State of Louisiana
Coastal Protection and Restoration Authority

2017 Annual Inspection Report

for

South Lake Decade Freshwater Introduction Project (TE-39)

State Project Number TE-39
Priority Project List 9

July 12, 2017
Terrebonne Parish

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Table of Contents

Appendices

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 which has not been pursued and there are no plans to proceed with construction of CU#2 at this time.

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 dike 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 11, 2017. In attendance were Brian Babin, Adam Ledet and Josh Sylvest with CPRA, Quin Kinler with NRCS, Josh Soileau with ConocoPhillips and Francis

Fields with Apache Louisiana Minerals, Inc. The inspection began around 9:00 am, proceeding the Brady Canal Hydrologic Restoration (TE-28) project, at the east end of the rock revetment structure near the Williams pipeline 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 dike 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 revetment 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 appeared 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 shape and well vegetated. We did observe large 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 Lake Decade. Apache Minerals routinely refurbishes the earthen bankline along the lake on the east and west sides of the rock revetment to maintain the lake rim.

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:

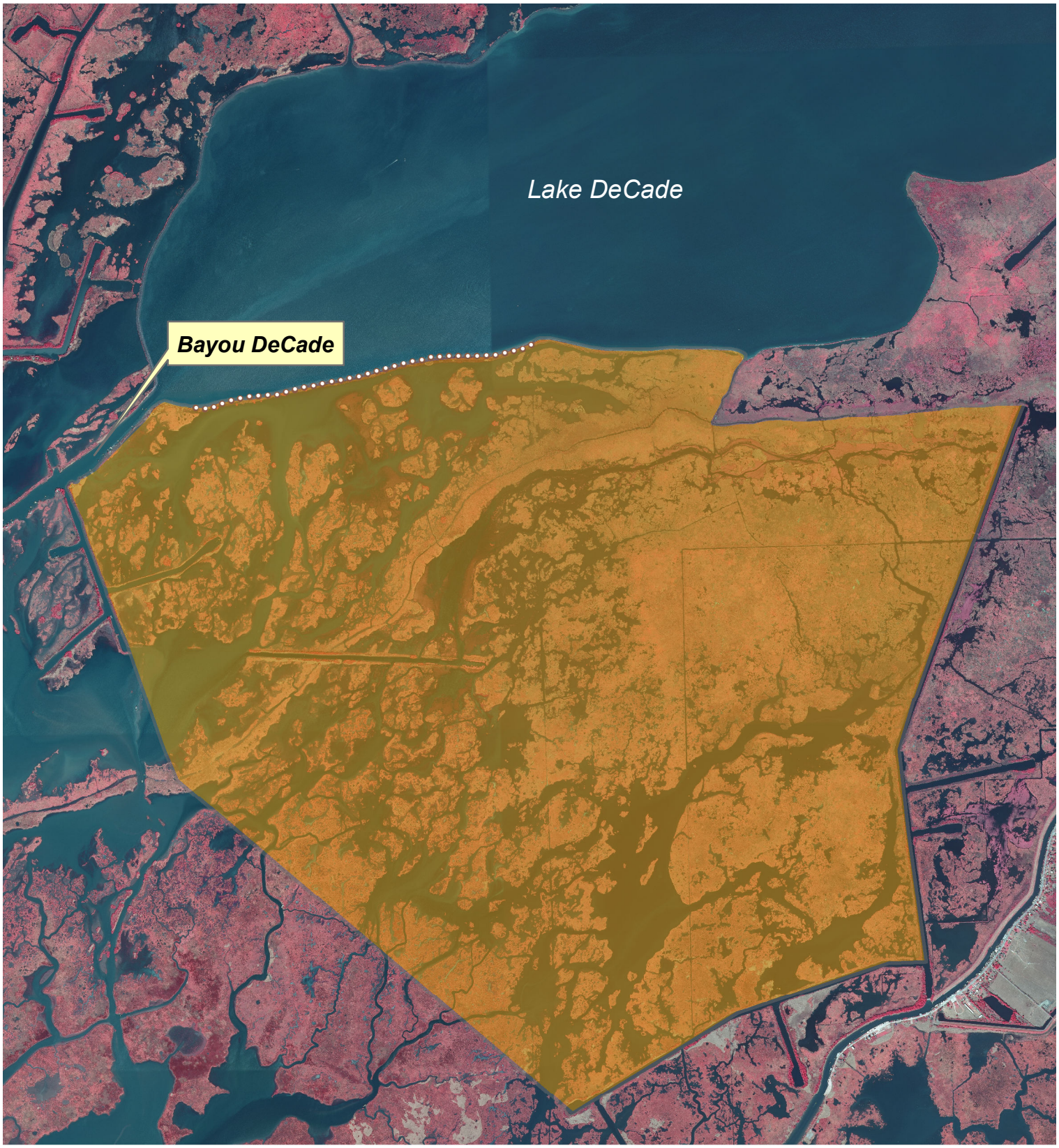
Chabreck, R. H. and G. Linscombe. 1997. Vegetative type map of Louisiana coastal marshes. Louisiana Department of Wildlife and Fisheries. Baton Rouge, La.

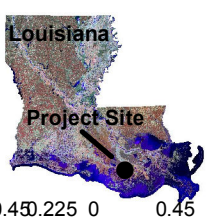
United States Department of Agriculture – Natural Resource Conservation Service (USDA-NRCS). 2001. Project plan and environmental assessment for South Lake De Cade Freshwater Introduction Project (TE-39) U.S. Department of Agriculture, Natural Resource Conservation Service. 37 pp. plus Appendicies.

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





0.45 0.225 0 0.45 0.9 1.35
Kilometers
0.4 0.2 0 0.4 0.8 1.2
Miles

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

Photo 1 – view of the east end of the rock revetment along the south bank of Lake Decade near the Williams Pipeline at Sta. 86+00.

Photo 2 – view of the rock revetment along the south bank of Lake Decade from Sta. 86+00 looking in southwesterly direction.

Photo 3 – view of the rock revetment along the south bank of Lake Decade.

Photo 4 - view of the rock revetment along the south bank of Lake Decade.

Photo 5 – view of rock revetment along south bank of Lake Decade near Sta. 0+18, beginning of project.

Photo 6 – view of cut banks between Sta. 0+18 of the rock revetment and the mouth of Bayou Decade.

Appendix C

Three Year Budget Projection

South Lake Decade/ TE-39 / PPL 9 (2017-2020)
Three-Year Operations & Maintenance Budgets

Project Manager	O & M Manager	Federal Sponsor	Prepared By
	B.Babin	*NRCS*	*B. Babin*

	2017/2018	2018/2019	2019/2020
Maintenance Inspection	$ 9,002.00	$ 9,271.00	$ 9,549.00
Structure Ops/ Nav Aid	$ -	$ -	$ -
OCPR Administration	$ -	$ -	$ -
Maintenance/Rehabilitation	$ -	$ -	$ -

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.	$ -

19/20 Description:

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

	2017/2018	2018/2019	2019/2020
Annual O&M Budgets	**$ 9,002.00**	**$ 9,271.00**	**$ 9,549.00**

2017 - 2020 O &M Budget (3 yr Total)	**$ 27,822**
Unexpended O & M Funds	**$47,672**
Remaining O & M Budget (Projected)	**$19,850**

OPERATIONS & MAINTENANCE BUDGET WORKSHEET

Project: TE-39 South Lake Decade Freshwater Introduction

FY 17/18 –

Administration			$ 0
O&M Inspection & Report			$ 9,002
Operation/Navigational Aid:			$ 0
Maintenance:			$ 0
E&D:	$	0	
Construction:	$	0	
Construction Oversight:	$	0	

Operation and Maintenance Assumptions: Since this project is inspected on the same day as Brady Canal, we have reduced the hours necessary to complete the inspection.

CPRA Direct Costs

Inspection:	
CPRA Engineer 3 – 4 hrs@ $68/hr.:	$ 272
CPRA Engineer 6 – 4 hrs @ $78/hr.	$ 312
CPRA Scientist 4 – 4 hrs @ $56/hr.	$ 224
	$ 808
Report:	
CPRA Engineer 6 –30 hrs. @ $78/hr.	$ 2,340
Total Direct CPRA Costs:	**$ 3,148**

CPRA Indirect Costs

Inspection:	
CPRA Engineer 3 – 4 hrs@ $127/hr.:	$ 508
CPRA Engineer 6 – 4 hrs @ $145/hr.	$ 580
CPRA Scientist 4 – 4 hrs @ $104/hr.	$ 416
	$ 1,504
Report:	
CPRA Engineer 6 – 30 hrs. @ $145/hr.	$ 4,350
Total Indirect CPRA Costs:	**$ 5,854**

FY 18/19 –

Administration			$ 0
O&M Inspection & Report			$ 9,271
Operation/Navigational Aid:			$ 0
Maintenance:			$
E&D:	$	0	
Construction:	$	0	
Construction Oversight:	$	0	

Operation and Maintenance Assumptions:
O&M Inspection and Report – 3% inflation

CPRA Direct Costs

Total Direct CPRA Costs: $ 3,148 x 3% Inflation = **$ 3,242**

CPRA Indirect Costs

Total Indirect CPRA Costs: $ 5,854 x 3% Inflation =**$ 6,029**

FY 19/20 –

Administration			$ 0
O&M Inspection & Report			$ 9,549
Operation/Navigational Aid:			$ 0
Maintenance:			$
E&D:	$	0	
Construction:	$	0	
Construction Oversight:	$	0	

Operation and Maintenance Assumptions:
O&M Inspection and Report – 3% Inflation

CPRA Direct Costs

Total Direct CPRA Costs: $ 3,242 x 3% Inflation = **$ 3,339**

CPRA Indirect Costs

Total Indirect CPRA Costs: $ 6,029 x 3% Inflation =**$ 6,210**

2017-2020 Accounting

Expenditures from LaGov:	$	6,593
NRCS MIPR (20 Year):	$	9,304
Total Expenditures:	**$**	**15,897**
Current O&M Funding (LANA Report):	**$**	**63,569**
Current Unexpended O&M Funds:	**$**	**47,672**

Note: NRCS's MIPR for 20 Years is $9,304.