and closed fully, its function was unimpeded. The culvert was free of any obstructions. The flapgate hinges were just below the surface of the water, but were free of barnacles. A few barnacles near the hinges were scraped away. The Field Equipment Checklist and Operation Procedure can be found in Appendix C. Photos of the flapgated culvert structure are shown in Appendix D.
VARIABLE CREST WEIR (SITE 35):

We arrived at the Site 35 variable crest weir structure at 1:30 p.m. on March 25, 2002. The weir structure appeared to be in fairly good condition. The orange paint on the railing and platform is worn and peeling in some places. Also, the two (2) locks were frozen, and had to be broken. We attached a new cable to the crane.

It was determined that in order to raise the sill elevation of the structure to as close as possible to 0.5 feet below marsh elevation, three (3) stoplogs would have to be installed. Marsh level at the Site was 1.0 feet, based upon information provided by DNR. The three (3) stoplogs were installed leaving a finished sill elevation of 0.3 feet. It was discovered, however, that each aluminum channel that held the stoplogs in place had only one hole for the locking pin. Additional holes would have to be drilled into the channels in order to properly adjust the weir structure and keep the stoplogs in position. The channels were put in and the locking pins inserted into the existing holes. The locking pins were secured temporarily with wire before leaving the Site.

On April 3, 2002 at 11:00 a.m., we revisited the weir structure. We attempted to drill new holes in the channels with a handheld drill. When this proved impractical, we decided to remove the channels and take them to a machine shop. The top stoplog was temporarily secured to the weir structure with nylon rope. We returned to the structure at 2:20 p.m. and completed our work, including placing new locks on the locking pins. It was noted that water was transferring approximately 0.5 feet over the top stoplog with an easterly flow. The Field Equipment Checklist and Operation Procedure can be found in Appendix E. Photos of the variable crest weir structure are shown in Appendix F.

PREPARED BY: Joey Laville, Pyburn & Odom MCA
EDITED BY: Harry Rayner, Pyburn & Odom MCA
Mike Maillet, Pyburn & Odom MCA
Brian Miller, Pyburn & Odom MCA
DISTRIBUTION: Clark Allen, DNR, CRD (3 Copies)
Brian Babin, DNR, CRD (1 Copy)
APPENDIX A
FIELD DATA REPORT

Project (No. & Name)  Site 35 BA-02 GIWW/Clovelly Hydrologic Restoration Project

Location:  Barataria Basin near the Gulf Intracoastal Waterway (GIWW) in Lafourche Parish, LA.

Purpose of Site Visit:  (1) Inspect the 4 navigation lights at Site 14a (end of Clovelly Farms Canal at Little Lake; (2) inspect, test and clean the flaps gate at Site 91 and, (3) operate/adjust the variable crest weir at Site 35 (add logs as needed). Plus attach new cable to lifting boom assembly.

Date:  March 28, 2002

Participants:  Mike Mailet, Joey Laville, and Brian Miller

Weather Conditions:  Sunny / Warm

Persons Contacted for Access:  Carroll Adams, Land Manager for Little Lake Co.

Site No.:  35

---

Structure Condition

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
<th>Maintenance/Repair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber Pile</td>
<td>Good</td>
<td>No</td>
</tr>
<tr>
<td>Timber Holst/Lag Eyes</td>
<td>Good</td>
<td>No</td>
</tr>
<tr>
<td>Pile Caps</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Corrugated Aluminum</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Grating/Metal Components</td>
<td>Grating - Good; platform &amp; railing-orange paint flaking, faded</td>
<td>X</td>
</tr>
<tr>
<td>Wood Access Ramp</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Stop Logs</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Master Locks</td>
<td>Rusted</td>
<td>X</td>
</tr>
<tr>
<td>Lifting Boom</td>
<td>Good</td>
<td>X</td>
</tr>
</tbody>
</table>

---

Levee Condition

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosion</td>
<td>N/A</td>
</tr>
<tr>
<td>Vegetation</td>
<td>Good, verdant growth</td>
</tr>
</tbody>
</table>

*Description of Maintenance/Repair Required:  Frame and railing need sanding and new coat of orange paint.

---

Stop Log Adjustment

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>March 28, 2002 1:30 p.m.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Logs Removed/Replaced:</td>
<td>3 (three)</td>
</tr>
<tr>
<td>Elevation:</td>
<td>See Field Notes</td>
</tr>
<tr>
<td>Mudline Levels:</td>
<td>See Field Notes</td>
</tr>
<tr>
<td>Water Levels:</td>
<td>See Field Notes</td>
</tr>
<tr>
<td>Top Description:</td>
<td>N/A - 3 stoplogs added.</td>
</tr>
<tr>
<td>LOCATION</td>
<td>DATE</td>
</tr>
<tr>
<td>----------</td>
<td>------</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>STATION</th>
<th>ANGLE</th>
<th>CC</th>
<th>M.C.</th>
<th>FENCES &amp; ROADS</th>
<th>ANGLE</th>
<th>M.C.</th>
<th>ELEVATION</th>
</tr>
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<tr>
<td></td>
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**GWW / CLOVELLY**

**Hydrologic Restoration**

**Project (BA-02)**

**Structure 35**
<table>
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<th>STATION</th>
<th>ANGLE</th>
<th>CC</th>
<th>MC</th>
<th>ELEVATION</th>
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</thead>
<tbody>
<tr>
<td>TBM NE PILE</td>
<td>3.88</td>
<td>7.85</td>
<td>3.97</td>
<td>EL.</td>
</tr>
<tr>
<td>TBM SE PILE</td>
<td>4.09</td>
<td>8.13</td>
<td>4.04</td>
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</tr>
<tr>
<td>AVERAGE</td>
<td>7.99</td>
<td>H.I.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOP OF EXISTING LOGS</td>
<td>9.18</td>
<td>-1.19</td>
<td>(-1.2)</td>
<td></td>
</tr>
<tr>
<td>3 LOGS INSTALLED (4'' \times 6'')</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1.2 + 1.5 = +0.3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>MARSH LEVEL = 1.0</td>
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<td></td>
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</tbody>
</table>

---

**Diagram:**
- Wood pile (T-1)
- Structure 35
- Orientation and elevation details

---

EXXON PIPELINE COMPANY HOUSTON, TEXAS
APPENDIX B
Photo 1 – Navigation Light No. 1 (Site 14a).

Photo 2 – Navigation Light No. 2 (Site 14a).
Photo 3 – Navigation Light No. 3 (Site 14a).

Photo 4 – Navigation Light No. 4 (Site 14a).
APPENDIX C
FIELD EQUIPMENT CHECKLIST AND PROCEDURE

BA-02 GIWW/CLOVELLY

SITE 90 – FLAPGATED CULVERT STRUCTURE

1. 3” DIAMETER. STEEL PIPE
2. TOOL TO CLEAN GATE ENTRANCE
3. LOCK TO SECURE GATE OPEN IF NEEDED
4. GLOVES
5. HARD HATS

GENERAL NOTES:

1. Gate shall be checked for any obstructions.

2. Gate operation shall be checked.

OPERATION PROCEDURE:

TO CHECK GATE OPERATION:

1. Inspect the flapgate hinge system for barnacles or other debris. Scrape off barnacles and debris with a shovel.

2. Place 3” dia. Pipe in insert at the top of the gate.

3. Open and close gate fully to check gate function.

4. Hold gate open fully and probe the entrance and interior of the culvert with a shovel for possible obstructions.
APPENDIX D
Photo 5 – Flapgated Culvert Structure (Site 91).

Photo 6 – Operating the Flapgated Culvert Structure (Site 91) and scraping barnacles off the flapgate hinge system.
Photo 7 – Flapgated Culvert Structure (Site 91), view of operation check.

Photo 8 – Flapgated Culvert Structure (Site 91), view of flapgate hinge system, gate closed.
APPENDIX E
FIELD EQUIPMENT CHECKLIST

BA-02 GIWW/CLOVELLY

SITE 35 – ADJUSTABLE CREST WEIR

_____ 1. CRANK HANDLE FOR CRANE BOOM
_____ 2. STAINLESS STEEL LIFTING RODS
_____ 3. KEYS FOR STOP LOG LOCKING MECHANISM
_____ 4. ADDITIONAL LOCKING PINS
_____ 5. GLOVES
_____ 6. HARD HATS

GENERAL NOTES:

1. April to November – stoplogs shall be set at 0.5’ below marsh elevation.

2. November to April – stoplogs shall be removed.

OPERATION PROCEDURE:

1. Install crank handle on crank boom.

2. Unlock and remove locking pins from each end of stoplogs.

3. Remove locking mechanism from each end of guide channel.

4. Hook stainless steel lifting rods to lifting ring.

5. Hook other end of stainless steel rods to lag eyes on stoplogs.

Photo 9 – Variable Crest Weir (Site 35), side view of weir structure and lifting boom.

Photo 10 – Variable Crest Weir (Site 35), view of control survey in progress
Photo 11 – Variable Crest Weir (Site 35), view of worn and chipped paint on the platform.

Photo 12 – Variable Crest Weir (Site 35), view of worn and chipped paint on the railing and weir.
Photo 13 – Variable Crest Weir (Site 35), view of stoplogs being installed.

Photo 14 – Variable Crest Weir (Site 35), view of stoplogs being installed.
Photo 15 – Variable Crest Weir (Site 35), view of floating top stoplog.

Photo 16 – Variable Crest Weir (Site 35), looking east at the temporarily secured weir structure.
BA-02 GIWW / CLOVELLY HYDROLOGIC RESTORATION PROJECT

DNR CONTRACT NO. 2503-01-30
CEECL PROJECT NO. 2076

OPERATION AND INSPECTION REPORT

Site No. 35

NOVEMBER 2002

Prepared For:
Louisiana Department of Natural Resources

Prepared By:
Coastal Engineering and Environmental Consultants, Inc.
197 Elysian Drive
Houma, Louisiana 70363
Site No. 35
Variable Crest Weir Structure
FIELD TRIP REPORT

SUBJECT: BA-02 GIWW / Clovelly Hydrologic Restoration Project

LOCATION: Barataria Basin, Near Little Lake in Lafourche Parish, Louisiana

PURPOSE: Operate and adjust the variable crest weir at Site No. 35

PARTICIPANTS: Brian Brunet, Randy Mouton and Willie Radau

DATES: November 1, 2002

CONDITIONS: Partly cloudy and Windy (70°)

Permission to gain access to Site No. 35 was obtained from Mr. Harold Werner (Attorney, 504-522-7496) and Mr. Carroll Adams (Land Manager - Little Lake Land Co., 504-691-1627) on November 1, 2002.

The weir structure is located in the Barataria Basin near the Gulf Intracoastal Waterway (GIWW) in Lafourche Parish, Louisiana. The project is bounded by the Intracoastal Waterway to the north and northeast, Bayou Lafourche to the west, Superior Canal to the south, Bayou Perot, Little Lake and Bayou L’Ours to the east. The weir structure appeared to be in good condition. Description of maintenance / repair required includes eye hook and crank handle needed on stiff arm hoist (see photographs). The TBM used for this site in the determination of elevation was the top of timber pile at the northeast corner of the structure platform (3.97 NAVD88). The water surface elevation at the site was determined to be 1.31 feet. The ground elevation on the east side of the weir was -5.80 feet and the ground elevation on the west side was -6.59 feet.

It was determined through coordination with Louisiana Department of Natural Resources personnel that the required elevation of the stop logs would be approximately 0.5 feet Below Marsh Level (BML). This would require the removal of three (3) stop logs. The elevation of the stop logs prior to placement was 0.20 feet and elevation -1.24 after placement. The field data report, photographs and field notes are attached.
FIELD DATA REPORT

Project (No. & Name): BA-02 GIWW / Clovelly Hydrologic Restoration Project

Location: Near Little Lake in Lafourche Parish, Louisiana

Purpose of Site Visit: To remove three (3) stop logs.

Date: November 1, 2002

Participants: Brian A. Brunet, Randy Mouton and Willie Radau

Weather Conditions: Partly cloudy, Windy (70°)

Persons Contacted for Access: Mr. Harold Werner (504-522-7496), and Mr. Carroll Adams (504-691-1627)

Site No.: 35

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
<th>Maintenance/Repair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber Pile</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Timber Hoist/Lag Eyes</td>
<td>N/A Stiff Arm Hoist Has Handle Missing</td>
<td>X</td>
</tr>
<tr>
<td>Pile Caps</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Corrugated Aluminum</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Grating/Metal Components</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Wood Access Ramp</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Stop Logs</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Master Locks</td>
<td>Good, Lock Holders Are Bent But Operational</td>
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Levee Condition

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</tr>
</thead>
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<tr>
<td>Vegetation</td>
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</tbody>
</table>

Description of Maintenance/Repair Required: Hoist Needs Eye Hook and Crank Handle.

Stop Log Adjustment

Date/Time: November 1, 2002 - 2:30 P.M.

- Number of Logs Removed/Replaced: Removed 3 Logs
- Elevation: See Field Notes
- Mudline Levels: See Field Notes
- Water Levels: See Field Notes

Flag Description: Blue
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<th>H.I.</th>
<th>H.A.</th>
<th>Remarks</th>
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<td>3.24</td>
<td>7.21</td>
<td>3.91</td>
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<td>7.01</td>
<td>0.20</td>
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<td>5.90</td>
<td>1.31</td>
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<td>13.01</td>
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<td>13.80</td>
<td>-4.57</td>
<td></td>
<td>Side</td>
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<tr>
<td>8.45</td>
<td>-1.24</td>
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<td>After Removal</td>
</tr>
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Diagram:
- EAST
- WEST
- EAST Side
- WEST Side
- Pile:
  - 3.91

11/01/02
Provided Information
<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Weather</th>
</tr>
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<tr>
<td>Sin 35</td>
<td>3/28/67</td>
<td>Warm</td>
</tr>
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<th>CC</th>
<th>Angle MC</th>
<th>FS</th>
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<tr>
<td>NE Pilg</td>
<td>3.88</td>
<td>7.85</td>
<td>-4.19</td>
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<tr>
<td>SE Pilg</td>
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<td>Avg.</td>
<td>7.99</td>
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<tr>
<td>Top of</td>
<td>9.18</td>
<td>-1.19</td>
<td>(-1.2)</td>
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<td></td>
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<tr>
<td>Fington</td>
<td>4.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3 Logs installed (4" x 6")

-1.2 + 1.5 = +0.3

Marsh Level = 1.0
OPERATION AND INSPECTION REPORT

Site No. 35

APRIL 2003

Prepared For:
Louisiana Department of Natural Resources

Prepared By:
Coastal Engineering and Environmental Consultants, Inc.
197 Elysian Drive
Houma, Louisiana 70363
Site No. 35
Variable Crest Weir Structure
FIELD TRIP REPORT

SUBJECT: BA-02 GIWW / Clovelly Hydrologic Restoration Project

LOCATION: Barataria Basin, Near Little Lake in Lafourche Parish, Louisiana

PURPOSE: Operate and adjust the variable crest weir at Site No. 35

PARTICIPANTS: Brian Brunet, Randy Mouton and Willie Radau

DATES: March 20, 2003

CONDITIONS: Partly cloudy and Warm (78° F)

Permission to gain access to Site No. 35 was obtained from Mr. Harold Werner (Attorney, 504-522-7496) and Mr. Carroll Adams (Land Manager - Little Lake Land Co., 504-691-1627) on March 14, 2003 and March 14, 2003 respectively.

The weir structure is located in the Barataria Basin near the Gulf Intracoastal Waterway (GIWW) in Lafourche Parish, Louisiana. The project is bounded by the Intracoastal Waterway to the north and northeast, Bayou Lafourche to the west, Superior Canal to the south, Bayou Perot, Little Lake and Bayou L’Ours to the east. The weir structure appeared to be in good condition. Eye hook on stiff arm hoist requires maintenance/repair (see photographs). The TBM used for this site in the determination of elevation was the top of timber pile at the northeast corner of the structure platform (3.97 NAVD88). The water surface elevation at the site was determined to be 1.29 feet. The ground elevation on the marsh side of the weir was -5.92 feet and the ground elevation on the canal side was -6.43 feet.

It was determined through coordination with Louisiana Department of Natural Resources personnel and review of previous operations that the required elevation of the stop logs would be approximately 0.5 feet Below Marsh Level (BML). This would require placement of three (3) stop logs. The elevation of the stop logs prior to placement was -1.21 feet and elevation 0.18 after placement. The field data report, photographs and field notes are attached.
FIELD DATA REPORT

Project (No. & Name): BA-02 GIWW / Clovelly Hydrologic Restoration Project

Location: Near Little Lake in Lafourche Parish, Louisiana

Purpose of Site Visit: To replace three (3) stop logs.

Date: March 20, 2003

Participants: Brian A. Brunet, Kevin Giles, Willie Radau, IV, and Jesse Bonvillain

Weather Conditions: Partly Cloudy and Warm (78° F)

Persons Contacted for Access: Mr. Harold Werner (504-522-7496), and Mr. Carroll Adams (504-691-1627)

Site No.: 35

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
<th>Maintenance/Repair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber Pile</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Timber Hoist/Lag Eyes</td>
<td>N/A Stiff Arm Hoist Has Handle and Eye Hook Missing</td>
<td>X</td>
</tr>
<tr>
<td>Pile Caps</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Corrugated Aluminum</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Grating/Metal Components</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Wood Access Ramp</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Stop Logs</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Master Locks</td>
<td>Good, Lock Holders Are Bent But Operational</td>
<td></td>
</tr>
</tbody>
</table>

Structure Condition

Levee Condition

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosion</td>
<td>N/A</td>
</tr>
<tr>
<td>Vegetation</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Description of Maintenance/Repair Required: Hoist Needs Eye Hook and Crank Handle.

Stop Log Adjustment Date/Time: March 20, 2003 (11:30 A.M.)

- Number of Logs Removed/Replaced: Replaced 3 Logs
- Elevation: See Field Notes
- Mudline Levels: See Field Notes
- Water Levels: See Field Notes

Flag Description: Blue
Provided Information
Data Source:

LA Department of Natural Resources
Coastal Restoration Division
Biological Monitoring Section
Thibodaux Field Office

1998 DOQQ's

Date: July 30, 2001

Map ID: 2001-TFO-012
VICINITY MAP  Scale: 1" = 2000'  Reproduced from USC&GS "Golden Meadow Farm, LA" Quadrangle

Station Name:  "BA02-SM-02"

Location:  From La Highway 308 at Cut Off, Louisiana, proceed east on east 36th Street for approximately 5 miles and follow the signs for North Dock. Once at the boat landing, by boat, proceed approximately 3 miles east to Little Lake. Turn right and proceed southeasterly in Little Lake for about 3 miles around a point, then southwesterly for about 2.5 miles to a Slip Canal at Clowley Oil and Gas Field, then about 1.5 miles in the Slip Canal to a Canal on the right. Turn right and proceed northwesterly in the Canal for about 2000 feet to the monument on the left.

Monument Description:  NGS style floating sleeve monument; datum point set on 9/16" stainless steel sectional rods driven 52 feet to refusal, set in sand filled 6" PVC pipe with access cover set in concrete, flush with ground.

Stamping:  BA02-SM-02

Installation Date:  12/11/02  Date of Survey:  January 2003

Monument Established By:  John Chance Land Surveys, Inc.

For:  Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 Geodetic Position
Lat.  29° 33' 26.264855" N
Long.  90° 14' 05.34754489" W

Adjusted NAD 83 Datum LSZ (1702) Feet
N=  361,933.98
E=  3,630,348.64

Adjusted NAVD88 Height
Elevation = 2.97 feet (0.906 mtrs)
Geoid99 Height = -24.944 mtrs.
Ellipsoid Height = -24.033 mtrs.
November 20, 2003

Louisiana Department of Natural Resources
Coastal Restoration Division
1440 Tiger Drive, Suite B
Thibodaux, Louisiana 70301

Attention: Mr. Brian Babin

Subject: Operation and Inspection Report

Reference: Louisiana Department of Natural Resources
BA-02 GIWW / Clovelly Hydrologic Restoration Project
DNR Contract No. 2503-03-21
CEEC Project No. 2245

Dear Mr. Babin:

In accordance with your scope of services delivered on October 22, 2003, Coastal Engineering and Environmental Consultants, Inc.’s (CEEC) field party inspected and operated the following listed weirs:

Site No. 35 - Operate and adjust the variable crest weir at site.

Enclosed please find four (4) bound reports demonstrating the results and photographs of our inspection and operation of the above listed structure.

CEEC is pleased to provide professional engineering services for this project. Should you have any questions, please call me at (985) 868-3434.

Sincerely,

COASTAL ENGINEERING AND ENVIRONMENTAL CONSULTANTS, INC.

Jeffrey M. Peed, P.E.
Project Manager

JMP:mmb

Enclosures

cc: Hillary Thibodaux - DNR (w/ Enclosures)

K:2245(Letter)111203.wpd
BA-02 GIWW / CLOVELLY HYDROLOGIC
RESTORATION PROJECT

DNR CONTRACT NO. 2503-01-30
CEEC PROJECT NO. 2245

OPERATION AND INSPECTION REPORT

Site No. 35

NOVEMBER 2003

Prepared For:
Louisiana Department of Natural Resources

Prepared By:
Coastal Engineering and Environmental Consultants, Inc.
197 Elysian Drive
Houma, Louisiana 70363
Site No. 35
Variable Crest Weir Structure
FIELD TRIP REPORT

SUBJECT: BA-02 GIWW / Clovelly Hydrologic Restoration Project

LOCATION: Barataria Basin, Near Little Lake in Lafourche Parish, Louisiana

PURPOSE: Operate and adjust the variable crest weir at Site No. 35

PARTICIPANTS: Brian Brunet and Willie Radau

DATES: November 5, 2003

CONDITIONS: Partly cloudy and Warm (85°)

Permission to gain access to Site No. 35 was obtained from Mr. Harold Werner (Attorney, 504-522-7496) and Mr. Carroll Adams (Land Manager - Little Lake Land Co., 504-691-1627) on October 28, 2003.

The weir structure is located in the Barataria Basin near the Gulf Intracoastal Waterway (GIWW) in Lafourche Parish, Louisiana. The project is bounded by the Intracoastal Waterway to the north and northeast, Bayou Lafourche to the west, Superior Canal to the south, Bayou Perot, Little Lake and Bayou L’Ours to the east. The weir structure appeared to be in good condition. Description of maintenance / repair required includes eye hook, bent locking pins and crank handle needed on stiff arm hoist (see photographs). The TBM used for this site in the determination of elevation was the top of timber pile at the northeast corner of the structure platform (3.97 NAVD88). The water surface elevation at the site was determined to be 1.18 feet. The ground elevation on the east side of the weir was -5.78 feet and the ground elevation on the west side was -7.03 feet.

It was determined through coordination with Louisiana Department of Natural Resources personnel that the required elevation of the stop logs would be approximately 2.0 feet Below Marsh Level (BML). This would require the removal of three (3) stop logs. The elevation of the stop logs prior to removal was 0.20 feet and elevation -1.23 after removal. The field data report, photographs and field notes are attached.
BA-02 Pre-Log Removal
BA-02 Ben: Lock Pin

BA-02 Missing Crank Handle on Crane Hoist
BA-02 Missing Eye Hook on End Lifting Cable

BA-02 Bent Lock Pin
**FIELD DATA REPORT**

**Subject (No. & Name):** BA-02 GFWW / Clovelly Hydrologic Restoration Project

**Location:** Near Little Lake in Lafourche Parish, Louisiana

**Purpose of Site Visit:** To remove three (3) stop logs in one (1) bay opening.

**Date:** November 5, 2003

**Participants:** Brian A. Brunet and Willie Radau

**Weather Conditions:** Partly cloudy, Warm (85°)

**Persons Contacted for Access:** Mr. Harold Werner (504-522-7496), and Mr. Carroll Adams (504-691-1627)

**Site No.:** 35

### Structure Condition

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
<th>Maintenance/Repair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber Pile</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Timber Hoist/Lag Eyes</td>
<td>Hoist Needs Handle and Eye Hook for End of Cable</td>
<td>X</td>
</tr>
<tr>
<td>Pile Caps</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Corrugated Aluminum</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Rating/Metal Components</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Road Access Ramp</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Stop Logs</td>
<td>Good, Fair - Lock Pins Bent, but Usable</td>
<td>X</td>
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</tbody>
</table>

### Levee Condition

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
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<tbody>
<tr>
<td>Erosion</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Vegetation</td>
<td>N/A</td>
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</tbody>
</table>

**Description of Maintenance/Repair Required:** Crane hoist needs crane handle and eye hook for end of cable. Lock pins are bent, but are usable.

**Stop Log Adjustment**

- **Date/Time:** November 5, 2003 (12:00 p.m.)
- **Number of Logs Removed/Replaced:** Removed three (3) logs
- **Elevation:** See Field Notes
- **Mudline Levels:** See Field Notes
- **Water Levels:** See Field Notes
- **Log Description:** Pink
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<th>Right Elev.</th>
<th>Remarks</th>
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<tr>
<td>12.53</td>
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<td>6.56</td>
<td>-1.23</td>
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<tr>
<td>1.36</td>
<td>3.97</td>
<td></td>
<td>CTE 104</td>
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**Remarks (drilled by D.A.R.):**
- Fill Depth +3.97 as given by D.A.R.
- Before removal

**Survey:**

**Survey Dates:**
- 11/5/03
- 11/5/03
- 11/5/03

**Surveyors:**
- J.D. Blount
- J.D. Blount
- J.D. Blount

**Surveyor:**
- Blount
- Blount
- Blount

**Supervisor:**
- P.C. Blount
- P.C. Blount
- P.C. Blount
Provided Information
BA-02 GIWW / CLOVELLY HYDROLOGIC
RESTORATION PROJECT

LDNR CONTRACT NO. 2503-01-30
SCI PROJECT NO. 2282

OPERATION AND INSPECTION REPORT

Site No. 35

APRIL 2004

Prepared For:
Louisiana Department of Natural Resources

Prepared By:
Shaw Coastal, Inc.
197 Elysian Drive
Houma, Louisiana 70363
Site No. 35
Variable Crest Weir Structure
FIELD TRIP REPORT

SUBJECT: BA-02 GIWW / Clovelly Hydrologic Restoration Project

LOCATION: Barataria Basin, Near Little Lake in Lafourche Parish, Louisiana

PURPOSE: Operate and adjust the variable crest weir at Site No. 35

PARTICIPANTS: Brian Brunet and John Helm

DATES: March 29, 2004

CONDITIONS: Partly cloudy and Hot (80°)

Permission to gain access to Site No. 35 was obtained from Mr. Harold Werner (Attorney, 504-522-7496) and Mr. Carroll Adams (Land Manager - Little Lake Land Co., 504-691-1627) on March 26, 2004.

The weir structure is located in the Barataria Basin near the Gulf Intracoastal Waterway (GIWW) in Lafourche Parish, Louisiana. The project is bounded by the Intracoastal Waterway to the north and northeast, Bayou Lafourche to the west, Superior Canal to the south, Bayou Perot, Little Lake and Bayou L’Ours to the east. The weir structure appeared to be in good condition. Description of maintenance/repair required includes bent locking pin on one side (still operable) and installed new locks (5404). The TBM used for this site in the determination of elevation was the top of timber pile at the northeast corner of the structure platform (3.97 NAVD88). The water surface elevation at the site was determined to be 0.92 feet on the canal side of the structure and 0.99 on the marsh side of the structure. The ground elevation on the east side of the weir was -5.49 feet and the ground elevation on the west side was -6.44 feet.

It was determined through coordination with Louisiana Department of Natural Resources personnel that the required elevation of the stop logs would be approximately 0.5 feet Below Marsh Level (BML). This would require the replacement of three (3) stop logs. The elevation of the stop logs prior to removal was -1.21 feet and elevation 0.19 after placement. The field data report, photographs and field notes are attached. There are no navigation lights or timber dolphins located at this structure.
Site No. 35
BA-02 GIWW / Clovelly Hydrologic Restoration Project

Pre Stop Log Installation

Post Stop Log Installation
Site No. 35
BA-02 GIWW / Clovelly Hydrologic Restoration Project

Pre Stop Log Installation with Old Lock and Slightly Bent Lock Pin

Pre Stop Log Installation with Old Lock and Bent Lock Pin
Site No. 35
BA-02 GIWW / Clovelly Hydrologic Restoration Project

03/29/2004

Post Stop Log Installation with New Lock

03/29/2004

Post Stop Log Installation with New Lock
FIELD DATA REPORT

Project (No. & Name): BA-02 GIWW / Clovelly Hydrologic Restoration Project

Location: Near Little Lake in Lafourche Parish, Louisiana

Purpose of Site Visit: To replace three (3) stop logs in one (1) bay.

Date: March 29, 2004

Participants: Brian A. Brunet and John Helm

Weather Conditions: Partly cloudy Hot (80°)

Persons Contacted for Access: Mr. Harold Werner (504-522-7496), and Mr. Carroll Adams (504-691-1627)

Site No.: 35

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
<th>Maintenance/Repair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber Pile</td>
<td>Good</td>
<td>x</td>
</tr>
<tr>
<td>Timber Hoist/Lag Eyes</td>
<td>Good</td>
<td>x</td>
</tr>
<tr>
<td>Pile Caps</td>
<td>Good</td>
<td>x</td>
</tr>
<tr>
<td>Corrugated Aluminum</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Grating/Metal Components</td>
<td>Good</td>
<td>x</td>
</tr>
<tr>
<td>Wood Access Ramp</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Stop Logs</td>
<td>Good</td>
<td>x</td>
</tr>
<tr>
<td>Locks</td>
<td>Changed This Date</td>
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Levee Condition

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</thead>
<tbody>
<tr>
<td>Erosion</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Vegetation</td>
<td>N/A</td>
<td></td>
</tr>
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</table>

Description of Maintenance/Repair Required: Lock pin on one side bent but operable.

Stop Log Adjustment Date/Time: March 29, 2004 (12:30 p.m.)

- Number of Logs Removed/Replaced: Three (3) Stop Logs Replaced
- Elevation: See Field Notes
- Mudline Levels: See Field Notes
- Water Levels: See Field Notes

Flag Description: N/A
**Louisiana Department of Natural Resources**  
**BA 02 GHW/Cloverly Restoration Project**

### Top Log Replacement

<table>
<thead>
<tr>
<th>H-1</th>
<th>ELEV.</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
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<td>5.11</td>
<td>NWAI'D98</td>
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<tr>
<td>4.12</td>
<td>0.99</td>
<td>Top Water Marsh Side</td>
</tr>
<tr>
<td>4.19</td>
<td>0.92</td>
<td>Top Water Marsh Side</td>
</tr>
<tr>
<td>1.13</td>
<td>3.98</td>
<td>CK Top Piling Used As Top Nat Bottom Marsh Side</td>
</tr>
<tr>
<td>10.00</td>
<td>-5.49</td>
<td>Nat Bottom Marsh Side</td>
</tr>
<tr>
<td>11.55</td>
<td>-6.44</td>
<td>Nat Bottom Canal Side Post-Log Placement Post-Log Placement</td>
</tr>
<tr>
<td>6.32</td>
<td>-1.21</td>
<td></td>
</tr>
<tr>
<td>4.92</td>
<td>0.19</td>
<td></td>
</tr>
</tbody>
</table>

**Canal**

**NOTE:** As instructed by Mr. Brian Babineau of Thibodaux Office of LDNR, the locks on the structure (5402) were removed and replaced by new locks (5404).

Also, the secondary mon. "BAO2-SH-02" was used in lieu of the temporary mark previously established on the structure piling.
Station Name: "BA02-SM-02"

Location: From La Highway 308 at Cutoff, Louisiana, proceed east on east 36th Street for approximately 5 miles and follow the signs for North Dock. Once at the boat landing, by boat, proceed approximately 3 miles east to Little Lake. Turn right and proceed southwesterly in Little Lake for about 3 miles around a point, then southwesterly for about 2.5 miles to a Slip Canal at Clovelly Oil and Gas Field, then about 1.5 miles in the Slip Canal to a Canal on the right. Turn right and proceed northwesterly in the Canal for about 2000 feet to the monument on the left.

Monument Description: NGS style floating sleeve monument; datum point set on 9/16" stainless steel sectional rods driven 52 feet to refusal, set in sand filled 6" PVC pipe with access cover set in concrete, flush with ground.

Stamping: BA02-SM-02

Installation Date: 12/11/02  Date of Survey: January 2003

Monument Established By: John Chance Land Surveys, Inc.

For: Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 Geodetic Position
Lat.  29° 29' 26.264853" N
Long.  90° 14' 05.347649" W

Adjusted NAD 83 Datum L5Z (1702) Feet
N= 361,933.78
E= 3,630,318.64

Adjusted NAVD88 Height
Elevation = 2.97 feet (0.906 mtrs)
Geoid99 Height = -24.944 mtrs.
Ellipsoid Height = -24.038 mtrs.
Adjusted OD88 Height = 2.91 ft (0.894 mtrs).

Adjusted Position Established for Louisiana Department of Natural Resources, Coastal Restoration Division.
FIELD TRIP REPORT

For

GIWW to Clovelly Hydrologic Restoration Project (BA-02)
Operation of Variable Crest Weir Structures
DNR Contract No. 2503-05-28

Prepared For

Mr. Brian J. Babin, P.E.
La. Dept. of Natural Resources
1440 Tiger Drive, Suite B
Thibodaux, LA 70301

Prepared By

TBS

T. BAKER SMITH

PROFESSIONAL CONSULTANTS SINCE 1913

April 2005
FIELD TRIP REPORT

For

GIWW to Clovelly Hydrologic Restoration Project (BA-02)
Operation of Variable Crest Weir Structures
DNR Contract No. 2503-05-28

Prepared For

Mr. Brian J. Babin, P.E.
La. Dept. of Natural Resources
1440 Tiger Drive, Suite B
Thibodaux, LA 70301

Prepared By

T. BAKER SMITH
PROFESSIONAL CONSULTANTS SINCE 1913

April 2005
# LIST OF ATTACHMENTS

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Structure No. 35</td>
<td>A-1</td>
</tr>
<tr>
<td>2</td>
<td>Benchmarks – Data Sheets</td>
<td>A-2</td>
</tr>
</tbody>
</table>
ATTACHMENT NO. 1

Structure No. 35
FIELD TRIP REPORT

SUBJECT: BA-02 GIWW / Clovelly Hydrologic Restoration Project

LOCATION: Barataria Basin, Near Little Lake in Lafourche Parish Louisiana

PURPOSE: Operate and adjust the variable crest weirs at Site No. 35

PARTICIPANTS: Jody Ledet, Arturo Baez, Joe Boquet

DATES: April 12, 2005

CONDITIONS: Clear & Sunny (83°)

Permission to gain access to Site No. 35 was obtained verbally from Mr. Harold Werner (Attorney, 504-522-7496) and Mr. Randy Moertle (985-532-6388) of Little Lake Land Co. on April 8, 2005.

The weir structure is located on Barataria Basin near the Gulf Intracoastal Waterway (GIWW) in Lafourche Parish, Louisiana. The project is bounded by the Intracoastal Waterway to the north and northeast, Bayou Lafourche to the west, Superior Canal to the south, Bayou Perot, Little Lake and Bayou L’Ours to the east. The weir structure appeared to be in good condition. Description of maintenance / repair required includes bent locking pin on one side and cleaned padlocks with WD40. The TBM used for this site in the determination of elevation was the supplied “BA02-SM-02” (2.97 feet NAVD88). The water surface elevation at the site was determined to be 1.20 feet on the canal side and 1.23 feet on the marsh side of the structure. The natural canal bottom elevation at the site was determined to be -6.34 feet on the canal side and -5.32 feet on the marsh side of the structure.

It was determined through coordination with Louisiana Department of Natural Resources personnel that the required elevation of the stop logs would be approximately 0.5 feet Below Marsh Level (BML). This would require the placement of (3) stop logs. The elevation of the pre-stop log placement was -1.29 feet and post-stop log placement was 0.11 feet. There are no navigational lights at this structure location.

For all elevations please refer to the attached field notes. Also attached are the field data report and photographs.
FIELD DATA REPORT

Project (No. & Name): BA-02 GIWW / Clovelly Hydrologic Restoration Project

Location: Near Little Lake in Lafourche Parish

Purpose of Site Visit: Placement of three (3) stop logs in one (1) bay and structure assessment at Site No. 35

Date: Tuesday, April 12, 2005

Participants: Jody Ledet, Arturo Baez, Joe Boquet

Weather Conditions: Clear & Sunny (83°)

Persons Contacted for Access: Mr. Harold Werner (504-522-7496) and Mr. Randy Moertle (985-532-6388)

Site No.: Structure No. 35

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
<th>Maintenance/Repair</th>
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<tbody>
<tr>
<td>Timber Pile</td>
<td>Good</td>
<td>Yes</td>
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<tr>
<td>Timber Hoist/Lag Eyes</td>
<td>Good</td>
<td>Yes</td>
</tr>
<tr>
<td>Pile Caps</td>
<td>Good</td>
<td>Yes</td>
</tr>
<tr>
<td>Corrugated Aluminum</td>
<td>N/A</td>
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<tr>
<td>Grating/Metal Components</td>
<td>Good</td>
<td>Yes</td>
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<tr>
<td>Wood Access Ramp</td>
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<tr>
<td>Stop Logs</td>
<td>Good</td>
<td>Yes</td>
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<tr>
<td>Master Locks</td>
<td>Good (cleaned)</td>
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Levee Condition

<table>
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<tr>
<th>Item</th>
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<tbody>
<tr>
<td>Erosion</td>
<td>N/A</td>
</tr>
<tr>
<td>Vegetation</td>
<td>N/A</td>
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</table>

Description of Maintenance/Repair Required: Cleaned master locks with WD-40.

Stop Log Adjustment

Date/Time: April 12, 2005; 12:30 p.m.

- Number of Logs Removed/Replaced: Placement of three (3) stop logs
- Elevation: See Field Notes
- Mudline Levels: See Field Notes
- Water Levels: See Field Notes

Flag Description: N/A
**Job # 2005.1184**

**LA DEPARTMENT OF NATURAL RESOURCES**

**BA-02 GIWN/CLOVELLY RESTORATION PROJECT**

**STOP LOG REPLACEMENT**

**SITE NO. 35**

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<tr>
<th>Component</th>
<th>H.I.</th>
<th>Elev.</th>
<th>Remarks</th>
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<tr>
<td>Post-Log</td>
<td>7.11</td>
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<td></td>
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</table>

**NOTES:**
1. Bm & TBM - Supplied by LDNR
2. Marsh
3. Steel Sheets
4. Ricks
5. Canal
6. Tow

**Diagram Notes:**
- 4 x 4" x 8" stop logs
- P-40 lock in good condition (used ND40)
- Stop logs in good condition before placement
GIWW to Clovelly Farms Hydrologic Restoration Project (BA-02)

Data Source:
LA Department of Natural Resources
Coastal Restoration Division
Biological Monitoring Section
Thibodaux Field Office
1998 DOQQ's
Date: July 30, 2001
Map ID: 2001-TFO-012
SITE NO. 35
BA-02 GIWW / Clovelly Hydrologic Restoration Project

Pre Stop Log Installation (4/12/05)

Post Stop Log Installation (4/12/05)
SITE NO. 35
BA-02 GIWW / Clovelly Hydrologic Restoration Project

Water Control Structure Condition (4/12/05)

Crane, Winch & Hoist Condition (4/12/05)

Grating/Metal Components & Pile Caps Condition (4/12/05)
ATTACHMENT NO. 2

Benchmarks - Datasheets
Station Name: "BA02-SM-02"

Location: From La Highway 308 at Cutoff, Louisiana, proceed east on east 36th Street for approximately 5 miles and follow the signs for North Dock. Once at the boat landing, by boat, proceed approximately 3 miles east to Little Lake. Turn right and proceed southeasterly in Little Lake for about 3 miles around a point, then southwesterly for about 2.5 miles to a Slip Canal at Clovelly Oil and Gas Field, then about 1.5 miles in the Slip Canal to a Canal on the right. Turn right and proceed northwesterly in the Canal for about 2000 feet to the monument on the left.

Monument Description: NGS style floating sleeve monument; datum point set on 9/16" stainless steel sectional rods driven 52 feet to refusal, set in sand filled 6" PVC pipe with access cover set in concrete, flush with ground.

Stamping: BA02-SM-02

Installation Date: 12/11/02  Date of Survey: January 2003

Monument Established By: John Chance Land Surveys, Inc.

For: Louisiana Department of Natural Resources, CRD

**Adjusted NAD 83 Geodetic Position**
Lat.  29° 29' 26.264845" N
Long. 90° 14' 05.347549" W

**Adjusted NAD 83 Datum LSZ (1702) Feet**
N= 361,933.78
E= 3,630,318.64

**Adjusted NAVD88 Height**
Elevation = 2.97 feet (0.906 mtrs)
Geoid99 Height = -24.944 mtrs.
Ellipsoid Height = -24.038 mtrs.

Adjusted CORS Height = 2.93 ft (0.994 mtrs)

*Adjusted Position Established for Louisiana Department of Natural Resources, Coastal Restoration Division*
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<tr>
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<td>Float Plan</td>
<td>Data Sheet</td>
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<td>Cell Phone</td>
<td>GPS</td>
</tr>
<tr>
<td>TBS Phone List</td>
<td>GPS Batteries / Charger</td>
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<td>Phone Number &amp; Directions to Nearest Hospital</td>
<td>Soil Survey Books</td>
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<td>Client Phone Numbers</td>
<td>Munsell Color Chart</td>
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<td>Vehicle</td>
<td>Hydric Soil List</td>
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<td>ATV</td>
<td>Delineation Field Manual</td>
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<td>Boat</td>
<td>Plant Keys</td>
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<td>Gas, Oil</td>
<td>Plant Indicator List</td>
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<td>Special Safety Equipment (i.e. ATV Gear, Air Boat Gear)</td>
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<td>Life Vest</td>
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<td>Safety Orange Field Vest</td>
<td>Iron Test</td>
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<td>Camera Batteries / Charger</td>
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<td>First Aid Kit / Safety Kit</td>
<td>Film / CDs / 3-1/2&quot; disks</td>
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<td>Hard Hat</td>
<td>Toilet Paper</td>
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<td>Safety Glasses</td>
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Bart Dupre 209-7926
Bruce Pelligrin 804-3443
Marshall Faulk 852-3431
Kenny Smith 852-3433

Horace Thibodaux 852-3446
Randy Landry 852-4207
Earl Eues 804-5455

M:\Env\STANDARD FORMS\Job Safety Analysis\Env Field Check List
April 21, 2005

Mr. Brian Babin
La. Dept. of Natural Resources
1440 Tiger Drive, Suite B
Thibodaux, LA 70301

RE: Field Trip Report
GIWW to Clovelly Hydrologic Restoration Project (BA-02)
DNR Contract No. 2503-05-28

Dear Mr. Babin:

Enclosed are four (4) copies of the above referenced report. It has been a pleasure working with you on this project.

If there is anything else we can assist you with, please contact me at 985-223-9288 or via email at kodib@tbsmith.com.

Very truly yours,

T. BAKER SMITH & SON, INC.

Kodi J. Babin, Project Manager
Environmental Business Unit

KJB/esh
Enclosure(s)
November 16, 2007

Hand Delivered

Mr. Brian J. Babin, P.E.
La. Dept. of Natural Resources
1440 Tiger Drive, Suite B
Thibodaux, LA 70301

RE: Field Trip Report
GIWW to Clovelly Hydrologic Restoration Project (BA-02) - Operation of Variable Crest Weir Structures – Fall 2007
DNR Contract No. 2503-08-13

Dear Mr. Babin:

Enclosed are four copies of the Field Trip Report for work performed on the above referenced project. This report includes findings, field notes, data and photographs as required in the contract.

Thank you for the opportunity of working with you on this project. For comments or questions, I can be reached at 985-223-9288 or email kodib@tbsmith.com.

Sincerely,

T. BAKER SMITH, INC.

Kodi J. Babin, Project Manager
Environmental Discipline

KJB/esh
Enclosure(s)
FIELD TRIP REPORT

For

GIWW to Clovelly Hydrologic Restoration Project (BA-02)
Operation of Variable Crest Weir Structures
DNR Contract No. 2503-08-13

Prepared For

Mr. Brian J. Babin, P.E.
La. Dept. of Natural Resources
1440 Tiger Drive, Suite B
Thibodaux, LA 70301

November 2007

Prepared By

T. BAKER SMITH, INC.
PROFESSIONAL CONSULTANTS SINCE 1913

Houma, LA     Lafayette, LA     Baton Rouge, LA     Thibodaux, LA     Houston, TX
1 (866) 357-1050   www.tbsmith.com
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<th>No.</th>
<th>Description</th>
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<tr>
<td>1</td>
<td>Site No. 35</td>
<td>A-1</td>
</tr>
<tr>
<td>2</td>
<td>Benchmarks – Data Sheets</td>
<td>A-2</td>
</tr>
</tbody>
</table>
ATTACHMENT NO. 1

Site No. 35
FIELD TRIP REPORT

SUBJECT: BA-02 GIWW / Clovelly Hydrologic Restoration Project

LOCATION: Barataria Basin, Near Little Lake in Lafourche Parish Louisiana

PURPOSE: Operate and adjust the variable crest weirs at Site No. 35

PARTICIPANTS: Richard Fontenot and Jude Chenier

DATES: November 8, 2007

CONDITIONS: Cloudy (68°)

Permission to gain access to Site No. 35 was obtained verbally from Mr. Randy Moertle (985-532-6388) of Little Lake Land Co. on November 6, 2007.

The weir structure is located on Barataria Basin near the Gulf Intracoastal Waterway (GIWW) in Lafourche Parish, Louisiana. The project is bounded by the Intracoastal Waterway to the north and northeast, Bayou Lafourche to the west, Superior Canal to the south, Bayou Perot, Little Lake and Bayou L'Ours to the east. The weir structure appeared to be in good condition. Description of maintenance / repair required includes bent locking pin on one side and cleaned padlocks with WD40. The TBM used for this site in the determination of elevation was the supplied “BA02-SM-02” (2.97 feet NAVD88). The water surface elevation at the site was determined to be 0.58 feet on the canal and marsh sides of the structure. The natural canal bottom elevation at the site was determined to be -4.41 feet on the canal side and -3.09 feet on the marsh side of the structure.

It was determined through coordination with Louisiana Department of Natural Resources Scope of Services that the required elevation of the stop logs would be approximately -2.00 feet Below Marsh Level (BML). This would require the removal of three (3) stop logs. The elevation of the pre-stop log removal was 0.17 feet and post-stop log removal was -1.23 feet. There are no navigational lights at this structure location.

For all elevations please refer to the attached field notes. Also attached are the field data report and photographs.
Project (No. & Name): BA-02 GIWW / Clovelly Hydrologic Restoration Project

Location: Near Little Lake in Lafourche Parish

Purpose of Site Visit: Removal of three (3) stop logs in one (1) bay and structure assessment at Site No. 35

Date: Thursday, November 8, 2007

Participants: Richard Fontenot and Jude Chenier

Weather Conditions: Cloudy (68°)

Persons Contacted for Access: Mr. Randy Moertle

Structure No.: Structure No. 35

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
<th>Maintenance/Repair</th>
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<tbody>
<tr>
<td>Timber Pile</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Timber Hoist/Lag Eyes</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Pile Caps</td>
<td>Good</td>
<td>X</td>
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<tr>
<td>Corrugated Aluminum</td>
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<tr>
<td>Grating/Metal Components</td>
<td>Good (cleaned)</td>
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<tr>
<td>Wood Access Ramp</td>
<td>N/A</td>
<td></td>
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<tr>
<td>Stop Logs</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Master Locks</td>
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Levee Condition

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<tr>
<td>Vegetation</td>
<td>N/A</td>
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Description of Maintenance/Repair Required: Cleaned master locks with WD-40.

Stop Log Adjustment

- Number of Logs Removed/Replaced: Removal of three (3) stop logs
- Elevation: See Field Notes
- Mudline Levels: See Field Notes
- Water Levels: See Field Notes

Flag Description: N/A
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<td></td>
<td>Marsh</td>
<td>10.48</td>
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<tr>
<td></td>
<td>Post Removal</td>
<td>8.50</td>
<td>-1.23</td>
</tr>
</tbody>
</table>

**Diagram Notes:**
- Removed 3 Legs
- Pads.HE: Working Condition
- Water level:
  - Pre: +2.67' MSL
  - Post: -1.23' Bottom
BA-02 GIWW – Site No. 35

Benchmark Overall Condition (11-8-07)

Benchmark Overall Condition (11-8-07)
Pre Stop Log Removal (11-8-07)

DANGER
OBSTRUCTION
DO NOT
PROCEED

Structure Condition: Winch, Crane, Hoist, and Pile Caps (11-8-07)
Condition of Stop Logs Pre-removal (11-8-07)

Condition of Stop Logs Pre-removal (11-8-07)
ATTACHMENT NO. 2

Benchmarks – Data Sheets
Station Name: "BA02-SM-02"

Location: From La Highway 308 at Cutoff, Louisiana, proceed east on east 36th Street for approximately 5 miles and follow the signs for North Dock. Once at the boat landing, by boat, proceed approximately 3 miles east to Little Lake. Turn right and proceed southeasterly in Little Lake for about 3 miles around a point, then southwesterly for about 2.5 miles to a Slip Canal at Cheyney Oil and Gas Field, then about 1.5 miles in the Slip Canal to a Canal on the right. Turn right and proceed northwesterly in the Canal for about 2000 feet to the monument on the left.

Monument Description: NGS style floating sleeve monument; datum point set on 9/16" stainless steel sectional rods driven 52 feet to refusal, set in sand filled 6" PVC pipe with access cover set in concrete, flush with ground.

Stamping: BA02-SM-02

Installation Date: 12/11/02  Date of Survey: January 2003

Monument Established By: John Chanco Land Surveys, Inc.

For: Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 Geodetic Position
Lat. 29°29'26.264853" N
Long. 90°14'05.347549" W

Adjusted NAD 83 Datum LSZ (1702) Feet
N = 361,933.78
E = 3,630,318.64

Adjusted NAVD88 Height
Elevation = 2.97 feet (0.905 mtrs)
Geoid99 Height = -24.944 mtrs.
Ellipsoid Height = -24.038 mtrs.

Adjusted CORS Height = 2.97 ft (0.905 mtrs)

Adjusted Position Established for Louisiana Department of Natural Resources, Coastal Restoration Division
FIELD TRIP REPORT

For

GIWW to Clovelly Hydrologic Restoration Project (BA-02)
Operation of Variable Crest Weir Structures
DNR Contract No. 2503-08-13

Prepared For

Mr. Brian J. Babin, P.E.
La. Dept. of Natural Resources
1440 Tiger Drive, Suite B
Thibodaux, LA 70301

May 2008

Prepared By

T. BAKER SMITH, INC.
PROFESSIONAL CONSULTANTS SINCE 1913

Houma, LA Lafayette, LA Baton Rouge, LA Thibodaux, LA Houston, TX
1 (866) 357-1050 www.tbsmith.com
# LIST OF ATTACHMENTS

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</table>
ATTACHMENT NO. 1

Site No. 35
FIELD TRIP REPORT

SUBJECT: BA-02 GIWW / Clovelly Hydrologic Restoration Project

LOCATION: Barataria Basin, Near Little Lake in Lafourche Parish Louisiana

PURPOSE: Operate and adjust the variable crest weirs at Site No. 35

PARTICIPANTS: Richard Fontenot and Kodi Babin

DATES: April 30, 2008

CONDITIONS: Sunny (69°)

Permission to gain access to Site No. 35 was obtained verbally from Mr. Randy Moertle (985-532-6388) of Little Lake Land Co. on April 29, 2008.

The weir structure is located on Barataria Basin near the Gulf Intracoastal Waterway (GIWW) in Lafourche Parish, Louisiana. The project is bounded by the Intracoastal Waterway to the north and northeast, Bayou Lafourche to the west, Superior Canal to the south, Bayou Perot, Little Lake and Bayou L'Ours to the east. The weir structure appeared to be in good condition. Description of maintenance / repair required includes bent locking pin on one side and cleaned padlocks with WD40. The TBM used for this site in the determination of elevation was the supplied "BA02-SM-02" (2.97 feet NAVD88). The water surface elevation at the site was determined to be 1.05 feet on the canal and marsh sides of the structure. The natural canal bottom elevation at the site was determined to be -4.25 feet on the canal side and -3.13 feet on the marsh side of the structure.

It was determined through coordination with Louisiana Department of Natural Resources Scope of Services that the required elevation of the stop logs would be approximately -0.50 feet Below Marsh Level (BML). This would require the installation of three (3) stop logs. The elevation of the pre-stop log installation was -1.19 feet and post-stop log installation was +0.19 feet. There are no navigational lights at this structure location.

For all elevations please refer to the attached field notes. Also attached are the field data report and photographs.
Project (No. & Name): BA-02 GIWW / Clovely Hydrologic Restoration Project

Location: Near Little Lake in Lafourche Parish

Purpose of Site Visit: Installation of three (3) stop logs in one (1) bay and structure assessment at Site No. 35

Date: Wednesday, April 30, 2008

Participants: Richard Fontenot and Kodi Babin

Weather Conditions: Sunny (69° F)

Persons Contacted for Access: Mr. Randy Moerle

Site No.: Structure No. 35

<table>
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<tr>
<th>Item</th>
<th>Condition</th>
<th>Maintenance/Repair</th>
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<tr>
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<td>Good</td>
<td>Yes</td>
</tr>
<tr>
<td>Corrugated Aluminum</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>Grating/Metal Components</td>
<td>Good</td>
<td>No</td>
</tr>
<tr>
<td>Wood Access Ramp</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>Stop Logs</td>
<td>Good</td>
<td>Yes</td>
</tr>
<tr>
<td>Master Locks</td>
<td>Good (cleaned)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Levee Condition

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosion</td>
<td>N/A</td>
</tr>
<tr>
<td>Vegetation</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Description of Maintenance/Repair Required: Cleaned master locks with WD-40.

Stop Log Adjustment Date/Time: Wednesday, April 30, 2008; 12:00 p.m.

- Number of Logs Removed/Replaced: Installation of three (3) stop logs
- Elevation: See Field Notes
- Mudline Levels: See Field Notes
- Water Levels: See Field Notes

Flag Description: N/A
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Sh.</th>
<th>Elev.</th>
<th>BS.</th>
<th>FS.</th>
<th>Water</th>
<th>BS.</th>
<th>FS.</th>
<th>Water</th>
<th>Pre-inst</th>
<th>Inst.</th>
<th>Canal</th>
<th>Marsh</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008.390</td>
<td>Gilman to Colley</td>
<td>35</td>
<td>2.97</td>
<td>5.96</td>
<td>6.93</td>
<td>1.05</td>
<td>5.96</td>
<td>6.93</td>
<td>1.05</td>
<td>-3.13</td>
<td>-4.25</td>
<td>7.51</td>
<td>11.95</td>
</tr>
</tbody>
</table>

Note: Installed Step Logs on April 30, 2008.
ATTACHMENT NO. 2

Benchmarks – Data Sheets
Station Name: "BA02-SM-02"

Location: From La Highway 308 at Cutoff, Louisiana, proceed east on east 36th Street for approximately 5 miles and follow the signs for North Dock. Once at the boat landing, by boat, proceed approximately 3 miles east to Little Lake. Turn right and proceed southeasterly in Little Lake for about 3 miles around a point, then southwesterly for about 2.5 miles to a Slip Canal at Cloveley Oil and Gas Field, then about 1.5 miles in the Slip Canal to a Canal on the right. Turn right and proceed northwesterly in the Canal for about 2000 feet to the monument on the left.

Monument Description: NGS style floating sleeve monument, datum point set on 9'16" stainless steel sectional rods driven 52 feet to refusal, set in sand filled 6" PVC pipe with access cover set in concrete, flush with ground.

Stamping: BA02-SM-02

Installation Date: 12/11/02  Date of Survey: January 2003

Monument Established By: John Chance Land Surveys, Inc.

For: Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 Geodetic Position
Lat.  29° 29' 26.28453" N
Long.  90° 14' 05.347549" W

Adjusted NAD 83 Datum L3Z (1702) Feet
N =  361,933.78
E =  3,630,318.64

Adjusted NAVD88 Height
Elevation = 2.97 feet (0.906 mtrs)
Geoid Height = -24.944 mtrs.
Ellipsoid Height = -24.038 mtrs.

Adjusted Position Established for Louisiana Department of Natural Resources, Coastal Restoration Division.
FIELD TRIP REPORT

For

GIWW to Clovelly Hydrologic Restoration Project (BA-02)
Operation of Variable Crest Weir Structures
DNR Contract No. 2503-08-13

Prepared For

Mr. Brian J. Babin, P.E.
La. Dept. of Natural Resources
1440 Tiger Drive, Suite B
Thibodaux, LA  70301

December 2008

Prepared By

T. BAKER SMITH, INC.
PROFESSIONAL CONSULTANTS SINCE 1913

1 (866) 357-1050   www.tbsmith.com
# LIST OF ATTACHMENTS

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</tr>
<tr>
<td>2</td>
<td>Benchmarks – Data Sheets</td>
<td>A-2</td>
</tr>
</tbody>
</table>
ATTACHMENT NO. 1

Site No. 35
FIELD TRIP REPORT

SUBJECT: BA-02 GIWW / Clovelly Hydrologic Restoration Project

LOCATION: Barataria Basin, Near Little Lake in Lafourche Parish Louisiana

PURPOSE: Operate and adjust the variable crest weirs at Site No. 35

PARTICIPANTS: Kiley Cressionie, Trevis Olivier, and Jacob Daigle

DATES: November 25, 2008

CONDITIONS: Sunny (61°)

Permission to gain access to Site No. 35 was obtained verbally from Mr. Randy Moertle (985-532-6388) of Little Lake Land Co. on November 20, 2008.

The weir structure is located on Barataria Basin near the Gulf Intracoastal Waterway (GIWW) in Lafourche Parish, Louisiana. The project is bounded by the Intracoastal Waterway to the north and northeast, Bayou Lafourche to the west, Superior Canal to the south, Bayou Perot, Little Lake and Bayou L’Ours to the east. The weir structure appeared to be in good condition. Description of maintenance / repair required includes bent locking pin on one side and cleaned padlocks with WD40. The TBM used for this site in the determination of elevation was the supplied “BA02-SM-02” (2.97 feet NAVD88). The water surface elevation at the site was determined to be 0.69 feet on the canal and marsh sides of the structure. The natural canal bottom elevation at the site was determined to be -5.27 feet on the canal side and -2.67 feet on the marsh side of the structure.

It was determined through coordination with Louisiana Department of Natural Resources Scope of Services that the required elevation of the stop logs would be approximately -2.00 feet Below Marsh Level (BML). This would require the removal of three (3) stop logs. The elevation of the pre-stop log removal was +0.22 feet and post-stop log removal was -1.11 feet. There are no navigational lights at this structure location.

For all elevations please refer to the attached field notes. Also attached are the field data report and photographs.
Project (No. & Name): BA-02 GIWW / Clovelly Hydrologic Restoration Project

Location: Near Little Lake in Lafourche Parish

Purpose of Site Visit: Removal of three (3) stop logs in one (1) bay and structure assessment at Site No. 35

Date: Tuesday, November 25, 2008

Participants: Kiley Cressionie, Trevis Olivier, and Jacob Daigle

Weather Conditions: Sunny (61° F)

Persons Contacted for Access: Mr. Randy Moertle

Site No.: Structure No. 35

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
<th>Maintenance/Repair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber Pile</td>
<td>Good</td>
<td>Yes</td>
</tr>
<tr>
<td>Timber Hoist/Lag Eyes</td>
<td>Good (lubricated)</td>
<td>No</td>
</tr>
<tr>
<td>Pile Caps</td>
<td>Good</td>
<td>Yes</td>
</tr>
<tr>
<td>Corrugated Aluminum</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>Grating/Metal Components</td>
<td>Good</td>
<td>Yes</td>
</tr>
<tr>
<td>Wood Access Ramp</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>Stop Logs</td>
<td>Good</td>
<td>Yes</td>
</tr>
<tr>
<td>Master Locks</td>
<td>Good (cleaned/lubricated)</td>
<td>No</td>
</tr>
</tbody>
</table>

Levee Condition

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosion</td>
<td>N/A</td>
</tr>
<tr>
<td>Vegetation</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Description of Maintenance/Repair Required: Cleaned and lubricated master locks and timber hoist with WD-40.

Stop Log Adjustment Date/Time: Tuesday, November 25, 2008; 11:30 p.m.

- Number of Logs Removed/Replaced: Removal of three (3) stop logs
- Elevation: See Field Notes
- Mudline Levels: See Field Notes
- Water Levels: See Field Notes

Flag Description: N/A
BA-02 GIWW – Site No. 35

North Side Structure Condition (11-25-08)

South Side Structure Condition (11-25-08)
ATTACHMENT NO. 2

Benchmarks – Data Sheets
Station Name: "BA02-SM-02"

Location: From La Highway 308 at Cutoff, Louisiana, proceed east on east 38th Street for approximately 5 miles and follow the signs for North Dock. Once at the boat landing, by boat, proceed approximately 3 miles east to Little Lake. Turn right and proceed southeasterly in Little Lake for about 3 miles around a point, then southwesterly for about 2.5 miles to a Slip Canal at Clovelly Oil and Gas Field, then about 1.5 miles in the Slip Canal to a Canal on the right. Turn right and proceed northwesterly in the Canal for about 2000 feet to the monument on the left.

Monument Description: NGS style floating sleeve monument; datum point set on 9/16” stainless steel sectional rods driven 52 feet to refusal, set in sand filled 6” PVC pipe with access cover set in concrete, flush with ground.

Stamping: BA02-SM-02

Installation Date: 12/11/02 Date of Survey: January 2003

Monument Established By: John Chance Land Surveys, Inc.

For: Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 Geodetic Position
Lat: 29° 29' 25.264853" N
Long: 90° 14' 05.347549" W

Adjusted NAD 83 Datum LSZ (1702) Feet
N= 361,933.78
E= 3,630,318.84

Adjusted NAVD88 Height
Elevation = 2.97 feet (0.906 mtrs)
Geoid99 Height = -24.944 mtrs.
Ellipsoid Height = -24.038 mtrs.

Adjusted CORS Height = 2.93 ft (0.904 mtrs)

Adjusted Position Established for Louisiana Department of Natural Resources, Coastal Restoration Division
FIELD TRIP REPORT

For

GIWW to Clovelly Hydrologic Restoration Project (BA-02)
Operation of Variable Crest Weir Structures
DNR Contract No. 2503-08-13

Prepared For

Mr. Brian J. Babin, P.E.
La. Dept. of Natural Resources
1440 Tiger Drive, Suite B
Thibodaux, LA 70301

May 2009

Prepared By

T. BAKER SMITH, INC.
PROFESSIONAL CONSULTANTS SINCE 1913

Houma, LA     Lafayette, LA     Baton Rouge, LA     Thibodaux, LA     Houston, TX
1 (866) 357-1050  www.tbsmith.com
## LIST OF ATTACHMENTS

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<td>A-1</td>
</tr>
<tr>
<td>2</td>
<td>Benchmarks – Data Sheets</td>
<td>A-2</td>
</tr>
</tbody>
</table>
FIELD TRIP REPORT

SUBJECT: BA-02 GIWW / Clovelly Hydrologic Restoration Project

LOCATION: Barataria Basin, Near Little Lake in Lafourche Parish Louisiana

PURPOSE: Operate and adjust the variable crest weirs at Site No. 35

PARTICIPANTS: Jacob Morrison, Ronnie Duke, Jr., Nicholas Gaspard

DATES: May 14, 2009

CONDITIONS: Sunny (78°)

Permission to gain access to Site No. 35 was obtained verbally from Mr. Randy Moertle (985-532-6388) of Little Lake Land Co. on May 13, 2009.

The weir structure is located on Barataria Basin near the Gulf Intracoastal Waterway (GIWW) in Lafourche Parish, Louisiana. The project is bounded by the Intracoastal Waterway to the north and northeast, Bayou Lafourche to the west, Superior Canal to the south, Bayou Perot, Little Lake and Bayou L’Ours to the east. The weir structure appeared to be in good condition. Description of maintenance / repair required includes cleaned padlocks with WD40. The TBM used for this site in the determination of elevation was the supplied “BA02-SM-02” (2.97 feet NAVD88). The water surface elevation at the site was determined to be 1.36 feet on the canal and marsh sides of the structure. The natural canal bottom elevation at the site was determined to be -3.52 feet on the canal side and -3.01 feet on the marsh side of the structure.

It was determined through coordination with Louisiana Department of Natural Resources Scope of Services that the required elevation of the stop logs would be approximately 0.5 feet Below Marsh Level (BML). This would require the replacement of three (3) stop logs. The elevation of the pre-stop log replacement was -1.21 feet and post-stop log replacement was +0.12 feet. There are no navigational lights at this structure location.

For all elevations please refer to the attached field notes. Also attached are the field data report and photographs.
**Project (No. & Name):** BA-02 GIWW / Clovelly Hydrologic Restoration Project

**Location:** Near Little Lake in Lafourche Parish

**Purpose of Site Visit:** Replacing of three (3) stop logs in one (1) bay and structure assessment at Site No. 35

**Date:** Thursday, May 14, 2009

**Participants:** Jacob Morrison, Ronnie Duke, Jr., Nicholas Gaspard

**Weather Conditions:** Sunny (78° F)

**Persons Contacted for Access:** Mr. Randy Moertle

**Site No.:** Structure No. 35

### Structure Condition

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
<th>Maintenance/Repair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber Pile</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Timber Hoist/Lag Eyes</td>
<td>Good (lubricated)</td>
<td>X</td>
</tr>
<tr>
<td>Pile Caps</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Corrugated Aluminum</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Grating/Metal Components</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Wood Access Ramp</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Stop Logs</td>
<td>Good</td>
<td>X</td>
</tr>
<tr>
<td>Master Locks</td>
<td>Good (cleaned/lubricated)</td>
<td>X</td>
</tr>
</tbody>
</table>

### Levee Condition

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosion</td>
<td>No erosion has taken place.</td>
</tr>
<tr>
<td>Vegetation</td>
<td>Vegetation along the structure on the bank is thick and healthy.</td>
</tr>
</tbody>
</table>

**Description of Maintenance/Repair Required:** Cleaned and lubricated master locks with WD-40.

**Stop Log Adjustment**

**Date/Time:** Thursday, May 14, 2008; 11:00 a.m.

- **Number of Logs Removed/Replaced:** Replacement of three (3) stop logs
- **Elevation:** See Field Notes
- **Mudline Levels:** See Field Notes
- **Water Levels:** See Field Notes

**Flag Description:** N/A
BA-02 GIWW - Site No. 35

North Side Structure Condition (05-14-09)

South Side Structure Condition (05-14-09)
ATTACHMENT NO. 2

Benchmarks – Data Sheets
Station Name:  "BA02-SM-02"

Location: From La Highway 308 at Cutoff, Louisiana, proceed east on east 36th Street for approximately 5 miles and follow the signs for North Dock. Once at the boat landing, by boat, proceed approximately 3 miles east to Little Lake. Turn right and proceed southeasterly in Little Lake for about 3 miles around a point, then southwesterly for about 2.5 miles to a Slip Canal at Clovelly Oil and Gas Field, then about 1.5 miles in the Slip Canal to a Canal on the right. Turn right and proceed northwesterly in the Canal for about 2000 feet to the monument on the left.

Monument Description: NGS style floating sleeve monument, datum point set on 9/16" stainless steel sectional rods driven 52 feet to refusal, set in sand filled 6" PVC pipe with access cover set in concrete, flush with ground.

Stamping: BA02-SM-02

Installation Date: 12/11/02  Date of Survey: January 2003

Monument Established By: John Chance Land Surveys, Inc.

For: Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 Geodetic Position
Lat.  29° 29' 25.673" N
Long.  90° 14' 05.347549" W

Adjusted NAD 83 Datum LS32 (1702) Feet
N = 361,933.78
E = 3,830,318.64

Adjusted NAVD88 Height
Elevation = 2.97 feet (0.906 mtr)
Geoid99 Height = -24.944 mtr.
Ellipsoid Height = -24.038 mtr.

Adjustable Position Established for Louisiana Department of Natural Resources, Coastal Restoration Division