



Coastal Protection and
Restoration Authority of Louisiana

**State of Louisiana
Coastal Protection and Restoration
Authority**

2015 Annual Inspection Report

for

**LAKE CHAPEAU SEDIMENT INPUT
AND HYDROLOGIC RESTORATION
PROJECT**

State Project Number TE-26
Priority Project List 3

August 28, 2015
Terrebonne Parish

Prepared by:

CPRA
Operations Division
Thibodaux Field Office
1440 Tiger Drive, Suite B
Thibodaux, La. 70301

Table of Contents

| | |
|---|---|
| I. Introduction..... | 1 |
| II. Inspection Purpose and Procedures | 1 |
| III. Project Description and History | 2 |
| IV. Summary of Past Operation and Maintenance Projects..... | 4 |
| V. Inspection Results | 5 |
| VI. Conclusions and Recommendations | 7 |

Appendices

| | |
|------------|-------------------------------|
| Appendix A | Project Features Map |
| Appendix B | Photographs |
| Appendix C | Three Year Budget Projections |

I. Introduction

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

The Lake Chapeau Marsh Creation and Hydrologic Restoration (TE-26) project is a marsh creation and hydrologic restoration project consisting of the creation of approximately 168 acres of marsh using dredge material from the Atchafalaya Bay and construction of seven (7) rock weirs across various oil field canals within the project area. The project was designed to restore the marshes west of Lake Chapeau by re-establishing a hydrologic separation between Locust Bayou and the Alligator Bayou watersheds. This was partially accomplished by hydraulically dredging sediments from the Atchafalaya Bay and filling large open water areas on the interior island near Lake Chapeau. Another objective of the Lake Chapeau project was to restore the islands natural hydrologic flow patterns by constructing weirs, spoil bank gapping and maintenance dredging of natural bayous within the project area.

The Lake Chapeau Marsh Creation and Hydrologic Restoration (TE-26) project is co-sponsored by the National Marine Fisheries Service (NMFS) and the Coastal Protection and Restoration Authority (CPRA) of Louisiana. The project was authorized by Section 303(a) of Title III Public Law 101-646, the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) enacted on November 29, 1990 as amended. The Lake Chapeau Project was approved on the third (3rd) Priority Project List (LDNR O&M Plan, 2002).

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

II. Inspection Purpose and Procedures

The purpose of the annual inspection of the Lake Chapeau Sediment Input and Hydrologic Restoration (TE-26) project is to evaluate the constructed project features and identify any deficiencies, prepare a report detailing the condition of these features, and recommended corrective actions needed. Should it be determined that corrective actions are needed, CPRA shall provide, in report form, a detailed cost estimate for engineering, design, supervision, inspection, construction, and contingencies and an assessment of the urgency of such repairs (O&M Plan, 2002). The annual inspection report also contains a summary of past projects completed in the maintenance phase and an estimated projected budget for the upcoming three (3) years for operation, maintenance, and rehabilitation. The three (3) year projected operation and maintenance budget is shown in Appendix C. A summary of past operation and maintenance projects undertaken since the completion of the Lake Chapeau Project are outlined in Section IV.

The annual inspection of the Lake Chapeau Sediment Input and Hydrologic Restoration Project (TE-26) took place on two separate days. The first trip was held on May 6, 2015 to inspect the weir sites located on the interior of the island (Site No. 1, 5, 6, 7, & 9). In attendance were Adam Ledet, Brian Babin, Stuart Brown of CPRA, John Foret and Donna Rogers with NMFS, and Randy Moertle representing the landowners. The second trip was held on May 7, 2013 to inspect the Site No. 4 structure and Site No.3 which had been degraded to below the water line since May 2011. In attendance on the second trip were Adam Ledet, Brian Babin, and Todd Hubbell of CPRA, John Foret and Donna Rogers with NMFS, and Randy Moertle representing the landowners.

The field inspection included a complete visual inspection of the hydrologic restoration features of the project. The interior marsh creation feature of the project was not inspected due to the remote location of the fill area and difficulty in accessing the area. The crest elevations of the rock weirs on the interior of the island were not measured because the timber barricade system in front of the structures prevented access to the rock weirs. Where available, staff gauge readings were used to determine water elevations at the time of the inspection. Photographs taken during the inspection are compiled in Appendix B.

III. History and Project Description

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

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

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

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

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

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

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

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

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

Below is a timeline of significant events:

| | |
|----------------|---|
| September 1995 | Engineering design activities began. |
| September 1996 | Preliminary design report and deliverables submitted by BKI |
| June 1997 | Final Design Completed |
| April 1998 | All landrights necessary to proceed with construction |

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

IV. Summary of Past Operation and Maintenance Projects

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

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

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

September 2005 – the second maintenance project included a breach repair on the south side of Structure No.3. The purpose of the project was to extend the rock weir by 50 linear feet on the south side of the structure. Articulated concrete mats were also used on the south side to slow future shoreline erosion and potential breaching. This work was performed in conjunction with maintenance work on the Point au Fer Project (TE-22), which consisted of breach closures adjacent to the rock dikes along Mobil and Transco Canals and the extension of the bulkhead at Structure No. 8. This work was performed by Luhr Bros., Inc. with construction oversight services provided by Picciolla and Associates, Inc. of Larose.

May 2011 – The third maintenance project involved the demolition of the rock weir at Site No. 3. Due to the high rate of erosion along the shoreline in the area of Site No. 3, a large breach formed around the north end of the rock dike. The breach made the structure ineffective to the project goals and no longer feasible to maintain, in addition to becoming a navigational hazard. The purpose of this maintenance project was to degrade the structure to

an elevation of -8.0 NAVD88 to remove any navigational hazard the weir may pose to boat traffic in the area. The work was performed by Great Southern Dredging, Inc. with construction oversight provided by Royal Engineers and Consultants, LLC. The project was completed in May 2011 at a total cost of \$188,872.72 (including construction, engineering & design, surveys, and administration costs).

Other Non-Maintenance Projects constructed within the Lake Chapeau project area

November 2007 – Dedicated Dredge Program – Point au Fer Island

The Department of Natural Resources Dedicated Dredge Program was initiated in FY 98/99 and is funded 100% by the State of Louisiana through its statutorily dedicated Wetlands Conservation and Restoration Fund. The goal of this program is to use a small, mobile hydraulic dredge to move sediment from small inland waterways within the coastal zone of Louisiana and deposit the material to nourish and/or rebuild the threatened coastal marsh that are located immediately adjacent to those waterways.

The Point au Fer Island Dedicated Dredge Project is located on Point au Fer Island between the Atchafalaya Bay and Lake Chapeau in Terrebonne Parish. The project consisted of dredging approximately 295,000 cubic yards to fill a 60 acre site adjacent to the original Lake Chapeau dredge site and the linear corridor connecting the proposed fill area to the Atchafalaya Bay. Below is the construction cost estimate involved with the Point au Fer Island Dedicated Dredge Project:

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

V. Inspection Results

Site No. 1 – Rock Weir

Site No.1 appears to be in good condition with no breaching or erosion around the rock apron over the marsh on both ends of the structure. The signs and timber barricade system was also in good condition. We did note that several of the sheet metal caps on the timber piles were missing and others corroded. We are not recommending any maintenance at this site other than to replace the sheet metal caps prior to closing out the project in 2019. (See Appendix B, Photos 1 through 3)

Site No. 4 – Rock Weir

The rock weir appeared to be in fair condition with minor erosion of the marsh tie-ins on the north side of the structure. As observed on previous inspections, we found that the existing marsh connecting the structure to land on the south side of the weir was very thin. This has been the condition of the marsh on the southern end of the weir for the last couple of years and it appears that the marsh bank has somewhat stabilized. CPRA and NMFS agree that at some point the marsh will erode on the south side and the structure will no longer be functional and will become a hazard. It is our plan to remove the timber barricade system and degrade the rock dike structure prior to the close-out of the project in 2019. Other than

removing the structure in the future, there are no other maintenance recommendations for Site No.4 (See Appendix B, Photos 18-20)

Site No. 5 – Rock Weir

Site No. 5 rock weir is in good overall condition. The marsh tie-ins on both sides of the structure are stable with no obvious erosion or breaching. The barricade system, timber piles and warning signs are in good condition with no visual damage or corrosion. There are no plans to perform future maintenance on the rock weir at Site No. 5. (See Appendix B, Photos 15-17)

Site No. 6 – Rock Weir

It was discovered during the 2008 Annual Inspection that the timber barricade system in front of the structure had been vandalized. A large section (approximately 10 feet) on both of the center section steel pipe cross members had been cut with a torch and are missing. CPRA and NMFS agree that it is highly likely than any repairs to the steel pile cross member will be vandalized again; therefore, we are not recommending repairs at this time. Other than the vandalized steel pipe cross members, the barricade system is in good condition with no signs of damage. We did note that several of the sheet metal caps on top of the timber piles were either missing or corroded. We recommend replacing all of the sheet metal caps prior to closing out the project in 2019. The rock weir appeared to be in good overall condition with no signs of erosion or breaching around the embankment tie-ins. The warning signs and supports are also in very good condition. There are no other recommendations for maintenance at this time. (See Appendix B, Photos 13 & 14)

Site No. 7 – Rock Weir

Overall, the rock weir at Site No. 7 is in good condition. There are no obvious signs of breaching or erosion around the embankment tie-ins. The timber barricade is in good condition with moderate corrosion on the timber pile caps. The warning signs and their supports have no apparent damage and appear to be in good condition as well. Prior to closing out the project at the 20 year life, we recommend replacing all of the sheet metal caps on the timber piles. There are no other recommendations for maintenance at this time. (See Appendix B, Photos 7 through 10)

Site No. 9 – Rock Weir

The Site No. 9 rock weir was in good overall condition. There are no visible signs of erosion or breaching around the embankment tie-ins. A few of the galvanized pile caps are missing and several are rusted and corroded. The rest of the timber barricade system appears to be in good condition. The warning signs and supports have no apparent damage and appear to be in good condition. We recommend that the all of the sheet metal caps be replaced prior to closing out the project in 2019. There are no other recommendations for maintenance at this time. (See Appendix B, Photos 4 through 6)

VI. Conclusions and Recommendations

Overall, the structural components and rock weir features on the interior of the island (Site No. 1, 5, 6, 7 & 9) appear to be good condition with no major deficiencies. The rock weirs look to be in good condition with no indication of excessive settlement, displacement, or erosion around the structure. The timber barricades were also in good condition, except for the two sections of pipe that were missing from Site No. 6. The warning signs on the structures are showing evidence of deterioration or “bleaching” causing the color contrast of the signs to fade and some of the sheet metal caps on the timber piles are missing or corroded. We recommend that the signs that are deteriorating and the corroded sheet metal caps be replaced prior to closing the project out in 2019.

As mentioned in Section V, the marsh on the southern end of the rock dike tie-in is very thin and is expected to become breached in the near future. CPRA and NMFS has agreed that it would be best to remove the timber piles and barricade system, and degrade the rock dike prior to closing out the project to avoid any hazardous conditions in the future.

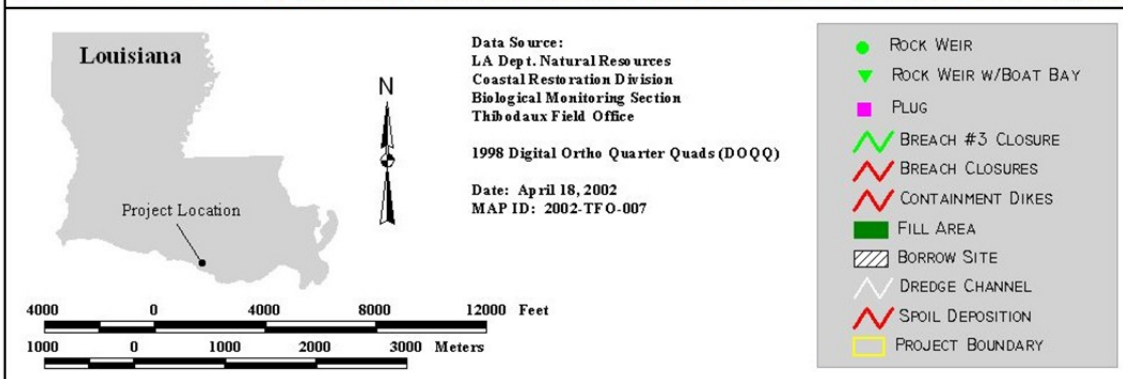
References:

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

Lear, E., T. Folse, and B. Babin. 2007. *2007 Operations, Maintenance, and Monitoring Report for Lake Chapeau Sediment Input and Hydrologic Restoration, Point Au Fer Island (TE-26), Louisiana Department of Natural Resources, Coastal Restoration Division and Coastal Engineering Division, Thibodaux, Louisiana. 48 pp. plus appendices.*

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

Appendix A
Project Features Map



Appendix B

Photographs



Photo 1: View of rock weir, timber barricades, and signs, and northwest bank tie-in on Structure No.1



Photo 2: View of rock weir, timber barricades, and signs, and southeast bank tie-in on Structure No.1



Photo 3: Overall view of rock plug, timber barricade structure and warning signs on Structure No.1.



Photo 4: View of rock plug, timber barricade and signage of Structure No.9.



Photo 5: Rock plug tie-in to marsh on the north bank and timber barricade system at Structure No.9.



Photo 6: Rock plug tie-in to marsh on the south bank and timber barricade system at Structure No.9



Photo 7: View of timber barricade system along southwest bank of Structure No.7.



Photo 8: View of the rock weir, timber barricade system, and warnings signs along center of channel at Structure No.7.



Photo 9: View of rock weir and timber barricade system along southwest bank of Structure No.7.



Photo 10: View of rock weir, timber barricade system and warnings sign on the northeast bank of Structure No.7.



Photo 11: View of rock dike along the Gulf of Mexico adjacent to Mobil Canal looking westward.



Photo 12: View of rock dike along the Gulf of Mexico adjacent to Mobil Canal looking eastward.



Photo 13: View of rock plug tie-in to bank line and timber barricade system on the southwest side of Structure No.6.



Photo 14: View of rock weir tie-in to bank line and timber barricade system on the northeast side of Structure No.6.



Photo 15: View of rock weir, barricade system and warning signs at Structure No.5.



Photo 16: View of rock weir, barricade system and warning sign on the northeast bank at Structure No.5.



Photo 17: View of rock weir, barricade system and warning sign on the southwest bank at Structure No.5.



Photo 18: View of rock weir, barricade system, warning signs and bank tie-in on the north side of Structure No.4.



Photo 19: View of rock weir, barricade system and bank tie-in on the south side of Structure No.4.



Photo 20: View of rock weir, barricade system and bank tie-in on the south side of Structure No.4.

Appendix C

Three Year Budget Projection

**Lake Chapeau Marsh Creation/ Hydrologic Restoration/ TE-26 / PPL 3
Three-Year Operations & Maintenance Budgets 07/01/2015 - 06/30/18**

| | | | |
|------------------------|--------------------------|------------------------|--------------------|
| <u>Project Manager</u> | <u>O & M Manager</u> | <u>Federal Sponsor</u> | <u>Prepared By</u> |
| Brian Babin | Adam Ledet | NMFS | Babin |

| | 2015/2016 | 2016/2017 | 2017/2018 |
|-------------------------------|--------------|--------------|--------------|
| Maintenance Inspection | \$ - | \$ - | \$ - |
| Structure Operation | | | |
| OCPR Administration | \$ 30,053.00 | \$ 30,955.00 | \$ 31,884.00 |
| Federal S&A | \$6,540.00 | \$ 6,736.00 | \$ 6,938.00 |

Maintenance/Rehabilitation

15/16 Description: Annual Inspection and Project Closeout

| | |
|-------------------------------|------|
| E&D | |
| Construction | |
| Construction Oversight | |
| Sub Total - Maint. And Rehab. | \$ - |

16/17 Description: Annual Inspection and Project Closeout

| | |
|-------------------------------|------|
| E&D | |
| Construction | \$ - |
| Construction Oversight | |
| Sub Total - Maint. And Rehab. | \$ - |

17/18 Description: Annual Inspection and Project Closeout

| | |
|-------------------------------|------|
| E&D | |
| Construction | |
| Construction Oversight | |
| Sub Total - Maint. And Rehab. | \$ - |

| | 2015/2016 | 2016/2017 | 2017/2018 |
|-------------------------------|--------------|--------------|--------------|
| Annual O&M Budgets | \$ 36,593.00 | \$ 37,691.00 | \$ 38,822.00 |

| | |
|---|-----------------|
| O & M Budget (3 yr Total) | \$ 113,106.00 |
| Unexpended O & M Funds | \$ 1,314,066.00 |
| Remaining O & M Budget (Projected) | \$ 1,200,960.00 |

OPERATIONS & MAINTENANCE BUDGET WORKSHEET

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

FY 15/16 –

| | |
|--------------------------|-----------|
| Administration (Fed S&A) | \$ 6,540 |
| CPRA Administration: | \$ 30,053 |
| Operation: | \$ 0 |
| Maintenance Survey: | \$ 0 |

Operation and Maintenance Assumptions:

Annual Inspections are based on new rate schedule. It is estimated to take 60 hrs to compile photos and create report.

CPRA Direct Costs

Inspection:

| | |
|--------------------------------------|-----------------|
| CPRA Engineer 3 – 12 hrs@ \$60/hr.: | \$ 720 |
| CPRA Engineer 6 – 12 hrs @ \$73/hr. | \$ 876 |
| CPRA Scientist 4 – 10 hrs @ \$50/hr. | \$ 500 |
| | \$ 2,096 |

Report:

| | |
|--------------------------------------|-----------------|
| CPRA Engineer 6 – 60 hrs. @ \$73/hr. | \$ 4,380 |
|--------------------------------------|-----------------|

Project Closeout

| | |
|---------------------------------|-----------------|
| CPRA – 30 hrs @ \$73/hr. | \$ 2,190 |
| Total Direct CPRA Costs: | \$11,666 |

Project Closeout

| | |
|---------------------------|-----------------|
| NMFS – 30 hrs @ \$218/hr. | \$ 6,540 |
|---------------------------|-----------------|

CPRA Indirect Costs

Inspection:

| | |
|--|-----------------|
| CPRA Engineer 3 – 12 hrs@ \$127.30/hr.: | \$ 1,528 |
| CPRA Engineer 6 – 12 hrs @ \$154.88/hr. | \$ 1,859 |
| CPRA Scientist 4 – 10 hrs @ \$106.08/hr. | \$ 1,061 |
| | \$ 4,448 |

Report:

| | |
|--|-----------------|
| CPRA Engineer 6 – 60 hrs. @ \$154.88/hr. | \$ 9,293 |
|--|-----------------|

Project Closeout

| | |
|-----------------------------------|-----------------|
| CPRA – 30 hrs @ \$154.88/hr. | \$ 4,646 |
| Total Indirect CPRA Costs: | \$18,387 |

FY 16/17 –

| | |
|--------------------------|-----------|
| Administration (Fed S&A) | \$ 6,736 |
| CPRA Administration: | \$ 30,955 |
| Operation: | \$ 0 |
| Maintenance: | \$ 0 |

Operation and Maintenance Assumptions:

CPRA and NMFS administration included for time and charges related to project closeout phase. Increase of 3% for inflation on inspection/report and administration charges.

FY 17/18 –

| | |
|--------------------------|-----------|
| Administration (Fed S&A) | \$ 6,938 |
| CPRA Administration: | \$ 31,884 |
| Operation: | \$ 0 |
| Maintenance: | \$ 0 |

Operations and Maintenance Assumptions:

CPRA and NMFS administration included for time and charges related to project closeout phase. Increase of 3% for inflation on inspection/report and administration charges.

O&M Accounting:

| | |
|--|----------------------|
| Approved CWPPRA Budget: | \$ 1,859,866.00 |
| Historic Expenditures (DNR Accounting) | <u>\$ 545,799.69</u> |

Estimated Unexpended Funds: \$ 1,314,066.31