



Coastal Protection and
Restoration Authority of Louisiana

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

2016 Annual Inspection Report

for

**South Lake Decade Freshwater
Introduction Project (TE-39)**

State Project Number TE-39
Priority Project List 9

April 27, 2016
Terrebonne Parish

Prepared by:

CPRA
Thibodaux Field Office
1440 Tiger Drive, Suite B
Thibodaux, LA 70301

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I. Introduction

The South Lake Decade Freshwater Introduction (TE-39) Project is located in Terrebonne Parish, Louisiana, and is bounded to the north by the southern bank of Lake DeCade and the Small Bayou La Pointe Ridge, to the east and southeast by an unnamed oilfield canal, to the southwest by an imaginary line through the marsh, and to the west by an unnamed oilfield canal and Bayou Decade (Balkum, K. F.; M. A. Stead, 2004). The 7,343 acre project is classified predominately as intermediate marsh with fresh marsh fringing the southern rim of Lake Decade and brackish marsh identified along the western and southern edges of the project boundary (Chabreck and Linscombe, 1997).

The proposed hydrologic restoration project, which is intended to enhance, maintain, and protect existing marshes within the project area (USDA-NRCS, 2001), has been separated into two (2) construction units to expedite construction of those features requiring less engineering and design effort. Construction Unit No. 1 (CU#1) included the construction of approximately 8,600 linear feet of rock armor shoreline protection along the southern bank of Lake Decade. The CU#1 was completed in July 2011. Construction Unit No. 2 was to consist of a freshwater introduction component but did not receive Phase 2 funding for construction.

Construction Unit No. 1 has a twenty-year (20 year) project life, which began in July 2011. The principle project feature included a continuous 8,600 linear foot rock revetment constructed along the southern bank of Lake Decade east of Bayou Decade.

II. Inspection Purpose and Procedures

The purpose of the annual inspection of the South Lake Decade Freshwater Introduction (TE-39) Project is to evaluate the constructed project features in order to identify any deficiencies. The inspection results are used to prepare a report detailing the condition of the project features and recommending any corrective actions considered necessary. Should it be determined that corrective actions are needed, the CPRA shall provide, in the report, a detailed cost estimate for engineering, design, supervision, inspection, construction, and contingencies, as well as an assessment of the urgency, of such repairs. The annual inspection report also contains a summary of maintenance projects which were completed since the completion of constructed project features 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 completed since construction of the South Lake Decade Freshwater Introduction – Construction Unit No.1 project is outlined in Section IV.

The annual inspection of South Lake Decade – Construction Unit No. 1 project took place April 20, 2016. In attendance were Ben Hartman and Todd Hubbell with CPRA, Quin Kinler, Doug Baker, Loland Broussard with NRCS, Josh Soileau with ConocoPhillips and Francis Fields with Apache Louisiana Minerals, Inc. The inspection

began around 9:30 am, proceeding the Brady Canal Hydrologic Restoration (TE-28) project, at the east end of the rock revetment structure and proceeded to the west end of the structure near Bayou Decade. The trip included a visual inspection of the rock revetment, earthen embankment and settlement plates. Photographs of the inspection are located in Appendix B.

III. Project Description

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

The principle project features include a continuous 8,600 linear foot rock revetment constructed along the southern bank of Lake Decade east of Bayou Decade. The spoil material resulting from access dredging was placed along the existing earthen embankment to an elevation between +5.0 to +10.0' NAVD. The lake rim rock dike revetment was constructed to an elevation of +5.0' NAVD with a planned finished elevation of +4.5' NAVD. The dike included a 4' wide top width, 2:1 side slopes constructed above a geotextile fabric material. A total of eight (8) settlement plates were installed at locations along the rock dike revetment to monitor soil consolidation.

IV. Summary of Past Operation and Maintenance Projects

To date, there have been no maintenance events or project features that require routine operation. This section will be used to reference all maintenance activities on future inspection reports.

V. Inspection Results

Rock Riprap Revetment/ Earthen Embankment

The rock revetment and earthen embankment appear to be in very good condition with no obvious settlement or displacement of the rock riprap. The earthen embankment behind the rock revetment was in good condition and well vegetated. We did notice cut banks in the embankment on both ends of the rock revetment; however, this is expected considering the wave action along the south bank of Bayou Decade. We are not recommending any maintenance or corrective action at this time.

VI. Conclusions and Recommendations

The rock revetment structure of the South Lake Decade Freshwater Introduction (TE-39) project is in very good condition. The rock revetment remains at a consistent elevation with no evidence of settlement or displacement of the rock riprap. The vegetation on the earthen embankment behind the rock structure has flourished and the bank line appears to be stable. Since the structure is in great shape, we are not recommending any maintenance or corrective actions.

References:

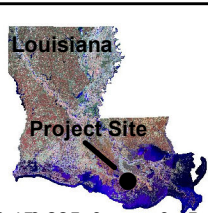
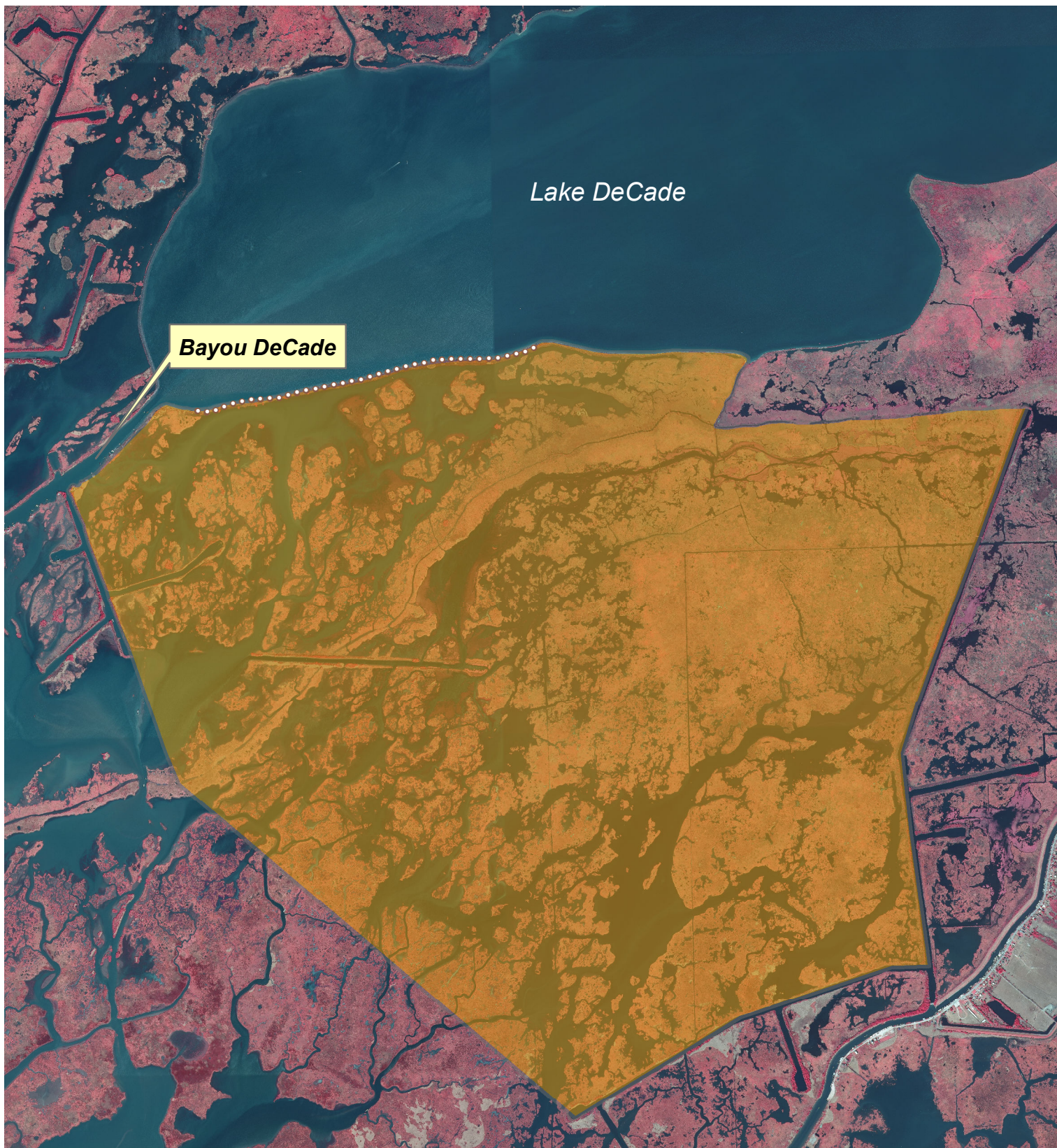
Chabreck, R. H. and G. Linscombe. 1997. Vegetative type map of Louisiana coastal marshes. Louisiana Department of Wildlife and Fisheries. Baton Rouge, La.

United States Department of Agriculture – Natural Resource Conservation Service (USDA-NRCS). 2001. Project plan and environmental assessment for South Lake De Cade Freshwater Introduction Project (TE-39) U.S. Department of Agriculture, Natural Resource Conservation Service. 37 pp. plus Appendices.

Balkum, K.F. and M. A. Stead. 2004. Ecological Review for the South Lake DeCade Freshwater Introduction – Construction Unit 1. Louisiana Department of Natural Resources (LDNR). Baton Rouge, La.

Appendix A

Project Features Map



Data Source:
Coastal Protection and
Restoration Authority of LA
Office of Coastal Protection
and Restoration
Operations

2008 DOQQ

Date: September 6, 2011
Map ID: 2011-TFO-043

- ○ ○ ○ Foreshore Rock Dike
- TE-39 Project Area

Appendix B

Photographs



Photos 1: View of earthen embankment and rock revetment at east end of project along south bank of Bayou Decade near Sta. 86+00.



Photo 2: View of earthen embankment and rock revetment along south bank of Bayou Decade near Sta. 80+00 looking westward.



Photo 3: View of earthen embankment and rock revetment along south bank of Bayou Decade near Sta. 66+00.



Photo 4: View of earthen embankment and rock revetment along the south bank of Bayou Decade near Sta. 46+00 looking westward.



Photo 5: View of earthen embankment and rock revetment on the south bank of Lake Decade near Sta. 36+00 looking westward.



Photo 6: View of earthen embankment and rock revetment on the south bank of Lake Decade near Sta. 26+00 looking westward.



Photo 7: View of earthen embankment and rock revetment on the south bank of Lake Decade near Sta. 16+00.



Photo 8: View of earthen embankment and rock revetment along south bank of Bayou Decade near Sta. 2+00 looking eastward



Photo 9: View of earthen embankment and rock revetment along the south bank of Bayou Decade near Sta. 1+00



Photo 10: View of earthen embankment and rock revetment along the south bank of Bayou Decade near Sta. 0+50 looking eastward.



Photo 11: View of earthen embankment and rock revetment on the west end (Sta. 0+10) of the South Lake Decade.

Appendix C

Three Year Budget Projection

South Lake Decade/ TE-39 / PPL 9 (2016-2019)
Three-Year Operations & Maintenance Budgets

<u>Project Manager</u>	<u>O & M Manager</u>	<u>Federal Sponsor</u>	<u>Prepared By</u>
	<i>B.Babin</i>	NRCS	<i>B. Babin</i>

	2016/2017	2017/2018	2018/2019
Maintenance Inspection	\$ 9,395.00	\$ 9,687.00	\$ 9,978.00
Structure Ops/ Nav Aid	\$ -	\$ -	\$ -
OCPR Administration	\$ -	\$ -	\$ -
Maintenance/Rehabilitation	\$ -	\$ -	\$ -

16/17 Description:

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

17/18 Description:

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

18/19 Description:

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

	2016/2017	2017/2018	2018/2019
Annual O&M Budgets	\$ 9,395.00	\$ 9,687.00	\$ 9,978.00

2015 - 2018 O &M Budget (3 yr Total)	\$ 29,060
Unexpended O & M Funds	\$16,114
Remaining O & M Budget (Projected)	(\$12,946)

Project: TE-39 South Lake Decade Freshwater Introduction

Administration		\$	0
O&M Inspection & Report		\$	9,395
Operation/Navigational Aid:		\$	0
Maintenance:		\$	0
E&D:	\$	0	
Construction:	\$	0	
Construction Oversight:	\$	0	

CPRA Direct Costs

CPRA Engineer 3 – 4 hrs@ \$60/hr.:	\$	240
CPRA Engineer 6 – 4 hrs @ \$73/hr.	\$	292
CPRA Scientist 4 – 4 hrs @ \$50/hr.	\$	<u>200</u>
	\$	732

CPRP Engineer 6 – 30 hrs. @ \$73/hr. \$ 2,190

CPRA Indirect Costs

CPRA Engineer 3 – 4 hrs@ \$127.30/hr.:	\$ 509
CPRA Engineer 6 – 4 hrs @ \$154.88/hr.	\$ 620
CPRA Scientist 4 – 4 hrs @ \$106.08/hr.	\$ 424
	<u>\$ 1,553</u>

CPR Engineer 6 – 30 hrs. @ \$154.88/hr. \$ 4,646

Total Indirect CPRA Costs: \$ 6,199 x 3% Inflation = **\$ 6,385**

2016-2019 Accounting

Expenditures from LaGov:	\$ 5,734.85
NRCS MIPR (20 Year):	\$ 0
Total Expenditures:	\$ 5,734.85
 Current O&M Funding (LANA Report):	 \$ 21,849.00
 Current Unexpended O&M Funds:	 \$ 16,114.15

Note: NRCS's MIPR for 20 Years is \$9,304. To date, \$0 has been expended.