



### ATTENDANCE RECORD



DATE(S) December 11, 2014 9:30 A.M.	SPONSORING ORGANIZATION COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	LOCATION LA Department of Wildlife and Fisheries (Louisiana Room) 2000 Quail Drive Baton Rouge, LA
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PURPOSE MEETING OF THE CWPPRA TECHNICAL COMMITTEE

PARTICIPANT REGISTER*		
NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER
Nina Zeig	Project Manager - MWOT	504-400-8962
ARCHIE CHASSOET	Lafourche Parish	985-441-8427
Amanda Voisin	Lafourche Parish	985-493-6616
Dona Weifenbach	CPRA	337-482-0688
Dean Roberts	Stream Companies	337-433-1055
Gloria M. Kunk	PLG Coastal MANAGER	504-912-5973
Tommy Clark	USFWS	337-291-3111
Kevin Roy	USFWS	337-291-3120
Angela Trahan	FWS	337-291-3137
Aaron Hoff	EPA	214-665-7319
Chad Courville	Miami Corporation	337-264-1695
AUGUSTO VILLALON	FREESE & NICHOLS (Acct. Dir)	512-913-7573
Anne Watkins	URS	
JUAN MOYA	FREESE & NICHOLS <small>Juan.moya@freese.com</small>	512-577-1951
Billy Brassard	GM Vermilion Corp	337-893-0268
Elise Snoeren	Board Lake Catherine Civic Assoc.	504-427-0774
Carol Giardini	Lake Catherine	504-331-5326
Laurie Cormier	CPJ	337-721-3600
David Brunet	St Tammany Parish	985-898-2552
JOHN FORZET	NOAA/NMFS	337-291-2107
Patrick Williams	NOAA/NMFS	225-399-0508
Trey Horne	CPRA	225-281-0022





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PURPOSE MEETING OF THE CWPPRA TECHNICAL COMMITTEE

PARTICIPANT REGISTER\*

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER
Rachel Pickens	Coastal Restoration Manager <del>The Lake 9th Ward ESTO</del>	504-357-5498
GREG GRANOV	COASTAL ENGINEERING CONSULTANTS	225-278-7068
Charles Sasser	LSU	225-578-6375
ROX HARPER	City of New Orleans	225-317-1926
Tony Risko	MWH	504-658-4071
		512 496 7689
John Lopez	Lake Pontchartrain Basin Fund	504 421-7348
B. Keith Bourke	PM, CPRA (contractor)	225-931-8212
Don Brassard	CPRA LRO Engineering	337-482-0686
Marnie Winter	Jeff. Parish	504-913-6443
Vicki Dyer	Jeff. Parish	504-832-4880
Matt Weahley	Berk-Kleinpeter, Inc.	504-301-6542
Kim Clements	NOAA	225 389 0508
Vodi Guillory	CPRA Engineering	225 342 5175
Thomas McLain	CPRA Engineering	225 342 6307
Leslie Juge	Duchs Unlimited	985-229-3270

\* If you wish to be furnished a copy of the attendance record, please indicate so next to your name.

# CWPPRA

## COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT TECHNICAL COMMITTEE MEETING

### AGENDA

December 11, 2014, 9:30 a.m.

**Location:**

LA Department of Wildlife and Fisheries  
Louisiana Room  
2000 Quail Drive  
Baton Rouge, Louisiana

**Documentation of Technical Committee meetings (including minutes, attendance records, PowerPoint Presentations, and meeting binders) may be found at:**

<http://www.mvn.usace.army.mil/Missions/Environmental/CWPPRA.aspx>

#### Tab Number

#### Agenda Item

- 1. Meeting Initiation 9:30 a.m. to 9:40 a.m.**
  - Introduction of Technical Committee or Alternates
  - Opening remarks of Technical Committee Members
  - Request for Agenda Changes/Additional Agenda Items/Adoption of Agenda
- 2. Report: Status of CWPPRA Program Funds and Projects (Susan Mabry, USACE) 9:40 a.m. to 9:50 a.m.** Ms. Susan Mabry will provide an overview of the status of CWPPRA accounts and available funding in the Planning and Construction Programs.
- 3. Decision: Request for a Change in Scope and Name Change for the PPL 22 – Bayou Dupont Sediment Delivery Marsh Creation #3 Project (BA-164) (Brad Crawford, EPA) 9:50 a.m. to 10:00 a.m.** The Environmental Protection Agency (EPA) and CPRA request a project scope and name change for the BA-164 project. Because the estimated amount of sediment required to meet project goals (and associated costs) have increased substantially from the Phase 0 estimate, the project has been modified to reduce the scope, and one of the original restoration cells was altered to avoid a conflict with the proposed Mid-Barataria Diversion. The revised project includes an estimated 252 acres of marsh creation plus 26,379 linear feet of terraces, while the original concept included 415 acres of marsh creation only. The fully-funded cost estimate has changed from the original \$38,279,163 to an estimated \$34,320,925 with a change from 383 net acres to 230 net acres, respectively. The EPA and CRPA request approval of the scope change and also request a name change to reflect the addition of terraces to the project to “Bayou Dupont Sediment Delivery Marsh Creation #3 and Terracing.” No additional funds are needed to complete phase 1 of this project and EPA will be seeking Phase 2 funding immediately. The Technical Committee will consider and vote on a recommendation to the Task Force to approve the request scope and name change for the Bayou Dupont Sediment Delivery Marsh Creation #3 (BA-164) project.

4. **Report/Decision: 24<sup>th</sup> Priority Project List (Kevin Roy, FWS) 10:00 a.m. to 10:45 a.m.** The Environmental Workgroup Chairman will present an overview of the ten PPL 24 candidate projects. The Technical Committee will vote to make a recommendation to the Task Force for selecting PPL 24 projects for Phase I Engineering and Design.

Region	Basin	PPL 24 Candidates	Agency
1	Pontchartrain	New Orleans Landbridge Shoreline Stabilization & Marsh Creation	FWS
1	Pontchartrain	Shell Beach South Marsh Creation	EPA/USACE
1	Pontchartrain	Bayou Bienvenue Marsh Creation	EPA
2	Barataria	Grand Bayou Marsh Creation & Terracing	FWS
2	Barataria	East Leeville Marsh Creation & Nourishment	NMFS
3	Terrebonne	West Fouchon Marsh Creation & Marsh Nourishment	CPRA
3	Terrebonne	Bayou Dularge Ridge Restoration & Marsh Creation	NRCS
3	Teche-Vermilion	South Humble Marsh Creation & Nourishment	FWS
4	Mermentau	Southeast Pecan Island Marsh Creation & Freshwater Introduction	NRCS
4	Calcasieu-Sabine	No Name Bayou Marsh Creation & Nourishment	NMFS

	PPL 24 Demonstration Project Candidate	Agency
DEMO	Innovative Bedload Sediment Collector Demonstration	USACE

5. **Report/Decision: Request for Phase II Authorization and Approval of Phase II Increment 1 Funding (Brad Inman, USACE) 10:45 a.m. to 11:30 a.m.** The Technical Committee will consider requests for Phase II authorization and approval of Increment 1 funding for cash flow projects for recommendation to the Task Force. Due to limited funding, the Technical Committee will recommend a list of projects for Task Force approval within available program construction funding limits. Each project listed in the following table will be discussed individually by its sponsoring agency. Following presentations and discussion on individual projects, the Technical Committee will rank all projects to aid in deciding which to recommend to the Task Force for Phase II authorization and funding.

Agency	Project No.	PPL	Project Name	Construct Start Date	Fully-Funded Phase I Cost	Fully-Funded Phase II Cost	Total Fully Funded Cost Est.	Net Benefit Acres	Total Cost per Acre
NMFS	ME-18	10	Rockefeller Gulf Shoreline Stabilization	Apr 2016	\$2,408,478	\$31,768,000	\$34,176,478	256	\$133,502
NMFS	TE-51	16	Madison Bay Marsh Creation & Terracing	Jan 2016	\$3,002,171	\$41,291,829	\$44,294,000	334	\$132,617
FWS	CS-54	20	Cameron-Creole Watershed Grand Bayou Marsh Creation	Jan 2016	\$2,376,789	\$26,330,899	\$28,707,688	476	\$60,310
NMFS	CS-59	21	Oyster Bayou Marsh Restoration	Sep 2015	\$3,165,322	\$28,071,419	\$31,236,741	489	\$63,879
EPA	BA-164	22	Bayou Dupont Sediment Delivery – Marsh Creation #3	Jan 2016	\$3,415,930	\$30,904,995	\$34,320,925	230	\$149,221

6. **Report: Coastwide Reference Monitoring System (CRMS) Report (Dona Weifenbach, CPRA) 11:30 a.m. to 11:45 a.m.** Ms. Dona Weifenbach will provide a report on CRMS.
7. **Report/Decision: Status of 2015 Report to Congress (Darryl Clark, FWS) 11:45 a.m. to 12:00 p.m.** The U.S. Fish and Wildlife Service (FWS) is leading the development of the

2015 Report to Congress (RTC) and will present a status of the report's progress and request Technical Committee concurrence of the report outline and schedule. The draft plan for the 2015 RTC development would be to proceed with an outline similar to the 2012 RTC, including new restoration information, such as the RESTORE Act, and updated project information from 2012 to 2015. The schedule would be to complete the first draft by May 2015, the second draft by July 2015, and the semi-final draft by August 2015 in time for Technical Committee and Task Force approval in September and October 2015. Publishing and distributing the report will be in January 2016. The Technical Committee will consider and vote to make a recommendation to the Task Force concerning the draft Report to Congress development proposal.

8. **Decision: Request for Approval for Final Deauthorization of the PPL 3 - West Pointe a la Hache Outfall Management (BA-04c) (Garvin Pittman, CPRA) 12:00 p.m. to 12:05 p.m.** CPRA is requesting approval for final deauthorization of the West Pointe a la Hache Outfall Management (BA-04c) project. The project team determined that many of the proposed benefits of BA-04c were being met by the current operation of the structure, and the marginal benefits could be achieved through this project could be achieved more cost-effectively by improving existing operations. The Technical Committee will consider and vote to make a recommendation to the Task Force to approve the final deauthorization of BA-04c.
9. **Decision: Request for Approval for Final Deauthorization of the PPL 16 – Southwest Louisiana Gulf Shoreline Nourishment and Protection (ME-24) (Brad Inman, USACE). 12:05 p.m. to 12:10 p.m.** USACE and CPRA are requesting approval for final deauthorization of the Southwest Louisiana Gulf Shoreline Nourishment and Protection (ME-24) project. During the annual review of unconstructed projects in 2013, the P&E Committee recommended transferring lead federal sponsor from USACE to EPA. After reviewing the updated cost estimates, EPA did not accept transfer and the P&E Committee recommended deauthorization. The Technical Committee will consider and vote to make a recommendation to the Task Force to approve the final deauthorization of ME-24.
10. **Decision: Request for Approval to Initiate Deauthorization of the PPL 19 – Chenier Ronquille Barrier Island Restoration Project (BA-76) (Cece Linder, NMFS) 12:10 p.m. to 12:15 p.m.** NMFS and CPRA are requesting approval to initiate deauthorization procedures on the Chenier Ronquille Barrier Island Restoration Project (BA-76) due to securing of construction funds for this project from the Deepwater Horizon Oil Spill Phase III Early Restoration Plan in October 2014. This project had a favorable 95% design review through the CWPPRA process but did not secure phase 2 funding approval in 2012 and 2013. The Technical Committee will consider and vote to make a recommendation to the Task Force to approve to initiate deauthorization of the Chenier Ronquille Barrier Island Restoration Project.
11. **Decision: Request for Approval to Initiate Deauthorization of the PPL 17 – West Pointe a la Hache Marsh Creation (BA-47) (Bren Haase, CPRA) 12:15 p.m. to 12:20 p.m.** CPRA and NRCS are requesting formal deauthorization procedures be initiated for the West Pointe a la Hache Marsh Creation (BA-47) Project. This project is currently being constructed utilizing remaining CWPPRA funds from the Lake Hermitage Marsh Creation project (BA-42). The Technical Committee will consider and vote to make a

recommendation to the Task Force to approve initiating deauthorization of West Pointe a la Hache Marsh Creation (BA-47).

12. **Additional Agenda Items (Brad Inman, USACE) 12:20 p.m. to 12:25 p.m.**

13. **Request for Public Comments (Brad Inman, USACE) 12:25 p.m. to 12:30 p.m.**

14. **Announcement: Priority Project List 25 Regional Planning Team Meetings (Brad Inman, USACE) 12:30 p.m. to 12:35 p.m.**

January 27, 2015	11:00 a.m.	Region IV Planning Team Meeting	Lafayette
January 28, 2015	9:00 a.m.	Region III Planning Team Meeting	Houma
January 29, 2015	8:00 a.m.	Region I & II Planning Team Meeting	Lacombe
February 24, 2015	10:30 a.m.	Coastwide Electronic Voting	<i>(via email, no meeting)</i>

15. **Announcement: Date of Upcoming CWPPRA Program Meeting (Brad Inman, USACE) 12:35 p.m. to 12:40 p.m.** The Task Force meeting will be held January 22, 2015 at 9:30 a.m. at the USFWS Southeast Louisiana Refuges Complex (Big Branch), 61389 Highway 434, Lacombe, LA.

16. **Announcement: Scheduled Dates of Future Program Meetings (Brad Inman, USACE) 12:40 p.m. to 12:45 p.m.**

January 22, 2015	9:30 a.m.	Task Force	Lacombe
January 27, 2015	11:00 a.m.	Region IV Planning Team Meeting	Lafayette
January 28, 2015	9:00 a.m.	Region III Planning Team Meeting	Houma
January 29, 2015	8:00 a.m.	Region I & II Planning Team Meeting	Lacombe
April 16, 2015	9:30 a.m.	Technical Committee	New Orleans
May 14, 2015	9:30 a.m.	Task Force	Lafayette
September 10, 2015	9:30 a.m.	Technical Committee	Baton Rouge
October 15, 2015	9:30 a.m.	Task Force	New Orleans
December 10, 2015	9:30 a.m.	Technical Committee	Baton Rouge

17. **Decision: Adjourn**

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**MEETING INITIATION**

- a. Introduction of Technical Committee or Alternates
- b. Opening remarks of Technical Committee Members
- c. Request for Agenda Changes/Additional Agenda Items/Adoption of Agenda

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**STATUS OF CWPPRA PROGRAM FUNDS AND PROJECTS**

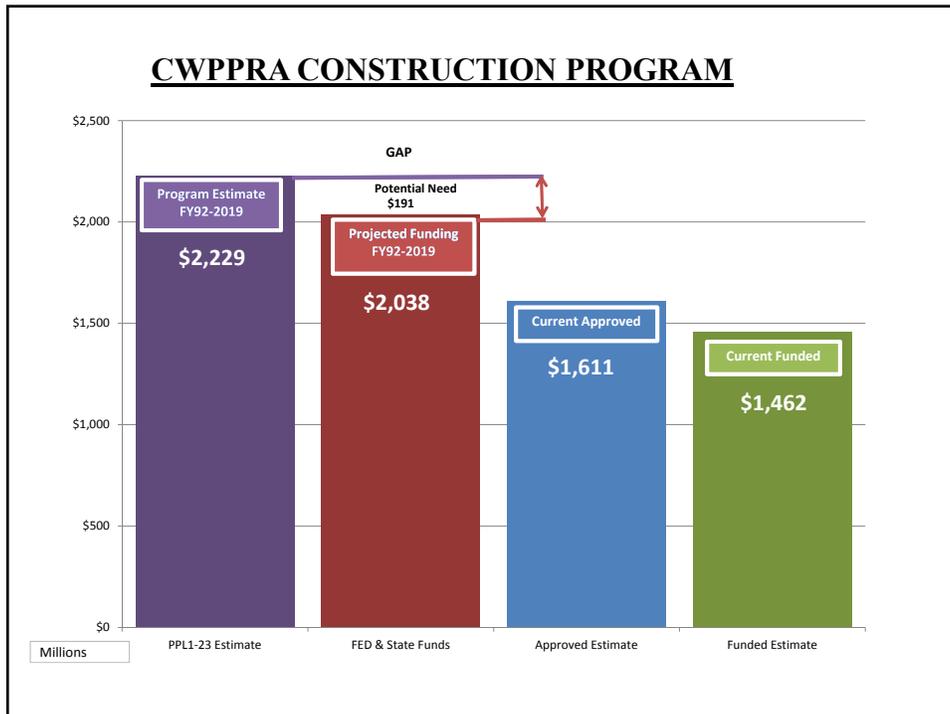
**For Report:**

Ms. Susan Mabry will provide an overview of the status of CWPPRA accounts and available funding in the Planning and Construction Programs.

# Status of CWPPRA Program Funds & Projects

Susan M. Mabry

December 11, 2014



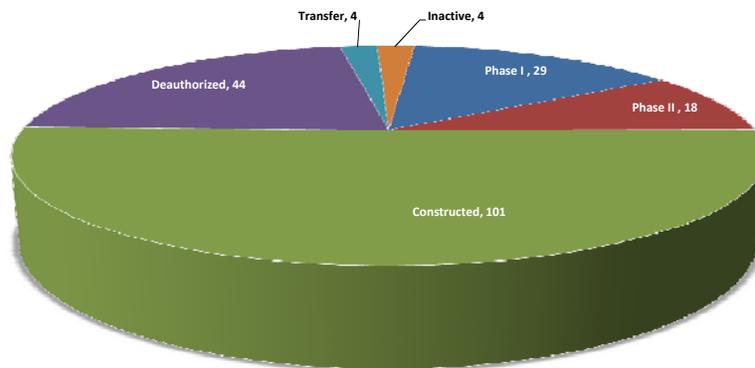
**CWPPRA AVAILABLE FUNDS**

Approved Funded Estimate PPL 1-23	\$2,203,986,262	
Available Funds		\$10,691,742
Estimated Federal Funds to receive		\$68,236,000
<b>Total Program / Funds Available:</b>	<b>\$2,203,986,262</b>	<b>\$78,927,742</b>

**CWPPRA PROJECT STATUS**

**TOTAL CWPPRA PROJECTS: 200**

**ACTIVE PROJECTS: 148**



## Construction Program Funding Requests: Tech Committee Meeting, 11 December 2014

	PROGRAM ESTIMATE	TC	PROPOSED	TC	PENDING	TC	Fed	Non-Fed
<b>1. Funds Available:</b>								
Approved Funded Estimate PPL 1-23	\$2,203,986,262							
Available Funds			\$10,691,742		\$10,691,742			
Estimated Federal Funds to receive			\$68,236,000		\$68,236,000			
<b>Total Program / Funds Available:</b>	<b>\$2,203,986,262</b>		<b>\$78,927,742</b>		<b>\$78,927,742</b>		<b>\$0</b>	<b>\$0</b>
<b>2. Agenda Item 3: 24th Priority Project List :</b>								
New Orleans Landbridge Shoreline Stabilization & Marsh Creation - FWS	\$17,549,317		\$1,942,143				\$0	\$0
Shell Beach South Marsh Creation - EPA/USACE	\$28,101,520		\$3,176,569				\$0	\$0
Bayou Bienvenue Marsh Creation - EPA	\$34,219,915		\$3,801,431				\$0	\$0
Grand Bayou Marsh Creation & Terracing - FWS	\$37,405,780		\$3,263,637				\$0	\$0
East Leeville Marsh Creation & Nourishment - NMFS	\$34,883,208		\$3,971,658				\$0	\$0
West Fouchon Marsh Creation & Marsh Nourishment - CPRA	\$29,405,764		\$3,201,929				\$0	\$0
Bayou Dularge Ridge Restoration & Marsh Creation - NRCS	\$41,996,002		\$3,778,604				\$0	\$0
South Humble Marsh Creation & Nourishment - FWS	\$34,489,655		\$3,600,021				\$0	\$0
Southeast Pecan Island Marsh Creation & Freshwater Introduction - NRCS	\$38,586,563		\$3,903,670				\$0	\$0
No Name Bayou Marsh Creation & Nourishment - NMFS	\$28,253,137		\$2,724,524				\$0	\$0
Innovative Bedload Sediment Collector Demonstration - USACE	\$2,608,601		\$2,608,601				\$0	\$0
<b>Total</b>	<b>\$327,499,462</b>		<b>\$35,972,788</b>		<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>3. Agenda Item 4: Request for Phase II Authorization and Approval of Phase II Increment 1 Funding:</b>								
Oyster Bayou Marsh Restoration (CS-59, PPL 21) NMFS	\$31,236,741		\$27,557,097				\$0	\$0
Madison Bay Marsh Creation and Terracing (TE-51, PPL16) NMFS	\$44,294,000		\$40,806,278				\$0	\$0
Bayou Dupont 3 Sediment Delivery - MC (BA-164, PPL 22) EPA	\$34,320,925		\$30,217,559				\$0	\$0
Cameron Creole Watershed Grand Bayou Marsh (CS-54, PPL 20) FWS	\$28,707,688		\$25,745,513				\$0	\$0
Rockefeller Gulf Shoreline Stabilization (ME-18, PPL 10) NMFS	\$34,176,478		\$30,908,631				\$0	\$0
<b>Total</b>	<b>\$172,735,832</b>		<b>\$155,235,078</b>		<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>4. Agenda Item 10: Initiate Deauthorization:</b>								
Chenier Ronquille Barrier Island Restoration Project (BA-76) NMFS	(\$40,409,022)		(\$2,309,647)		(\$2,309,647)		(\$1,963,200)	(\$346,447)
<b>Total</b>	<b>(\$40,409,022)</b>		<b>(\$2,309,647)</b>		<b>(\$2,309,647)</b>		<b>(\$1,963,200)</b>	<b>(\$346,447)</b>
<b>5. Agenda Item 11: Initiate Deauthorization:</b>								
West Pointe a la Hache Marsh Creation (BA-47, PPL 17) NRCS	(\$14,774,954)		(\$259,055)		(\$259,055)		(\$220,197)	(\$38,858)
<b>Total</b>	<b>(\$14,774,954)</b>		<b>(\$259,055)</b>		<b>(\$259,055)</b>		<b>(\$220,197)</b>	<b>(\$38,858)</b>
<b>( 1 ) Funds Available for September 2013 Recommendations</b>								
Proposed amount	\$445,051,318		\$188,639,164		(\$2,568,702)			
Program Amount/Available Funds Surplus/Shortage	\$2,649,037,581		(\$109,711,422)		\$81,496,444			

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**REQUEST FOR A CHANGE IN SCOPE AND NAME CHANGE FOR THE PPL 22 –  
BAYOU DUPONT SEDIMENT DELIVERY MARSH CREATION #3  
PROJECT (BA-164)**

**For Decision:**

The Environmental Protection Agency (EPA) and CPRA request a project scope and name change for the BA-164 project. Because the estimated amount of sediment required to meet project goals (and associated costs) have increased substantially from the Phase 0 estimate, the project has been modified to reduce the scope, and one of the original restoration cells was altered to avoid a conflict with the proposed Mid-Barataria Diversion. The revised project includes an estimated 252 acres of marsh creation plus 26,379 linear feet of terraces, while the original concept included 415 acres of marsh creation only. The fully-funded cost estimate has changed from the original \$38,279,163 to an estimated \$34,320,925 with a change from 383 net acres to 230 net acres, respectively. The EPA and CRPA request approval of the scope change and also request a name change to reflect the addition of terraces to the project to “Bayou Dupont Sediment Delivery Marsh Creation #3 and Terracing.” No additional funds are needed to complete phase 1 of this project and EPA will be seeking Phase 2 funding immediately.

The Technical Committee will consider and vote on a recommendation to the Task Force to approve the request scope and name change for the Bayou Dupont Sediment Delivery Marsh Creation #3 (BA-164) project.

# Bayou Dupont Sediment Delivery Marsh Creation #3 and Terracing (BA-164)

## Scope/Name Change Request Technical Committee Meeting

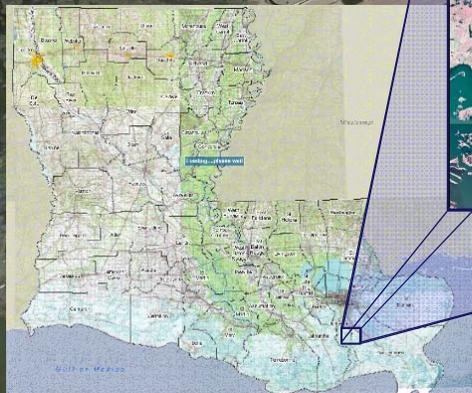


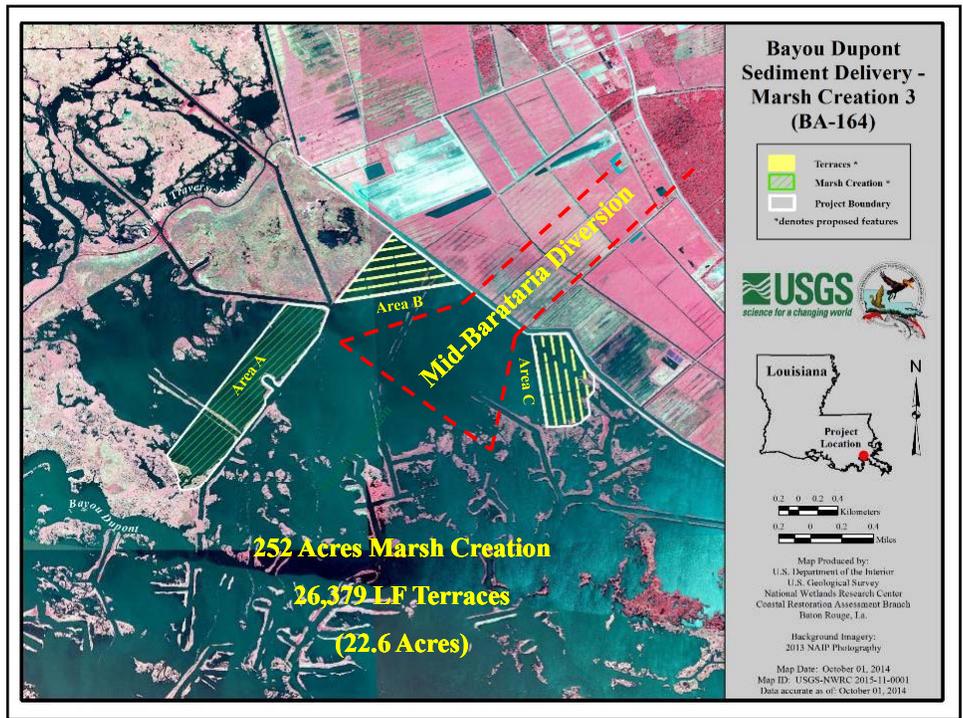
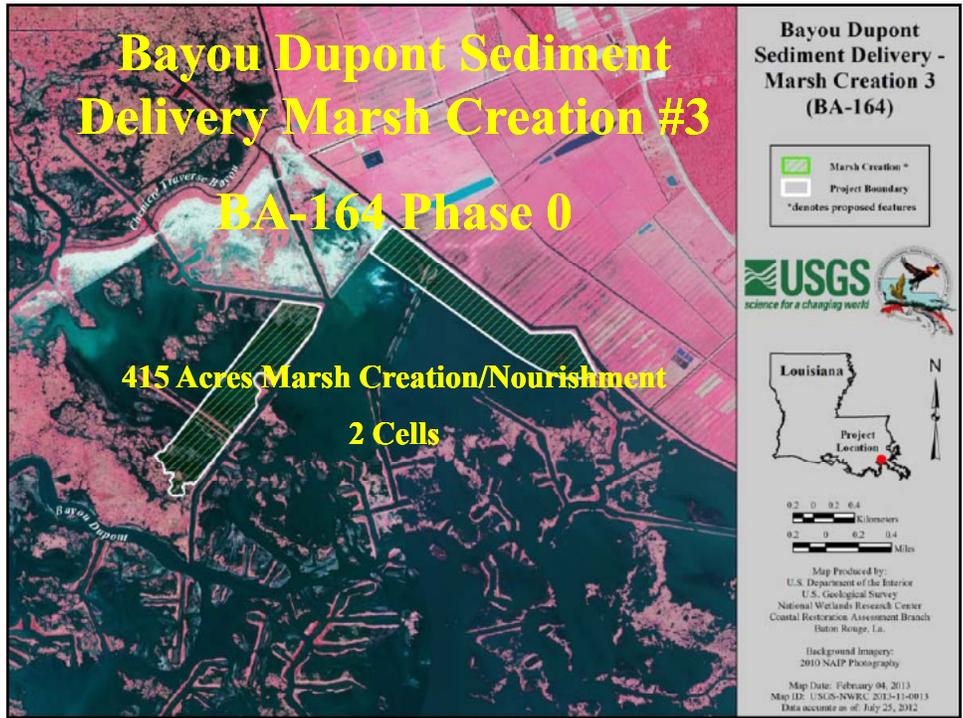
December 11, 2014  
Baton Rouge, LA



## Project Location

Region 2, Barataria Basin  
Plaquemines Parish  
and  
Jefferson Parish





# Bayou Dupont Sediment Delivery Marsh Creation #3 and Terracing (BA-164)

## Features:

- 252 Acres Marsh Creation/Nourishment
- Sediment From the Mississippi River
- 26,379 linear feet of terraces.

## Project Benefits & Costs

	Project Features	Fully Funded First Cost	Fully Funded Cost	Net Acres	Cost/Net Acre
Phase 0	415 Acres of Marsh Creation/nourishment	\$37,057,275	\$38,279,163	383	\$99,945
Phase 2	252 Acres of Marsh Creation/Nourishment and 26,379 linear feet of Terraces	\$33,295,867	\$34,320,925	230	\$149,221

# Questions?



**Brad Crawford**  
US Environmental  
Protection Agency  
(214) 665 - 7255



**Kodi Guillory**  
LA Coastal Protection and  
Restoration Authority  
(225) 342-5175  
www.guilcoastphoto.com  
985.788.2458  
A SDW owned small business



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS TX 75202-2733

November 19, 2014

Mr. Troy G. Constance,  
Acting Deputy District Engineer for Project Management  
U.S. Army Corps of Engineers  
New Orleans District  
P.O. Box 60267  
New Orleans, LA 70160-0267

Re: Bayou Dupont Sediment Delivery Marsh Creation #3 (BA-164)  
95% Concurrence and Change in Scope Request

Dear Mr. Constance:

As you know, the U.S. Environmental Protection Agency (EPA) and LA's Coastal Protection and Restoration Authority (CPRA) have recently hosted the 95% Design Review meeting for the Bayou Dupont Sediment Delivery Marsh Creation #3 (BA-164) project pursuant to Section 6(h)(2) of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Standard Operating Procedures Manual (SOP). The meeting was held in Baton Rouge on October 30, 2014 in CPRA offices and included participants representing the sponsoring agencies along with the other CWPPRA agencies. As noted, the project has met the conditions of a change in scope, therefore, EPA and CPRA submit the following information in accordance with Sections 6.(e)(3) and 6.(h)(2) of the CWPPRA SOP.

The original BA-164 (Phase 0) project entailed using renewable Mississippi River sediment to create approximately 415 acres of marsh in Jefferson Parish and Plaquemines Parish. However, the project has been modified in 2 important ways which meet the conditions of a change in scope as specified in the CWPPRA SOP. First, as noted in the design report, the Plaquemines Parish marsh creation cell was modified and split into two cells to avoid the outfall influence area of the proposed Mid-Barataria Diversion. Second, because of the depth of water and the soil conditions in the area, much greater quantities of material will be required to meet the project goals and objectives which resulted in an increase in overall cost for the project. Because of the high cost and the amount of sediment required to meet project goals, the two marsh creation areas targeted within Plaquemines Parish were determined to be economically infeasible and those areas were changed to terraces rather than marsh creation.

In summary, the project has been altered to account for these challenges and now includes 252 acres of marsh creation/nourishment in Jefferson Parish and approximately 26,379 linear feet of terraces in Plaquemines Parish. The following table contains a summary of the changes in cost and benefits from the Phase 0 project compared to the current project proposal:

	<b>Project Features</b>	<b>Fully Funded First Cost</b>	<b>Fully Funded Cost</b>	<b>Net Acres</b>	<b>Cost/Net Acre</b>
<b>Phase 0</b>	415 Acres of Marsh Creation/nourishment in 2 cells	\$37,057,275	\$38,279,163	383	\$99,945
<b>Phase 2</b>	252 Acres of Marsh Creation/Nourishment and 26,379 linear feet of Terraces	\$33,295,867	\$34,320,925	230	\$149,221

The major driver for the cost increase per Net acre is due to the higher target elevation indicated by the project specific settlement curves. While the cost per net acre has increased, it is still within the range of other CWPPRA projects in the area. It is important to note that the cost estimate includes taking advantage of the existing mobilization for the Long Distance Sediment/BA-48 project which has the potential to save millions of dollars if this project is funded now. If the project is not able to take advantage of this mobilization, we may lose that savings and the cost estimate will likely increase.

Per Sections 6.(e)(3) and 6.(h)(2) of the CWPPRA SOP, EPA and CPRA are seeking Task Force approval for this "Change in Scope." Both EPA and CPRA endorse these modifications and believe the project is still viable and will be seeking construction (Phase 2) funding at the December 2014 TC meeting. Likewise, because we have added terraces to the project features, we believe it is appropriate to include a minor name change for the project, therefore, we are also requesting BA-164's official name be changed to "Bayou Dupont Sediment Delivery Marsh Creation #3 and Terracing." It is our understanding that the Change in Scope and the Phase 2 request can be pursued simultaneously, hence, this request will be on the December TC meeting agenda for a decision. For your convenience, attached are project maps for both the original and the revised project. The project details including the revised fully funded cost estimate and revised WVA are included in the Phase 2 request documentation.

Also, as required by Section 6(h)2 of the CWPPRA SOP, enclosed is a letter of concurrence from CPRA indicating their willingness to continue the project. If you have any questions regarding this project or would like to discuss these issues further, please do not hesitate to contact me at (214)665-8365, or Brad Crawford of my staff at (214)665-7255.

Sincerely,

Karen McCormick, Chief  
Marine and Coastal Section

Enclosures

Cc: Richard Hartman, NMFS  
Darryl Clark, FWS  
Brit Paul, NRCS  
Bren Haas, CPRA  
Adrian Chavarria, EPA  
Brad Inman, USACE

Cece Linder, NMFS  
Kevin Roy, FWS  
John Jurgensen, NRCS  
Stu Brown, CPRA  
Kodi Guillory, CPRA  
Brian (Keith) Boeneke (CPRA Contractor)

**Bayou Dupont Sediment Delivery Marsh Creation #3  
(BA-164)  
Phase 0 Fact Sheet and Map**

## **PPL22 Bayou Dupont Sediment Delivery – Marsh Creation #3**

### **Coast 2050 Strategy:**

Coastwide Common Strategies: Dedicated dredging to create, restore, or protect wetlands; Offshore and riverine sand and sediment resources.

Region 2 Regional Ecosystem Strategies: Restore and Sustain Marshes.

### **Project Location:**

Region 2, Barataria Basin, Jefferson and Plaquemines Parishes. The borrow location will be in the Mississippi River. The project is immediately adjacent to the Mississippi River Sediment Delivery System project (BA-39).

### **Problem:**

Wetlands in the Barataria Basin were historically nourished by the fresh water, sediment and nutrients delivered by the Mississippi River and its many distributary channels. Following the creation of levees along the lower river for flood control and navigation, these inputs ceased. In addition, numerous oil and gas canals in the area contributed significantly to wetland loss. Recent information suggests that actual subsurface oil and gas withdrawal was a major cause of wetland loss. From 1932 to 1990, the Barataria Basin lost over 245,000 acres of marsh, and from 1978 to 1990, it experienced the highest rate of wetland loss in coastal Louisiana.

### **Goals:**

The primary goal of this project is to create/nourish approximately 415 acres of emergent intermediate marsh using sediment from the Mississippi River. Specific goals include: 1) Create approximately 402 acres of intermediate marsh; 2) Nourish approximately 13 acres of existing intermediate marsh; and 3) Create approximately 2500 linear feet of tidal creeks.

### **Proposed Solution:**

The proposed project consists of features to create/nourish 415 acres of marsh adjacent to the Mississippi River Sediment Delivery System – Bayou Dupont (BA-39) project, again *using sediment from the Mississippi River*. The target elevation of +1.3 feet is estimated to be met at year 10. Approximately 50% of created marsh will be planted using intermediate marsh plant species. Approximately 2500 linear feet of tidal creeks will be created throughout the project area.

### **Project Benefits:**

The project would result in approximately 383 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$ 38,279,163.

### **Preparers of Fact Sheet:**

Ken Teague, EPA, (214) 665-6687; [Teague.kenneth@epa.gov](mailto:Teague.kenneth@epa.gov)

Paul Kaspar, EPA, (214) 665-7459; [kaspar.paul@epa.gov](mailto:kaspar.paul@epa.gov)

Adrian Chavarria, EPA, (214) 665-3103; [Chavarria.adrian@epa.gov](mailto:Chavarria.adrian@epa.gov)

Chris Llewellyn, EPA, (214) 665-7239; [Llewellyn.chris@epa.gov](mailto:Llewellyn.chris@epa.gov)

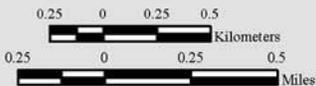


### Bayou Dupont Marsh Creation 3 (PPL22 Candidate)



-  Marsh Creation \*
-  Project Boundary

\* denotes proposed features



Scale: 1:35,000

Map Produced By:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Assessment Branch  
Baton Rouge, LA

Image Source:  
2010 NAIP Photography

Map ID: 2012-11-0017  
Map Date: July 25, 2012

**Bayou Dupont Sediment Delivery Marsh Creation #3  
And Terracing (BA-164)  
Phase 2 Fact Sheet and Map**

## **PPL22 Bayou Dupont Sediment Delivery – Marsh Creation #3 and Terracing (BA-164)**

### **Coast 2050 Strategy:**

Coastwide Common Strategies: Dedicated dredging to create, restore, or protect wetlands; Offshore and riverine sand and sediment resources. Region 2 Regional Ecosystem Strategies: Restore and Sustain Marshes.

### **Project Location:**

Region 2, Barataria Basin, Jefferson and Plaquemines Parishes. The borrow location will be in the Mississippi River. The project is immediately adjacent to the Mississippi River Sediment Delivery System project (BA-39).

### **Problem:**

Wetlands in the Barataria Basin were historically nourished by the fresh water, sediment and nutrients delivered by the Mississippi River and its many distributary channels. Following the creation of levees along the lower river for flood control and navigation, these inputs ceased. In addition, numerous oil and gas canals in the area contributed significantly to wetland loss. Recent information suggests that actual subsurface oil and gas withdrawal was a major cause of wetland loss. From 1932 to 1990, the Barataria Basin lost over 245,000 acres of marsh, and from 1978 to 1990, it experienced the highest rate of wetland loss in coastal Louisiana.

### **Goals:**

The primary goal of this project is to create/nourish approximately 252 acres of emergent intermediate marsh using sediment from the Mississippi River and construct approximately 26,379 linear feet of terraces. Specific goals include: 1) Create approximately 232 acres of intermediate marsh; 2) Nourish approximately 20 acres of existing intermediate marsh; and 3) Create approximately 26,379 LF of terraces (22.6 acres).

### **Proposed Solution:**

The proposed project consists of features to create/nourish 252 acres of marsh adjacent to the Mississippi River Sediment Delivery System – Bayou Dupont (BA-39) project, again *using sediment from the Mississippi River* and creation of 26,379 LF of terraces adjacent to the Plaquemines Parish flood protection levee and east of BA-39. The initial marsh creation placement target elevation is +2.5' feet (+/- 0.5') with an estimated marsh elevation of 0.8' at year 20. Approximately 50% of created marsh will be planted using intermediate marsh plant species. The terraces will be constructed to an initial target elevation of 2.5 feet (+0.5') creating approximately 22.6 acres.

### **Project Benefits:**

The project would result in approximately 230 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$ 34,320,925.

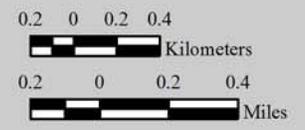
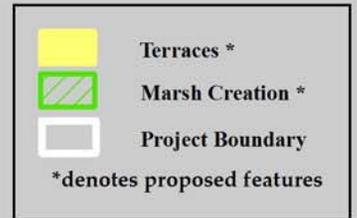
### **Preparers of Fact Sheet:**

Brad Crawford, EPA, (214) 665-7255; [Crawford.brad@epa.gov](mailto:Crawford.brad@epa.gov)

Barbara Aldridge, EPA, (214) 665-2712; [Aldridge.barbara@epa.gov](mailto:Aldridge.barbara@epa.gov)

Adrian Chavarria, EPA, (214) 665-3103; [Chavarria.adrian@epa.gov](mailto:Chavarria.adrian@epa.gov) □ □

# Bayou Dupont Sediment Delivery - Marsh Creation 3 (BA-164)



Map Produced by:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Assessment Branch  
Baton Rouge, La.

Background Imagery:  
2013 NAIP Photography

Map Date: October 01, 2014  
Map ID: USGS-NWRC 2015-11-0001  
Data accurate as of: October 01, 2014



**CPRA 95% Concurrence Letter**



# State of Louisiana

**BOBBY JINDAL**  
GOVERNOR

November 6, 2014

Ms. Karen McCormick, Chief  
United States Environmental Protection Agency, Region 6  
Marine & Coastal Section – Water Quality Protection Division  
1445 Ross Avenue, Suite 1200  
Dallas, TX 75202-2733

Re: 95% Design Review- Concurrence for Phase II Funding Request  
Bayou Dupont Sediment Delivery – Marsh Creation No. 3 (BA-164)  
Statement of Local Sponsor Concurrence

Dear Ms. McCormick:

The 95% Design Review meeting for the Bayou Dupont Sediment Delivery – Marsh Creation No. 3 (BA-164) project was held on October 30, 2014. Based on our review of the technical information compiled to date, the land ownership investigation, and the final designs, the Coastal Protection and Restoration Authority, as the local sponsor, concur to proceed with requesting Phase II construction funding for the project. In accordance with the CWPPRA Project Standard Operating Procedures Manual, we request that you forward this letter of concurrence to the Technical Committee and the Planning and Evaluation Subcommittee.

Sincerely,

Andrew D. Beall  
Project Management Administrator  
Project Management Division

ADB: BKB

cc: Brad Crawford, U.S. Environmental Protection Agency  
Stuart Brown, Coastal Protection and Restoration Authority  
B. Keith Boeneke, Coastal Protection and Restoration Authority - Contractor



# Bayou Dupont Sediment Delivery - Marsh Creation #3 (BA-164)

## Project Status

**Approved Date:** 2013      **Project Area:** 415 acres  
**Approved Funds:** \$3.41 M      **Total Est. Cost:** \$38.2 M  
**Net Benefit After 20 Years:** 383 acres  
**Status:** Engineering and Design  
**Project Type:** Marsh Creation  
**PPL #:** 22

## Location

CWPPRA Region 2, Barataria Basin, Jefferson and Plaquemines Parishes. The general project area is about 10 miles south of Belle Chasse, LA and is west of LA Hwy 23 and north of the Myrtle Grove Marina. The project is immediately adjacent to the completed CWPPRA Mississippi River Sediment Delivery System – Bayou Dupont (BA-39) project.

## Problems

Wetlands in the Barataria Basin were historically nourished by the fresh water, sediment and nutrients delivered by the Mississippi River and its many distributary channels. These sediment and nutrient inputs ceased following the creation of levees along the lower river for flood control and navigation. In addition, the construction of numerous oil and gas canals along with subsurface oil and gas withdrawal has exacerbated wetland loss in the area. From 1932 to 1990, the Barataria Basin lost over 245,000 acres of marsh. From 1978 to 1990, the area experienced the highest rate of wetland loss in coastal Louisiana.

## Restoration Strategy

The primary goal of this project is to create and nourish approximately 415 acres of emergent intermediate marsh using sediment from the Mississippi River. The proposed project involves dredging sediment from the Mississippi River for marsh creation by pumping the sediment via pipeline into an area of open water and broken marsh. The proximity of the project to the Mississippi River provides a prime opportunity to utilize this renewable river sediment resource. Additionally, tidal creeks will be created to improve marsh habitat value, and native intertidal marsh vegetation will be planted following construction. This project will complement existing restoration projects in the area and could protect existing infrastructure.



Aerial view of project area looking west with the parish levee in the foreground and adjacent to the completed BA-39 project

## Progress to Date

The project sponsors are initiating grant related activities to perform the Engineering and Design for the project.

This project is on Priority Project List 22.

For more project information, please contact:



**Federal Sponsor:**  
U.S. Environmental Protection Agency  
Dallas, TX  
(214) 665-7459



**Local Sponsor:**  
Coastal Protection and Restoration Authority  
Baton Rouge, LA  
(225) 342-4736

# Bayou Dupont Sediment Delivery - Marsh Creation 3 (BA-164)

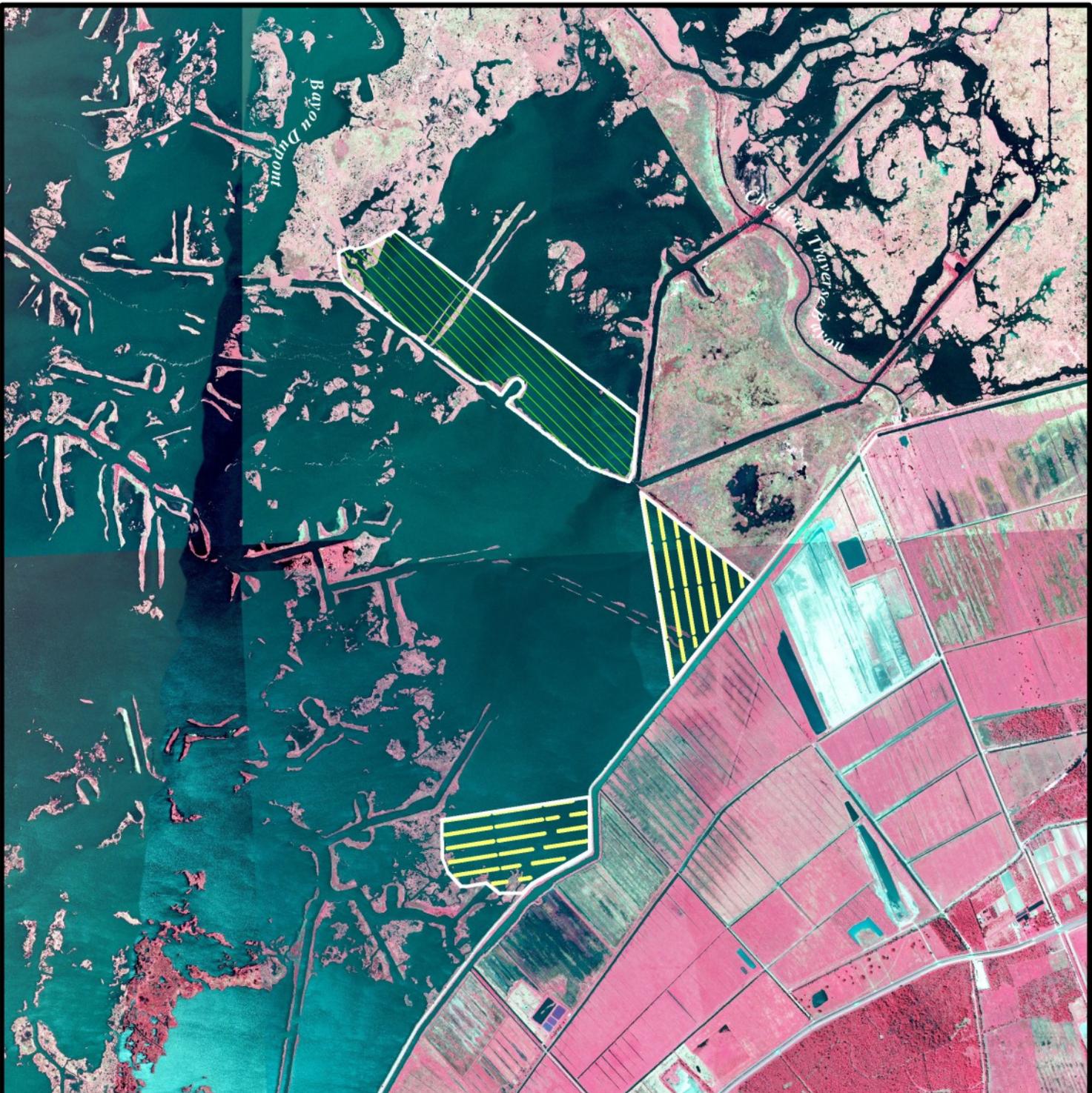
-  Terraces \*
-  Marsh Creation \*
-  Project Boundary
- \*denotes proposed features



Map Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Assessment Branch  
 Baton Rouge, La.

Background Imagery:  
 2013 NAPP Photography

Map Date: October 01, 2014  
 Map ID: USGS-NWRC 2015-11-0001  
 Data accurate as of: October 01, 2014



COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**24<sup>TH</sup> PRIORITY PROJECT LIST**

**For Report/Decision:**

The Environmental Workgroup Chairman will present an overview of the ten PPL 24 candidate projects.

The Technical Committee will vote to make a recommendation to the Task Force for selecting PPL 24 projects for Phase I Engineering and Design.

<b>Region</b>	<b>Basin</b>	<b>PPL 24 Candidates</b>	<b>Agency</b>
1	Pontchartrain	New Orleans Landbridge Shoreline Stabilization & Marsh Creation	FWS
1	Pontchartrain	Shell Beach South Marsh Creation	EPA/USACE
1	Pontchartrain	Bayou Bienvenue Marsh Creation	EPA
2	Barataria	Grand Bayou Marsh Creation & Terracing	FWS
2	Barataria	East Leeville Marsh Creation & Nourishment	NMFS
3	Terrebonne	West Fouchon Marsh Creation & Marsh Nourishment	CPRA
3	Terrebonne	Bayou Dularge Ridge Restoration & Marsh Creation	NRCS
3	Teche-Vermilion	South Humble Marsh Creation & Nourishment	FWS
4	Mermentau	Southeast Pecan Island Marsh Creation & Freshwater Introduction	NRCS
4	Calcasieu-Sabine	No Name Bayou Marsh Creation & Nourishment	NMFS

	<b>PPL 24 Demonstration Project Candidate</b>	<b>Agency</b>
DEMO	Innovative Bedload Sediment Collector Demonstration	USACE

**CWPPRA PPL 24 Technical Committee VOTE**

<b>Region</b>	<b>Project</b>	<b>COE</b>	<b>State</b>	<b>EPA</b>	<b>FWS</b>	<b>NMFS</b>	<b>NRCS</b>	<b>No. of votes</b>	<b>Sum of Point Score</b>
4	No Name Bayou Marsh Creation & Nourishment	5	4	4	1	6	5	6	25
1	New Orleans Landbridge Shoreline Stabilization & Marsh Creation	4	5	3	6	2	3	6	23
1	Shell Beach South Marsh Creation	6		5	3	4		4	18
3	West Fouchon Marsh Creation & Marsh Nourishment		6	2	4	3		4	15
4	Southeast Pecan Island Marsh Creation & Freshwater Enhancement			1	2	1	6	4	10
2	East Leeville Marsh Creation & Nourishment	2	3			5		3	10
1	Bayou Bienvenue Marsh Creation	1	1	6				3	8
2	Grand Bayou Marsh Creation & Terracing		2		5		1	3	8
3	Bayou Dularge Ridge Restoration & Marsh Creation	3					4	2	7
3	South Humble Marsh Creation & Nourishment						2	1	2

**NOTES:**

- Projects are sorted by: (1) "No. of Votes" and (2) "Sum of Point Score"

CWPPRA PPL 24 Technical Committee VOTE

11-Dec-14

Region	Project	COE	State	EPA	FWS	NMFS	NRCS	No. of votes	Sum of Point Score
1	New Orleans Landbridge Shoreline Stabilization & Marsh Creation	4						0	0
1	Shell Beach South Marsh Creation	6						0	0
1	Bayou Bienvenue Marsh Creation	1						0	0
2	Grand Bayou Marsh Creation & Terracing							0	0
2	East Leeville Marsh Creation & Nourishment	2						0	0
3	West Fouchon Marsh Creation & Marsh Nourishment							0	0
3	Bayou Dularge Ridge Restoration & Marsh Creation	3						0	0
3	South Humble Marsh Creation & Nourishment							0	0
4	Southeast Pecan Island Marsh Creation & Freshwater Enhancement							0	0
4	No Name Bayou Marsh Creation & Nourishment	5						0	0
		0	0	0	0	0	0	0	0
		check	21	21	21	21	21	36	126

**RUN MACRO FROM "SORT-Final Vote" WORKSHEET**

The following voting process will be used to recommend projects under PPL 24 to the Task Force:

1. Each agency represented in the Technical Committee will be provided one ballot for voting.
2. Each agency represented in the Technical Committee will cast weighted votes for 6 projects. All votes must be used.
3. Each agency will vote for their top projects, hand-written on the above ballot form
4. A weighted score will be assigned (6, 5, 4, 3, 2, and 1), to be used in the event of a tie. (6 highest...1 lowest).
5. Initial rank will be determined based upon the number of votes received for a project (unweighted).
6. The Technical Committee will vote on "up to four" projects for recommendation to the Task Force.
7. In the event of a tie at the cutoff (up to 4), the weighted score may be used as a tie-breaker (if the Technical Committee decides to break the tie).
8. The tied projects will be ranked based upon a sum of the weighted score.

*Bar L J*

*11-Dec-2014*

CWPPRA PPL 24 Technical Committee VOTE

11-Dec-14

Region	Project	COE	State	EPA	FWS	NMFS	NRCS	No. of votes	Sum of Point Score
1	New Orleans Landbridge Shoreline Stabilization & Marsh Creation		5					0	0
1	Shell Beach South Marsh Creation							0	0
1	Bayou Bienvenue Marsh Creation		1					0	0
2	Grand Bayou Marsh Creation & Terracing		2					0	0
2	East Leeville Marsh Creation & Nourishment		3					0	0
3	West Fouchon Marsh Creation & Marsh Nourishment		6					0	0
3	Bayou Dularge Ridge Restoration & Marsh Creation							0	0
3	South Humble Marsh Creation & Nourishment							0	0
4	Southeast Pecan Island Marsh Creation & Freshwater Enhancement							0	0
4	No Name Bayou Marsh Creation & Nourishment		4					0	0
		0	0	0	0	0	0	0	0
		check	21	21	21	21	21	36	126

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CWPPRA PPL 24 Technical Committee VOTE

11-Dec-14

Region	Project	COE	State	EPA	FWS	NMFS	NRCS	No. of votes	Sum of Point Score
1	New Orleans Landbridge Shoreline Stabilization & Marsh Creation			3				0	0
1	Shell Beach South Marsh Creation			5				0	0
1	Bayou Bienvenue Marsh Creation			6				0	0
2	Grand Bayou Marsh Creation & Terracing							0	0
2	East Leeville Marsh Creation & Nourishment							0	0
3	West Fouchon Marsh Creation & Marsh Nourishment			2				0	0
3	Bayou Dularge Ridge Restoration & Marsh Creation							0	0
3	South Humble Marsh Creation & Nourishment							0	0
4	Southeast Pecan Island Marsh Creation & Freshwater Enhancement			1				0	0
4	No Name Bayou Marsh Creation & Nourishment			04				0	0
		0	0	0	0	0	0	0	0
		check	21	21	21	21	21	36	126

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CWPPRA PPL 24 Technical Committee VOTE

11-Dec-14

Region	Project	COE	State	EPA	FWS	NMFS	NRCS	No. of votes	Sum of Point Score
1	New Orleans Landbridge Shoreline Stabilization & Marsh Creation				6			0	0
1	Shell Beach South Marsh Creation				3			0	0
1	Bayou Bienvenue Marsh Creation							0	0
2	Grand Bayou Marsh Creation & Terracing				5			0	0
2	East Leeville Marsh Creation & Nourishment							0	0
3	West Fouchon Marsh Creation & Marsh Nourishment				4			0	0
3	Bayou Dularge Ridge Restoration & Marsh Creation							0	0
3	South Humble Marsh Creation & Nourishment							0	0
4	Southeast Pecan Island Marsh Creation & Freshwater Enhancement				2			0	0
4	No Name Bayou Marsh Creation & Nourishment				1			0	0
		0	0	0	0	0	0	0	0
	check	21	21	21	21	21	21	36	126

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CWPPRA PPL 24 Technical Committee VOTE

11-Dec-14

Region	Project	COE	State	EPA	FWS	NMFS	NRCS	No. of votes	Sum of Point Score
1	New Orleans Landbridge Shoreline Stabilization & Marsh Creation					2		0	0
1	Shell Beach South Marsh Creation					4		0	0
1	Bayou Bienvenue Marsh Creation							0	0
2	Grand Bayou Marsh Creation & Terracing							0	0
2	East Leeville Marsh Creation & Nourishment					5		0	0
3	West Fouchon Marsh Creation & Marsh Nourishment					3		0	0
3	Bayou Dularge Ridge Restoration & Marsh Creation							0	0
3	South Humble Marsh Creation & Nourishment							0	0
4	Southeast Pecan Island Marsh Creation & Freshwater Enhancement					1		0	0
4	No Name Bayou Marsh Creation & Nourishment					6		0	0
		0	0	0	0	0	0	0	0
check		21	21	21	21	21	21	36	126

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*AM*

CWPPRA PPL 24 Technical Committee VOTE

11-Dec-14

Region	Project	COE	State	EPA	FWS	NMFS	NRCS	No. of votes	Sum of Point Score
1	New Orleans Landbridge Shoreline Stabilization & Marsh Creation						3	0	0
1	Shell Beach South Marsh Creation							0	0
1	Bayou Bienvenue Marsh Creation							0	0
2	Grand Bayou Marsh Creation & Terracing						1	0	0
2	East Leeville Marsh Creation & Nourishment							0	0
3	West Fouchon Marsh Creation & Marsh Nourishment							0	0
3	Bayou Dularge Ridge Restoration & Marsh Creation						4	0	0
3	South Humble Marsh Creation & Nourishment						2	0	0
4	Southeast Pecan Island Marsh Creation & Freshwater Enhancement						6	0	0
4	No Name Bayou Marsh Creation & Nourishment						5	0	0
		0	0	0	0	0	0	0	0
check		21	21	21	21	21	21	36	126

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*AM*

# CWPPRA

## Priority Project List 24

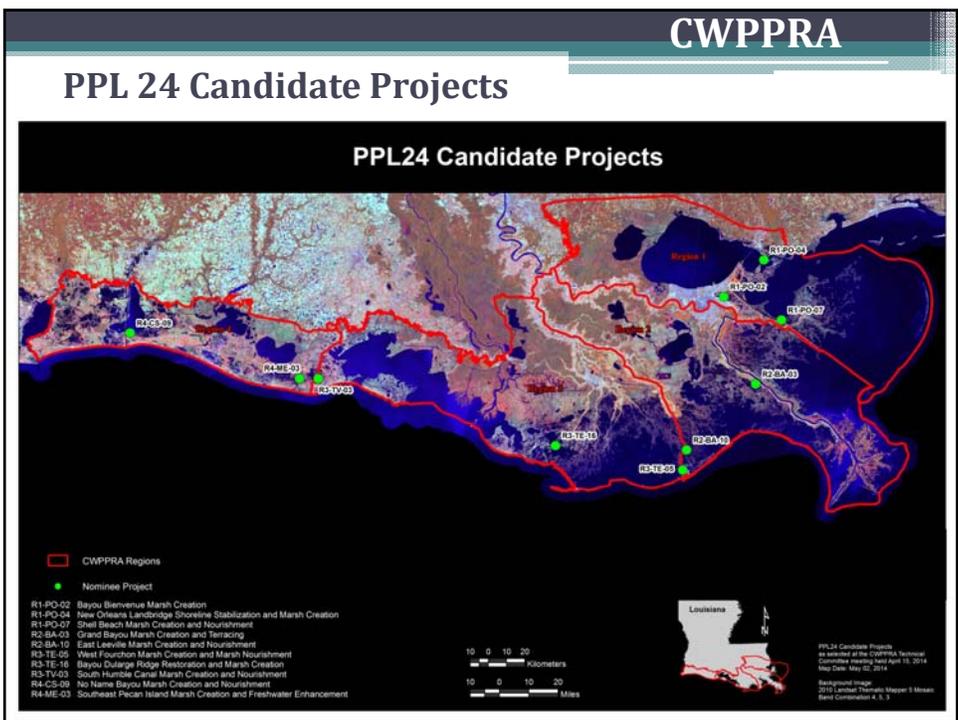
### Candidate Project Evaluation Results

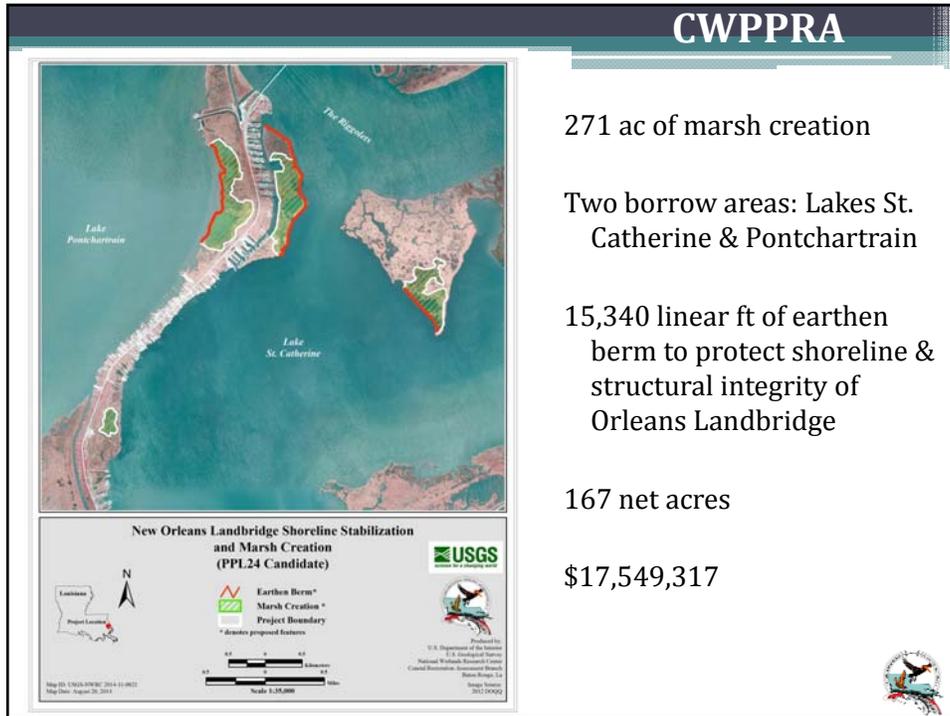


**Technical  
Committee Meeting**

**December 11, 2014**

**Baton Rouge, LA**





## CWPPRA

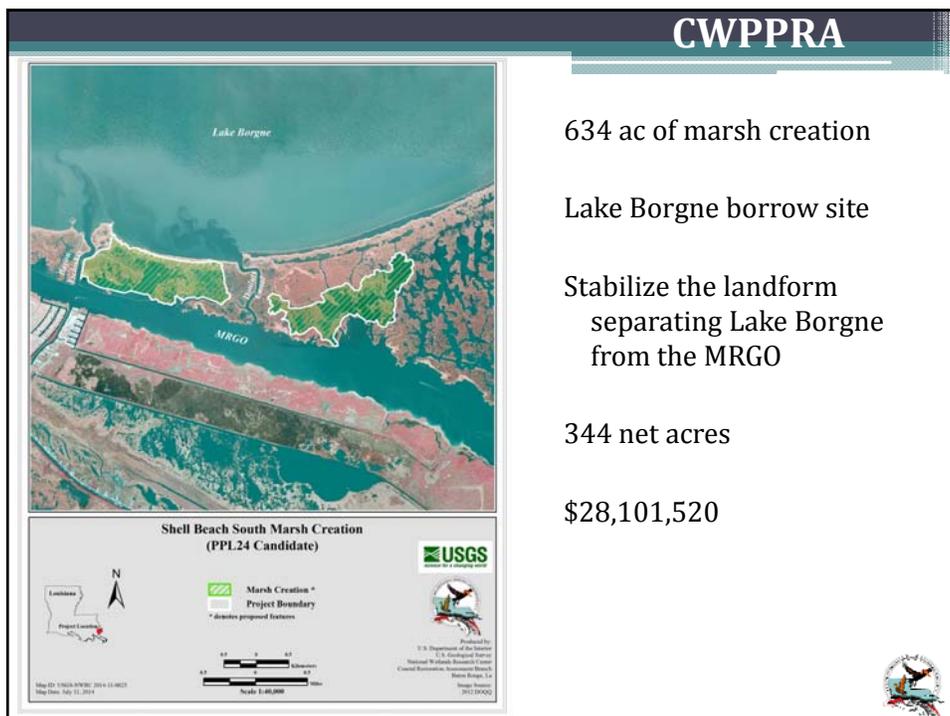
271 ac of marsh creation

Two borrow areas: Lakes St. Catherine & Pontchartrain

15,340 linear ft of earthen berm to protect shoreline & structural integrity of Orleans Landbridge

167 net acres

\$17,549,317



## CWPPRA

634 ac of marsh creation

Lake Borgne borrow site

Stabilize the landform separating Lake Borgne from the MRGO

344 net acres

\$28,101,520



## CWPPRA



**Bayou Bienvenue Marsh Creation  
(PPL24 Candidate)**



351 ac of marsh creation

Mississippi River borrow site

Restores a portion of the historic Bayou Bienvenue bank

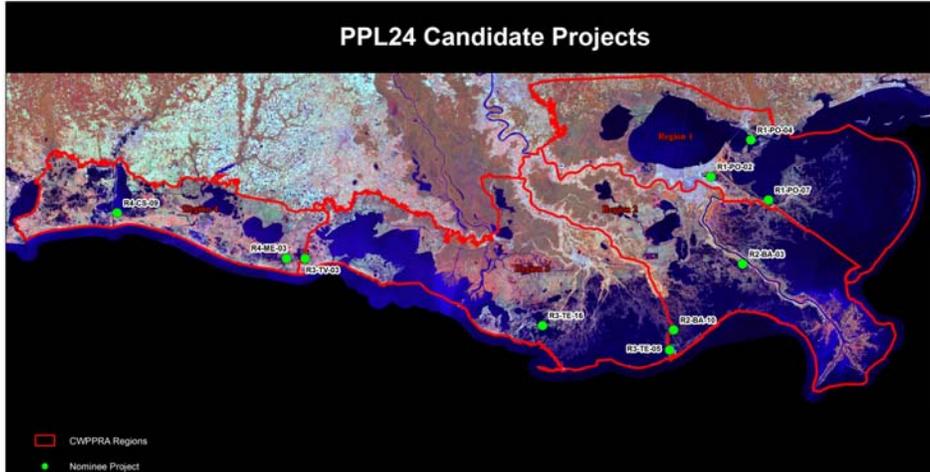
276 net acres

\$34,219,915

## CWPPRA

### PPL 24 Candidate Projects

#### PPL24 Candidate Projects



CWPPRA Regions

● Nominee Project

- R1-PO-02 Bayou Bienvenue Marsh Creation
- R1-PO-04 New Orleans Landridge Shoreline Stabilization and Marsh Creation
- R1-PO-07 Shell Beach Marsh Creation and Nourishment
- R2-BA-03 Grand Bayou Marsh Creation and Terracing
- R3-BA-10 East Lakeville Marsh Creation and Nourishment
- R3-TE-05 West Fourchon Marsh Creation and Marsh Nourishment
- R3-TE-16 Bayou Delarge Ridge Restoration and Marsh Creation
- R3-TV-05 South Humble Canal Marsh Creation and Nourishment
- R4-CS-09 No Name Bayou Marsh Creation and Nourishment
- R4-ME-03 Southeast Pecan Island Marsh Creation and Freshwater Enhancement



PPL24 Candidate Projects as selected at the CWPPRA Technical Committee meeting held April 15, 2014. Map Date: May 02, 2014. Background Image: 2013 Landsat Thematic Mapper 5 Imagery. Band Combination: 4, 3, 3.

## CWPPRA



**Grand Bayou Marsh Creation and Terracing (PPL24 Candidate)**

366 ac of marsh creation

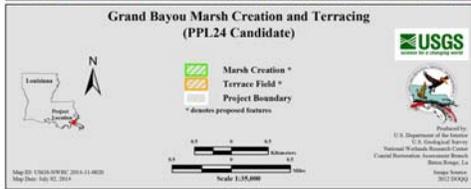
Mississippi River borrow site

52,650 linear feet (37 ac) of terraces

Complements BA-42 Lake Hermitage Marsh Creation

340 net acres

\$37,405,780




## CWPPRA



**East Leeville Marsh Creation and Nourishment (PPL24 Candidate)**

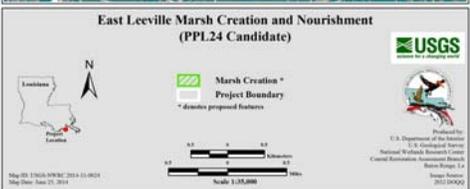
482 ac of marsh creation

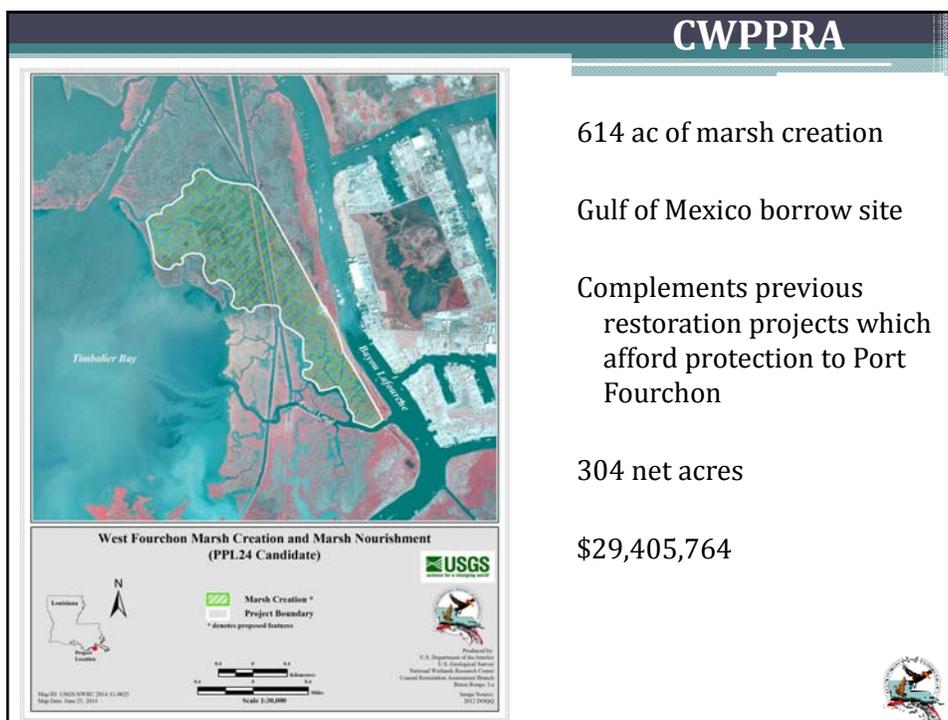
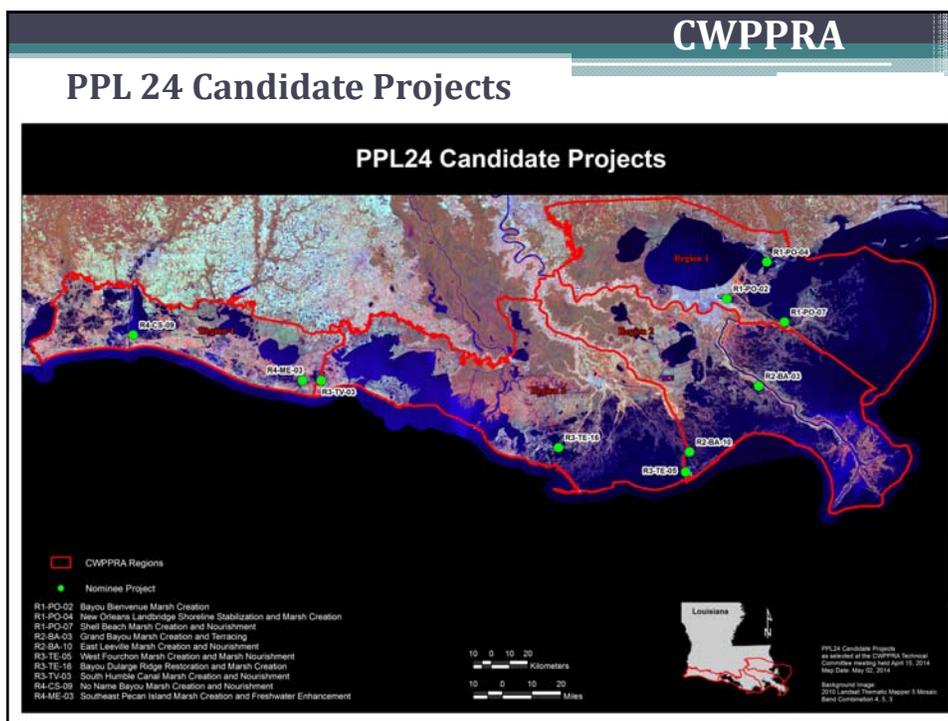
Little Lake borrow site

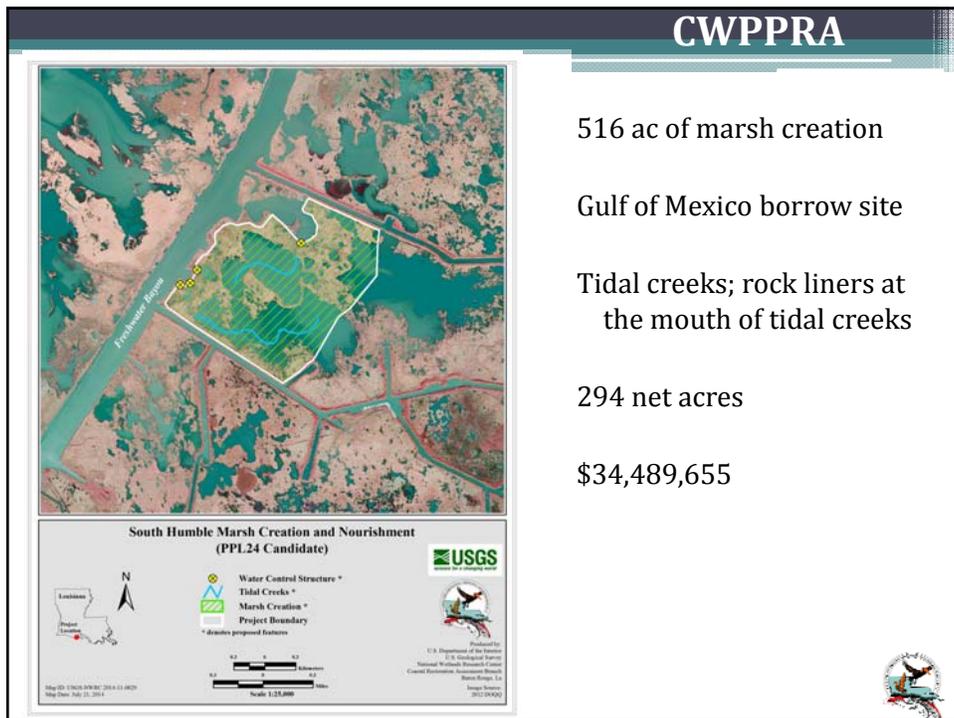
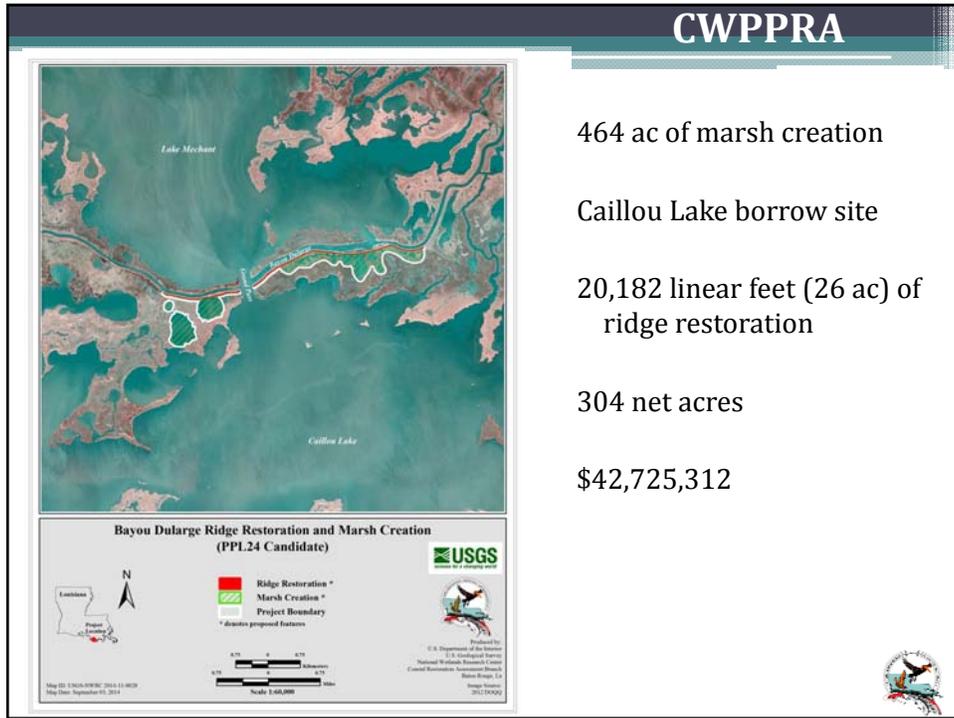
Re-establish an arc of wetlands east of Leeville around Lake Jesse

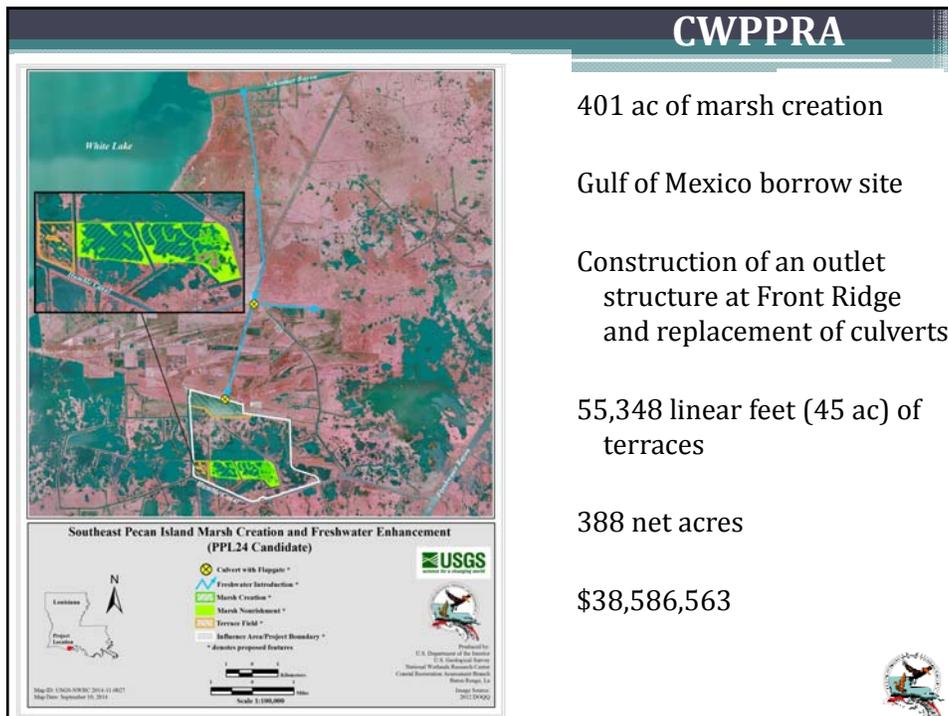
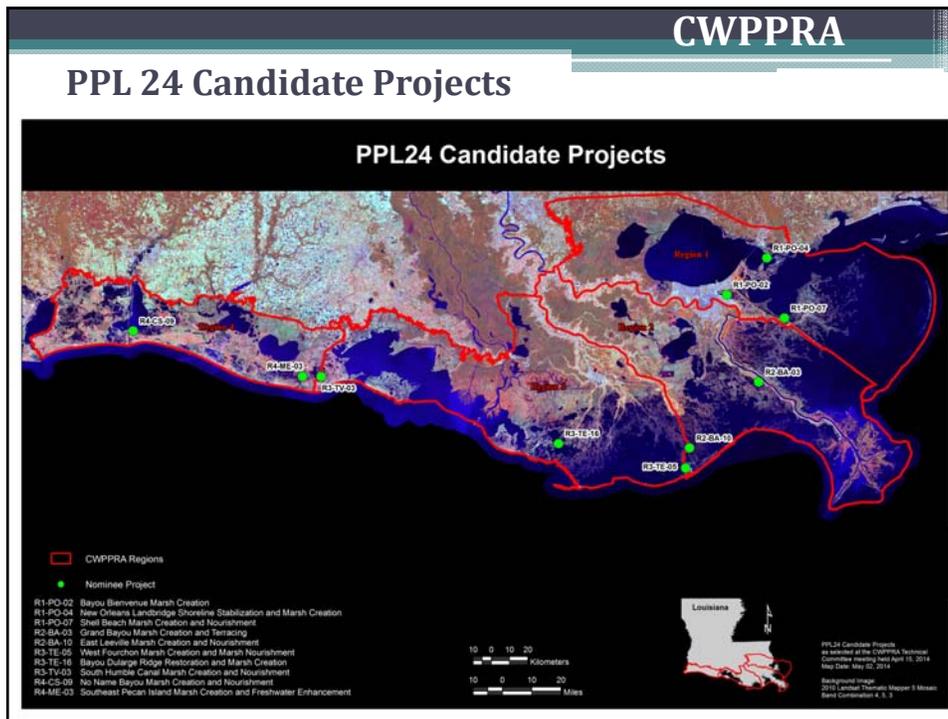
326 net acres

\$34,883,208







401 ac of marsh creation

Gulf of Mexico borrow site

Construction of an outlet structure at Front Ridge and replacement of culverts

55,348 linear feet (45 ac) of terraces

388 net acres

\$38,586,563

CWPPRA

**No Name Bayou Marsh Creation and Nourishment  
(PPL24 Candidate)**

533 ac of marsh creation

Upland disposal site utilized as borrow site

Approximately 10,000 linear ft. of tidal creeks

Vegetative plantings

497 net acres

\$28,253,137

CWPPRA

### PPL24 Candidate Project Evaluation Matrix

Project Name	Region	Parish	Project Area (acres)	Average Annual Habitat Units (AAHU)	Net Acres	Total Fully Funded Cost	Fully-Funded Phase I Cost	Fully-Funded Phase II Cost	Average Annual Cost (AAC)	Cost Effectiveness (AAC/AAHU)	Cost Effectiveness (Cost/Net Acre)
New Orleans Landbridge Shoreline Stabilization & Marsh Creation	1	Orleans	271	94	167	\$17,549,317	\$1,942,143	\$15,607,174	\$1,170,739	\$12,455	\$105,086
Shell Beach South Marsh Creation	1	St. Bernard	634	184	344	\$28,101,520	\$3,176,569	\$24,924,951	\$1,883,180	\$10,235	\$81,690
Bayou Bienvenue Marsh Creation	1	Orleans	351	85	276	\$34,219,915	\$3,801,431	\$30,418,484	\$2,315,093	\$27,236	\$123,985
Grand Bayou Marsh Creation & Terracing	2	Plaquemines	1,201	174	340	\$37,405,780	\$3,263,637	\$34,142,143	\$2,511,573	\$14,434	\$110,017
East Leeville Marsh Creation & Nourishment	2	Lafourche	484	196	326	\$34,883,208	\$3,971,658	\$30,911,550	\$2,333,005	\$11,903	\$107,004
West Fouchon Marsh Creation & Marsh Nourishment	3	Terrebonne	614	195	304	\$29,405,764	\$3,201,929	\$26,203,835	\$1,976,277	\$10,135	\$96,729
Bayou Dularge Ridge Restoration & Marsh Creation	3	Terrebonne	490	176	304	\$42,725,312	\$3,840,532	\$38,884,780	\$2,897,022	\$16,460	\$140,544
South Humble Marsh Creation & Nourishment	3	Vermilion	523	183	294	\$34,489,655	\$3,600,021	\$30,889,634	\$2,318,781	\$12,671	\$117,312
Southeast Pecan Island Marsh Creation & Freshwater Enhancement	4	Vermilion	3,280	215	388	\$38,586,563	\$3,903,670	\$34,682,893	\$2,566,812	\$11,939	\$99,450
No Name Bayou Marsh Creation & Nourishment	4	Cameron	533	231	497	\$28,253,137	\$2,724,524	\$25,528,613	\$1,884,364	\$8,157	\$56,847

This matrix is also located in the PPL 24 Candidate booklet

**CWPPRA**

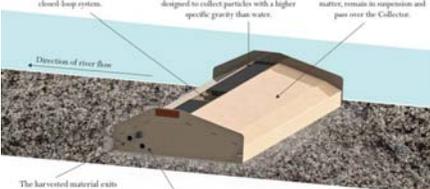
## Candidate Demonstration Project - Innovative Bedload Sediment Collector

- Goal:** Demonstrate the potential use and effectiveness of the sediment collector technology to passively collect sediment as an alternative to conventional dredging.
- Features:** The Innovative Bedload Sediment Collector demonstration project will consist of (3) 12' high capacity collectors at three separate locations of varying environments, for a 12-month duration, to monitor and evaluate the removal of bedload sediment for beneficial reuse. Each site will include one complete Streamside Systems 12' collector system with supporting equipment. The stainless steel 12' collector will be set in the main channel of a river or bayou and will be located at or just above grade of the channel bottom to collect migrating sediment. After the sediment is collected, it will be hydraulically pumped to adjacent beneficial reuse sites. Each site will be approximately one acre and fully contained.
- Cost:** The fully funded cost is \$2,608,601.



**CWPPRA**

## Candidate Demonstration Project - Innovative Bedload Sediment Collector



Once the material has passed through the grate system, it is collected within the hopper. The hopper acts as a collection basin that contains dewatering section and inject ports, which allows for a modified closed loop system.

The grate system installed above the hopper acts as a screen to selectively remove a specified particle size and allow for larger sized material to continue moving down stream. The Sediment Collector is designed to collect particles with a higher specific gravity than water.

Coarse grained sediment - fine sands to gravel - migrates as bedload and travels up the ramp of the Sediment Collector. Finer sediments (silt & clay), as well as other organic matter, remain in suspension and pass over the Collector.

The harvested material exits the Sediment Collector via suction ports and is pumped as a slurry to a placement or dewatering site.

Inject ports allow the water from the dewatering system to be returned to the Collector, this helps to reduce impingement and minimize discharge of water to the river.

Large Scale Sediment Collector  
Inventory of Sediment Collector Technology  
Copyright © Streamside Technology



### Sediment Collectors

- Sediment Collectors represent a new, innovative technology, using simple physical principles to capture bedload sediments.
- Passive Collectors allow the energy of the stream to move bedload sediment up the Collector's ramp and into a hopper. As the sediment fills the hopper, it is pumped to a beneficial use site.



**STREAMSIDE TECHNOLOGY**  
Simplified thinking

# CWPPRA

## PPL 24 Demonstration Project Evaluation Matrix

(Parameter grading as to effect: 1 = low; 2 = medium; 3 = high)

Demonstration Project Name	Lead Agency	Total Fully Funded Cost	Parameter (P <sub>i</sub> )						Total Score	Averaging of Agency Scores
			P <sub>1</sub> Innovativeness	P <sub>2</sub> Applicability or Transferability	P <sub>3</sub> Potential Cost Effectiveness	P <sub>4</sub> Potential Env Benefits	P <sub>5</sub> Recognized Need for Info	P <sub>6</sub> Potential for Technological Advancement		
Innovative Bedload Sediment Collector DEMO	USACE	\$2,608,601	3	1	1	2	1	1	9	9.7

"Total Score" calculation: Individual parameter scores were determined from the score having the majority of the vote.  
Example - If 4 agencies cast a vote of "3" and 3 agencies cast a vote of "2", then a score of "3" was given.

"Averaging of Agency Scores" calculation: Calculated by averaging the Total Scores from each Agency.

### Demonstration Project Parameters

(P<sub>1</sub>) *Innovativeness* - The demonstration project should contain technology that has not been fully developed for routine application in coastal Louisiana or in certain regions of the coastal zone. The technology demonstrated should be unique and not duplicative in nature to traditional methods or other previously tested techniques for which the results are known. Techniques which are similar to traditional methods or other previously tested techniques should receive lower scores than those which are truly unique and innovative.

(P<sub>2</sub>) *Applicability or Transferability* - Demonstration projects should contain technology which can be transferred to other areas of the coastal zone. However, this does not imply that the technology must be applicable to all areas of the coastal zone. Techniques which can only be applied in certain wetland types or in certain coastal regions, are acceptable but may receive lower scores than techniques with broad applicability.

(P<sub>3</sub>) *Potential Cost Effectiveness* - The potential cost-effectiveness of the demonstration project's method of achieving project objectives should be compared to the cost-effectiveness of traditional methods. In other words, techniques which provide substantial cost savings over traditional methods should receive higher scores than those with less substantial cost savings. Those techniques which would be more costly than traditional methods, to provide the same level of benefits, should receive the lowest scores. Information supporting any claims of potential cost savings should be provided.

(P<sub>4</sub>) *Potential Environmental Benefits* - Does the demonstration project have the potential to provide environmental benefits equal to traditional methods? somewhat less than traditional methods? above and beyond traditional methods? Techniques with the potential to provide benefits above and beyond those provided by traditional techniques should receive the highest scores.

(P<sub>5</sub>) *Recognized Need for the Information to be Acquired* - Within the restoration community, is there a recognized need for information on the technique being investigated? Demonstration projects which provide information on techniques for which there is a great need should receive the highest scores.

(P<sub>6</sub>) *Potential for Technological Advancement* - Would the demonstration project significantly advance the traditional technology currently being used to achieve project objectives? Those techniques which have a high potential for completely replacing an existing technique at a lower cost and without reducing wetland benefits should receive the highest scores.

***This matrix is also located in the PPL 24 Candidate booklet***

# Priority Project List 24

## Candidate Projects



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## APPENDIX A

### **PRIORITY PROJECT LIST 24 SELECTION PROCESS**

#### **Coastal Wetlands Planning, Protection and Restoration Act Guidelines for Development of the 24<sup>th</sup> Priority Project List**

#### **FINAL**

##### **I. Development of Supporting Information**

A. COE staff prepares spreadsheets indicating status of all restoration projects (CWPPRA Priority Project Lists (PPL) 1-23; Louisiana Coastal Area (LCA) program, Corps of Engineers Continuing Authorities 1135, 204, 206; and State only projects). Also, indicate net acres at the end of 20 years for each CWPPRA project.

B. CPRA/USGS staff prepare basin maps indicating:

- 1) Boundaries of the following projects types (PPLs 1-23; LCA program, COE 1135, 204, 206; and State only).
- 2) Locations of completed projects.
- 3) Projected land loss by 2050 including all CWPPRA projects approved for construction through January 2014.
- 4) Regional boundary maps with basin boundaries and parish boundaries included.

##### **II. Project Nominations**

A. The four Regional Planning Teams (RPTs) will meet individually to examine basin maps, discuss areas of need, discuss strategies within Louisiana's Comprehensive Master Plan for a Sustainable Coast (State Master Plan), and accept project nominations by hydrologic basin. Project nominations will be accepted in the following hydrologic basins – Pontchartrain, Breton Sound, Barataria, Terrebonne, Atchafalaya, Teche/Vermilion, Mermentau, and Calcasieu/Sabine. Project nominations will not be accepted in the Mississippi River Delta Basin as strategies for this basin are not included within the State Master Plan. Project nominations that provide benefits or construct features in more than one basin shall be presented in the basin receiving the majority of the project's benefits. The RPT leaders, in coordination with the project proponents and the P&E Subcommittee, will determine which basin to place multi-basin projects. Alternatively, multi-basin projects can be broken into multiple projects to be considered individually in the basins which they occur. Project nominations that are legitimate coast-wide applications will be accepted separate from the eight basins at any of the four RPT meetings.

**Proposed project nominees shall be consistent with the State Master Plan. Those projects determined to be inconsistent with the State Master Plan will be removed from consideration as PPL24 nominees. Representatives of the State will be present at the RPT meetings to provide guidance on the consistency of project nominations. Nominations for demonstration projects will also be accepted at any of the four RPT meetings. Those wishing to propose projects are encouraged to work with representatives of the State prior to the RPT meetings to develop projects that are consistent with the State Master Plan**

In the event that similar projects are proposed within the same area, the RPT representatives will determine if those projects are sufficiently different to allow each of them to move forward. If not sufficiently different, such projects will be combined into one project nominee.

The RPTs will not vote to select nominee projects at the individual regional meetings. Rather, voting will be conducted after the individual regional meetings via email or fax. All CWPPRA agencies and parishes will be required to provide the name and contact information during the RPT meetings for the official representative who will vote to select nominee projects.

B. Voting for project nominees (including basin, coast-wide and demonstration project nominees) will be conducted after the individual RPT meetings (date to be determined). The RPTs will select four projects in the Barataria and Terrebonne Basins and three projects in the Breton Sound and Pontchartrain Basins based on the high loss rates (1985-2010) in those basins. Two projects will be selected in the Mermentau, Calcasieu/Sabine, and Teche/Vermilion Basins. Because the Atchafalaya Basin is currently in a land gain situation, only one project will be selected in that basin.

A total of up to 21 basin projects could be selected as nominees. Each officially designated parish representative in the basin will have one vote and each federal CWPPRA agency and the State will have one vote. If coast-wide projects have been presented, the RPTs will select one coast-wide project nominee to compete with the 21 basin nominees for candidate project selection. Selection of a coast-wide project nominee will be by consensus, if possible. If voting is required, officially designated representatives from all coastal parishes will have one vote and each federal CWPPRA agency and the State will have one vote. The RPTs will also select up to six demonstration project nominees at this coast-wide meeting. Selection of demonstration project nominees will be by consensus, if possible. If voting is required, officially designated representatives from all coastal parishes will have one vote and each federal CWPPRA agency and the State will have one vote.

C. Prior to voting on project nominees, the Environmental and Engineering Work Groups will screen each coast-wide project nominated at the RPT meetings to ensure that each qualifies as a legitimate coast-wide application. Should any of those projects not qualify as a coast-wide application, the RPT leaders, in coordination with the project proponents and the P&E Subcommittee, will determine which basin the project should be placed in.

Also, prior to voting on project nominees, the Environmental and Engineering Work Groups will screen each demonstration project nominated at the RPT meetings. Demonstration projects will be screened to ensure that each meets the qualifications for demonstration projects as set forth in the CWPPRA Standard Operating Procedures (SOP), Appendix E.

D. A lead Federal agency will be designated for the nominees and demonstration project nominees to prepare preliminary project support information (fact sheet, maps, and potential designs and benefits). The RPT Leaders will then transmit this information to the P&E Subcommittee, Technical Committee and other RPT members.

### III. Preliminary Assessment of Nominated Projects

A. Agencies, parishes, landowners, and other individuals informally confer to further develop projects. Nominated projects shall be developed to support the strategies and goals of the State Master Plan. For help in the development of projects that are consistent with the State Master Plan, please contact State CWPPRA representatives.

B. The lead agency designated for each nominated project will prepare a brief Project Description that discusses possible features. Fact sheets will also be prepared for demonstration project nominees.

C. Engineering and Environmental Work Groups meet to review project features, discuss potential benefits, and estimate preliminary fully funded cost ranges for each project. The Work Groups will also review the nominated demonstration projects and verify that they meet the demonstration project criteria and that they represent potentially viable restoration techniques. If it is determined that a demonstration project is unlikely to be utilized in restoration or has been evaluated previously, the Engineering and Environmental Work Groups may recommend to the Technical Committee that these projects not move forward.

D. P&E Subcommittee prepares matrix of cost estimates and other pertinent information for nominees and demonstration project nominees and furnishes to Technical Committee.

IV. Selection of Phase 0 Candidate Projects

A. Technical Committee meets to consider the project costs and potential wetland benefits of the nominees. Technical Committee will select ten candidate projects for detailed assessment by the Environmental, Engineering, and Economic Work Groups. At this time, the Technical Committee may select up to three demonstration project candidates for detailed assessment by the Environmental, Engineering, and Economic Work Groups.

B. Technical Committee assigns a Federal sponsor for each project to develop preliminary Wetland Value Assessment (WVA) data and engineering cost estimates for Phase 0 as described below.

V. Phase 0 Analysis of Candidate Projects

A. Environmental and Engineering Work Groups and the Academic Advisory Group meet to refine project features and develop boundaries for the project and extended boundaries for estimating land loss.

B. Sponsoring agency coordinates site visits for each project. A site visit is vital so each agency can see the conditions in the area. There will be no site visits conducted for demonstration projects.

C. Sponsoring agency develops a draft WVA and prepares Phase 1 engineering and design cost estimates and Phase 2 construction cost estimates. Sponsoring agency should use formats approved by the applicable work group.

D. Environmental Work Group reviews and approves all draft WVAs. Demonstration project candidates will be evaluated as outlined in Appendix E of the CWPPRA SOP.

E. Engineering Work Group reviews and approves Phase 1 and 2 cost estimates.

F. Economics Work Group reviews cost estimates and develops annualized (fully funded) costs.

G. Corps of Engineers staff prepares information package for Technical Committee. Packages consist of:

- 1) updated Project Fact Sheets;
- 2) a matrix for each region that lists projects, fully funded cost, average annual cost, Wetland Value Assessment results in net acres and Average Annual Habitat Units (AAHUs), and cost effectiveness (average annual cost/AAHU); and
- 3) a qualitative discussion of supporting partnerships and public support.

H. Technical Committee will host a public hearing to present the results from the candidate project evaluations. Public comments will be accepted during the meeting and in writing.

VI. Selection of 24<sup>th</sup> Priority Project List

A. The selection of the 24<sup>th</sup> PPL will occur at the Winter Technical Committee and Task Force meetings.

B. Technical Committee meets and considers matrix, Project Fact Sheets, and public comments. The Technical Committee will recommend up to four projects for selection to the 24<sup>th</sup> PPL. The Technical Committee may also recommend demonstration projects for the 24<sup>th</sup> PPL.

C. The CWPPRA Task Force will review the Technical Committee recommendations and determine which projects will receive Phase 1 funding for the 24<sup>th</sup> PPL.

## **24<sup>th</sup> Priority List Project Development Schedule (dates subject to change)**

December 2013	Distribute public announcement of PPL 24 process and schedule
December 12, 2013	Winter Technical Committee Meeting, approve Phases I and II (Baton Rouge)
January 16, 2014	Winter Task Force Meeting (New Orleans)
February 11, 2014	Region IV Planning Team Meeting (Lafayette)
February 12, 2014	Region III Planning Team Meeting (Houma)
February 13, 2014	Regions I and II Planning Team Meetings (Lacombe)
February 25, 2014	Coast-wide RPT Voting (via electronic vote)
February 26 – March 7, 2014	Agencies prepare fact sheets for RPT-nominated projects
March 19-20, 2014	Engineering/ Environmental Work Groups review project features, benefits & prepare preliminary cost estimates for nominated projects (Baton Rouge)
March 2014	P&E Subcommittee prepares matrix of nominated projects showing initial cost estimates and benefits
April 15, 2014	Spring Technical Committee Meeting, select PPL 24 candidate projects (New Orleans)
May/June	Candidate project site visits
May 22, 2014	Spring Task Force Meeting (Lafayette)
July/August/ September	Env/Eng/Econ Work Group project evaluations
September 11, 2014	Fall Technical Committee Meeting, O&M and Monitoring funding recommendations (Baton Rouge)
October 23, 2014	Fall Task Force meeting, O&M and Monitoring approvals (New Orleans)
October 2014	Economic, Engineering, and Environmental analyses completed for PPL 24 candidates
December 11, 2014	Winter Technical Committee Meeting, recommend PPL 24 and Phase I and II approvals (Baton Rouge)
January 16, 2015	Winter Task Force Meeting, select PPL 24 and approve Phase II requests (New Orleans)

# **Candidate Projects Located in Region 1**

## **PPL24 New Orleans Landbridge Shoreline Stabilization and Marsh Creation**

### **Project Location:**

The project is located in Region 1, Pontchartrain Basin, Orleans Parish

### **Problem:**

Since 1956, the project area has lost more than 110 acres of wetlands along the east shore of Lake Pontchartrain between Hospital Road and the Greens Ditch area. The shoreline in the area has retreated approximately 450 feet since 1956. Wetland losses were accelerated by winds and storm surge caused by Hurricane Katrina. Within the project area, Hurricane Katrina alone converted approximately 70 acres of interior marsh to open water. Flooding of nearby communities during strong northwest winds may be partially attributed to these high wetland losses. Stabilizing the shoreline and protecting the remaining marsh would protect natural coastal resources, communities, the Fort Pike State Historical Site, and infrastructure including U.S. Highway 90. USGS land change analysis determined a loss rate of -0.35% per year for the 1984 -2011 period of analysis. Subsidence in this unit is relatively low and is estimated at 0-1 ft/century (Coast 2050).

### **Goals:**

The project goal is to restore and enhance 271 acres of brackish marsh and to enhance 15,340 linear feet of shoreline to maintain the structural integrity of the Orleans Landbridge.

### **Proposed Solution:**

Approximately 1.6 million cubic yards of material will be dredged from two borrow areas in Lakes St. Catherine and Pontchartrain to create 169 acres and nourish 102 acres of brackish marsh. Containment dikes will be constructed around four marsh creation areas to retain sediment during pumping. Approximately 15,340 linear feet of lake shoreline will be enhanced with an earthen berm, with a top width of 20 feet, to add additional protection from wind-induced wave fetch. This berm will also function as containment for dredged material. No later than three years post construction, containment dikes that are not functioning as shoreline enhancement will be degraded and/or gapped. Vegetative plantings are proposed including five rows along the crown and two rows along the front slope of the shoreline protection berm, as well as within the marsh platform area.

### **Project Benefits:**

The project would result in approximately 167 net acres over the 20-year project life.

### **Project Costs:**

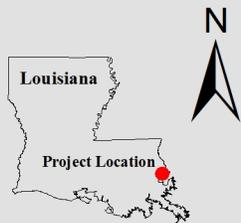
The total fully-funded cost is \$17,549,317.

### **Preparers of Fact Sheet:**

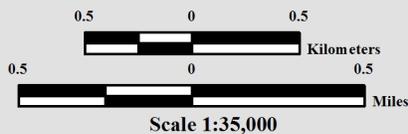
Angela Trahan, Fish and Wildlife Service, 337-291-3137, [angela\\_trahan@fws.gov](mailto:angela_trahan@fws.gov)



## New Orleans Landbridge Shoreline Stabilization and Marsh Creation (PPL24 Candidate)



-  Earthen Berm\*
  -  Marsh Creation \*
  -  Project Boundary
- \* denotes proposed features



Produced by:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Assessment Branch  
Baton Rouge, La

Image Source:  
2012 DOQQ

Map ID: USGS-NWRC 2014-11-0021  
Map Date: August 20, 2014

## **PPL24 Shell Beach South Marsh Creation**

### **Project Location:**

Region 1, Pontchartrain Basin, South Lake Borgne Mapping Unit, St. Bernard Parish, north bank of the Mississippi River Gulf Outlet (MRGO) in the vicinity of Shell Beach.

### **Problem:**

The marsh boundary separating Lake Borgne and the MRGO has undergone both interior and shoreline wetland losses due to subsidence, impacts related to construction and use of the MRGO (i.e., deep draft vessel traffic), and wind-driven waves. Although much of the project area is protected from edge erosion by shoreline protection measures, interior wetland loss due to subsidence continues to cause marsh fragmentation and pond enlargement. Wetland loss rates in the project area are estimated to be -0.60 percent a year based on USGS analysis.

### **Goals:**

The project would create and/or nourish 634 acres (ac) of emergent brackish marsh to stabilize the landform separating Lake Borgne from the MRGO. Using fill material from Lake Borgne, 346 ac of new marsh would be created and 288 ac nourished.

### **Proposed Solution:**

The proposed project will create and nourish 634 acres of marsh using dredged sediment from Lake Borgne. Existing high shorelines along Lake Borgne, remnants of previous containment dikes and marsh edge, would be used for containment to the extent practical. Constructed containment dikes would be breached/gapped as needed to provide tidal exchange after fill materials settle and consolidate. The project would create 346 acres of marsh and nourish at least 288 acres of existing fragmented marsh. A target fill elevation of +1.2 feet is envisioned to enhance longevity of this land form. Additionally, 187 acres of vegetative planting will occur within the newly created areas. Due to the presence of existing banklines, dredged slurry overflow could potentially be discharged immediately adjacent to the project polygons, resulting in nourishment of additional areas.

### **Project Benefits:**

The project would result in approximately 344 net acres over the 20-year project life.

### **Construction Costs**

The total fully-funded cost is \$28,101,520.

### **Preparer(s) of Fact Sheet:**

Scott Wandell, USACE, 504-862-1878, [scott.f.wandell@usace.army.mil](mailto:scott.f.wandell@usace.army.mil)

Aaron Hoff, USEPA, 214.665.7319, [hoff.aaron@epa.gov](mailto:hoff.aaron@epa.gov)

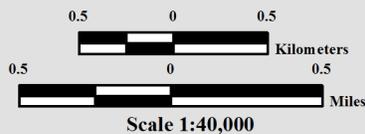
Barbara Aldridge, 214.665.2712, [aldridge.barbara@epa.gov](mailto:aldridge.barbara@epa.gov)



## Shell Beach South Marsh Creation (PPL24 Candidate)



- Marsh Creation \***
- Project Boundary**
- \* denotes proposed features**



Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Assessment Branch  
 Baton Rouge, La

Image Source:  
 2012 DOQQ

Map ID: USGS-NWRC 2014-11-0023  
 Map Date: July 11, 2014

## **PPL24 Bayou Bienvenue Marsh Creation**

### **Project Location:**

Region 1, Pontchartrain Basin, Orleans Parish, adjacent to St. Bernard Parish.

### **Problem:**

Over the past decades, the wetlands and wetland function in the area have been lost because of altered hydrology due to impoundment, subsidence, and saltwater intrusion. The area was heavily impacted by the construction of the MRGO in the 1960's. The majority of the area is shallow open water, littered with cypress stumps and snags. The land loss rate for the project area is -2.04% per year.

### **Goals:**

The goal of the project is to create/nourish 351 acres of emergent marsh in the triangle area adjacent to Bayou Bienvenue using sediment mined from the Mississippi River. Specific goals include:

1. Create 337 acres of marsh and nourish 14 acres of existing marsh using Mississippi River sediment; and
2. Restore the historic bankline along Bayou Bienvenue.

### **Proposed Solution:**

Sediment from the Mississippi River will be hydraulically dredged and pumped via pipeline to create/nourish approximately 351 acres of wetlands by converting open water into marsh and nourishing existing marsh remnants in the triangular-shaped area adjacent to the headwaters of Bayou Bienvenue. To help stabilize the new marsh platform, approximately half of the project area (176 ac) will be planted after construction to reduce time for full vegetation. Containment dikes will be constructed around the marsh creation area to keep material within the project area during pumping, which will be degraded in appropriate areas no later than three years after construction is completed. Restoration in this area will build New Orleans' defenses against hurricanes and flooding and offer opportunities for public recreation and wildlife habitat.

### **Project Benefits:**

The project would result in approximately 276 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$34,219,915.

### **Preparers of Fact Sheet:**

Barbara Aldridge, EPA, 214-665-2712, [aldridge.barbara@epa.gov](mailto:aldridge.barbara@epa.gov)

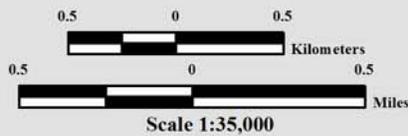
Aaron Hoff, EPA, 214-665-7319, [hoff.aaron@epa.gov](mailto:hoff.aaron@epa.gov)



## Bayou Bienvenue Marsh Creation (PPL24 Candidate)



- Marsh Creation \***
  - Project Boundary**
- \* denotes proposed features



Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Assessment Branch  
 Baton Rouge, La

Image Source:  
 2012 Digital Orthophoto Quarter Quadrangles

Map ID: USGS-NWRC 2014-11-0026  
 Map Date: September 19, 2014

## **Candidate Projects Located in Region 2**

## **PPL24 Grand Bayou Marsh Creation and Terracing**

### **Project Location:**

Region 2, Barataria Basin, Plaquemines Parish

### **Problem:**

Within the Lake Hermitage basin, between Bayou Grande Cheniere and the Mississippi River, significant marsh loss has occurred with the construction of oil/gas canals, subsidence, and sediment deprivation. From examination of aerial photography, it appears that the majority of this loss occurred during the 1960s and 1970s when numerous oil/gas canals were dredged in the area. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, loss rates in the project area are estimated to be -1.49% per year for the period 1984 to 2011.

### **Goals:**

The primary goals of this project are; 1) restore marsh habitat in the open water areas via marsh creation and terracing and 2) reduce fetch and wave energy in open water areas via the construction of terraces. Specific goals of the project are: 1) Create approximately 366 acres of marsh with dredged material from the Mississippi River; 2) create 52,650 linear feet (37 acres) of terraces.

### **Proposed Solution:**

Sediments from a Mississippi River borrow site will be hydraulically dredged and pumped via pipeline to create/nourish approximately 366 acres of marsh. The proposed design is to place the dredged material to a fill height of +2.0 ft NAVD88 (per the BA-42 Lake Hermitage Marsh Creation Project). Dewatering and compaction of dredged sediments should produce marsh elevations conducive to the establishment of emergent marsh and within the intertidal range. Containment dikes will be constructed as necessary. Perimeter containment dikes exposed to high wave energy will be planted. Containment dikes will be gapped.

Approximately 52,650 linear feet of terraces (35 acres) will be constructed in open water areas east and west of Grand Bayou. Terraces will have a 15-ft crown width, a height of +2.5 ft NAVD88, and side slopes of 1(V):6(H). A barge-mounted bucket dredge and marsh buggies will be utilized for construction. The terraces will be planted with seashore paspalum on the crown and smooth cordgrass on the side slopes.

### **Project Benefits:**

The project would result in approximately 340 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$37,405,780.

### **Preparer of Fact Sheet:**

Kevin Roy, FWS, [Kevin\\_Roy@fws.gov](mailto:Kevin_Roy@fws.gov), 337-291-3120



## Grand Bayou Marsh Creation and Terracing (PPL24 Candidate)



- Marsh Creation \*
  - Terrace Field \*
  - Project Boundary
- \* denotes proposed features



Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Assessment Branch  
 Baton Rouge, La

Image Source:  
 2012 DOQQ

Map ID: USGS-NWRC 2014-11-0020  
 Map Date: July 02, 2014

## **PPL24 East Leeville Marsh Creation and Nourishment**

### **Project Location:**

Region 2, Barataria Basin, Lafourche Parish (primary)  
Region 3, Terrebonne Basin, Lafourche Parish

### **Problem:**

There is historic and continued rapid land loss within the project and surrounding areas resulting from oil and gas exploration, subsidence, wind erosion, storms, and altered hydrology. The limits of Southwestern Louisiana Canal are difficult to determine in some areas because land loss is causing the coalescence of the canal with adjacent water bodies. A large section of the western bank of South Lake has been lost increasing wave fetch and further coalescence of natural lakes with adjacent waters that were once marsh. Natural tidal flow and drainage patterns which once existed are currently circumvented by the increasing area of open water. The wetland loss rate for the project area is -1.15%/year based on USGS data from 1984 to 2011.

### **Goals:**

The project goal is to create approximately 352 acres and nourish 130 acres of saline marsh east of Leeville.

### **Proposed Solution:**

After consideration of three potential alternatives, an alignment was selected to re-establish an arc of wetlands along the north side of Southwestern Canal, Lake Jesse, and the west side of South Lake. This is to begin rebuilding the structural framework of wetlands east of Leeville and provide protection for Leeville from southeasterly winds and tides. A robust engineering and design cost was included for full flexibility during Phase 1 to expand the project if cost allows or to assess alternative configurations, if necessary. The proposed features consist of hydraulically mining sediment from a borrow source in Little Lake west of Leeville and pumping material to create and nourish marsh east of Leeville. The disposal areas would be fully contained during construction and gapped no later than three years post construction to establish tidal connection and function. Additionally, 50% of the created marsh acres would be planted with smooth cordgrass following construction to help stabilize the created platform by increasing the rate of colonization.

### **Project Benefits:**

The project would result in approximately 326 net acres over the 20-year project life.

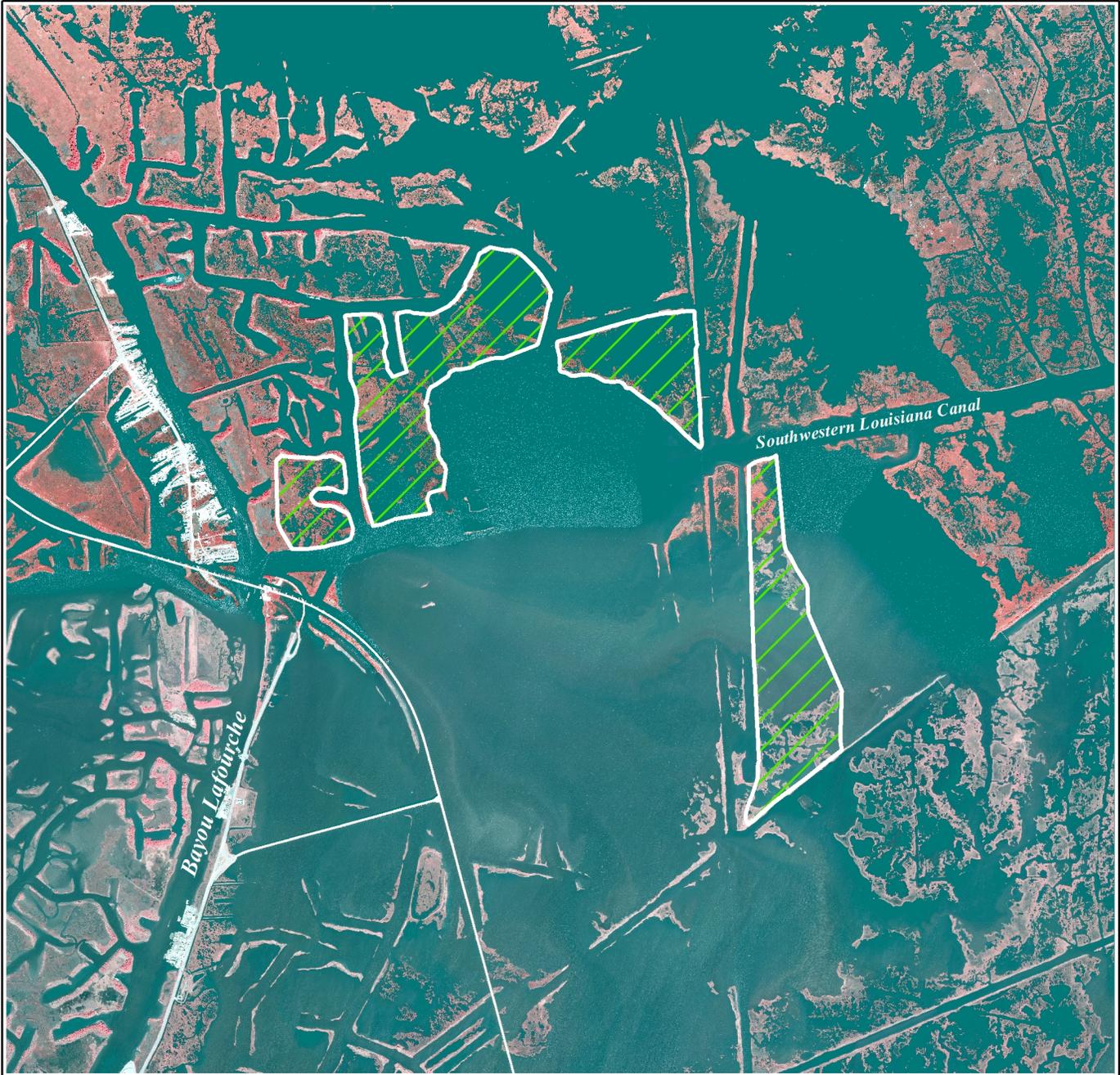
### **Project Costs:**

The total fully-funded cost is \$34,883,208.

### **Preparers of Fact Sheet**

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Lisa Abernathy, NOAA's National Marine Fisheries Service, (225) 389-0508, extension 209  
[Lisa.Abernathy@noaa.gov](mailto:Lisa.Abernathy@noaa.gov)

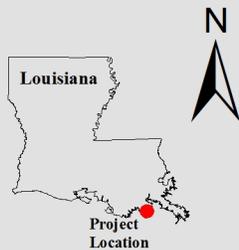


## East Leeville Marsh Creation and Nourishment (PPL24 Candidate)



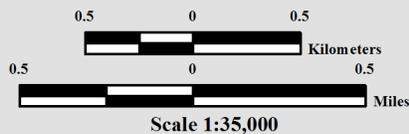
Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Assessment Branch  
 Baton Rouge, La

Image Source:  
 2012 DOQQ



- Marsh Creation \*
- Project Boundary

\* denotes proposed features



Map ID: USGS-NWRC 2014-11-0024  
 Map Date: June 25, 2014

## **Candidate Projects Located in Region 3**

## **PPL24 West Fourchon Marsh Creation and Marsh Nourishment**

### **Project Location:**

The project is located in Region 2, Terrebonne Basin, in Lafourche Parish

### **Problem:**

The primary causes of land loss in the project area are oil and gas canals, subsidence, and sediment deprivation, which have resulted in an estimated rate of -0.41% per year based on hyper-temporal analysis conducted by USGS for the extended project boundary for the years 1984 to 2012. Bounded by Bayou Lafourche to the east and Timbalier Bay to the west the project area is also subject to shoreline erosion.

### **Goals:**

The goals of this project are to create and nourish 614 acres of marsh, by pumping sediment from an offshore borrow site in the Gulf of Mexico. This project will create new marsh habitat and increase the longevity of existing habitat. The project will also help protect the people and infrastructure of Port Fourchon.

### **Proposed Solution:**

This project would create 302 acres of saline intertidal marsh and nourish 312 acres of emergent marsh using material dredged from the Gulf of Mexico, southwest of the project area. Earthen containment dikes will be constructed along the project boundary to contain the material. Vegetative plantings are planned at a 50% density, with half planned at TY1 and half planned at TY3 if necessary. Containment dikes will be degraded or gapped by TY3 to allow access for estuarine organisms. Funding will be set aside for the creation of tidal creeks if needed. This project, along with TE-23 and TE-52, will help stabilize the edge of the marshes and protect Port Fourchon from the west. The initial construction elevation is +2.4 feet NAVD 88; after settlement, marsh is expected to be +1.4 NAV 88.

### **Project Benefits:**

The project would result in approximately 304 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$29,405,764.

### **Preparers of Fact Sheet:**

Costal Restoration and Protection Authority

Logan Boudreaux, [logan.boudreaux@la.gov](mailto:logan.boudreaux@la.gov); (225) 342-2639

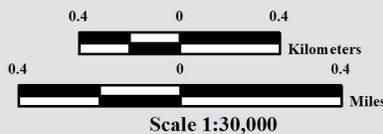
Stuart Brown, [stuart.brown@la.gov](mailto:stuart.brown@la.gov); (225) 342-4596



## West Fourchon Marsh Creation and Marsh Nourishment (PPL24 Candidate)



- Marsh Creation \***
- Project Boundary**
- \* denotes proposed features**



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 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Assessment Branch  
 Baton Rouge, La

Image Source:  
 2012 DOQQ

Map ID: USGS-NWRC 2014-11-0025  
 Map Date: June 25, 2014

## **PPL24 Bayou Dularge Ridge Restoration and Marsh Creation**

### **Project Location:**

Region 3, Terrebonne Basin, Terrebonne Parish, Bayou Dularge at Grand Pass

### **Problem:**

The Bayou Dularge Ridge is a prominent feature in the south central Terrebonne Basin forming a diagonal ridge extending from northeast to southwest that historically restricted the Gulf marine influence into Central Terrebonne marshes. The project location provides a unique opportunity to manage salinity intrusion into a vast area where historically salinity was naturally moderated through intact land features. The Grand Pass, a 900 ft wide artificial cut through the Bayou Dularge Ridge, south of Lake Mechant, is currently being addressed in the CWPPRA TE-66 project. However, the integrity of the ridge is also of concern due to erosion of the adjacent marshes. Loss of this important land bridge separating Lake Mechant from Sister Lake would undermine efforts to restore the fresh and intermediate marshes to the north and eliminate an important landscape feature of critical importance to basin hydrology. The State Master Plan has also identified the ridge as a restoration priority.

### **Goals:**

The project will create/restore a ridge feature and marsh in the landbridge that separates Lake Mechant from Sister Lake to insure the integrity of the ridge and the important function of sustaining optimal salinity gradients and promote healthy marsh recovery in the region.

### **Proposed Solution:**

The project would create approximately 20,182 linear feet (26 acres) of forested coastal ridge south of Bayou Dularge and create/nourish approximately 464 acres of marsh. Lake sediments will be hydraulically dredged and pumped via pipeline to supply material to the marsh creation locations. Containment dikes will be constructed around marsh creation areas to retain material during pumping. Additionally, the ridge feature will be fully planted with appropriate hardwood species.

### **Project Benefits:**

The project would result in approximately 304 net acres of emergent marsh and forested coastal ridge over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$42,725,312.

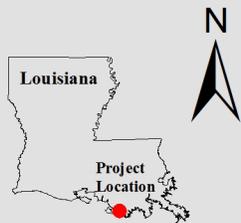
### **Preparers of Fact Sheet:**

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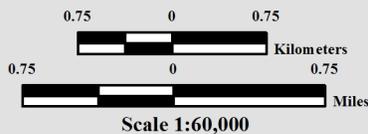
John Jurgensen, NRCS, (318) 473-7694, [john.jurgensen@la.usda.gov](mailto:john.jurgensen@la.usda.gov)



## Bayou Dularge Ridge Restoration and Marsh Creation (PPL24 Candidate)



- Ridge Restoration \*
  - Marsh Creation \*
  - Project Boundary
- \* denotes proposed features



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 National Wetlands Research Center  
 Coastal Restoration Assessment Branch  
 Baton Rouge, La

Image Source:  
 2012 DOQQ

Map ID: USGS-NWRC 2014-11-0028  
 Map Date: September 03, 2014

## **PPL24 South Humble Marsh Creation and Nourishment**

### **Project Location:**

The project is located in Region 3, Teche - Vermilion Basin, in Vermilion Parish

### **Problem:**

Project area wetlands are being lost at a rate of -0.78 % per year based on USGS analysis (1985-2010). Marshes in this area are subject to losses from shoreline erosion, subsidence/sediment deficit, hurricane impacts, and interior ponding. Shoreline erosion along the Freshwater Bayou Canal has resulted in direct wetland loss as the canal has widened from an authorized width of less than 200 feet to 800 feet. In addition to these direct losses, significant interior marsh loss has resulted from saltwater intrusion and hydrologic changes associated increasing tidal influence, storm surge impacts, and herbivory. The ensuing erosion creates water turbidity within the interior ponds, this coupled with increased pond depth, decreases the coverage of submerged aquatic vegetation. Recent hurricane scour sites are not likely to recover unaided. Erosion of the eastern bank line of Freshwater Bayou has resulted in formation of three breaches, allowing boat wakes and hydrologic action to adversely affect the interior project area marshes. The wakes from passing vessels and tidal action are also causing the export of organic material from the project area.

### **Goals:**

The project goal is to create and/or nourish approximately 516 ac of marsh (301 ac created, 215 ac nourished) of emergent brackish marsh using sediment from the Gulf.

### **Proposed Solution:**

The proposed project would create and/or nourish approximately 516 acres of marsh (301 acres created, 215 acres nourished). Sediment will be hydraulically pumped from the Gulf of Mexico into the shallow water marsh creation area. Containment dikes will be constructed around the marsh creation area to keep material on site during pumping. The saline effluent will be direct toward Freshwater Bayou and will not be discharged eastward into existing marshes. Once pumping has been completed, dikes will be gapped, tidal channels will be constructed and some vegetative plantings will occur if needed within the newly created areas.

### **Project Benefits:**

The project would result in approximately 294 net acres over the 20-year project life.

### **Project Costs:**

The total fully funded cost is \$34,489,655.

### **Preparer(s) of Fact Sheet:**

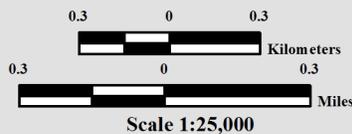
Ronald Paille: U.S. Fish and Wildlife Service; 337-291-3117



## South Humble Marsh Creation and Nourishment (PPL24 Candidate)



-  Water Control Structure \*
  -  Tidal Creeks \*
  -  Marsh Creation \*
  -  Project Boundary
- \* denotes proposed features



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U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Assessment Branch  
Baton Rouge, La

Image Source:  
2012 DOQQ

Map ID: USGS-NWRC 2014-11-0029  
Map Date: July 21, 2014

## **Candidate Projects Located in Region 4**

## **PPL24 Southeast Pecan Island Marsh Creation and Freshwater Enhancement**

### **Project Location:**

Region 4, Mermentau Basin, Vermilion Parish, east of Pecan Island and south of Highway 82.

### **Problem:**

The Southeast Pecan Island project area and surrounding marshes have experienced significant land loss from storm impacts, increased tidal exchange, saltwater intrusion, and reduced freshwater retention. Based on USGS data from 1984 to 2010, the wetland loss rate for the proposed project area is 0.84 %/year. Recent land loss, resulting from Hurricanes Rita and Ike, left Louisiana State Highway 3147 and Front Ridge Road exposed to open water wave action and vulnerable to additional storms.

Currently, Highway 82 forms a hydrologic barrier that isolates the Chenier Subbasin from freshwater associated with the Grand and White Lakes Subbasin. Highway 82 traverses cheniers wherever possible, however, low spots between cheniers historically allowed drainage from the Lakes Subbasin south into the Chenier Subbasin.

### **Goals:**

The project goals are to restore/improve hydrologic conditions and increase emergent marsh vegetation throughout the project area. The project would help restore drainage of excess freshwater from the Lakes Subbasin into the Chenier Subbasin. Restoring the hydrology would reduce the exposure of fragile interior marsh to seasonal salinity spikes and increase productivity of marshes.

### **Proposed Solution:**

The project would create/nourish approximately 401 acres of emergent marsh; create 55,348 linear feet (45 acres) of terraces; and promote growth of submerged aquatic vegetation.

The freshwater enhancement feature would improve hydrologic conditions by allowing water from the Lakes Subbasin to drain south into the Chenier Subbasin. The majority of the necessary infrastructure exists and would require channel clean out and the construction of two outlet structures, replacement of four sets of culverts along the conveyance channel, and the potential cleanout of culverts under Highway 82.

### **Project Benefits:**

The project would result in approximately 388 net acres over the 20-year project life.

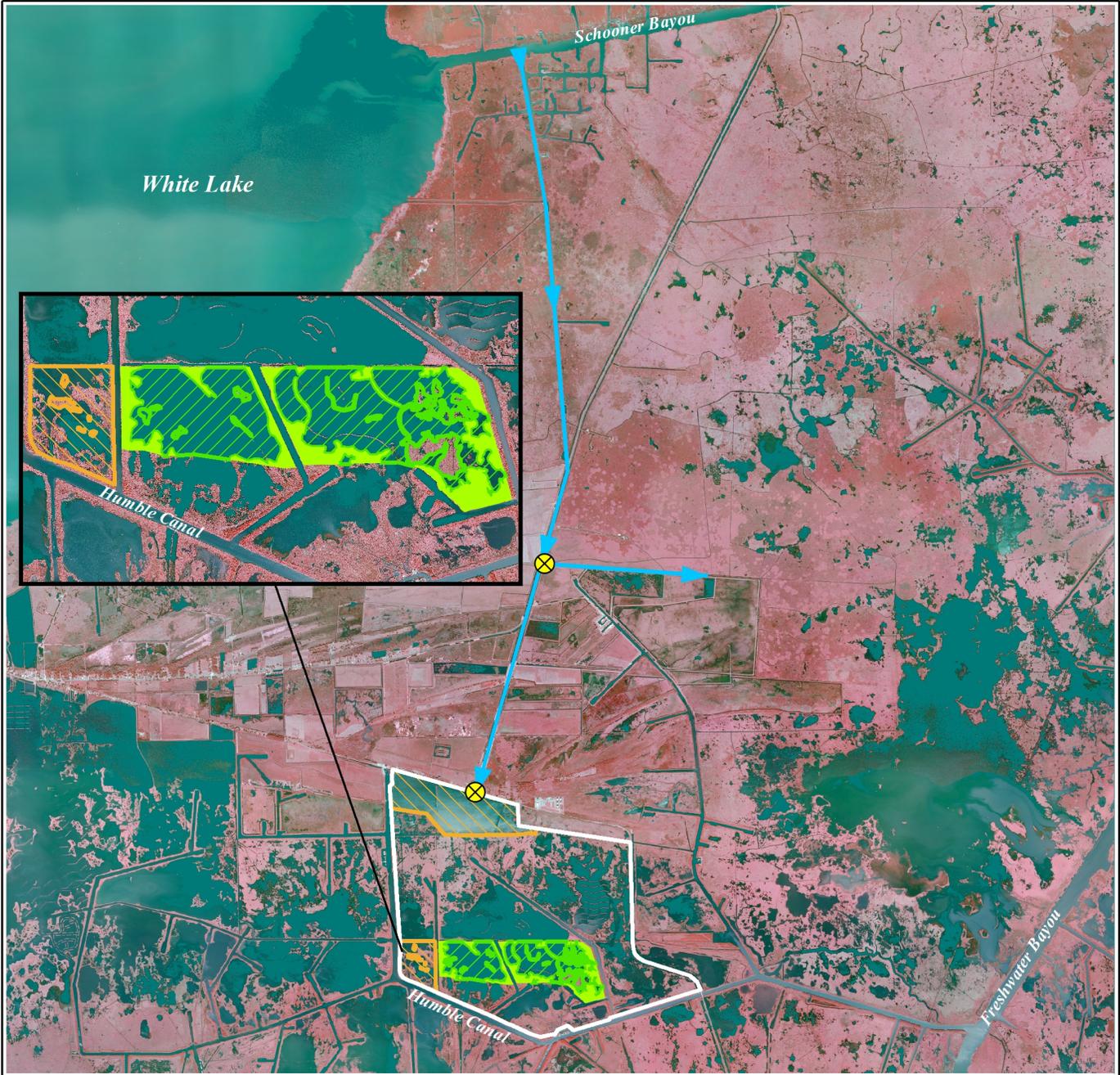
### **Project Costs:**

The total fully-funded cost is \$38,586,563.

### **Preparers of Fact Sheet:**

Troy Mallach, NRCS, (337) 291-3064, [troy.mallach@la.usda.gov](mailto:troy.mallach@la.usda.gov)

Billy Broussard, Vermilion Corps, (337) 893-0268, [bbillypb@kaplantel.net](mailto:bbillypb@kaplantel.net)



### Southeast Pecan Island Marsh Creation and Freshwater Enhancement (PPL24 Candidate)



-  Culvert with Flapgate \*
-  Freshwater Introduction \*
-  Marsh Creation \*
-  Marsh Nourishment \*
-  Terrace Field \*
-  Influence Area/Project Boundary \*

\* denotes proposed features



Scale 1:100,000



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U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Assessment Branch  
Baton Rouge, La

Image Source:  
2012 DOQQ

Map ID: USGS-NWRC 2014-11-0027  
Map Date: September 10, 2014

## **PPL24 No Name Bayou Marsh Creation and Nourishment**

### **Project Location:**

Region 4, Calcasieu-Sabine Basin, Cameron Parish

### **Problem:**

The project area is located in the Cameron-Creole Watershed Management Area which protects approximately 64,000 acres in the watershed. It includes a 16.5 mile levee along Calcasieu Lake and five large concrete water control structures to manage the unit and prevent the effects of saltwater intrusion, by managing salinity, tidal exchange, water levels, and estuarine organism movement into and out of the watershed. The Calcasieu Ship Channel, immediately west of the project area, provides an avenue for the rapid movement of high-salinity water into the marshes around Calcasieu Lake. This movement increased salinity in the area, resulting in plant death and marsh loss. The weakened marshes located between the East Fork of the Calcasieu River and Calcasieu Lake has also been decimated by hurricanes. Marshes that once provided a buffer to the southwest rim of Calcasieu Lake are now shallow open water areas.

### **Goals:**

The project goal is to create and/or nourish approximately 533 acres of emergent saline marsh within the Cameron-Creole watershed along the Calcasieu Lake rim using sediment from upland disposal sites of the Calcasieu River.

### **Proposed Solution:**

The proposed project's primary feature is to create and/or nourish approximately 533 acres of saline marsh (502 acres created, 21 acres nourished) south of Calcasieu Lake. In order to achieve this, approximately 3.5 million cubic yards of sediment will be hydraulically pumped from the upland disposal areas of the Calcasieu River immediately adjacent to (across East Fork), and into the shallow water marsh creation area to an elevation of 1.4 ft NAVD 88. Clean out approximately 5,000 LF of the Cameron Creole Watershed Levee borrow channel to facilitate water movement into the newly created area. Containment dikes will be constructed around the marsh creation area to keep material on site during pumping. Once pumping has been completed, the containment dikes will be degraded to the current platform elevation and gaps will be excavated. Additionally, 251 acres of vegetative plantings will occur within the newly created areas. Approximately 10,000 linear feet of tidal creeks and two 2.5 acre ponds will be constructed to help facilitate hydrologic flow of water in and out of project area.

### **Project Benefits:**

The project will result in approximately 497 net acres over the 20-yr project life.

### **Project Costs:**

The total fully funded cost is \$28,253,137.

### **Preparer(s) of Fact Sheet:**

John D. Foret, Ph.D, NOAA's National Marine Fisheries Service, (337) 291-2107,

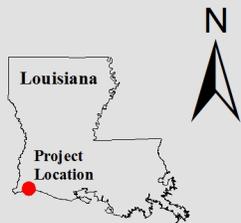
[John.Foret@noaa.gov](mailto:John.Foret@noaa.gov)

Kimberly Clements, NOAA's National Marine Fisheries Service, (225) 389-0508, extension 204,

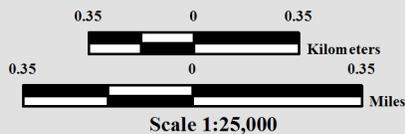
[Kimberly.Clements@noaa.gov](mailto:Kimberly.Clements@noaa.gov)



**No Name Bayou Marsh Creation and Nourishment  
(PPL24 Candidate)**



-  Channel Cleanout \*
  -  Marsh Creation \*
  -  Project Boundary
- \* denotes proposed features



Produced by:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Assessment Branch  
Baton Rouge, La

Image Source:  
2012 DOQQ

Map ID: USGS-NWRC 2014-11-0022  
Map Date: June 25, 2014

# **Candidate Demonstration Project**

## **PPL24 Innovative Bedload Sediment Collector Demonstration Project**

### **Potential Demonstration Project Location:**

Coastwide

### **Problem:**

Sediments for restoration projects are typically excavated from static borrow sources by disruptive and costly dredge platforms and dredging operations. These sediment borrow sources have limited capacity, with nominal natural replenishment rates following their excavation.

### **Goals:**

The goal of this project is to demonstrate the potential use and effectiveness of the Innovative Bedload Sediment Collector technology for passively collecting sediment at its natural transport rate, as an alternative to conventional dredging.

### **Proposed Solution:**

The Innovative Bedload Sediment Collector demonstration project will consist of (3) 12' high capacity collectors at three separate locations of varying environments, for a 12 month duration, to monitor and evaluate the removal of bedload sediment for beneficial reuse. Each site will include one complete Streamside Systems 12' collector system with supporting equipment. The stainless steel 12' collector will be set in the main channel of a river or bayou and will be located at or just above grade of the channel bottom to collect migrating sediment. After the sediment is collected, it will be hydraulically pumped to adjacent beneficial reuse sites. Each site will be approximately one acre and fully contained.

### **Project Benefits:**

Potential benefits include: 1) passive collection and delivery of sediments for the purpose of beneficial use; 2) capture sediment that would otherwise migrate out of the system; 3) reduce impacts by optimally collecting sediment in a non-disruptive, non-intrusive, and sustainable manner.

### **Project Costs:**

The fully-funded cost is \$2,608,601.

### **Preparer of Fact Sheet:**

Scott Wandell, USACE, 504-862-1878, [scott.f.wandell@usace.army.mil](mailto:scott.f.wandell@usace.army.mil)  
Brian Halm, Streamside Environmental LLC, 419-423-1290,  
[bhalm@streamsideenvironmental.com](mailto:bhalm@streamsideenvironmental.com)

# Sediment Collectors

- Sediment Collectors represent a new, innovative technology, using simple physical principles to capture bedload sediments.
- Passive Collectors allow the energy of the stream to move bedload sediment up the Collector's ramp and into a hopper. As the sediment fills the hopper, it is pumped to a beneficial use site.

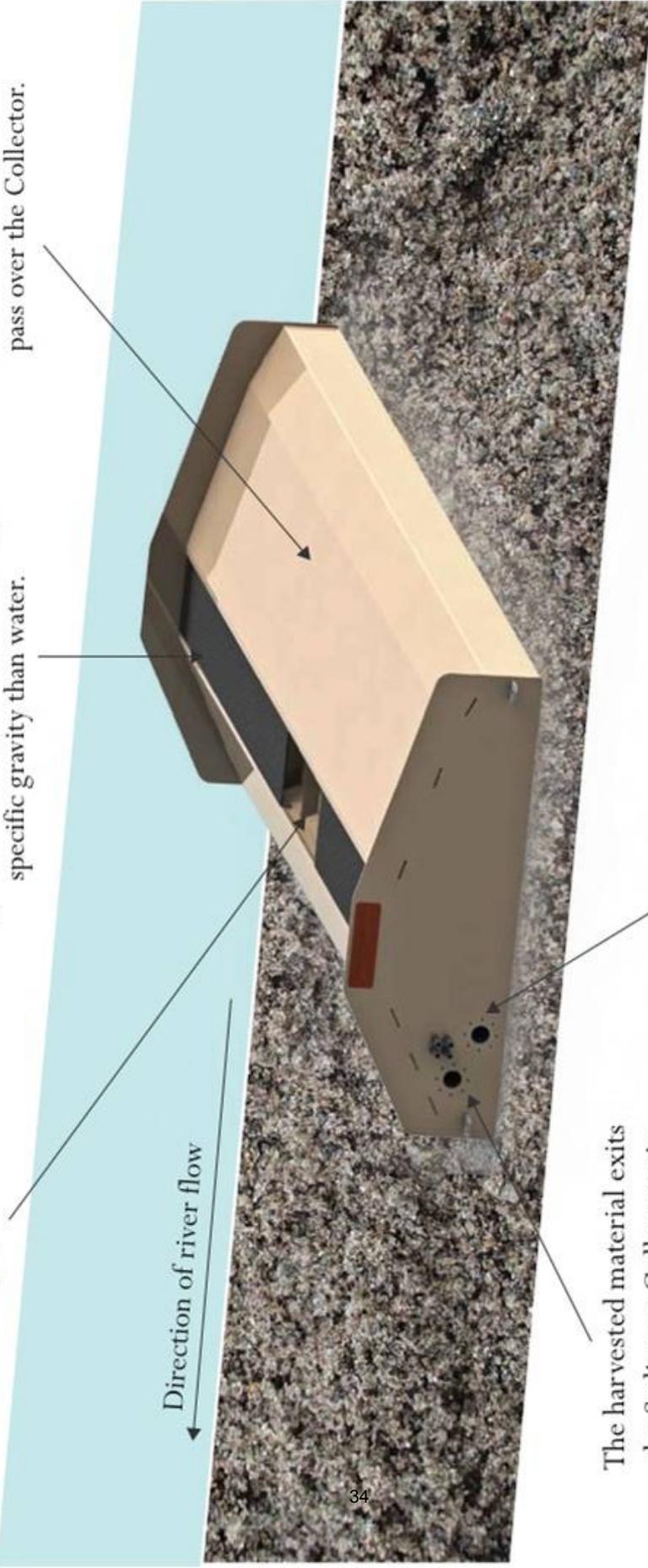


**STREAMS DE  
TECHNOLOGY**  
simplified thinking.

Once the material has passed through the grate system, it is collected within the hopper. The hopper acts as a collection basin that contains alternating suction and inject ports, which allows for a modified closed-loop system.

The grate system installed above the hopper acts as a screen to selectively remove a specified particle size and allow for larger sized material to continue moving downstream. The Sediment Collector is designed to collect particles with a higher specific gravity than water.

Coarse-grained sediment – fine sands to gravel – migrates as bedload and travels up the ramp of the Sediment Collector. Finer sediments (silts & clays), as well as other organic matter, remain in suspension and pass over the Collector.



The harvested material exits the Sediment Collector via suction ports and is pumped as a slurry to a placement or dewatering site.

Inject ports allow the water from the dewatering system to be returned to the Collector, this helps to reduce impingement and minimize discharge of water to the river.

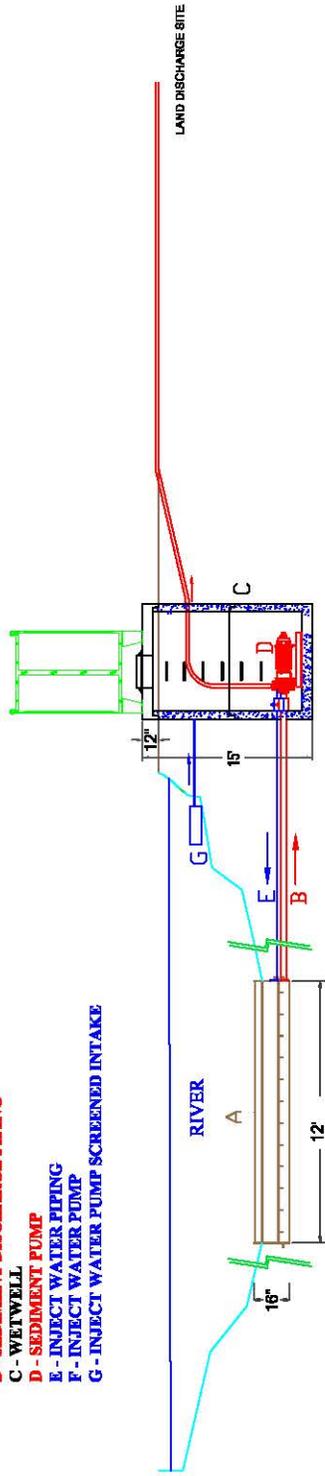
Large-Scale Sediment Collector

Summary of Sediment Collector Technology

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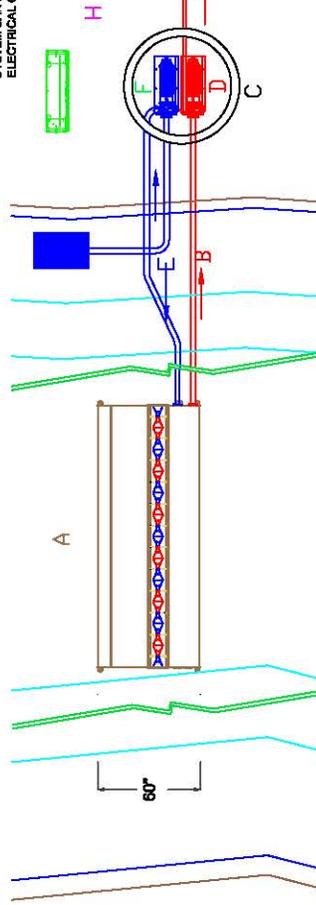
**STREAMSIDE  
TECHNOLOGY**  
simplified thinking.

- A - 12' SEDIMENT COLLECTOR
- B - SEDIMENT DISCHARGE PIPING
- C - WETWELL
- D - SEDIMENT PUMP
- E - INJECT WATER PIPING
- F - INJECT WATER PUMP
- G - INJECT WATER PUMP SCREENED INTAKE



**STREAMSIDE SYSTEMS ©**  
**12' COLLECTOR W/LAND APPLICATION OF DISCHARGE**  
 CONCEPTUAL DRAWING (SIDE VIEW)

STREAMSIDE SYSTEMS PATENTED BEDLOAD SEDIMENT COLLECTOR  
 MODEL 80 X 144 X 18 HIGH CAPACITY WITH RETURN WATER INJECT TO REDUCE IMPINGEMENT  
 (6) EXTERNAL ANCHORING POINTS, (6) 2 FOOT PANELS OF 3/8" OPENING STAINLESS STEEL GRATES  
 (4) DISCHARGE PIPING AND INJECT PIPING,  
 (1) 20 HP DREDGE PUMP IN WETWELL, 420 GPM WITH 80 FEET OF HEAD  
 (1) WETWELL SIZED FOR THE PUMP, TO A DEPTH NO GREATER THAN THE COLLECTOR, (SUPPLIED BY CONTRACTOR)  
 DISCHARGE PIPING AND INJECT PIPING MUST BE HDPE DR11  
 (1) 120" RAMP DECKS  
 (1) 1/4" END PLATES, .120" RAMP DECKS  
 SYSTEM CAN BE EITHER 230/240 OR 480/240V  
 ELECTRICAL CONTROL PANEL WITH VARIABLE FREQUENCY DRIVE FOR ALL MOTORS



**STREAMSIDE SYSTEMS ©**  
**12' COLLECTOR W/LAND APPLICATION OF DISCHARGE**  
 CONCEPTUAL DRAWING (PLAN VIEW)

		STREAMSIDE TECHNOLOGY LLC 1105 W. WYOMING ST. SUITE 100 WYOMING, WY 82001-2101 TEL: 307-201-1000 FAX: 307-201-1001
PROJECT NO. DRAWING NO. SHEET NO.	230-240-001 230-240-001-A 1 OF 1	DATE 8/8/2014

## PPL24 Candidate Project Evaluation Matrix

Project Name	Region	Parish	Project Area (acres)	Average Annual Habitat Units (AAHU)	Net Acres	Total Fully Funded Cost	Fully-Funded Phase I Cost	Fully-Funded Phase II Cost	Average Annual Cost (AAC)	Cost Effectiveness (AAC/AAHU)	Cost Effectiveness (Cost/Net Acre)
New Orleans Landbridge Shoreline Stabilization & Marsh Creation	1	Orleans	271	94	167	\$17,549,317	\$1,942,143	\$15,607,174	\$1,170,739	\$12,455	\$105,086
Shell Beach South Marsh Creation	1	St. Bernard	634	184	344	\$28,101,520	\$3,176,569	\$24,924,951	\$1,883,180	\$10,235	\$81,690
Bayou Bienvenue Marsh Creation	1	Orleans	351	85	276	\$34,219,915	\$3,801,431	\$30,418,484	\$2,315,093	\$27,236	\$123,985
Grand Bayou Marsh Creation & Terracing	2	Plaquemines	1,201	174	340	\$37,405,780	\$3,263,637	\$34,142,143	\$2,511,573	\$14,434	\$110,017
East Leeville Marsh Creation & Nourishment	2	Lafourche	484	196	326	\$34,883,208	\$3,971,658	\$30,911,550	\$2,333,005	\$11,903	\$107,004
West Fouchon Marsh Creation & Marsh Nourishment	3	Terrebonne	614	195	304	\$29,405,764	\$3,201,929	\$26,203,835	\$1,976,277	\$10,135	\$96,729
Bayou Dularge Ridge Restoration & Marsh Creation	3	Terrebonne	490	176	304	\$42,725,312	\$3,840,532	\$38,884,780	\$2,897,022	\$16,460	\$140,544
South Humble Marsh Creation & Nourishment	3	Vermilion	523	183	294	\$34,489,655	\$3,600,021	\$30,889,634	\$2,318,781	\$12,671	\$117,312
Southeast Pecan Island Marsh Creation & Freshwater Enhancement	4	Vermilion	3,280	215	388	\$38,586,563	\$3,903,670	\$34,682,893	\$2,566,812	\$11,939	\$99,450
No Name Bayou Marsh Creation & Nourishment	4	Cameron	533	231	497	\$28,253,137	\$2,724,524	\$25,528,613	\$1,884,364	\$8,157	\$56,847

rev 11/04/14

# PPL 24 Demonstration Project Evaluation Matrix

10/27/2014

(Parameter grading as to effect: 1 = low; 2 = medium; 3 = high)

Demonstration Project Name	Lead Agency	Total Fully Funded Cost	Parameter (P <sub>n</sub> )						Total Score	Averaging of Agency Scores
			P <sub>1</sub> Innovativeness	P <sub>2</sub> Applicability or Transferability	P <sub>3</sub> Potential Cost Effectiveness	P <sub>4</sub> Potential Env Benefits	P <sub>5</sub> Recognized Need for Info	P <sub>6</sub> Potential for Technological Advancement		
Innovative Bedload Sediment Collector DEMO	USACE	\$2,608,601	3	1	1	2	1	1	9	9.7

"Total Score" calculation:

Individual parameter scores were determined from the score having the majority of the vote. Example - if 4 agencies cast a vote of "3" and 3 agencies cast a vote of "2", then a score of "3" was given.

"Averaging of Agency Scores"

calculation:

Calculated by averaging the Total Scores from each Agency.

## Demonstration Project Parameters

(P<sub>1</sub>) *Innovativeness* - The demonstration project should contain technology that has not been fully developed for routine application in coastal Louisiana or in certain regions of the coastal zone. The technology demonstrated should be unique and not duplicative in nature to traditional methods or other previously tested techniques for which the results are known. Techniques which are similar to traditional methods or other previously tested techniques should receive lower scores than those which are truly unique and innovative.

(P<sub>2</sub>) *Applicability or Transferability* - Demonstration projects should contain technology which can be transferred to other areas of the coastal zone. However, this does not imply that the technology must be applicable to all areas of the coastal zone. Techniques, which can only be applied in certain wetland types or in certain coastal regions, are acceptable but may receive lower scores than techniques with broad applicability.

(P<sub>3</sub>) *Potential Cost Effectiveness* - The potential cost-effectiveness of the demonstration project's method of achieving project objectives should be compared to the cost-effectiveness of traditional methods. In other words, techniques which provide substantial cost savings over traditional methods should receive higher scores than those with less substantial cost savings. Those techniques which would be more costly than traditional methods, to provide the same level of benefits, should receive the lowest scores. Information supporting any claims of potential cost savings should be provided.

(P<sub>4</sub>) *Potential Environmental Benefits* - Does the demonstration project have the potential to provide environmental benefits equal to traditional methods? somewhat less than traditional methods? above and beyond traditional methods? Techniques with the potential to provide benefits above and beyond those provided by traditional techniques should receive the highest scores.

(P<sub>5</sub>) *Recognized Need for the Information* - Within the restoration community, is there a recognized need for information on the technique being investigated? Demonstration projects which provide information on techniques for which there is a great need should receive the highest scores.

(P<sub>6</sub>) *Potential for Technological Advancement* - Would the demonstration project significantly advance the traditional technology currently being used to achieve project objectives? Those techniques which have a high potential for completely replacing an existing technique at a lower cost and without reducing wetland benefits should receive the highest scores.

# *Coastal Wetlands Planning, Protection and Restoration Act*

## *Technical Committee Meeting Announcement*

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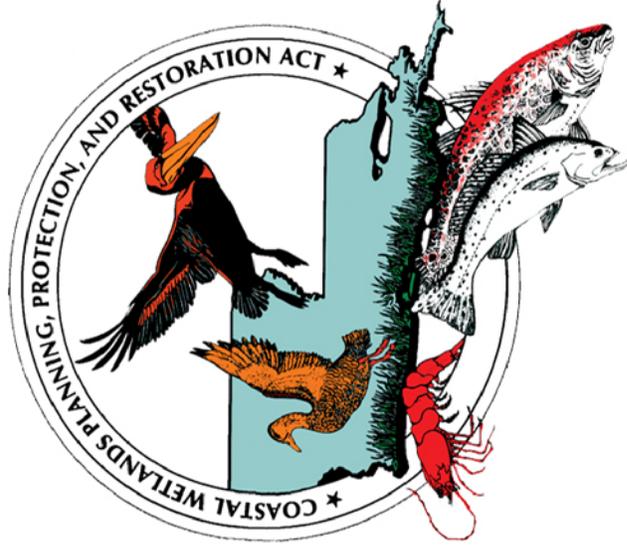
**Date:** December 11, 2014

**Time:** 9:30 a.m.

**Location:** LA Dept of Wildlife and Fisheries  
Louisiana Room  
2000 Quail Drive  
Baton Rouge, Louisiana

### **Technical Committee Meeting**

The evaluation results will be presented for all the PPL 24 candidate projects. The public is invited to attend and provide comments on the candidate projects. The Technical Committee will vote & recommend projects for PPL 24 selection. The Technical Committee will also consider requests for construction (Phase II) approvals.



**Written comments may be provided no later than November 26, 2014 to the CWPBRA Task Force by mail, fax or email to:**

**Colonel Richard Hansen**  
**District Engineer, New Orleans**  
**c/o: Brad Inman**  
**U.S. Army Corps of Engineers**  
**P.O. Box 60267**  
**New Orleans, Louisiana**

**Fax: 504-862-2572**

**Email: [Brad.L.Inman@usace.army.mil](mailto:Brad.L.Inman@usace.army.mil)**

# Letters of Support



*River to Bayou*

November 26, 2014

Coastal Wetlands Planning, Projection, and Restoration Act Technical Committee

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

RE: *Letter of Support for the Bayou Bienvenue Triangle Marsh Creation Project*

Dear Coastal Wetlands Planning, Projection, and Restoration Act Technical Committee --

We are writing to express our support for the Bayou Bienvenue Triangle Marsh Creation (the Triangle) candidate project on the Coastal Wetlands Planning, Projection, and Restoration Act's (CWPPRA) 24<sup>th</sup> Project Priority List (PPL24). The Triangle is located just north of the City of New Orleans' Lower Ninth Ward along Florida Avenue and on the border St. Bernard parish. The area is a remnant of a dense freshwater cypress tupelo forest that existed within city boundaries until roughly 50 years ago. Hydrologic impoundment, subsidence and saltwater intrusion largely caused by the construction of the Mississippi River Gulf Outlet (MRGO) in the 1960s, killed the cypress trees converting the area into open water and creating a "ghost" swamp.

The Triangle provides a unique opportunity for highly visible coastal restoration work. An overlook platform at the end of Caffin Avenue allows for access to the site. Only five miles from the French Quarter, the platform already attracts thousands of locals and tourists each year who can learn about the history of the swamp and see an example of the coastal land loss problems that extend throughout southern Louisiana. This CWPPRA project will help restore the historic bankline along Bayou Bienvenue and reintroduce Mississippi River sediment to the Triangle, creating a marsh platform that is critical to full restoration in the Triangle. The restoration of the Triangle can showcase the process and outcome of restoration projects in Louisiana while providing an accessible venue for outreach and education. This project is complementary to the State's Coastal Master Plan and will allow large numbers of people to see the Master Plan in action and CWPPRA funds at work.

The Bayou Bienvenue Wetland Triangle has been a focal point for the recovery efforts in the Lower Ninth Ward community post Hurricane Katrina and has enjoyed broad support from tens of thousands of people across the nation since the storm. This project proposal supports the community's vision for

restoration and will provide great benefits for the Lower Ninth Ward and surrounding neighborhoods. In addition to the outreach and education benefits highlighted above, restoration will increase habitat value, increase resilience, increase recreational opportunities and quality of life for urban residents, and provide for future restoration opportunities (such a plantings).

We ask that you recognize the importance of this project to Louisiana's larger restoration agenda and choose this project for construction.

Sincerely,



Arthur J. Johnson, CEO

Cc:

**Technical Committee:**

Mr. Thomas A. Holden - [thomas.a.holden@usacc.army.mil](mailto:thomas.a.holden@usacc.army.mil)  
Mr. Darryl Clark - [Darryl\\_Clark@fws.gov](mailto:Darryl_Clark@fws.gov)  
Mr. Bren Haase - [Ben.Haase@la.gov](mailto:Ben.Haase@la.gov)  
Mr. Richard Hartman - [Richard.Hartman@noaa.gov](mailto:Richard.Hartman@noaa.gov)  
Ms. Karen McCormick - [mccormick.karen@epamail.cpa.gov](mailto:mccormick.karen@epamail.cpa.gov)  
Mr. Britt Paul, P.E. - [britt.paul@la.usda.gov](mailto:britt.paul@la.usda.gov)

**Task Force:**

Colonel Richard L. Hansen - [Richard.L.Hansen.col@usace.army.mil](mailto:Richard.L.Hansen.col@usace.army.mil)  
Mr. Jerome Zeringue - [Jerome.Zeringue@la.gov](mailto:Jerome.Zeringue@la.gov)  
Mr. William K. Honker - [honker.william@epa.gov](mailto:honker.william@epa.gov)  
Mr. Jeff Weller - [jeff\\_weller@fws.gov](mailto:jeff_weller@fws.gov)  
Mr. Kevin Norton - [Kevin.Norton@la.usda.gov](mailto:Kevin.Norton@la.usda.gov)  
Mr. Christopher Doley - [chris.doley@noaa.gov](mailto:chris.doley@noaa.gov)

5130 Chartres Street, Post Office Box 770407, New Orleans, Louisiana 70177-0407

Phone: (504)324-9955 Fax: (504)267-5583

[www.sustainthenine.org](http://www.sustainthenine.org) [blog.sustainthenine.org](http://blog.sustainthenine.org)

November 26, 2014

Coastal Wetlands Planning, Projection, and Restoration Act Technical Committee

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Fax: 504-862-2572

Email: Brad.L.Inman@usace.army.mil

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The Triangle provides a unique opportunity for highly visible coastal restoration work. An overlook platform at the end of Caffin Avenue allows for access to the site. Only five miles from the French Quarter, the platform already attracts thousands of locals and tourists each year who can learn about the history of the swamp and see an example of the coastal land loss problems that extend throughout southern Louisiana. This CWPPRA project will help restore the historic bankline along Bayou Bienvenue and reintroduce Mississippi River sediment to the Triangle, creating a marsh platform that is critical to full restoration in the Triangle. The restoration of the Triangle can showcase the process and outcome of restoration projects in Louisiana while providing an accessible venue for outreach and education. This project is complementary to the State's Coastal Master Plan and will allow large numbers of people to see the Master Plan in action and CWPPRA funds at work.

The Bayou Bienvenue Wetland Triangle has been a focal point for the recovery efforts in the Lower Ninth Ward community post Hurricane Katrina and has enjoyed broad support from tens of thousands of people across the nation since the storm. This project proposal supports the community's vision for restoration and will provide great benefits for the Lower Ninth Ward and surrounding neighborhoods. In addition to the outreach and education benefits highlighted above, restoration will increase habitat value, increase resilience, increase recreational opportunities and quality of life for urban residents, and provide for future restoration opportunities (such a plantings).

We ask that you recognize the importance of this project to Louisiana's larger restoration agenda and choose this project for construction.

Sincerely,

Environmental Defense Fund  
Global Green  
Gulf Restoration Network  
Holy Cross Neighborhood Association  
Louisiana Environmental Action Network  
Lower Mississippi Riverkeeper  
Lower Ninth Ward Center for Sustainable Engagement and Development  
Mary Queen of Vietnam Community Development Corporation  
National Audubon Society  
National Wildlife Federation  
Sierra Club – Delta Chapter

Cc:

Technical Committee:

Mr. Thomas A. Holden - [thomas.a.holden@usace.army.mil](mailto:thomas.a.holden@usace.army.mil)  
Mr. Darryl Clark - [Darryl\\_Clark@fws.gov](mailto:Darryl_Clark@fws.gov)  
Mr. Bren Haase - [Ben.Haase@la.gov](mailto:Ben.Haase@la.gov)  
Mr. Richard Hartman - [Richard.Hartman@noaa.gov](mailto:Richard.Hartman@noaa.gov)  
Ms. Karen McCormick - [mccormick.karen@epamail.epa.gov](mailto:mccormick.karen@epamail.epa.gov)  
Mr. Britt Paul, P.E. - [britt.paul@la.usda.gov](mailto:britt.paul@la.usda.gov)



November 21, 2014

To: Mr. Jerome Zeringue, Executive Assistant to the Governor for Coastal Activities  
Capital Annex  
1051 North Third Street, Suite 138, Baton Rouge, LA 70802  
Jerome.Zeringue@la.gov

From: Dr. John Lopez - jlopez@saveourlake.org  
Dr. Theryn Henkel – therynhenkel@gmail.com  
Lake Pontchartrain Basin Foundation  
P.O. Box 6965, Metairie, LA 70009  
504-836-2215

Dear Mr. Zeringue,

We our writing to express our support for the Bayou Bienvenue Marsh Creation (Triangle henceforth) project a candidate on the CWPPRA PPL 24 project list. The Triangle was converted from swamp to open water due to hydrologic impoundment, saltwater intrusion due mostly to the construction of the MRGO in the 1960's, and subsidence. With the construction of a viewing platform and placement of educational signage, the Triangle has become a place to learn about the land loss crisis and environmental issues facing Louisiana. Politicians, officials, tourists and residents are brought to this location to experience the loss first hand. Due to its proximity to the New Orleans Metro Area, the Triangle is highly accessible and visible.

The construction of this project will provide a tremendous opportunity for outreach to the local, national, and international community. Restoration of the Triangle can serve as venue to showcase the process and outcome of restoration projects in Louisiana. The area can be used to educate the public about the CWPPRA program, restoration in Louisiana and the future needs of the region. Lastly, post-project monitoring could provide an opportunity to educate local school children of an underserved community about science, to support the highly important STEM initiative.

This project will create a new green space and recreational area for the Lower Ninth Ward community, which continues to rebuild from devastation due to Hurricane Katrina. With the addition of boardwalks and waterways, this area can become a local gem, providing families with an area to recreate, picnic, bird watch and relax. Also, the project will create habitat, an intrinsically valuable to wildlife.

Restoration of the Triangle has the potential to reach far beyond its 351 acres with the opportunities for outreach, education, leveraging of restoration dollars, and volunteerism. We ask that you recognize the importance of this project to Louisiana's larger restoration agenda and choose this project for construction.

Sincerely,

Dr. John Lopez  
Director, Coastal Sustainability Program  
Dr. Theryn Henkel  
Assistant Director, Coastal Sustainability Program

NEW CANAL LIGHTHOUSE  
Education, Development and Marketing  
8001 Lakeshore Drive  
New Orleans, LA 70124

MAILING ADDRESS  
P.O. Box 6965, Metairie, LA 70009  
504-836-2215  
saveourlake.org

PONTCHARTRAIN BEACH OFFICE  
Coastal, Water Quality and GIS  
2045 Lakeshore Dr. - Room 339  
New Orleans, LA 70122



# Cameron Parish Coastal Restoration Committee

November 21, 2014

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

RE: Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA)  
Project Priority List 24-No Name Bayou Marsh Creation; Construction Support ME-18: Rockefeller  
Gulf Shoreline Stabilization, CS-54: CCW Grand Bayou, and CS-59: Oyster Bayou Marsh  
Restoration

Col. Hansen:

On behalf of the Cameron Parish Coastal Restoration Committee (CPCRC), I would like to request that the United States Army Corps of Engineers (USACE) respectfully support for PPL 24 Engineering and Design-No Name Bayou Marsh Creation as well as the following projects to be supported for Construction Funds (listed in prioritized order) Rockefeller Gulf Shoreline Stabilization (ME-18), Cameron-Creole Watershed Grand Bayou Marsh Creation (CS-54) and Oyster Bayou Marsh Restoration (CS-59) projects.

In conjunction, these items have a combined net benefit of about 1,719 acres of vital marsh in the Calcasieu and Mermentau River Basins after 20 years. The total cost estimation for all three projects is \$99.1M with \$7.93M of the funding already approved.

These projects are vital to the restoration and protection efforts necessary for our parish wetlands to sustain both our economy and our ecosystem.

Thank you for the opportunity for us to provide support in this process, your favorable consideration of this request is greatly appreciated.

Sincerely,

Ryan Bourriaque, Parish Administrator  
CAMERON PARISH POLICE JURY

L. AMANDA PHILLIPS  
SECRETARY TREASURER  
LAND MANAGER

935 GRAVIER STREET  
SUITE 825  
NEW ORLEANS, LA 70112  
(504) 210-1152  
FAX (504) 210-1156

[WISNERDONATION@AOL.COM](mailto:WISNERDONATION@AOL.COM)

MAILING ADDRESS  
P. O. BOX 52204  
NEW ORLEANS, LA 70152-2204

**Wisner**

REPRESENTING

CHARITY HOSPITAL / MEDICAL CENTER  
OF LOUISIANA  
CITY OF NEW ORLEANS  
THE SALVATION ARMY  
TULANE UNIVERSITY  
THE WISNER FAMILY

18 November 2014

Mr. Thomas A. Holden *TROY CONSTANCE*  
Deputy District Engineer  
US Army Corps of Engineers, New Orleans District  
Office of the Chief  
P. O. Box 60267  
New Orleans, LA 70160-0267

**RE: CWPBRA EAST LEEVILLE MARSH CREATION AND NOURISHMENT PROJECT (PPL 24)**

Dear Mr. Holden,

I am writing in support of the above referenced project which is partially on Wisner's property. Much attention has been rightly focused on the coastline, but the interior marshes desperately need intervention as well. This area has seen dramatic land loss as wide swaths of marsh become open water, encroaching upon Leeville's inhabitants and businesses and threatening oil and gas infrastructure.

I accompanied CWPBRA on its field trips to evaluate potential cells for restoration. It is difficult to discern where one is without the latest maps because the area changes so rapidly. Wisner has various servitudes and mineral leases in the area. Our lessees are embroiled in a continual battle to maintain and preserve their infrastructure. Our fishing camp lessees abandoned their camps after the 2008 storms. They had lost too much.

Wisner has been a proponent of coastal restoration for more than half a century. We just signed a temporary easement, servitude and right-of-way with the State to secure land rights for the Caminada Back Barrier Marsh Creation and Nourishment Project (BA-171). The Caminada Headland Dune Restoration and Beach Creation Projects, Increments I and II are under construction and shovel-ready for our property, respectively.

Since the 1990's Wisner has worked closely with coastal scientists to promote research and to restore Wisner's property. Using a NOAA Community-based Restoration grant (Lafourche Parish Wisner Restoration Project), Wisner built 45-acres of marsh, planted 18,500 plugs of Smooth Cordgrass and 2,500 Black Mangroves, installed 7,000 linear feet of sand fencing, and restored hydrology to over 1850-acres between 2003 and 2004.

Page 2

Mr. Thomas A. Holden

18 November 2014

In 2004 Wisner created the Fourchon Region Restoration Initiative (FRRI) to focus stakeholders' efforts on restoring the Fourchon Region's coast. Wisner raised \$150,000 from partners at Chevron, Shell Oil Company, LOOP, UNO, the Greater Lafourche Port Commission, the South Lafourche Levee District and the Barataria Terrebonne National Estuary Program. FRRI commissioned research that reduced the scientific uncertainties for the Louisiana Coastal Ecosystem Restoration Study's (LCA) Barataria Basin Barrier Shoreline Restoration Project (BBB).

The East Leeville Marsh Creation and Nourishment Project (PPL24) will recreate important saline marsh which protects lives and livelihoods, and a portion of our nation's energy infrastructure.

I, and the undersigned Committee members, urge the Task Force to move this project to the Engineering and Design Phase. CWPPRA has our full support for PPL 24.

Sincerely,

L. Amanda Phillips  
Secretary Treasurer and Land Manager

Suchitra J. Satpathi  
Representative, City of New Orleans

Michael Peneguy  
Representative, Wisner Heirs

Ronald Gardner  
Representative, Charity Hospital

Tony Lorino  
Representative, Tulane University

Major David Worthy  
Representative, The Salvation Army

Cc: Mr. Darryl Clark, Senior Field Biologist, U.S. Fish and Wildlife Service  
Mr. Bren Haase, Deputy Chief – Studies & Environmental Branch, Coastal Protection & Restoration Authority  
Mr. Richard Hartman – Chief – Baton Rouge Field Office, National Marine Fisheries Service  
Ms. Karen McCormick – Section Chief, Environmental Protection Agency, Region 6  
Mr. Britt Paul – Assistant State Conservationist/Water Resources, Natural Resources Conservation Service

Received By  
CEM/PEX  
US Army Corps of Engineers  
New Orleans District

NOV 20 2014

KIRK QUINN  
PRESIDENT  
CURTIS FOUNTAIN  
VICE PRESIDENT  
RYAN BOURRIAQUE  
ADMINISTRATOR  
DARRELL WILLIAMS  
SECRETARY-TREASURER

POLICE JURY  
**PARISH OF CAMERON**

P.O. BOX 1280  
CAMERON, LOUISIANA 70631

(337) 775-5718  
(337) 775-5567 Fax  
www.parishofcameron.net

DISTRICT 1  
CURTIS FOUNTAIN  
DISTRICT 2  
ANTHONY HICKS  
DISTRICT 3  
KIRK QUINN  
DISTRICT 4  
TERRY BEARD  
DISTRICT 5  
KIRK BURLEIGH  
DISTRICT 6  
JOE DUPONT  
DISTRICT 7  
DARRYL FAROUÉ

May 21, 2014

To: Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana 70160

**VIA EMAIL**

Re: PPL 24- No Name Bayou Marsh Creation & Nourishment Project (R4-CS-06)

Col. Hansen:

The Cameron Parish Police Jury would like to submit this letter of support on behalf of the PPL 24- No Name Bayou Marsh Creation & Nourishment Project (R4-CS-06). This nominee is projected to create 438 acres of vital marsh and nourish about 77 acres of emergent brackish marsh. The project is also estimated to yield 449 net acres of marsh after 20 years from the initial construction. The No Name Bayou Marsh Creation & Nourishment Project has a fully funded cost of approximately \$30M.

We appreciate your consideration of this request, and if you have any questions, please do not hesitate to contact us.

Sincerely,

  
Ryan Bourriaque, Parish Administrator  
CAMERON PARISH POLICE JURY



2002 Clipper Park Road, Suite 201  
Baltimore, MD 21211

P 443.921.9441

F 410.235.1503

[www.ecosystempartners.com](http://www.ecosystempartners.com)

19 November, 2014

Mr. Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana 70160

Subject: New Orleans Land bridge Shoreline Stabilization and Marsh Creation (PPL23 Candidate)

Dear Mr. Inman:

I am writing a letter of support for the New Orleans Land bridge Shoreline Stabilization and Marsh Creation Project (PPL23) located along the east portion of Lake Pontchartrain on both sides of U.S. Highway 90 between Hospital Road and Greens Ditch. As a landowner in the area we appreciate any efforts to restore brackish marsh along the land bridge.

If you have any questions, please call.

Sincerely,

David T. Urban  
Director of Operations

Cc: Maria Escudero (Land Trust for Louisiana)

## Murry, Allison N CONTRACTOR @ MVN

---

**From:** Inman, Brad L MVN  
**Sent:** Wednesday, November 26, 2014 5:39 PM  
**To:** Murry, Allison N CONTRACTOR @ MVN  
**Subject:** Fw: [EXTERNAL] Fw: CWPPRA 24th PPL Nominations

Sent from my BlackBerry 10 smartphone on the Verizon Wireless 4G LTE network.

From: rigoletsunrise <[rigoletsunrise@bellsouth.net](mailto:rigoletsunrise@bellsouth.net)>

Sent: Wednesday, November 26, 2014 11:23 AM

To: Inman, Brad L MVN

Reply To: rigoletsunrise

Subject: [EXTERNAL] Fw: CWPPRA 24th PPL Nominations

Dear Mr. Inman,

Please be aware of the continued interest and support of the Region I, PPL 24 project name: New Orleans Landbridge Shoreline Stabilization and Marsh Creation project. This project is vital to maintain and improve the natural land bridge in New Orleans East. The maintenance of this area will lead to protection of life, land, natural habitats and resources. The future cost of doing nothing will far exceed the cost of this present project. This project can provide added protection to all parishes surrounding Lake Pontchartrain, supporting the goal of a sustainable Louisiana coast.

Additionally, while knowing CWPPRA has engaged in many worthwhile projects, this particular project located adjacent to U.S. Highway 90 and near the base of the elevated Rigolets Pass Bridge will be very visible to local residents and the general public who travel this area. Although the purpose is to restore the coast line; this location will also allow people and media to see a worthy government funded project providing benefit to the many residents, businesses and natural resources of the Lake Pontchartrain Basin area.

Continue to strongly encourage your support/approval of this project, thank you, cg  
Carol Giardina

On Wednesday, February 19, 2014 1:52 PM, rigoletsunrise <[rigoletsunrise@bellsouth.net](mailto:rigoletsunrise@bellsouth.net)> wrote:

Dear Mr. Inman,

Please accept this email as response for public comment to the CWPPRA Task Force regarding PPL 24.

As a 31 year resident of the Lake Catherine Community, I support CWPPRA, Region I, PPL 24 project name: New Orleans Landbridge Shoreline Stabilization and Marsh Creation project nominated on February 13, 2014.

We see and live firsthand the effects of diminished coast lines and marshes. In particular, Hurricane Katrina produced accelerated destruction and devastation, resulting in increased frequency and volume of flooding, even during smaller storms. This has a direct affect on property owners, businesses, wild life, fisheries, commercial shrimpers, and other natural resources.

Post Katrina, numerous property owners have invested in their waterfront property with new elevated homes, bulkheads and securing their immediate shoreline. However, we don't have the means or resources to improve/rebuild and replenish the outer shoreline and lost marshes.

This project will provide protection to community residents, businesses, commercial shrimping/fishing, wild life, natural resources, infrastructure, and the Highway 90 Hurricane evacuation route. It is known that healthy marshes act as a buffer to storms and high waters. Restoring and maintaining the structural integrity of this area provides added protection to other Lake Pontchartrain coastal communities/ parishes; including St. Tammany, St. John, and Orleans. The hydrology effects of this restoration would help diminish the intrusion of waters into Lake Pontchartrain, helping to lower the flooding in these parishes.

I strongly encourage the CWPPRA Task Force support/approve of this project. Thank you, cg  
Carol Giardina

[rigoletsunrise@belsouth.net](mailto:rigoletsunrise@belsouth.net) <<mailto:rigoletsunrise@belsouth.net>>

Carol Giardina

November 26, 2014

Coastal Wetlands Planning, Projection, and Restoration Act Technical Committee

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Fax: 504-862-2572

Email: Brad.L.Inman@usace.army.mil

RE: *New Orleans Landbridge Shoreline Stabilization & Marsh Creation Project*

Dear Coastal Wetlands Planning, Projection, and Restoration Act Technical Committee –

We are writing to express our support for the New Orleans Landbridge Shoreline Stabilization & Marsh Creation Project, a candidate on the Coastal Wetlands Planning, Projection, and Restoration Act's (CWPPRA) 24<sup>th</sup> Project Priority List (PPL24). Marsh creation and enhancement along with shoreline stabilization in this location would project critical wildlife habitat, the communities all along the Lake Pontchartrain Basin and road infrastructure.

The New Orleans Landbridge is deemed a critical landscape feature for storm protection, as it essentially separates Lake Pontchartrain from the Gulf of Mexico and reduces surge during storm events. The restoration site of this proposed projects is located along Lake Pontchartrain, Lake St. Catherine and the Rigolets, and straddles Chef Menteur Highway. This area has endured significant erosion and in some places the shoreline has retreated as much as 450 feet since 1956. Also in the project area, the winds and storm surges from Hurricane Katrina converted over 70 acres of marsh into open water. The flooding of nearby communities during storm events has been partially attributed to the severe loss of wetlands at this location.

The New Orleans Landbridge project would help to increase habitat for large numbers of wintering birds, fish, and other wildlife, which are dependent on the marsh in the area. The proposed marsh creation and shoreline protection would also help sustain the landbridge, which provides one of the last lines of defense against storm surges coming into Lake Pontchartrain and protects over 1.5 million people. The New Orleans Landbridge restoration site would enhance and complement ongoing marsh restoration and shoreline protection projects in the area. Finally, as part of the MRGO ecosystem area, tens of thousands of members of the public have commented in support of restoration of the New Orleans Landbridge in the last few years.

We strongly recommend this project for selection by CWPPRA for both its flood protection and marsh creation benefits.

Sincerely,

Environmental Defense Fund  
Global Green  
Gulf Restoration Network  
Holy Cross Neighborhood Association

Louisiana Environmental Action Network  
Lower Mississippi Riverkeeper  
Lower Ninth Ward Center for Sustainable Engagement and Development  
Mary Queen of Vietnam Community Development Corporation  
National Audubon Society  
National Wildlife Federation  
Sierra Club – Delta Chapter

Cc:

Technical Committee:

Mr. Thomas A. Holden - [thomas.a.holden@usace.army.mil](mailto:thomas.a.holden@usace.army.mil)

Mr. Darryl Clark - [Darryl\\_Clark@fws.gov](mailto:Darryl_Clark@fws.gov)

Mr. Bren Haase - [Ben.Haase@la.gov](mailto:Ben.Haase@la.gov)

Mr. Richard Hartman - [Richard.Hartman@noaa.gov](mailto:Richard.Hartman@noaa.gov)

Ms. Karen McCormick - [mccormick.karen@epamail.epa.gov](mailto:mccormick.karen@epamail.epa.gov)

Mr. Britt Paul, P.E. - [britt.paul@la.usda.gov](mailto:britt.paul@la.usda.gov)

**Murry, Allison N CONTRACTOR @ MVN**

---

**From:** Trahan, Angela [angela\_trahan@fws.gov]  
**Sent:** Friday, December 05, 2014 3:42 PM  
**To:** Inman, Brad L MVN; Murry, Allison N CONTRACTOR @ MVN  
**Subject:** [EXTERNAL] Fwd: PPL24 New Orleans Landbridge Shoreline Stabilization and Marsh Creation

Brad & Allison: I did not see this letter of support in the TC binder. Just making sure you got it.

.....

Angela Trahan  
Fish and Wildlife Biologist

U.S. Department of the Interior  
Fish and Wildlife Service  
Louisiana Ecological Services Field Office  
646 Cajundome Blvd., Suite 400  
Lafayette, LA 70506  
(337) 291-3137

<http://www.fws.gov/lafayette/>

----- Forwarded message -----  
From: Chris Morvant <[Chris.Morvant@la.gov](mailto:Chris.Morvant@la.gov)>  
Date: Mon, Nov 24, 2014 at 4:43 PM  
Subject: PPL24 New Orleans Landbridge Shoreline Stabilization and Marsh Creation  
To: "[Brad.L.Inman@usace.army.mil](mailto:Brad.L.Inman@usace.army.mil)" <[Brad.L.Inman@usace.army.mil](mailto:Brad.L.Inman@usace.army.mil)>  
Cc: "Trahan, Angela" <[angela\\_trahan@fws.gov](mailto:angela_trahan@fws.gov)>, Chris Knotts <[Chris.Knotts@la.gov](mailto:Chris.Knotts@la.gov)>

Dear Mr. Inman,

I have reviewed the PPL 24 proposal for the New Orleans Landbridge Shoreline Stabilization and Marsh Creation Project as presented by the Fish and Wildlife Service. The creation of marsh and the protection of the shoreline in the proposed area will help to preserve the land that US 90 traverses through. US 90 is a major arterial that is one of only three connections between the New Orleans and Slidell, and is a major evacuation route for the New Orleans area. US 90 serves as an alternate route when major incidents occur on the Interstate 10 Bridges.

Therefore, the Louisiana Department of Transportation and Development provides this statement of support for the proposed New Orleans Landbridge Shoreline Stabilization and Marsh Creation Project.

Sincerely,

Chris G. Morvant, P.E., PTOE  
DOTD  
District 02 Engineer Administrator  
Post Office Box 9180  
Bridge City, LA 70096-9180

(504) 437-3101

This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409.



November 21, 2014

To: Mr. Jerome Zeringue, Executive Assistant to the Governor for Coastal Activities  
Capital Annex  
1051 North Third Street, Suite 138, Baton Rouge, LA 70802  
Jerome.Zeringue@la.gov

From: Dr. John Lopez - jlopez@saveourlake.org  
Dr. Theryn Henkel – therynhenkel@gmail.com  
Lake Pontchartrain Basin Foundation  
P.O. Box 6965, Metairie, LA 70009  
504-836-2215

Dear Mr. Zeringue,

We are writing to convey our support for the New Orleans Landbridge Shoreline Stabilization & Marsh Creation project listed as a candidate project under the CWPPRA PPL 24 list. The New Orleans Landbridge has experienced extensive erosion near Lake Pontchartrain to the point that the lake shore threatens Highway 90. Because the land bridge reduces surge into Lake Pontchartrain, the land bridge is listed as a critical landscape feature in Corps' LACPR report and is one of LPBF's priority projects in the Pontchartrain Coastal Lines of Defense program (PCLOD).

The marsh on the land bridge provides important habitat along the major aquatic migratory pathway through Rigolets Pass. These migrations support estuarine and marine organisms. The critical storm reduction benefit is provided to the parishes along the entire rim of Lake Pontchartrain. This includes St. Tammany, Tangipahoa, St. Charles, St. John, Orleans and Jefferson parishes. Communities without levee protection are particularly vulnerable such as Slidell, Mandeville, and Madisonville.

In conclusion, we highly recommend that this project be chosen by CWPPRA for its enhancement of both flood protection and marsh habitat in the region. The New Orleans Landbridge must be maintained and improved for flood protection.

Sincerely,

Dr. John Lopez  
Director, Coastal Sustainability Program  
Dr. Theryn Henkel  
Assistant Director, Coastal Sustainability Program



*Dedicated to preserving and protecting valuable natural areas, urban green spaces and agricultural lands of Louisiana for current and future generations.*

November 24, 2014

**BOARD OF DIRECTORS**

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Karen S. Babin  
Marisa C. Escudero

Brad Inman  
CWPPRA Programs Manager  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, LA 70160  
Email: Brad.L.Inman@usace.army.mil

Mr. Inman:

My name is Marisa Escudero and I am writing on behalf of Land Trust for Louisiana to submit public comments in regards to the New Orleans Landbridge Shoreline Stabilization and Marsh Creation that shall be presented on December 11, 2014. Land Trust for Louisiana is a 501(c)(3), nonprofit corporation that works to protect our state's valuable natural resources, agricultural lands, and urban green spaces for present and future generations. We do so by working with community partners to create a healthy and sustainable natural environment through land donations, conservation easements, or land purchases that conserve and protect valuable natural areas.

We support the New Orleans Landbridge project. The area in question, referenced as Region 1, Pontchartrain Basin, Orleans Parish, along the east portion of Lake Pontchartrain on both sides of U.S. Highway 90 between Hospital Road and Greens Ditch, is an area of land vital to improving synergistic effects with flood protection and restoration efforts within the Lake Pontchartrain Basin. This includes the Greater New Orleans Hurricane and Storm Damage Risk Reduction System, the Bayou Chevee Shoreline Protection Project (PO-22), as well as several marsh mitigation projects being designed and implemented in the area.

The diminishing coast lines and marshes, accelerated by the destruction and devastation of Hurricane Katrina, have resulted in an increased frequency and volume of flooding in this area. This net loss of land directly impacts property owners, businesses, wild life, fisheries, commercial shrimpers, and other natural resources in the surrounding area. The New Orleans Landbridge project would have a net positive impact to critical infrastructure to a major hurricane evacuation route for the Greater New Orleans area and residences along the East Orleans Land Bridge: U.S. Highway 90. The project would reduce the rate or frequency of flooding from south/southeast winds and tidal surge, thus providing protection to community residents, businesses, commercial shrimping/fishing, wild life, natural resources, infrastructure, and the Highway 90 Hurricane evacuation route.

Restoring the marshes along the Orleans Landbridge will help to protect fish and wildlife trust resources dependent on habitats associated with Lake Pontchartrain, particularly at-risk species such as the diamondback terrapin, black rail, reddish egret, brown pelican and the Louisiana eyed silkworm. As land conservationists, we respectfully request you approve the New Orleans Landbridge Shoreline Stabilization and Marsh Creation.

Thank you for your consideration,

Marisa C. Escudero  
Development Director

cc: Dr. Jay Addison, President

HENRY A. McCALL JR.  
P.O. BOX 186  
CAMERON, LA. 70631

*Handwritten notes and signatures in the top right corner, including a large signature and some illegible text.*

November 7, 2014

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Dear Colonel Hansen,

I am writing to express my support for the Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) Project Priority List 24 project nominee **No Name Bayou Marsh Creation and Nourishment Project**. As one of the landowners within the project area, I have seen first hand how the high salinity water, and later hurricanes, changed a very productive marsh to open water. The project will recreate over 500 acres of saline marsh, which will significantly increase habitat for waterfowl, wading birds, fish, shrimp, and crabs. Salinity control in this area has been accomplished through other projects, and it is now time to recreate critical, valuable wetlands in Cameron Parish.

I hope that you will favorably consider this project for engineering and design, as it has potential to recreate critically important wetland habitats.

Sincerely,

*Handwritten signature of Henry A. McCall Jr.*

Henry A. McCall Jr.

Received By  
CE-1-EX  
US Army Corps of Engineers  
New Orleans District

NOV 24 2014



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Southwest Louisiana National Wildlife Refuge Complex  
(Cameron Prairie, Lacassine, Sabine, Shell Keys NWRs)  
1428 Highway 27  
Bell City, Louisiana 70630

November 26, 2014

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Dear Colonel Hansen,

I am writing to express Southwest Louisiana National Wildlife Refuge Complex (SW LA Complex) support for Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) Project Priority List 24 project nominee **No Name Bayou Marsh Creation and Nourishment Project**. As one of the landowners (East Cove Unit, SW LA Complex) and former Cameron Creole Watershed Project (CCWP) operator, I have observed how high salinities, tropical storms, droughts, and Hurricanes Rita (2005) & Ike (2008) have adversely impacted a once productive vibrant marsh, creating vast expanses of open water. The proposed project will create over 500 acres of emergent saline marsh, increasing available habitat for waterfowl, wading birds, fish, shrimp, and crabs. Moderation and management of salinity and water levels within the proposed site have been accomplished through implementation of the CCWP Resource Management Plan. However, salinity and water level control alone are not sufficient to promote extensive recreation of valuable wetlands lost in Cameron Parish. As observed and exhibited on SW LA Complex, Sabine NWR, placement of beneficial dredge and/or dedicated dredge is a very effective if not the best means of creating emergent wetlands with lasting sustainable effects.

Thank you for your consideration of this worthwhile project for engineering and design, as it has potential to create and restore critically important wetland habitats within the CCWP, Cameron Parish and Southwest Louisiana. If you need any additional information do not hesitate to contact me at 337-598-2216.

Sincerely

Donald J Voros  
Project Leader  
Southwest Louisiana National Wildlife refuge Complex  
1428 Hwy 27  
Bell City, LA 70630



November 21, 2014

To: Mr. Jerome Zeringue, Executive Assistant to the Governor for Coastal Activities  
Capital Annex  
1051 North Third Street, Suite 138, Baton Rouge, LA 70802  
Jerome.Zeringue@la.gov

From: Dr. John Lopez - jlopez@saveourlake.org  
Dr. Theryn Henkel – therynhenkel@gmail.com  
Lake Pontchartrain Basin Foundation  
P.O. Box 6965, Metairie, LA 70009  
504-836-2215

Dear Mr. Zeringue,

We are writing to convey our support for the Shell Beach South Marsh Creation project listed as a candidate project under the CWPPRA PPL 24 list. The Lake Borgne Landbridge has experienced extensive deterioration over time, due to the construction of the MRGO, erosion from poor maintenance of the MRGO channel, subsidence, saltwater intrusion and wave action from Lake Borgne. The landbridge is listed as a critical landscape feature in LPBF's Pontchartrain Coastal Lines of Defense program (PCLOD).

The landbridge between Lake Borgne and the MRGO is a critical storm reduction feature which protects not only the communities of Shell Beach and Hopedale but also levees that comprise part of the Hurricane and Storm Surge Damage Risk Reduction System which protects numerous communities and large populations. Rebuilding marsh along the landbridge will strengthen the landbridge and could provide additional protection during storms. Additionally, this project will increase and enhance the wetland habitat in the area. Lastly, this project will repair a small portion of the damage caused by the MRGO which is a high priority for both the State of Louisiana and the U.S. Army Corps of Engineers.

Because of the Landbridge's importance, there have been many projects constructed and proposed, mostly shoreline stabilization, to prevent further deterioration or complete disintegration of the Lake Borgne Landbridge. The Shell Beach South Marsh Creation project compliments, benefits from and enhances the constructed and proposed shoreline stabilization projects in the region.

In conclusion, we highly recommend that this project be chosen by CWPPRA for its enhancement of both flood protection and marsh habitat in the region. The Lake Borgne Landbridge must be maintained and improved for flood protection.

Sincerely,

Dr. John Lopez  
Director, Coastal Sustainability Program  
Dr. Theryn Henkel  
Assistant Director, Coastal Sustainability Program

November 26, 2014

Coastal Wetlands Planning, Projection, and Restoration Act Technical Committee

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Fax: 504-862-2572

Email: Brad.L.Inman@usace.army.mil

RE: *Letter of Support for the Shell Beach South Marsh Creation Project*

Dear Coastal Wetlands Planning, Projection, and Restoration Act Technical Committee –

We are writing to express our support for the Shell Beach South Marsh Creation project, a candidate on the Coastal Wetlands Planning, Projection, and Restoration Act's (CWPPRA) 24<sup>th</sup> Project Priority List (PPL24). The Shell Beach restoration site is located in St. Bernard parish, in between Lake Borgne and the Mississippi River Gulf Outlet (MRGO) near the communities of Yscloskey, Hopedale and Shell Beach. The marsh separating these two bodies of water has been severely degraded over time. The construction of the MRGO caused salt water intrusion and shoreline erosion from wave action once created from passing deep draft vessel traffic. Today, wave action and subsidence continues to cause erosion, ever thinning the landbridge that separates MRGO from Lake Borgne.

To address this issue, the proposed project will create and nourish 634 acres of marsh as well as 187 acres of vegetative plantings in the newly created marsh habitat. This work will extend the life of the landbridge and also complements extensive shoreline protection work that has already occurred in the area.

The Shell Beach restoration site is an important storm protection feature for the immediate surrounding communities and also for the nearby levees that make up the Hurricane and Storm Surge Damage Risk Reduction System, which protects the Greater New Orleans area. This project will also increase and enhance wetland habitat in the area, needed to sustain wildlife in the delta. Finally, this project will repair a portion of the damage caused by the MRGO which is a high priority for the State of Louisiana, the U.S. Army Corps of Engineers, and the communities and conservation organizations that have advocated for restoration in this area for years. As part of the MRGO ecosystem area, this restoration area has enjoyed strong public support over the last few years. Tens of thousands of people have commented in support of a suite of restoration projects along the MRGO, which include the Lake Borgne Landbridge.

We strongly recommend that this project be chosen by CWPPRA for its enhancement of both flood protection and marsh habitat in the region.

Sincerely,

Environmental Defense Fund  
Global Green  
Gulf Restoration Network  
Holy Cross Neighborhood Association  
Louisiana Environmental Action Network  
Lower Mississippi Riverkeeper

Lower Ninth Ward Center for Sustainable Engagement and Development  
Mary Queen of Vietnam Community Development Corporation  
National Audubon Society  
National Wildlife Federation  
Sierra Club – Delta Chapter

Cc:

CWPPRA Technical Committee:

Mr. Thomas A. Holden - [thomas.a.holden@usace.army.mil](mailto:thomas.a.holden@usace.army.mil)

Mr. Darryl Clark - [Darryl\\_Clark@fws.gov](mailto:Darryl_Clark@fws.gov)

Mr. Bren Haase - [Ben.Haase@la.gov](mailto:Ben.Haase@la.gov)

Mr. Richard Hartman - [Richard.Hartman@noaa.gov](mailto:Richard.Hartman@noaa.gov)

Ms. Karen McCormick - [mccormick.karen@epamail.epa.gov](mailto:mccormick.karen@epamail.epa.gov)

Mr. Britt Paul, P.E. - [britt.paul@la.usda.gov](mailto:britt.paul@la.usda.gov)

# Chenier Plain Coastal Restoration & Protection Authority

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May 21, 2014

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana 70160

**VIA EMAIL**

RE: PPL 24- South Humble Marsh Creation & Nourishment (R3-TV-03); No Name Bayou Marsh Creation & Nourishment (R4-CS-06); Southeast Pecan Island Marsh Creation & Freshwater Enhancement (R4-ME-03)

Dear Col. Hansen:

On behalf of the Chenier Plain Coastal Restoration & Protection Authority (CPCRPA), I would like to request that the United States Army Corps of Engineers (USACE) respectfully accept the following comments that the CPCRPA will submit in support of PPL 24- South Humble Marsh Creation & Nourishment; No Name Bayou Marsh Creation & Nourishment; Southeast Pecan Island Marsh Creation & Freshwater Enhancement projects.

In conjunction, these items are projected to protect/create about 1,073 acres of vital marsh in Cameron, and Vermilion Parishes. The projects are also estimated to restore 1,282 net acres of marsh after 20 years. The Southeast Pecan Island Marsh Creation & Freshwater Enhancement Project and No Name Bayou Marsh Creation & Nourishment Project, combined, have a fully funded cost range of approximately \$65M. The South Humble Marsh Creation & Nourishment Project has an approximate construction cost, including 25% contingency of \$22.1M.

The CPCRPA is representative of the three Parishes: Calcasieu, Cameron, and Vermilion and has been in constant contact with the Police Jury and relevant staffs of each Parish.

Thank you for the opportunity for us to provide support in this process, your favorable consideration of this request is greatly appreciated.

Sincerely,

Earl Landry, Chairman

**RESOLUTION**

**CHENIER PLAIN COASTAL RESTORATION & PROTECTION AUTHORITY**

**WHEREAS**, the Chenier Plain Coastal Restoration & Protection Authority was created pursuant to the provisions of the Louisiana Constitution of 1974, Article VI, Sections 38, 38.1 and 44, and La. R.S. 38:329.5; and

**WHEREAS**, the Chenier Plain CRPA is a political subdivision of the State of Louisiana, and through its board of commissioners, is organized with the primary duty to establish, construct, operate, or maintain flood control works as they relate to hurricane protection, tidewater flooding, saltwater intrusion, and conservation, and a secondary duty to establish flood control, adequate drainage relating to tidal or riverine flooding, and water resources development including but not limited to construction of reservoirs, diversion canals, gravity and pump drainage systems, erosion control measures, and marsh management; and

**WHEREAS**, the Chenier Plain Authority is inclusive of the Parishes of Calcasieu, Cameron, & Vermilion and seeks to identify discretionary funds to implement projects included in the State Master Plan; and

**WHEREAS**, marsh creation and nourishment is needed in Region 4, Calcasieu-Sabine Basin, Cameron Parish; and

**WHEREAS**, the Calcasieu-Sabine Basin marshes (Cameron-Creole Watershed Management Area which protects approximately 64,000 acres in the watershed) in this area are subject to increased salinity, resulting in plant death and marsh loss; weakened marshes located between the East Fork of the Calcasieu River and Calcasieu Lake; and, open water areas as a result of loss of marsh buffer to the southwest rim of Calcasieu Lake due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive creation/nourishment efforts, and

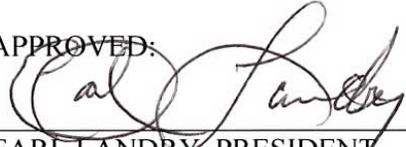
**WHEREAS**, the project goal is to create and/or nourish approximately 533 acres of emergent saline marsh within the Cameron-Creole watershed along the Calcasieu Lake rim using sediment from upland disposal sites of the Calcasieu River. Specific goals of the project are: 1) approximately 3.5 million cubic yards of sediment from the upland disposal areas of the Calcasieu River; 2) clean out approximately 5,000 LF of the Cameron Creole Watershed Levee borrow channel; 3) containment dikes constructed around the marsh creation area; 4) containment dikes degraded to the current platform elevation and gaps excavated; 5) additionally, 251 acres of vegetative plantings within the newly created areas; 6) Approximately 10,000 linear feet of tidal creeks and two 2.5 acre ponds constructed; approximately 497 net acres over the 20-yr project life will be created/nourished, and

**NOW, THEREFORE BE IT RESOLVED**, by the Chenier Plain Coastal Restoration & Protection Authority on this 18th day of November 2014, that the Executive Director is hereby authorized, empowered and directed to forward this Resolution of support for the "PPL24 No Name Bayou Marsh Creation and Nourishment" to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

**BE IT FURTHER RESOLVED**, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, thru this Resolution, are requested to support the "PPL24 No Name Bayou Marsh Creation and Nourishment" for Phase 1 funding for the 24th PPL.

ADOPTED AND APPROVED this 18th day of November 2014.

APPROVED:

  
EARL LANDRY, PRESIDENT  
CHENIER PLAIN CRPA

ATTEST:

  
For PHILIP TROSCLAIR, SECRETARY

**RESOLUTION**

**CHENIER PLAIN COASTAL RESTORATION & PROTECTION AUTHORITY**

**WHEREAS**, the Chenier Plain Coastal Restoration & Protection Authority was created pursuant to the provisions of the Louisiana Constitution of 1974, Article VI, Sections 38, 38.1 and 44, and La. R.S. 38:329.5; and

**WHEREAS**, the Chenier Plain CRPA is a political subdivision of the State of Louisiana, and through its board of commissioners, is organized with the primary duty to establish, construct, operate, or maintain flood control works as they relate to hurricane protection, tidewater flooding, saltwater intrusion, and conservation, and a secondary duty to establish flood control, adequate drainage relating to tidal or riverine flooding, and water resources development including but not limited to construction of reservoirs, diversion canals, gravity and pump drainage systems, erosion control measures, and marsh management; and

**WHEREAS**, the Chenier Plain Authority is inclusive of the Parishes of Calcasieu, Cameron, & Vermilion and seeks to identify discretionary funds to implement projects included in the State Master Plan; and

**WHEREAS**, marsh creation and freshwater enhancement is needed in Region 4, Mermentau Basin, Vermilion Parish, east of Pecan Island and south of Highway 82; and

**WHEREAS**, the Mermentau Basin marshes (Southeast Pecan Island project area and surrounding marshes) have experienced significant land loss from storm impacts, increased tidal exchange, saltwater intrusion, and reduced freshwater retention due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive creation/nourishment efforts, and

**WHEREAS**, results of the hurricane-scoured area has resulted, based on USGS data from 1984 to 2010, the wetland loss rate for the proposed project area at 0.84 %/year. Recent land loss, resulting from Hurricanes Rita and Ike, left Louisiana State Highway 3147 and Front Ridge Road exposed to open water wave action and vulnerable to additional storms, and

**WHEREAS**, this marsh creation and freshwater enhancement project would create/nourish approximately 401 acres of emergent marsh; create 55,348 linear feet (45 acres) of terraces; and promote growth of submerged aquatic vegetation. Specific goals of the project are: 1) to restore/improve hydrologic conditions and increase emergent marsh vegetation throughout the project area; 2) to restore drainage of excess freshwater from the Lakes Subbasin into the Chenier Subbasin; 3) to restore the hydrology reducing the exposure of fragile interior marsh to seasonal salinity spikes and increase productivity of marshes; approximately 388 net acres over the 20-year project life will be created/nourished, and

**NOW, THEREFORE BE IT RESOLVED**, by the Chenier Plain Coastal Restoration & Protection Authority on this 18th day of November 2014, that the Executive Director is hereby authorized, empowered and directed to forward this Resolution of support for the "PPL24 Southeast Pecan Island Marsh Creation and Freshwater Enhancement" to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

**BE IT FURTHER RESOLVED**, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, thru this Resolution, are requested to support the "PPL24 Southeast Pecan Island Marsh Creation and Freshwater Enhancement" for Phase 1 funding for the 24th PPL.

ADOPTED AND APPROVED this 18th day of November 2014.

APPROVED:

  
\_\_\_\_\_  
EARL LANDRY, PRESIDENT  
CHENIER PLAIN CRPA

ATTEST:

  
\_\_\_\_\_  
FOR PHILIP TRÖSCCLAIR, SECRETARY

## RESOLUTION

### CHENIER PLAIN COASTAL RESTORATION & PROTECTION AUTHORITY

**WHEREAS**, the Chenier Plain Coastal Restoration & Protection Authority was created pursuant to the provisions of the Louisiana Constitution of 1974, Article VI, Sections 38, 38.1 and 44, and La. R.S. 38:329.5; and

**WHEREAS**, the Chenier Plain CRPA is a political subdivision of the State of Louisiana, and through its board of commissioners, is organized with the primary duty to establish, construct, operate, or maintain flood control works as they relate to hurricane protection, tidewater flooding, saltwater intrusion, and conservation, and a secondary duty to establish flood control, adequate drainage relating to tidal or riverine flooding, and water resources development including but not limited to construction of reservoirs, diversion canals, gravity and pump drainage systems, erosion control measures, and marsh management; and

**WHEREAS**, the Chenier Plain Authority is inclusive of the Parishes of Calcasieu, Cameron, & Vermilion and seeks to identify discretionary funds to implement projects included in the State Master Plan; and

**WHEREAS**, marsh creation and nourishment is needed in Region 3, Teche - Vermilion Basin, in Vermilion Parish; and

**WHEREAS**, the Vermilion Basin marshes in this area are subject to losses from shoreline erosion, subsidence/sediment deficit, hurricane impacts, and interior ponding due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive creation/nourishment efforts, and

**WHEREAS**, results of the hurricane-scoured area has culminated in wetlands being lost at a rate of - 0.78 % per year based on USGS analysis (1985- 2010). Recent land loss (Erosion of the eastern bank line of Freshwater Bayou), resulting from Hurricanes Rita and Ike, has resulted in formation of three breaches, allowing boat wakes and hydrologic action to adversely affect the interior project area marshes. The wakes from passing vessels and tidal action are also causing the export of organic material from the project area, and

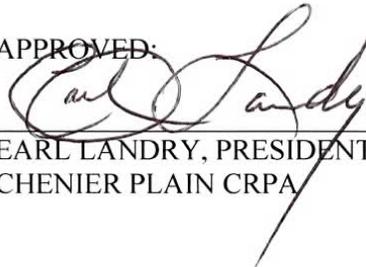
**WHEREAS**, this marsh creation and freshwater enhancement project would create/nourish approximately 516 ac of marsh (301 ac created, 215 ac nourished) of emergent brackish marsh. Specific goals of the project are: 1) hydraulically pumped sediment from the Gulf of Mexico into the marsh creation area; 2) containment dikes constructed around the marsh creation area; 3) saline effluent directed toward Freshwater Bayou and not discharged eastward; 4) dikes gapped, tidal channels constructed and vegetative plantings; approximately 294 net acres over the 20-year project life will be created/nourished, and

**NOW, THEREFORE BE IT RESOLVED**, by the Chenier Plain Coastal Restoration & Protection Authority on this 18th day of November 2014, that the Executive Director is hereby authorized, empowered and directed to forward this Resolution of support for the "PPL24 South Humble Marsh Creation and Nourishment" to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

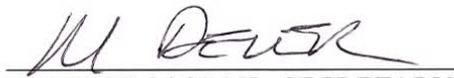
**BE IT FURTHER RESOLVED**, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, thru this Resolution, are requested to support the "PPL24 South Humble Marsh Creation and Nourishment" for Phase 1 funding for the 24th PPL.

ADOPTED AND APPROVED this 18th day of November 2014.

APPROVED:

  
EARL LANDRY, PRESIDENT  
CHENIER PLAIN CRPA

ATTEST:

  
PHILIP TROSCLAIR, SECRETARY

For

## **Murry, Allison N CONTRACTOR @ MVN**

---

**From:** Bobby Hansen [bhfly4u@yahoo.com]  
**Sent:** Tuesday, December 09, 2014 10:00 AM  
**To:** Murry, Allison N CONTRACTOR @ MVN  
**Subject:** [EXTERNAL] East Leeville marsh creation/nourishment project

I strongly urge and appreciate your support for the 350-400 acres of marsh creation or nourishment that would be done on the East side of Leeville La. I have a place down there and hope to have one for a long time but without something being done to prevent the loss of marsh none of us will have any reason to be there as Leeville will not exist!  
Thanks for your consideration and support of this project!  
Bobby Hansen

***THE LOUISIANA LAND AND EXPLORATION COMPANY LLC  
806 BAYOU BLACK DRIVE  
HOUMA, LOUISIANA 70360***

December 3, 2014

US Army Corps of Engineers – NOD  
P.O. Box 60267  
New Orleans, LA 70160-0267  
Attn: CEMVN-PM-BC (Allison Murry/CWPPRA)

RE: PPL24 Project  
Phase I Engineering & Design CWPPRA funding  
East Leeville Marsh Creation and Nourishment  
Lafourche Parish, Louisiana

---

Dear CWPPRA Task Force,

The Louisiana Land & Exploration Company LLC (LL&E) and ConocoPhillips are not the major landowners in which the above referenced project is proposed, but is in full support of this project.

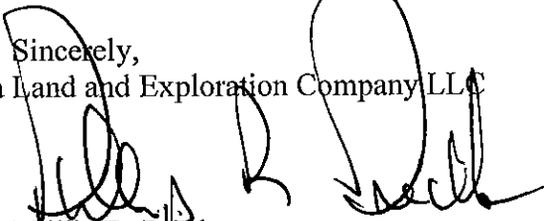
This proposed project is very much needed in the Leeville area to create and nourish the existing marsh areas, protect critical shoreline and further prevent enlargement of the existing lakes.

LL&E has long been a supporter of coastal restoration activities in Louisiana. We have spent millions in the wetlands trying to stem the tide of coastal erosion. Since enactment of the CWPPRA Program, we have supported whole heartily both State and Federal efforts to restore, enhance or protect coastal wetlands. We, along with Fina-LaTerre, now Apache, were the first private entities to sponsor a coastal restoration project, the Brady Canal Project. We have also donated thousands of acres for coastal restoration projects namely the Barrier Islands and the West Belle Pass Restoration Projects. Working with public agencies we have issued numerous scientific research permits, servitudes and easements for other restoration projects. We have also issued a permit covering portions of our property in a 7-parish area for the CRMS Study. We sincerely appreciate the cooperative efforts of all parties involved in protecting Louisiana coastal wetlands. Continuing with that effort of cooperation, we are requesting your support for this Project, we feel it is important for the preservation of coastal wetlands in Lafourche Parish. We humbly request that the Technical Committee consider and recommend for Phase I approval. We support this Project and sincerely believe that it will be of great value in enhancing the wetlands of this area in Lafourche Parish.

We strongly urge your support for this Project.

Thank you in advance for your favorable support for this Project.

Sincerely,  
The Louisiana Land and Exploration Company LLC



Phillip R. Pecht  
Attorney-in-Fact

PRP/aav

**THE LOUISIANA LAND AND EXPLORATION COMPANY LLC**  
**806 BAYOU BLACK DRIVE**  
**HOUMA, LOUISIANA 70360**

December 3, 2014

US Army Corps of Engineers – NOD  
P.O. Box 60267  
New Orleans, LA 70160-0267  
Attn: CEMVN-PM-BC (Allison Murry/CWPPRA)

RE: PPL24 Project  
Phase I Engineering & Design CWPPRA funding  
**Bayou Dularge Ridge Restoration & Marsh Creation**  
**Terrebonne Parish, Louisiana**

---

Dear CWPPRA Task Force,

The Louisiana Land & Exploration Company LLC (LL&E) and ConocoPhillips believe that the Bayou Dularge Ridge Restoration and Marsh Creation project is needed in the Terrebonne Basin area to rebuild and restore the Bayou Dularge Ridge by creating and nourishing the existing marsh areas along Bayou Dularge. This ridge is the only landbridge feature that separates Lake Mechant and Sister Lake. This project will also benefit the existing TE-44 Lake Mechant project and proposed TE-66 Grand Pass project.

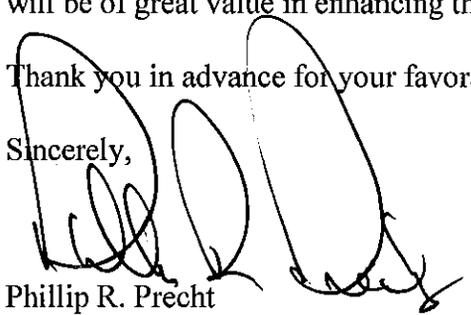
LL&E has long been a supporter of coastal restoration activities in Louisiana. Since enactment of the CWPPRA Program, we have supported whole heartily both State and Federal efforts to restore, enhance or protect coastal wetlands.

We sincerely appreciate the cooperative efforts of all parties involved in protecting Louisiana coastal wetlands. Continuing with that effort of cooperation, we request that the Technical Committee consider and recommend the project for Phase I approval.

We support the Bayou Dularge Ridge Restoration & Marsh Creation project and sincerely believe that it will be of great value in enhancing the wetlands in Terrebonne Parish.

Thank you in advance for your favorable support for this project.

Sincerely,



Phillip R. Precht  
Attorney-in-Fact

The Louisiana Land and Exploration Company LLC

**THE LOUISIANA LAND AND EXPLORATION COMPANY LLC**  
**806 BAYOU BLACK DRIVE**  
**HOUMA, LOUISIANA 70360**

December 3, 2014

US Army Corps of Engineers – NOD  
P.O. Box 60267  
New Orleans, LA 70160-0267  
Attn: CEMVN-PM-BC (Allison Murry/CWPPRA)

RE: PPL24 Project  
Phase I Engineering & Design CWPPRA funding  
**West Fourchon Marsh Creation and Nourishment**  
**Lafourche Parish, Louisiana**

---

Dear CWPPRA Task Force,

The Louisiana Land & Exploration Company LLC (LL&E) and ConocoPhillips believe that the West Fourchon Marsh Creation and Nourishment project is needed in the Terrebonne Basin area to create and nourish the existing marsh areas, and between Bayou Lafourche and Timbalier Bay which is subject to shoreline erosion.

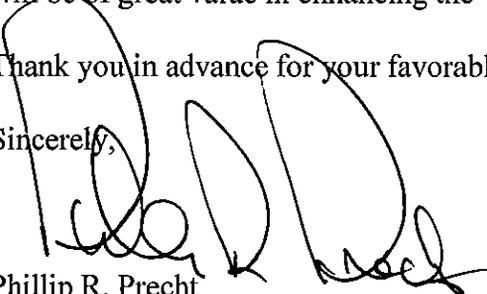
LL&E has long been a supporter of coastal restoration activities in Louisiana. Since enactment of the CWPPRA Program, we have supported whole heartily both State and Federal efforts to restore, enhance or protect coastal wetlands.

We sincerely appreciate the cooperative efforts of all parties involved in protecting Louisiana coastal wetlands. Continuing with that effort of cooperation, we request that the Technical Committee consider and recommend for Phase I approval.

We support the West Fourchon Marsh Creation and Nourishment project and sincerely believe that it will be of great value in enhancing the wetlands in Lafourche Parish.

Thank you in advance for your favorable support for this project.

Sincerely,

  
Phillip R. Precht  
Attorney-in-Fact  
The Louisiana Land and Exploration Company LLC

Norbèrt N. "Norby" Chabert  
State Senator  
20<sup>th</sup> Senatorial District

P. O. Box 2417  
Houma, LA 70361

Office: (985) 858-2927  
Fax: (985) 858-2930

SENATE  
STATE OF LOUISIANA



December 9, 2014

CWPPRA Task Force Members

**RE: Leeville Marsh Creation/Nourishment Project/PPL24**

Ladies and Gentlemen:

I am writing to advocate for the above referenced project which is proposed on the East side of Leeville. The project is vital to the community of Leeville, Port Fourchon, Lafourche Parish, the State, and the Nation. It will protect critical energy supplies, endangered and protected species, area resident's and businesses, to include LA Hwy 1.

The project encompasses approximately (+ or -) 440 acres of marsh creation and nourishment. It will reestablish a portion of the Southeastern Louisiana Canal and Protect LA Hwy 1. The project is consistent with the State Master Plan.

I urge the Task Force to move this project to the Engineering and Design Phase. CWPPRA has my full support for PPL24.

Sincerely,

A handwritten signature in black ink, appearing to read "Norbert N. Chabert".

Norbert N. "Norby" Chabert  
State Senator  
District 20

Lillie Petit Gallagher  
1661 East Lakeshore Drive  
Baton Rouge, LA 70808

December 9, 2014

Brad Inman  
CWPPRA Program Manager  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana 70160  
Fax: 504-862-2572  
Email: [Brad.L.Inman@usace.army.mil](mailto:Brad.L.Inman@usace.army.mil)

RE: CWPPRA Project Nominee/East Leeville

Dear Mr. Inman:

Please accept this letter as my support for the CWPPRA Project Nominee, to create or nourish approximately 450 (+or-) acres of marsh on the East side of Leeville, LA. As a descendent of Leeville, I am aware of the value this community contributes to the oilfield support, recreational fishing, and seafood industries.

The immediate area has few remaining barriers and has become a very fragile part of coastal Louisiana. Businesses and residents, as well as LA Hwy 1, suffer from flooding with high tides and strong winds. This project will give much needed protection against subsidence.

I encourage the CWPPRA Task Force to move this project to the next round for consideration and ultimately to the design and construction phase.

Sincerely,

Lillie Petit Gallagher

LPG/jr

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**REQUEST FOR PHASE II AUTHORIZATION AND APPROVAL OF PHASE II INCREMENT 1 FUNDING**

**For Report/Decision:**

The Technical Committee will consider requests for Phase II authorization and approval of Increment 1 funding for cash flow projects for recommendation to the Task Force. Due to limited funding, the Technical Committee will recommend a list of projects for Task Force approval within available program construction funding limits. Each project listed in the following table will be discussed individually by its sponsoring agency.

Following presentations and discussion on individual projects, the Technical Committee will rank all projects to aid in deciding which to recommend to the Task Force for Phase II authorization and funding.

Agency	Project No.	PPL	Project Name	Construct Start Date	Fully-Funded Phase I Cost	Fully-Funded Phase II Cost	Total Fully Funded Cost Est.	Net Benefit Acres	Total Cost per Acre
NMFS	ME-18	10	Rockefeller Gulf Shoreline Stabilization	Apr 2016	\$2,408,478	\$31,768,000	\$34,176,478	256	\$133,502
NMFS	TE-51	16	Madison Bay Marsh Creation & Terracing	Jan 2016	\$3,002,171	\$41,291,829	\$44,294,000	334	\$132,617
FWS	CS-54	20	Cameron-Creole Watershed Grand Bayou Marsh Creation	Jan 2016	\$2,376,789	\$26,330,899	\$28,707,688	476	\$60,310
NMFS	CS-59	21	Oyster Bayou Marsh Restoration	Sep 2015	\$3,165,322	\$28,071,419	\$31,236,741	489	\$63,879
EPA	BA-164	22	Bayou Dupont Sediment Delivery – Marsh Creation #3	Jan 2016	\$3,415,930	\$30,904,995	\$34,320,925	230	\$149,221

**CWPPRA Technical Committee Ranking for Phase II Approval, Dec 2014**

PPL	Project No.	Project	COE	EPA	FWS	NMFS	NRCS	STATE	No. of Agency Votes	Sum of Weighted Score
21	CS-59	Oyster Bayou Marsh Restoration	3	2	1	3		3	5	12
20	CS-54	Cameron-Creole Watershed Grand Bayou Marsh Creation	1	1	3		3	2	5	10
22	BA-164	Bayou Dupont Sediment Delivery - Marsh Creation #3	2	3			1	1	4	7
10	ME-18	Rockefeller Gulf Shoreline Stabilization				2	2		2	4
16	TE-51	Madison Bay Marsh Creation & Terracing			2	1			2	3

NOTES:

- Projects are sorted by: (1) Agency Support or "Number of Yes Votes" and (2) "Sum of Weighted Score"
- The "Number of Yes Votes" and the Sum of the Total Point Score will be used by the Technical Committee to formulate a recommendation to the Task Force within available funding limits.

RUN MACRO "sort" TO AUTOMATICALLY COMPLETE STEPS

STEP 1: Information from "VOTE" sheet is automatically copied into "SORT-Final Vote".

STEP 2: Sort columns A..P, descending, first by "No. of Yes Votes" (Column J) and second by "Sum of Point Score" (Column K).

STEP 3: Once projects are sorted, add in formula to add funding requests cumulatively (Column M)

CWPPRA Technical Committee Ranking for Phase II Approval, Dec 2014

12-Dec-13

PPL	Project No.	Project	COE	EPA	FWS	NMFS	NRCS	STATE	No. of Agency Votes	Sum of Weighted Score
10	ME-18	Rockefeller Gulf Shoreline Stabilization							0	0
16	TE-51	Madison Bay Marsh Creation & Terracing							0	0
20	CS-54	Cameron-Creole Watershed Grand Bayou Marsh Creation	1						0	0
21	CS-59	Oyster Bayou Marsh Restoration	3						0	0
22	BA-164	Bayou Dupont Sediment Delivery - Marsh Creation #3	2						0	0
			No. of votes:	0	0	0	0	0	0	
			Sum of Votes:	0	0	0	0	0	0	

The following voting process will be used to rank all projects under consideration for construction approval/Phase II Authorization:

1. Each agency represented in the Technical Committee will be provided one ballot for voting.
2. Each agency represented in the Technical Committee will cast weighted votes for 3 projects. All votes must be used.
3. Weighted scores will be assigned the values of 3, 2, and 1 with 3 being highest and 1 being the lowest ranking.
4. Projects are ranked first by the number of agency votes received (to determine level of agency consensus/support for individual projects, and then by "Sum" of the weighted score (on next page).
5. This ranking will be used by the Technical Committee as a "tool" to determine which projects will be recommended to the Task Force for funding, within available funds.

*RL L. J.*

12 Dec 2014

CWPPRA Technical Committee Ranking for Phase II Approval, Dec 2014

12-Dec-13

PPL	Project No.	Project	COE	EPA	FWS	NMFS	NRCS	STATE	No. of Agency Votes	Sum of Weighted Score
10	ME-18	Rockefeller Gulf Shoreline Stabilization							0	0
16	TE-51	Madison Bay Marsh Creation & Terracing							0	0
20	CS-54	Cameron-Creole Watershed Grand Bayou Marsh Creation		1					0	0
21	CS-59	Oyster Bayou Marsh Restoration		2					0	0
22	BA-164	Bayou Dupont Sediment Delivery - Marsh Creation #3		3					0	0

No. of votes: 0 0 0 0 0 0 0  
 Sum of Votes: 0 0 0 0 0 0 0

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*David Cole*

CWPPRA Technical Committee Ranking for Phase II Approval, Dec 2014

12-Dec-13

PPL	Project No.	Project	COE	EPA	FWS	NMFS	NRCS	STATE	No. of Agency Votes	Sum of Weighted Score
10	ME-18	Rockefeller Gulf Shoreline Stabilization							0	0
16	TE-51	Madison Bay Marsh Creation & Terracing			2				0	0
20	CS-54	Cameron-Creole Watershed Grand Bayou Marsh Creation			3				0	0
21	CS-59	Oyster Bayou Marsh Restoration			1				0	0
22	BA-164	Bayou Dupont Sediment Delivery - Marsh Creation #3							0	0

No. of votes: 0 0 0 0 0 0 0  
 Sum of Votes: 0 0 0 0 0 0 0

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*Paul*  
*He*

CWPPRA Technical Committee Ranking for Phase II Approval, Dec 2014

12-Dec-13

PPL	Project No.	Project	COE	EPA	FWS	NMFS	NRCS	STATE	No. of Agency Votes	Sum of Weighted Score
10	ME-18	Rockefeller Gulf Shoreline Stabilization				2			0	0
16	TE-51	Madison Bay Marsh Creation & Terracing				1			0	0
20	CS-54	Cameron-Creole Watershed Grand Bayou Marsh Creation							0	0
21	CS-59	Oyster Bayou Marsh Restoration				3			0	0
22	BA-164	Bayou Dupont Sediment Delivery - Marsh Creation #3							0	0

No. of votes: 0 0 0 0 0 0 0 0  
Sum of Votes: 0 0 0 0 0 0 0 0

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*W. Boyd*

CWPPRA Technical Committee Ranking for Phase II Approval, Dec 2014

12-Dec-13

PPL	Project No.	Project	COE	EPA	FWS	NMFS	NRCS	STATE	No. of Agency Votes	Sum of Weighted Score
10	ME-18	Rockefeller Gulf Shoreline Stabilization					2		0	0
16	TE-51	Madison Bay Marsh Creation & Terracing							0	0
20	CS-54	Cameron-Creole Watershed Grand Bayou Marsh Creation					3		0	0
21	CS-59	Oyster Bayou Marsh Restoration							0	0
22	BA-164	Bayou Dupont Sediment Delivery - Marsh Creation #3					1		0	0

No. of votes: 0 0 0 0 0 0 0  
 Sum of Votes: 0 0 0 0 0 0 0

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CWPPRA Technical Committee Ranking for Phase II Approval, Dec 2014

12-Dec-13

PPL	Project No.	Project	COE	EPA	FWS	NMFS	NRCS	STATE	No. of Agency Votes	Sum of Weighted Score
10	ME-18	Rockefeller Gulf Shoreline Stabilization							0	0
16	TE-51	Madison Bay Marsh Creation & Terracing							0	0
20	CS-54	Cameron-Creole Watershed Grand Bayou Marsh Creation						2	0	0
21	CS-59	Oyster Bayou Marsh Restoration						3	0	0
22	BA-164	Bayou Dupont Sediment Delivery - Marsh Creation #3						1	0	0
			No. of votes:	0	0	0	0	0	0	
			Sum of Votes:	0	0	0	0	0	0	

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## Evaluation Matrix for January 2015 Phase 2 Requests

Project Name	Region	Parish	Project Area (acres)	Average Annual Habitat Units (AAHU)	Net Acres	Phase II, Increment 1 Request*	Total Fully Funded Cost	Fully-Funded Phase I Cost	Fully-Funded Phase II Cost	Average Annual Cost (AAC)	Cost Effectiveness (AAC/AAHU)	Cost Effectiveness (Cos/Net Acre)
Oyster Bayou Marsh Restoration (CS-59, PPL 21)	4	Cameron	809	231	489	\$27,557,097	\$31,236,741	\$3,165,322	\$28,071,419	\$2,221,359	\$9,616	\$63,879
Madison Bay Marsh Creation and Terracing (TE-51, PPL 16)	3	Terrebonne	943	187	334	\$40,806,278	\$44,294,000	\$3,002,171	\$41,291,829	\$3,207,152	\$17,151	\$132,617
Bayou Dupont 3 Sediment Delivery - MC (BA-164, PPL 22)	2	Plaquemines & Jefferson	462	101	230	\$30,217,559	\$34,320,925	\$3,415,930	\$30,904,995	\$2,424,007	\$24,000	\$149,221
Cameron Creole Watershed Grand Bayou Marsh Creation (CS-54, PPL 20)	4	Cameron	616	193	476	\$25,745,513	\$28,707,688	\$2,376,789	\$26,330,899	\$2,067,227	\$10,711	\$60,310
Rockefeller Gulf Shoreline Stabilization (ME-18, PPL 10)	4	Cameron	450	79	256	\$30,908,631	\$34,176,478	\$2,408,478	\$31,768,000	\$2,458,789	\$31,124	\$133,502

\* Phase II, Increment 1 Request = Phase II FF First Cost + first 3 yrs of State & Fed O&M, monitoring, S&A, admin, and inspection

rev 11/24/14

# Rockefeller Gulf Shoreline Stabilization

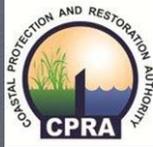
(ME-18)

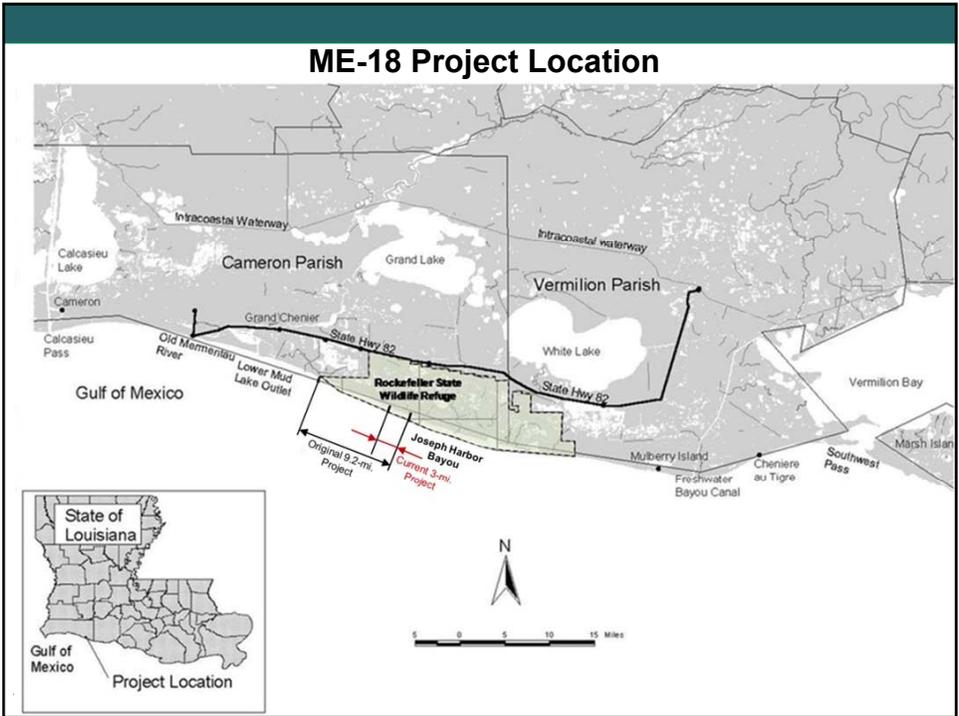
NFMS

PPL 10

# Rockefeller Refuge Gulf Shoreline Stabilization Project (ME-18) Phase II Request

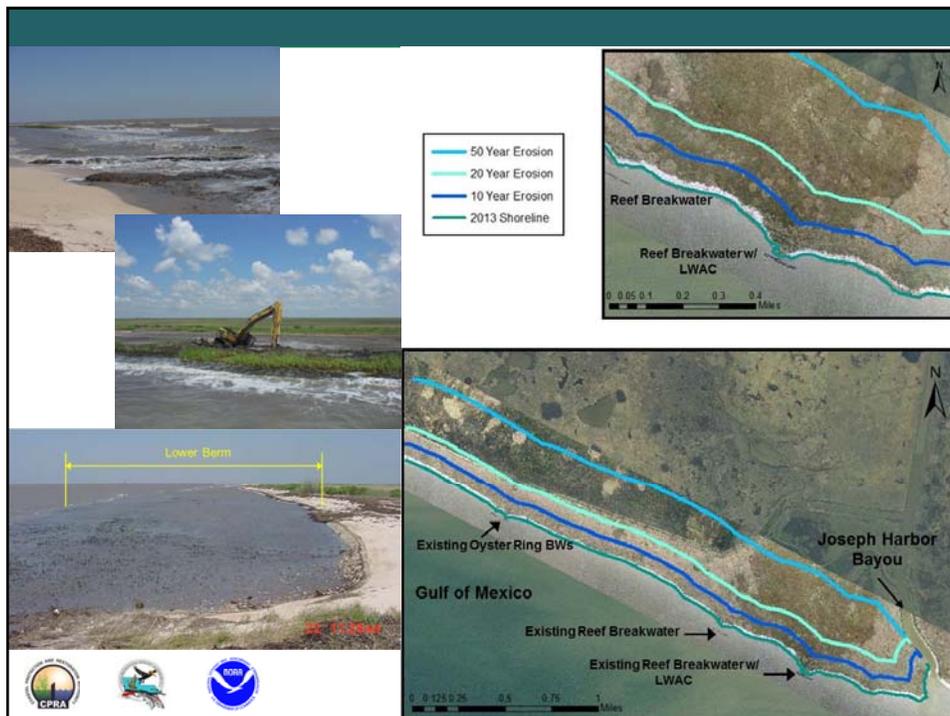
Technical Committee Meeting  
December 11, 2014  
Baton Rouge, LA

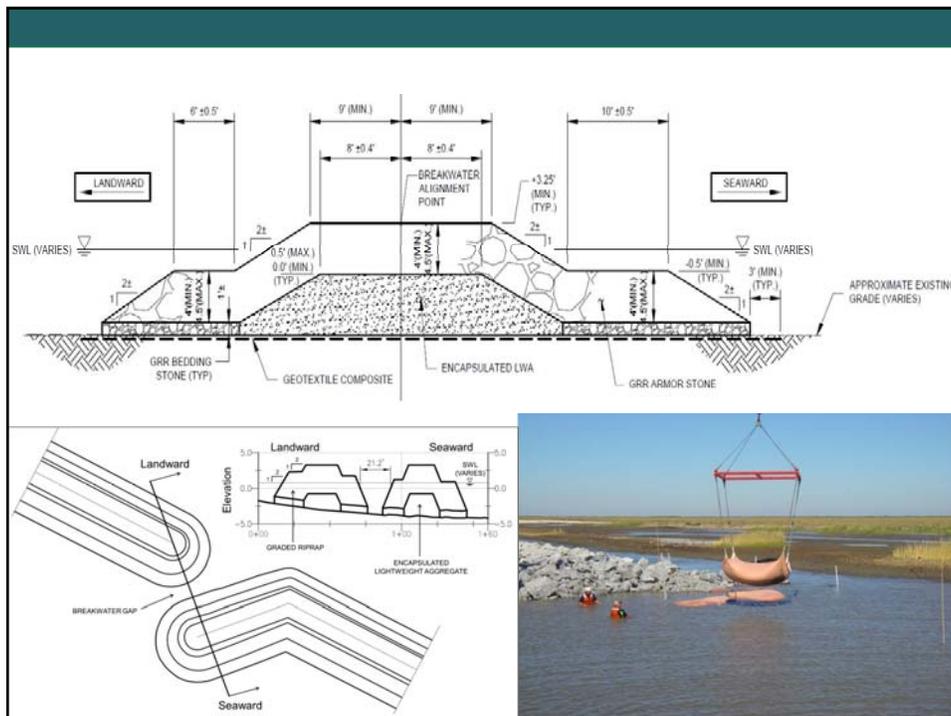
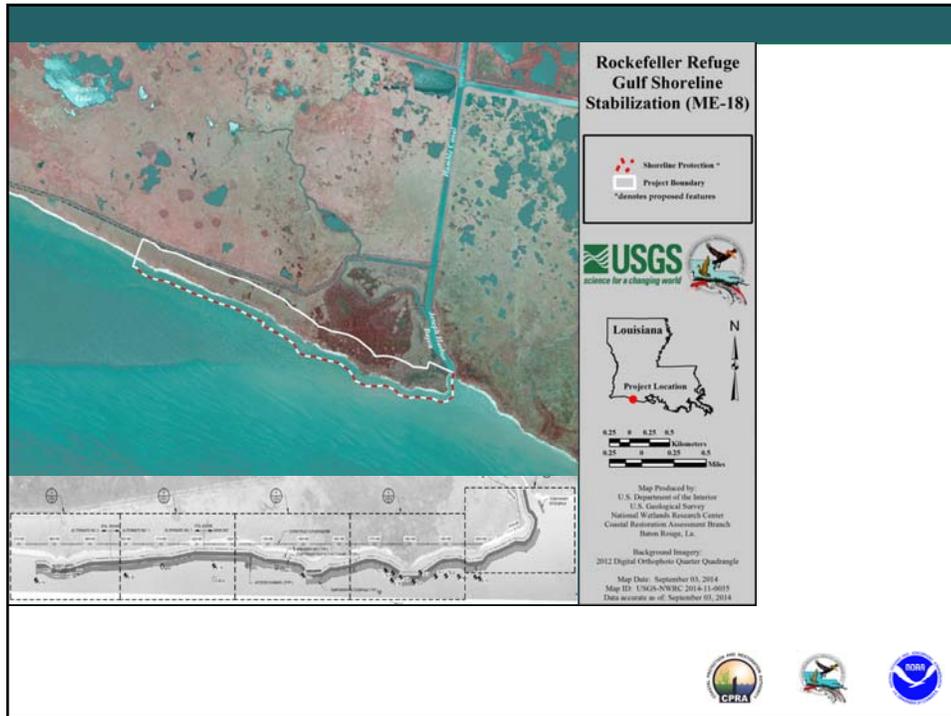




### Project Background and Purpose

- Project funded originally through CWPPRA on PPL 10 to address shoreline retreat rate of 46 feet/year
- Project Goals: halt Gulf shoreline retreat; protect saline marsh habitat; and enhance fish and wildlife habitat.
- 84 different shoreline protection designs were evaluated
- Due to challenging soil conditions at site, a demonstration project was implemented
- Construction and monitoring of demonstration project funded through CIAP
- Project scope change to reduce project size approved in April 2013





## Rockefeller Refuge (ME-18)

### Benefits and Costs

- The project benefits 450 acres of marsh and open water habitats
- 256 net acres at the end of the 20-year project life
- Fully funded cost = \$34,176,478
- Today's Phase 2 Increment 1 request = \$30,908,631



## Rockefeller Refuge (ME-18)

### Why this project, why now?

- Little maintenance associated with this project.
- Current design incorporates two existing shoreline features (ME-18 test sections and LA-08)
- LDWF is the proposed project permit applicant, and has already submitted a letter to the CWPPRA Program accepting project liability after project life.
- For every year not built, the Gulf of Mexico will be 46 feet closer to the critical infrastructure; i.e. project area loses another 17 acres of functioning wetlands to erosion.



22 2:08 PM



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, MD 20910

November 24, 2014

Mr. Troy G. Constance  
Acting Deputy District Engineer  
US Army Corps of Engineers  
New Orleans District  
P.O. Box 60267  
New Orleans, LA 70160-0267

Re: Phase II Construction Funds Request for the Rockefeller Refuge Gulf Shoreline  
Stabilization project (ME-18)

Dear Mr. Constance:

NOAA Fisheries and the Louisiana Coastal Protection and Restoration Authority (CPRA) hereby request approval for Phase II authorization of the Rockefeller Refuge Gulf Shoreline Stabilization project (ME-18). Phase I activities were authorized on Priority Project List 10 on January 10, 2001, by the Louisiana Coastal Wetlands Conservation and Restoration Task Force under the authority of the Coastal Wetlands, Planning, Protection and Restoration Act (CWPPRA). This request is submitted in accordance with the CWPPRA Project Standard Operating Procedures Manual (SOP).

Enclosed please find the information required for Phase II requests and approval pursuant to Appendix A of the SOP. Should additional information be required for this project, I can be reached at (301) 427-8675. Thank you for your consideration of this request.

Sincerely,

Cecelia Linder  
NOAA CWPPRA Program Manager  
NOAA Fisheries Service

Enclosures

Cc: Members of the CWPPRA Technical Committee  
John Foret, Project Manager, NOAA NMFS  
Andrew Beall, CPRA Project Management Administrator



## INFORMATION REQUIRED IN PHASE II AUTHORIZATION REQUESTS

**I. Description of Phase I Project**

The Rockefeller Refuge Gulf Shoreline Stabilization Project was proposed by the National Oceanic and Atmospheric Administration (NOAA) as a candidate for the Project Priority List 10. Phase 1 was authorized by the CWPPRA Task Force on January 10, 2001. The candidate project envisioned a 9.2 mile rock breakwater that followed the -5' contour from Joseph's Harbor Bayou westward to Beach Prong. Challenging site conditions prompted a Project Scope Change Request, and approval, in April 2013 to a 2.5-mile rock breakwater with lightweight aggregate core (w/LWA). The nearly continuous breakwater follows the -4.0' contour from Joseph's Harbor Bayou westward, and have breakwater gaps at approximate 1,500 foot intervals to ensure tidal exchange and fisheries support functions.

A summary of project costs and benefits at the time of the Phase 1 scope change is provided below; the candidate project fact sheet and map can be found in Attachment A.

Fully Funded Total Project Cost	\$28,515,025
Phase II, Increment I Request	\$27,558,543
Net Acres at TY20	198
Average Annual Habitat Units	113

**II. Overview of Phase I Tasks, Process and Issues**

Phase I activities included formation of project goals and objectives, pre-design investigations (i.e., bathymetric and topographic surveys and geotechnical of the project area), data acquisition and geotechnical analyses, development and evaluation of project alternatives at the Preliminary (30%) Design level and completion of Final Design (95%) of the preferred alternative. Other tasks included the development of the landrights workplan, the preliminary ownership report, application for appropriate permits and regulatory clearances, consultations with the State Historic Preservation Office, development of draft Environmental Assessment, and review of updated costs and benefits by the Engineering and Environmental Workgroups.

**III. Description of the Phase II Candidate Project**

The major feature of the proposed project is construction of a nearly 3.0 mile continuous rock breakwater w/LWA that follows the -3.5' contour of the Gulf of Mexico from Joseph's Harbor Bayou westward. Breakwater gaps at approximate 1,500-foot intervals are planned to ensure tidal exchange and fisheries support functions. The design incorporates two (2) rock breakwater test sections (constructed under CIAP), and two (2) oyster demonstration project features (LA-08). The proposed breakwater dimensions are an initial construction elevation of +3.5', with an 18' crown. The breakwater is anticipated to ultimately settle to +1.9' after 20 years; this elevation coupled with the 18' crown width will result in the protection of the Gulf shoreline for the 20-year project life.

A summary of current project costs and benefit is provided below; an updated project fact sheet and map can be found in Attachment B.

Fully Funded Total Project Cost	\$34,176,478
Phase II, Increment I Request	\$30,908,631
Net Acres at TY20	256
Average Annual Habitat Units	79

A few design challenges were encountered during Phase I that resulted in small modifications of the original project features. Design challenges included how to incorporate existing test sections and demonstration project features into the breakwater; given the geotechnical limitations. The current design reflects the following modifications

- Align the breakwater to the -3.5' contour to reduce project material costs;
- Existing LWA test section is at the design elevation and will be tied into on either side;
- Existing rock breakwater test section is at approximately 0.5', and will be tied into on either side;
- Existing oyster ring demonstration features will be tied into the proposed feature on either side, and in the approximate 150' gap between the two oyster ring features, the proposed design cross-section will be constructed. This will create two breakwater gaps. However, current cost estimates reflect enough stone to overtop both features should future geotechnical analyses indicate sufficient consolidation.

#### IV. Checklist of Phase Two Requirements

##### A. *List of Project Goals and Strategies*

The primary project goals are to halt shoreline retreat and direct marsh loss, protect saline marsh habitat, and enhance fish and wildlife habitat. Specific project objectives are to 1) protect 330 acres of saline marsh to provide fish and wildlife habitat through the prevention of beach erosion for up to Category 1 conditions, which were estimated to have a return interval of about 10 years at the project site; and 2) where practicable, the protection should remain stable for more severe storm conditions up to an event having a 100-year return period.

##### B. *Cost Share Agreement*

A cooperative agreement was executed between NOAA and CPRA for Phase I activities on December 27, 2013.

##### C. *Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase II approval.*

The State confirmed that the process for landrights acquisition is progressing and that it anticipated that landrights would be finalized in a reasonable amount of time after Phase II Approval (October 7 e-mail; Attachment C).

##### D. *A favorable Preliminary Design Review (30% Design Level)*

The Preliminary Design Review meeting was held on May 15, 2014; participants included EPA, COE and USFWS. Response to design review comments and the State's letter of concurrence to proceed to final design are included in Attachment D.

*E. Final Project Design Review (95% Design Level)*

The Final Design Review meeting was held on October 1, 2014. In addition to the federal and non-federal sponsors, NRCS, EPA, and COE participated in the meeting. Response to design review comments and the State's letter of concurrence to proceed to Phase II request are included in Attachment E.

*F. A draft of the Environmental Assessment of the Project, as required under the National Environmental Policy Act, must be submitted two weeks before the Technical Committee meeting at which Phase 2 approval is requested.*

A draft Environmental Assessment was submitted to the Technical Committee via email on November 25, 2014. Notice of its availability online is planned for publishing via the Lake Charles American Press the first week of December. Additionally, hard copies of the EA will be available at the Cameron Parish library.

*G. Written summary of the findings of the Ecological Review*

N/A

*H. Application for and/or issuance of the public notices for permits*

Joint permit application materials (LDNR/CMD; COE and LDEQ) were prepared, and are ready for submittal if Phase II funding is approved (Attachment F).

*I. A hazardous, toxic and radiological waste (HTRW) assessment, if required*

Not required.

*J. Section 303(e) approval*

Request for 303(e) approval was submitted to the New Orleans District on October 15, 2014 (Attachment G).

*K. Overgrazing determination from the NRCS*

NRCS has determined that overgrazing by livestock is not a problem in the project area (Attachment H).

*L. Revised fully funded cost estimate, reviewed and approved by the Engineering Work Group prior to fully funding by the Economic Work Group, based on the revised Project design and the specific Phase Two funding request as outlined in below spreadsheet*

A revised fully funded cost estimate was finalized by the Economic Workgroup on November 18, 2014. The total fully funded cost is \$34,176,478. The Phase II funding request is included in Attachment I.

*M. A Wetland Value Assessment, reviewed and approved by the Environmental Work*

---

*Group*

A revised WVA reflecting the final project design was completed on October 29, 2014 (Attachment J). The project is anticipated to result in 256 net acres and 79 AAHUs.

Attachment A  
Candidate Project Fact Sheet



# Rockefeller Refuge Gulf Shoreline Stabilization (ME-18)

## Project Status

**Approved Date:** 2001      **Project Area:** 1,373 acres  
**Approved Funds:** \$2.40 M      **Total Est. Cost:** \$96.4 M  
**Net Benefit After 20 Years:** 920 acres  
**Status:** Engineering and Design  
**Project Type:** Shoreline Protection  
**PPL #:** 10

## Location

The project is located along the Rockefeller Wildlife Refuge Gulf of Mexico shoreline from Beach Prong to Joseph Harbor in Cameron Parish, Louisiana.

## Problems

The project is designed to address Rockefeller Wildlife Refuge gulf shoreline retreat that averages approximately 39 feet/year with a subsequent direct loss of emergent saline marsh.

## Restoration Strategy

The project entails construction of shoreline protection along the Gulf of Mexico. The proposed structure would be tied into the west bank of Joseph Harbor and the east bank of Beach Prong. It would be designed to reduce shoreline retreat along this stretch of gulf shoreline, as well as promote shallowing, settling out, and natural vegetative colonization of the overwash material landward of the proposed structure. Gaps within the shoreline protection feature are also proposed to facilitate material and organism linkages.

## Progress to Date

The cooperative agreement between the National Marine Fisheries Service and the Louisiana Department of Natural Resources has been executed.

Construction feasibility report has been completed.

This project is listed on Priority Project List 10.



Existing beach formation at Rockefeller Wildlife Refuge gulf shoreline. Beach material is primarily made up of lightweight oyster shell fragments (hash).



An example of ongoing shoreline erosion on Rockefeller Wildlife Refuge. Dark areas in photo are remnant organic marsh.

*For more project information, please contact:*



**Federal Sponsor:**  
National Marine Fisheries Service  
Baton Rouge, LA  
(225) 389-0508



**Local Sponsor:**  
Coastal Protection and Restoration Authority  
Baton Rouge, LA  
(225) 342-4736

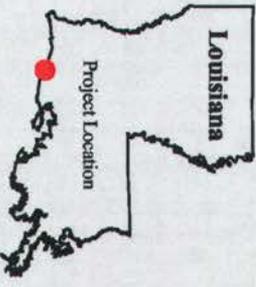
Gulf of Mexico

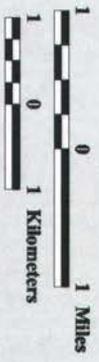


# Rockefeller Refuge Gulf Shoreline Stabilization (ME-18)

 **Shoreline Protection**  
 **Project Boundary**

 **USGS**  
*science for a changing world*  


**Louisiana**  
 **Project Location**  

Map Produced By:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Field Station  
 Background Imagery:  
 2002 Thematic Mapper Imagery  
 Map Date: March 18, 2003  
 Map ID: 2002-11-538  
 Data accurate as of: March 18, 2003

Attachment B  
Revised Project Factsheet



# Rockefeller Refuge Gulf Shoreline Stabilization (ME-18)

## Project Status

**Approved Date:** 2001      **Project Area:** 450 acres  
**Approved Funds:** \$2.40 M      **Total Est. Cost:** \$28.0 M  
**Net Benefit After 20 Years:** 256 acres  
**Status:** Engineering and Design  
**Project Type:** Shoreline Protection  
**PPL #:** 10

## Location

The project is located along the Rockefeller Wildlife Refuge Gulf of Mexico shoreline from Joseph's Harbor canal, westward 3 miles in Cameron Parish, Louisiana.

## Problems

The project is designed to address Rockefeller Wildlife Refuge gulf shoreline retreat that averages approximately 46 feet/year with a subsequent direct loss of emergent saline marsh.

## Restoration Strategy

The project entails construction of shoreline protection along the Gulf of Mexico. The proposed structure would be tied into the west bank of Joseph Harbor a rock breakwater with lightweight aggregate core, westward for approximately 3 miles. It would be designed to reduce shoreline retreat along this stretch of gulf shoreline, as well as promote shallowing, settling out, and natural vegetative colonization of the overwash material landward of the proposed structure. Gaps within the shoreline protection feature are also proposed to facilitate material and organism linkages.

## Progress to Date

The cooperative agreement between the National Marine Fisheries Service and the Louisiana Department of Natural Resources has been executed.

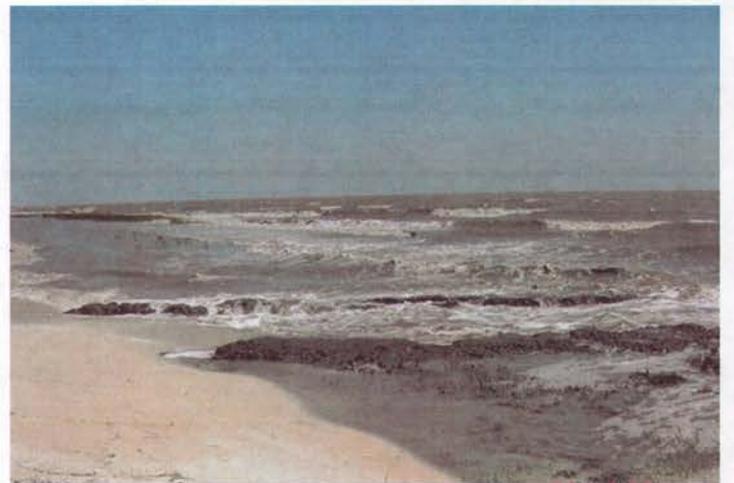
Construction feasibility report has been completed.

Project has completed engineering and design.

This project is listed on Priority Project List 10.



Existing beach formation at Rockefeller Wildlife Refuge gulf shoreline. Beach material is primarily made up of lightweight oyster shell fragments (hash).



An example of ongoing shoreline erosion on Rockefeller Wildlife Refuge. Dark areas in photo are remnant organic marsh.

For more project information, please contact:



**Federal Sponsor:**  
National Marine Fisheries Service  
Baton Rouge, LA  
(225) 389-0508

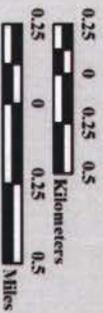
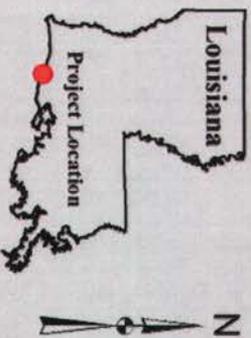


**Local Sponsor:**  
Coastal Protection and Restoration Authority  
Baton Rouge, LA  
(225) 342-4736



# Rockefeller Refuge Gulf Shoreline Stabilization (ME-18)

-  Shoreline Protection \*
-  Project Boundary
- \*denotes proposed features



Map Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Assessment Branch  
 Baton Rouge, La.

Background Imagery:  
 2012 Digital Orthophoto Quarter Quadrangle  
 Map Date: September 03, 2014  
 Map ID: USGS-NWRC 2014-11-0035  
 Data accurate as of: September 03, 2014

Attachment C  
Project Landrights

**Subject:** RE: Phase 2 Request Checklist>> Appendix C of the CWPPRA SOP required "Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase II Approval."

**From:** VJ Marretta <Victor.Marretta@LA.GOV>

**Date:** 10/7/14, 10:55 AM

**To:** "john.foret@noaa.gov" <john.foret@noaa.gov>

**CC:** Garvin Pittman <Garvin.Pittman@la.gov>, James Altman <James.Altman@LA.GOV>

Hi John,

Per your request:

This is to inform the CWPPRA committees and Task Force that the process for landrights acquisition is progressing for the Rockefeller Refuge Shoreline Stabilization Project (ME-18), and the CPRA is confident that landrights will be finalized in a reasonable amount of time after Phase II Approval.

I will provide the 303e letter, as early as, possible. Then, I will prepare, circulate for approval and have executed the Grant of Particular Use (for the state water bottoms), and, provide the landrights certification (once landrights has been completed), pending Phase II funding approval in December, 2014.

Garvin will let me know if the funding has been approved for this project. IF approved, the process for the Grant of Particular Use should not take very long. It will simply depend on how long each party takes to execute the document. I will do my best to expedite CPRA's approval/execution, as well as, State Lands. Hopefully, NOAA/NMFS will also expedite returning the executed document (four originals), as well.

Please feel free to contact me, if you have any questions and/or need additional information.

Thanks,

VJ

V. J. Marretta  
Land Rights Division

Coastal Protection and Restoration  
Authority of Louisiana  
P. O. Box 44027  
Baton Rouge, LA 70804-4027  
Physical Address:  
Chase Building - North Tower  
450 Laurel Street, 12th Floor, Suite 1200  
Baton Rouge, LA 70801

Phone: (225) 342-5260  
Fax: (225) 242-3574  
Cell: (225) 485-6222  
[victor.marretta@la.gov](mailto:victor.marretta@la.gov)

-----Original Message-----

Attachment D  
30% Design Review Concurrence



# State of Louisiana

**BOBBY JINDAL**  
GOVERNOR

August 1, 2014

Mr. Christopher Doley  
Director, Habitat Restoration Division  
NOAA Restoration Center  
The National Oceanic and Atmospheric Administration  
National Marine Fisheries  
1315 East-West Highway, Room 14853  
Silver Spring, MD 20910

Re: 30% Design Review for Rockefeller Shoreline Stabilization (ME-18)  
Statement of Local Sponsor Concurrence

Dear Mr. Doley:

The 30% design review meeting was held on May 15, 2014 for the Rockefeller Shoreline Stabilization (ME-18) project. Based on our review of the technical information compiled to date, the preliminary land ownership investigation, and the preliminary design, the Coastal Protection and Restoration Authority, as the local sponsor, concurs to proceed with the design of the project.

In accordance with the CWPPRA Standard Operating Procedures Manual, we request that you forward this letter of concurrence to the Technical Committee and the Planning and Evaluation Subcommittee and proceed to 95% design level with the selected design and revised project cost estimate.

Please do not hesitate to call me if I may be of any assistance.

Sincerely,

Andrew Beall  
Project Management Administrator

cc: John Foret, National Oceanic and Atmospheric Administration  
Cecelia Linder, National Oceanic and Atmospheric Administration  
Stuart Brown, Coastal Protection and Restoration Authority

Attachment E  
95% Design Review Concurrence



Coastal Protection and  
Restoration Authority of Louisiana

# State of Louisiana

**BOBBY JINDAL**  
GOVERNOR

October 13, 2014

Mr. Christopher Doley  
Director, NOAA Restoration Center  
National Oceanic and Atmospheric Administration  
National Marine Fisheries  
1315 East-West Highway, Room 14853  
Silver Spring, MD 20910

Re: 95% Design Review- Concurrence for Phase II Funding Request  
Rockefeller Refuge Shoreline Stabilization Project (ME-18)  
Statement of Local Sponsor Concurrence

Dear Mr. Doley:

The 95% Design Review meeting for the Rockefeller Refuge Shoreline Stabilization (ME-18) project was held on October 1, 2014. Based on our review of the technical information compiled to date, the land ownership investigation, and the final designs, the Coastal Protection and Restoration Authority, as the local sponsor, concur to proceed with requesting Phase II construction funding for the project. In accordance with the CWPPRA Project Standard Operating Procedures Manual, we request that you forward this letter of concurrence to the Technical Committee and the Planning and Evaluation Subcommittee.

Sincerely,

Andrew D. Beall  
Project Management Administrator  
Project Management Division

ADB: GDP

cc: John Foret, National Oceanic and Atmospheric Administration  
Cecelia Linder, National Oceanic and Atmospheric Administration  
Stuart Brown, Coastal Protection and Restoration Authority  
Garvin Pittman, Coastal Protection and Restoration Authority - Contractor

Attachment F  
Project Permit Application  
*(Full version available upon request)*



# Joint Permit Application

## For Work Within the Louisiana Coastal Zone

**What is the purpose of the Joint Permit Application?**

This Joint Permit Application was developed to facilitate the state and federal permit application process administered by the Louisiana Department of Natural Resources/Office of Coastal Management (OCM) and the U.S. Army Corps of Engineers (COE) for work within the Louisiana Coastal Zone.

To simplify the permit application process, the Joint Permit Application is a multi-purpose application. It may be used to apply for a Coastal Use Permit (CUP) and/or a Department of the Army Permit under Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act. This application may also be used to apply for a Solicitation of Views (SOV) or an OCM Request for Determination (RFD). Review the instructions below, then proceed to Step 1.

**Instructions**

**How do I complete the Joint Permit Application?**

There are two parts to the Joint Permit Application package:

1. Joint Permit Application, and
2. Maps and Drawings.

**An accurate/complete application is required for processing; inaccurate/missing information may delay processing. Follow the instructions below to complete the application. Specific instructions are provided with each step.**

- Type or print clearly using black or blue ink;
- Steps 1 through 16 must be completed; write "N/A" if information does not apply to your proposed project. It is not necessary to write "N/A" on the Steps that you have been asked to skip;
- When additional space is needed, include an 8½ x 11 sheet of paper identifying the Step number.

**When you have questions or need assistance in completing the application package:**

- Refer to the "Glossary of Terms" (See page 10.);
- Refer to "Frequently Asked Questions" (See page 11.);
- Contact the Office of Coastal Management at 1-800-267-4019 or 225-342-7591; or
- Contact your local coastal parish program (See page 11.).  
(<http://dnr.louisiana.gov/CRM/coastmgt/interagencyaff/lcp/lcp.asp>)

**Step 1 of 16**

**Who is the applicant for the proposed project?**

*Note: Applicants may be either the landowner, person or company that is responsible for the proposed project.*

Complete the following information about the applicant.

<b>Applicant/Company Name:</b>	Louisiana Department of Wildlife and Fisheries (LDWF)		
	Individual Person or Corporation/Company		
<b>Mailing Address:</b>	5476 Grand Chenier Hwy		Unit/Apartment #
	Street Address or P.O. Box		
	Grand Chenier	LA	70643-3100
	City	State	Zip
<b>Contact Information:</b>	Philip Trosclair		ptrosclair@wlf.la.gov
	Name of Contact Person (not the agent)		E-Mail Address
	( 337 )	491-2593	( 337 ) 491-2595
	Area Code	Daytime Telephone Number	Area Code Fax Number

**Step 2 of 16**

**Is an agent being used for the proposed project?**

*Note: An agent is not required.*

**Is an agent being used for the proposed project?**

- NO (If NO, proceed to Step 3.)  
 YES (If YES, complete the following information.)

**Company Name:** Coastal Protection and Restoration Authority (CPRA)  
 Corporation/Company

**Mailing Address:** 450 Laurel St. Suite 1501  
 Street Address or P.O. Box Unit/Apartment #  
 Baton Rouge LA 70801  
 City State Zip

**Contact Information:** Garvin Pittman Garvin.Pittman@la.gov  
 Name of Contact Person E-Mail Address  
 ( 225 ) 342-4576 ( 225 ) 342-9417  
 Area Code Daytime Telephone Number Area Code Fax Number

**Step 3 of 16**

**What type of permit or action would you like to request?**

*Note: You may need the approval of other federal, state or local agencies for your project.*

*Note: For questions concerning the CUP, SOV or RFD, call OCM at:  
 • 1-800-267-4019  
 or  
 • 225-342-7591*

Check  the appropriate box(es) to indicate the type of permit or action that you would like to request.

**Coastal Use Permit (CUP), Clean Water Act Permit (Section 404), Rivers and Harbors Act (Section 10)**

The purpose of the CUP is to ensure that any activity affecting the Coastal Zone is completed in a manner that is consistent with the Louisiana Coastal Resource Program.

The purpose of the Department of the Army permit program under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act is to review and evaluate proposals for dredging, filling, and/or placement of structures in waterways and wetlands in order to determine whether a permit should be granted or denied based on expected impacts to the overall public interest.

**Solicitation of Views (SOV) – OCM only**

If you wish to find out if your project is in the Coastal Zone or if you wish to determine if there are special features of the area that may impact your project design you may request a SOV. No application fee is assessed for SOV requests. The following Steps must be completed to obtain an informal determination.

- Step 1, Step 2, Step 6, Step 14, Step 16; and
- Step 13 - (Vicinity plat showing project location and extent is required; cross section and plan views are useful, if available.)

**Request for Determination (RFD)**

If you wish to obtain a formal determination as to whether or not a CUP would be required for a particular activity, you may submit a RFD. The appropriate application fee will be assessed for RFD requests. The following Steps must be completed to obtain a RFD.

- Step 1, Step 2, Step 5, Step 6, Step 8, Step 10, Step 14, Step 16; and;
- Step 13 - (Vicinity plat showing project location and extent is required; cross section and plan views are useful, if available.)
- If you think that no permit is required, you must provide a statement explaining why you think a permit is not required.

**Step 4 of 16**

**Have you participated in a Pre-Application or Geological Review Meeting or obtained a wetland determination?**

*Note: To schedule a Pre-Application and/or a Geological Review Meeting, call OCM at 1-800-267-4019.*

*Note: To apply for a wetland determination, call the COE at 504-862-1627.*

**a. Have you participated in a Pre-Application or Geological Review Meeting for the proposed project?**

- NO (If NO, proceed to Step 4b.) (If you would like to schedule a pre-application meeting, please call 1-800-267-4019)  
 YES (If YES, complete the following information.)

Date meeting was held: \_\_\_/\_\_\_/\_\_\_

Attendees: \_\_\_\_\_  
 Individual or Company Representative OCM Representative COE Representative

**b. Have you obtained an official wetland determination from the COE for the project site?**

- NO (If NO, proceed to Step 4c.)  
 YES (If YES, include a copy with this application.)

JD Number: \_\_\_\_\_

**c. Is this application a mitigation plan for another CUP?**

- NO (If NO, proceed to Step 5.)  
 YES (If YES, identify the permit number of the project requiring mitigation.)

OCM Permit Number: P \_\_\_\_\_

Continue to page 3 for step 5. ↗

**Step 5 of 16**

What permits/certifications have you previously requested for the proposed project?

Note: Additional sheets may be required for agency name, permit number and status information.

**a. Describe the project.**

Construction of an offshore breakwater along the Rockefeller Wildlife Refuge Gulf of Mexico shoreline to protect the rapidly eroding shoreline in the vicinity of Joseph Harbor Bayou.

**b. Is this application a change to an existing permit?**

- NO** (If NO, proceed to Step 5c.)
- YES** (If YES, identify the existing permit number.)

OCM Permit Number: P  
 Please explain

**c. Have you previously applied for a permit or emergency authorization for all or any part of the proposed project?**

- NO** (If NO, proceed to Step 6.)
- YES** (If YES, complete the following information for the proposed project.)

Agency Name	Permit Number	Decision Status			Decision Date
		Approved	Denied	Pending	
OCM _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
COE _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Step 6 of 16**

Where will the proposed project be located?

Note: The following websites may provide assistance in completing the latitude/longitude and directions:

- Sonris on OCM website
- MapQuest.com
- Topozone.com

Note: Directions may include the following:

- Nearest town/city
- Highways
- Intersections
- Street names
- Landmarks
- Start/end point

**Complete the following information to identify the exact location of the proposed project.**

**a. Physical Location:** Cameron Grand Chenier 70643  
 Parish City Zip  
 Street Address (if known) \_\_\_\_\_  
Gulf of Mexico  
 Water Body (if known) \_\_\_\_\_

**b. Latitude and Longitude:**  Must be included in all applications. Latitude: 29 38 10.860 Longitude: 92 46 41.030  
 Degrees Minutes Seconds Degrees Minutes Seconds

**c. Section, Township, Range: (if available)**  
16, 17, 20, 21, 22 16S 4W  
 Section #(s) Township # (Specify North or South) Range # (Specify East or West)  
 \_\_\_\_\_  
 Section #(s) Township # (Specify North or South) Range # (Specify East or West)

**d. Lot #, Tract #, Parcel # or Subdivision Name: (if known)**  
 Lot # \_\_\_\_\_ Parcel # \_\_\_\_\_  
 Tract # \_\_\_\_\_ Subdivision Name \_\_\_\_\_

**e. Site Directions:** Directions to the proposed project site must be identified in order to process the application.  
**Example:** START - I-10 toward Baton Rouge. Exit #153 toward Port Allen. US-190 West/LA-1 North ramp. RIGHT onto LA-987 1/Bridge Side Road. RIGHT onto LA-986/North River Road to Popular Grove Plantation directly behind guest parking lot in rear. -END  
 START- From Lafayette: US-167 South toward Maurice. LEFT onto Veterans Memorial Dr. after approximately 20 miles. RIGHT onto LA-82 W/N State St. after approximately 0.5 miles. Follow signs for LA-82 W for approximately 60 miles. The boat launch will be on the left hand side. Travel South through Humble Canal and Joseph Harbor Bayou by boat to Gulf of Mexico- END.

Continue to page 4 for step 7. ➔

Attachment G  
Section 303(e) Approval

**Subject:** Rockefeller Refuge Gulf Shoreline Stabilization ME-18 303(e) Certification

**From:** Cecelia Linder - NOAA Federal <cecelia.linder@noaa.gov>

**Date:** 10/15/14, 8:27 AM

**To:** "Hennington, Susan M MVN" <Susan.M.Hennington@usace.army.mil>

**CC:** angela.thomas@la.gov, Benjamin Barnes <Benjamin.Barnes@la.gov>, James Altman <James.Altman@la.gov>, Stuart Brown <stuart.brown@la.gov>, "Inman, Brad L MVN" <Brad.L.Inman@usace.army.mil>, Garvin Pittman <garvin.pittman@la.gov>, John Foret - NOAA Federal <john.foret@noaa.gov>

Susan,

Please see the attached information for fulfillment of Section 303(e) of CWPPRA for the Rockefeller Refuge Gulf Shoreline Stabilization Project, ME-18 . Once I receive the hard copy version of CPRA's letter, then I will send a hard copy version to you.

Thank you so much,

Cece

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Cecelia Linder

NOAA CWPPRA Program

1315 East-West Highway

SSMC #3, F/HC3, Rm 15861

Silver Spring, MD 20910

301-427-8675

[www.restoration.noaa.gov](http://www.restoration.noaa.gov)

— Attachments: —

ME 18 Rockefeller Refuge 303e Request.pdf

27 bytes

Attachment H  
Overgrazing Determination



United States Department of Agriculture

August 19, 2014

Mr. John D. Foret  
National Oceanic and Atmospheric Administration  
Estuarine Habitats & Coastal Fisheries Center  
646 Cajundome Boulevard  
Lafayette, Louisiana 70508

Dear Mr. Foret:

RE: Rockefeller Refuge Gulf Shoreline Stabilization Project (ME-18)

I am in receipt of your request for an overgrazing determination for the Rockefeller Refuge Gulf Shoreline Stabilization Project (ME-18). I contacted our local district conservationist and our state grazing land specialist to discuss the grazing in the project area. Currently, livestock are not grazing in the area, nor do we see a potential for grazing once the project is installed. Therefore, it is our opinion, overgrazing is not a problem in this project area. If you have any questions please let me know.

Sincerely,

W. Britt Paul  
Assistant State Conservationist/Water Resources

Cc: (electronic distribution only)  
Randolph Joseph, Assistant State Conservationist/Field Operations, Lafayette, Louisiana  
Frank Chapman, District Conservationist, Lake Charles, Louisiana  
John Jurgensen, Civil Engineer, Alexandria, Louisiana  
Johanna Pate, State Grazing Land Specialist, Alexandria, Louisiana

Attachment I  
Phase II Funding Request

Attachment J  
Revised Project Wetland Value Assessment  
*(Full version available upon request)*

# Rockefeller Refuge Gulf Shoreline Stabilization (ME-18)

Coastal Wetlands Planning, Protection and Restoration Act



**Proposed by**

NOAA National Marine Fisheries Service

**FINAL Project Information Sheet for Wetland Value Assessment  
Phase Two Revision**

**October 22, 2014**

**Contact:** Kimberly Clements, NOAA NMFS, (225) 389-0508

# Madison Bay Marsh Creation & Terracing

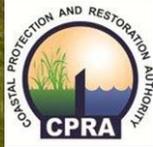
(TE-51)

NMFS

PPL 16

# Madison Bay Marsh Creation and Terracing Project (TE-51) Phase II Request

Technical Committee Meeting  
December 11, 2014  
Baton Rouge, LA



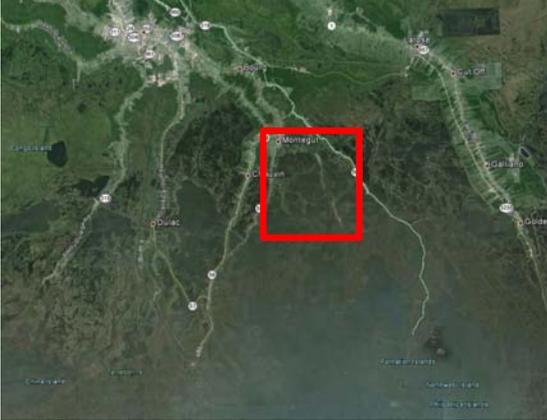
## TE-51 Project Location

Terrebonne Parish,  
Louisiana

STATE OF LOUISIANA  
INSET MAP



TERREBONNE PARISH



Madison Bay/Wonder Lake Complex  
• South of Montegut, Louisiana

12/12/2014

## TE-51 Project Location

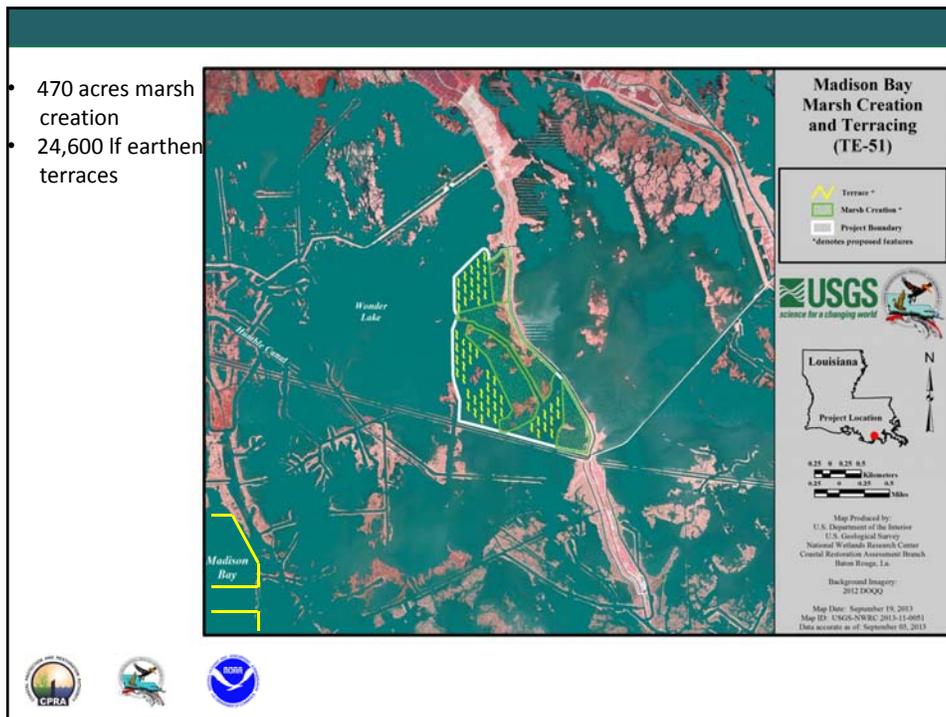


12/12/2014

## Project Background and Purpose

- Phase 1 approval on October 18, 2006
- Project change in scope on April 19, 2012
- Construct and maintain an intertidal marsh elevation for the longest period of time within the 20-year project life.
- Protect the Montegut Flood Protection Levee and St. Jean Charles Ridge from wave energy by reducing the open water fetch of Wonder Lake/Madison Bay
- Protect the newly constructed marsh from wave energy by reducing the open water fetch of Wonder Lake/Madison Bay through the use of earthen terraces





## Madison Bay (TE-51)

### Benefits and Costs

- The project benefits 943 acres of marsh and open water habitats
- 334 net acres at the end of the 20-year project life
- Fully funded cost = \$44,294,000
- Today's Phase 2 Increment 1 request = \$40,806,278



## Madison Bay (TE-51)

Why this project, why now?

- Located within an area with one of the highest land loss rates in the State
- Protection of St. Jean Charles Ridge
- Establishes first line of defense against storm surge and the Morganza to the Gulf Hurricane Protection Project





UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, MD 20910

November 24, 2014

Mr. Troy G. Constance  
Acting Deputy District Engineer  
US Army Corps of Engineers  
New Orleans District  
P.O. Box 60267  
New Orleans, LA 70160-0267

Re: Phase II Construction Funds Request for the Madison Bay Marsh Creation and Terracing Project (TE-51)

Dear Mr. Constance:

NOAA Fisheries and the Louisiana Coastal Protection and Restoration Authority (CPRA) hereby request approval for Phase II authorization of the Madison Bay Marsh Creation and Terracing project (TE-51). Phase I activities were authorized on Priority Project List 16 on October 18, 2006, by the Louisiana Coastal Wetlands Conservation and Restoration Task Force under the authority of the Coastal Wetlands, Planning, Protection and Restoration Act (CWPPRA). This request is submitted in accordance with the CWPPRA Project Standard Operating Procedures Manual (SOP).

Enclosed please find the information required for Phase II requests and approval pursuant to Appendix A of the SOP. Should additional information be required for this project, I can be reached at (301) 427-8675. Thank you for your consideration of this request.

Sincerely,

Cecelia Linder  
NOAA CWPPRA Program Manager  
NOAA Fisheries Service

Enclosures

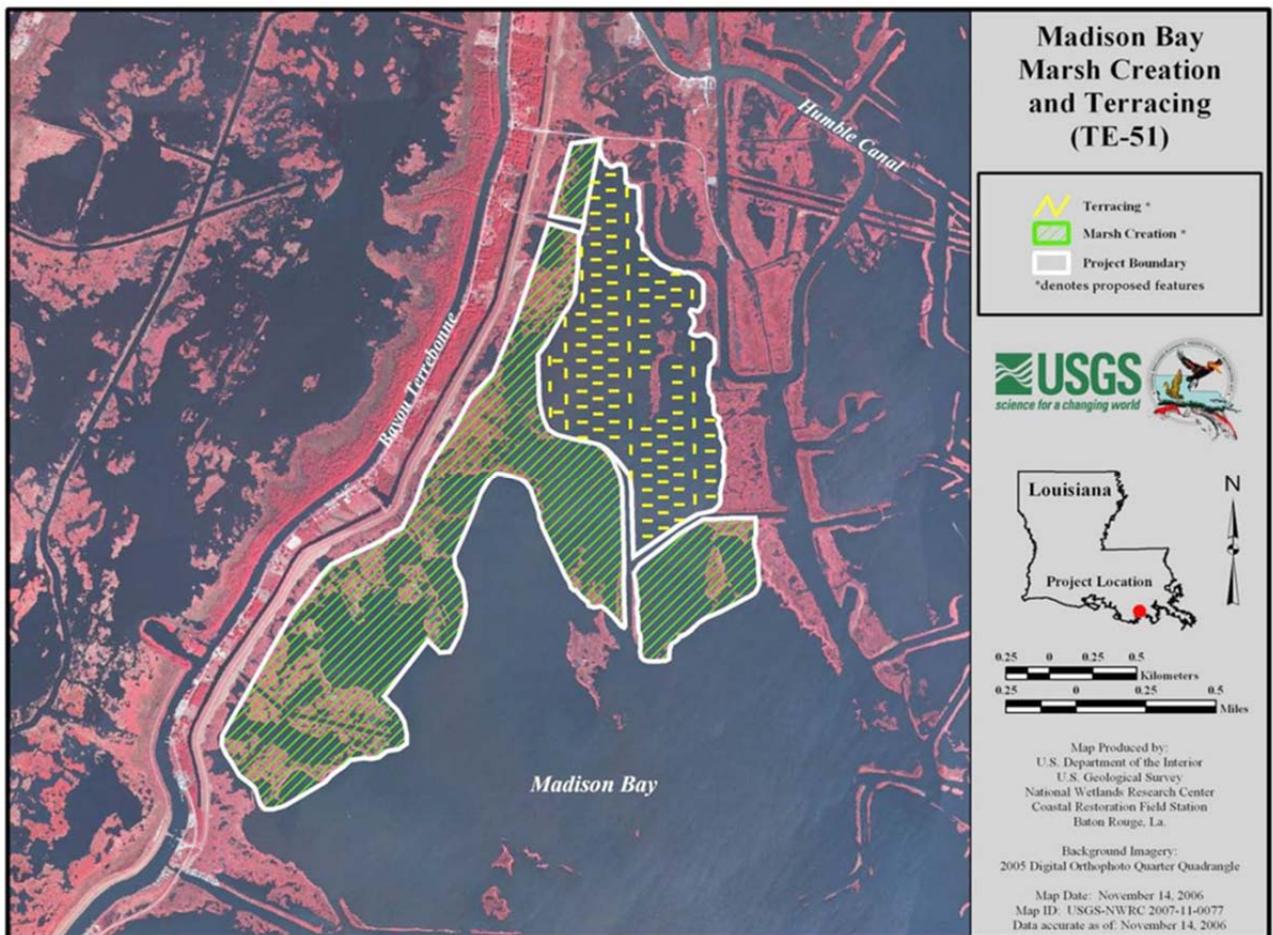
Cc: Members of the CWPPRA Technical Committee  
John Foret, Project Manager, NOAA NMFS  
Andrew Beall, CPRA Project Management Administrator

**Phase II Authorization Request  
Madison Bay Marsh Creation and Terracing  
TE-51**

**I. Description of Phase I Project**

The Madison Bay Marsh Creation and Terracing Project was proposed by the National Oceanic and Atmospheric Administration (NOAA) as a candidate for Project Priority List 16. Phase 1 was authorized by the CWPPRA Task Force on October 18, 2006. The original 1,019-acre project area is located in Terrebonne Parish, Louisiana, north of Madison Canal between Bayou Terrebonne and Humble Canal. This area has experienced tremendous wetland loss due to a variety of forces including subsidence, saltwater intrusion, a lack of sediment supply, and oil and gas activities. The loss of these marshes has exposed significant infrastructure to open water conditions, and has made the areas north less suitable for various wildlife and fish species.

**Figure 1:** Phase I project location



## II. Overview of Phase I Tasks, Process and Issues

The following tasks were completed during Phase I:

- October 2006 – Phase 1 Approval
- March 7, 2007 – Project Kick off meeting
- October 2008 – Landowner meeting (Oyster lease coordination initiated)
- April 2009 – Survey and Geotechnical Investigations initiated
- January 2010 – Survey, magnetometer survey, and landrights results began discussion of project boundary shift.
- February 2010 – NMFS/OCPR met with landowners in the area to keep them apprised of project status.
- May 2010 – Field investigation conducted to evaluate alternative project locations.
- April 2011 – Made project presentation to the Technical Committee in order to request permission to expend project funds outside of the approved project area for geotechnical investigation of an alternative project site.
- August 30, 2011 – Geotechnical investigation to begun.
- November 19, 2011 – Geotechnical report delivered, results show Wonder Lake area most appropriate for construction consideration.
- April 19, 2012 – Technical Committee approves project scope change; i.e. 32% reduction in constructed acres, 29% reduction in TY20 acres, and 19% increase to the FullyFunded Cost Estimate; Technical Committee approved the relocation of the project boundary to the Wonder Lake area.
- June 5, 2012 – Task Force approved Technical Committee project scope change recommendation.
- July 23, 2013 – 30% Preliminary Design Review meeting held.
- October 31, 2013 – 95% Final Project Design Review held.

Initial investigations of the Phase I area showed complications in achieving the environmental benefits of the project goals from the area's poor load-bearing capacity. The location for marsh creation had over 1,200 landowners with 3 dual claims, meaning landrights were in legal dispute. The cost to acquire landrights was estimated at over \$1,000,000. Concurrent with project design, part of the proposed area was defined for levee improvements in the Morganza to the Gulf (Reach H-3), which would limit construction area. A survey found 108 magnetometer anomalies at that location and state maps identify pipelines, and active or abandoned wellheads. Given complications of landrights, infrastructure (hazards) to avoid, water depths, and unstable soils, a request to change project location was made.

Further investigation into two probable alternate locations yielded one prime candidate. That location, Wonder Lake, was identified as the preferred alternative location for the project. The request to change the project location was approved and geotech, surveys, land rights, oyster impacts, and magnetometer surveys confirmed the feasibility to construct a project that would meet the project goals and objectives. There were no significant problems encountered within the Wonder Lake location.

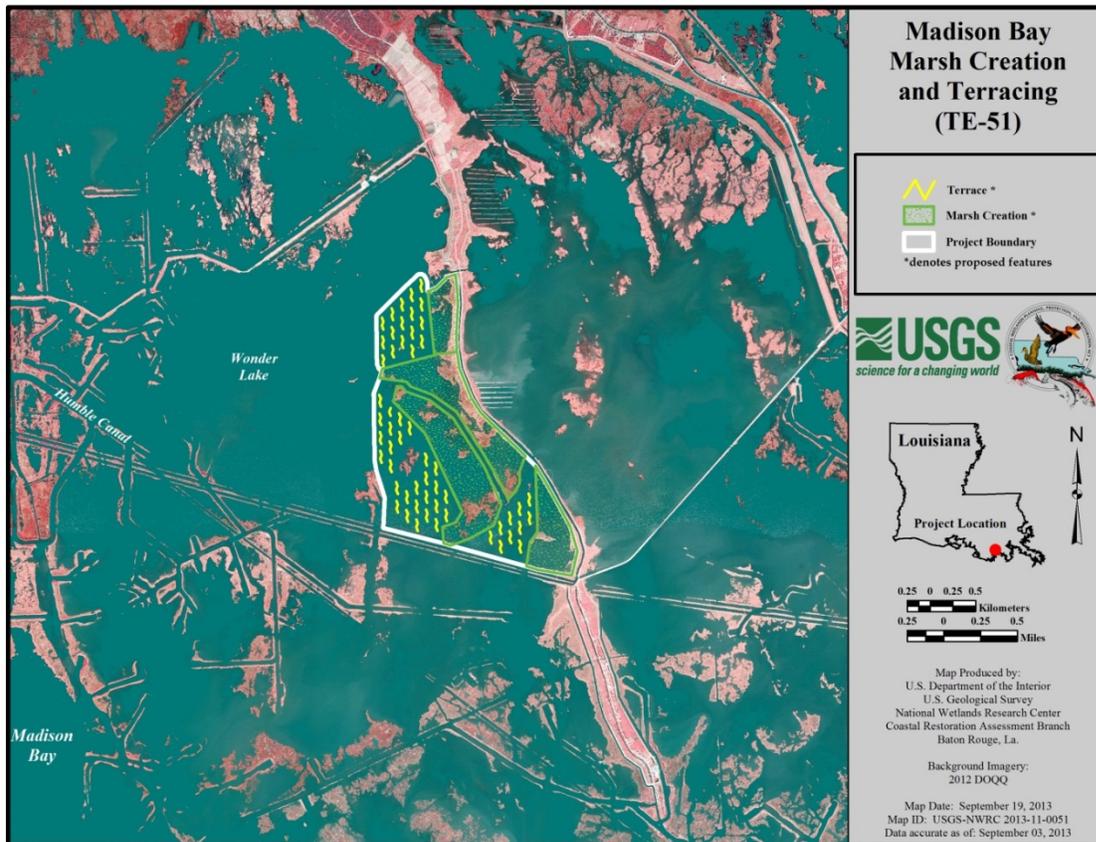
**Table 2.1:** Summary of Project Scope Change Costs and Benefits

	<b>Phase I</b>	<b>Scope Change</b>
Location	Madison Bay	Wonder Lake
Marsh created and nourished	675 acres marsh 13 acres terrace	430 acres marsh 40 acres terrace
20-year post-construction acres	514 acres will have been gained/retained	364 acres
Borrow	Madison Bay cut at -10ft	Madison Bay cut at -10ft
Total FFC	\$32.5 M	\$44.3 M

Phase I activities in the Wonder Lake area included formation of project goals and objectives, pre-design investigations (i.e., bathymetric and topographic surveys and geotechnical investigation of the project area), borrow area identification, data acquisition and geotechnical analyses, development and evaluation of project alternatives at the Preliminary (30%) Design level and completion of Final Design (95%) of the preferred alternative. Other tasks included the development of the landrights, workplan, the preliminary ownership report, application for appropriate permits and regulatory clearances, consultations with the State Historic Preservation Office, development of draft Environmental Assessment, completion of a Phase 1 Environmental Site Assessment to evaluate the potential for hazardous, toxic and radioactive waste concerns, and review of updated costs and benefits by the Engineering and Environmental Workgroups.

### III. Description of the Phase II Candidate Project

The proposed area contains “soils better suited for marsh construction [than the original location] due to the smaller peat layer in the subsurface and generally higher soil strengths, especially in the top twenty feet of the profile (GeoEngineers 2011).”

**Figure 2:** Phase II Project Location

The major feature of the proposed project is creation and nourishment of 470 acres of saline marsh. Initial (no settlement period) fill elevations range from +2.5 ft to +2.9 ft NAVD which is anticipated to result in marsh elevations that would remain intertidal for the majority of the 20-year project life. Layout of the marsh creation and terraces avoid deepest areas for marsh fill, optimizes protection of a perimeter ridge, and facilitates hydrologic exchange across the ridge. An estimated 47,838 linear feet of containment dike would be constructed utilizing a single-phase (one lift) process for approximately two-thirds of the distance of the four defined marsh areas, and a two-phase (two lift) process for the remaining one-third of the dike.

The proposed project also calls for the construction of 25,000 linear feet of earthen terraces (42 acres). Initial (no settlement period) elevation will be +3.5 ft NAVD, which is anticipated to result in terrace crown elevations above +2.5 ft NAVD for the majority of the 20-year project life.

1. Creating and nourishing marsh and associated edge habitat, and promoting conditions conducive to the growth of submerged aquatic vegetation (SAV).
2. The proposed terraces will reduce the wave erosion of created and existing marshes along the fringes of Madison Bay.

Strategy:

1. Construct and maintain an intertidal marsh elevation for the longest period of time within the 20 year project life.
2. Protect the Montegut Flood Protection Levee and St. Jean Charles Ridge from wave energy by reducing the open water fetch of Wonder Lake/Madison Bay.
3. Protect the newly constructed marsh from wave energy by reducing the open water fetch of Wonder Lake/Madison Bay through the use of earthen terraces.

- B. A statement that the Cost Sharing Agreement between the Lead Agency and the Local Sponsor has been executed for Phase I.*

A cooperative agreement was executed between NOAA and CPRA for Phase I activities on May 31, 2007.

- C. Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase II approval.*

NOAA received notification from the Louisiana CPRA in correspondence dated September 20, 2013, that while there are two areas within the project footprint that contain several landowners, landrights will be finalized in a reasonable period of time after Phase II approval. (Attachment A)

- D. A favorable Preliminary Design Review (30% Design Level). The Preliminary Design shall include completion of surveys, borings, geotechnical investigations, data analysis review, hydrologic data collection and analysis, modeling (if necessary), and development of preliminary designs.*

A 30% design review meeting was held on July 23, 2013. Participants included EPA, the Corps, and USFWS. Responses to design review comments were either clarified, or incorporated into the project final design. NOAA and CPRA (via correspondence dated September 23, 2013) agreed on the project design and to proceed to the 95% design level. (Attachment B)

- E. Final Project Design Review (95% Design Level). Upon completion of a favorable review of the preliminary design, the Project plans and specifications shall be developed and formalized to incorporate elements from the Preliminary Design and the Preliminary*

*Design Review. Final Project Design Review (95%) must be successfully completed prior to seeking Technical Committee approval.*

A 95% design meeting was held on October 31, 2013 and resulted in favorable reviews of the project design with minor modifications. NOAA and CPRA agreed (via correspondence dated November 12, 2013) on the project design and to proceed with a Phase II funding request. (Attachment C)

- F. A draft of the Environmental Assessment of the Project, as required under the National Environmental Policy Act, must be submitted two weeks before the Technical Committee meeting at which Phase II approval is requested.*

NOAA submitted a draft Environmental Assessment for preliminary agency review on November 22, 2013. That review was completed by March 2014. Currently under NOAA review for final version.

- G. Written summary of the findings of the Ecological Review, if completed.*

In accordance with SOP revision #34 approved by the Task Force on June 3, 2009 which eliminated the requirement for Ecological Reviews (ER), no ER was developed for TE-51.

- H. Application for and/or issuance of the public notices for permits at least two weeks before the Technical Committee meeting at which Phase II approval is requested.*

CPRA intends to submit a "Joint Use Permit" application to the Corps if successful in getting Phase 2 funds, upon the request of the LA DNR CMD. A full draft Joint Permit Application with supporting documentation has been prepared and is ready for submittal upon Phase 2 funding approval. (Attachment D)

- I. A hazardous, toxic and radiological waste (HTRW) assessment, if required, has been prepared.*

An HTRW analysis of the project area was performed and documented in a report dated August 28, 2013. The analysis was completed in accordance with Phase I ESA scope and limitations of American Society for Testing and Materials Standard Practice E1527-05. The report concluded, "This assessment has revealed no evidence of recognized environmental conditions at the subject property." (Attachment E)

- J. Section 303(e) approval from the Corps.*

The project is consistent with the requirements of CWPPRA Section 303(e). A request for Section 303(e) approval was submitted to the Corps on September 20, 2013. The Corps approved the Section 303 (e) submittal December 13, 2013. (Attachment F)

*K. Overgrazing determination from the NRCS (if necessary).*

An overgrazing determination was issued on September 13, 2013 by the NRCS and indicated that overgrazing would not be a problem in the project area. (Attachment G)

*L. Revised fully funded cost estimate, reviewed and approved by the Engineering Work Group prior to fully funding by the Economic Work Group, based on the revised Project design and the specific phase II funding request as outlined in below spreadsheet.*

The revised fully funded cost estimate of the project is \$44,294,001. The specific Phase II funding request is \$40,806,278 (Phase II Increment I). See the attached "Request for Phase II Approval" for additional detail regarding the funding request. (Attachment H)

*M. A Wetland Value Assessment reviewed and approved by the Environmental Work Group.*

A revised WVA (dated November 20, 2013) was reviewed and approved by the Environmental Work Group. No further revision was needed after the initial phase 2 request. (Attachment I)

**MADISON BAY MARSH CREATION AND TERRACING PROJECT**

**PHASE II REQUEST**

**ATTACHMENT A**

**State's Notification regarding Landrights**



Coastal Protection and  
Restoration Authority of Louisiana

# State of Louisiana

BOBBY JINDAL  
GOVERNOR

September 19, 2013

Ms. Cecelia Linder  
U.S. Department of Commerce  
National Marine Fisheries Service  
Office of Habitat Protection  
1315 East West Highway, Restoration Center, Room 7120  
Silver Spring, MD 20910

RE: CWPPRA Section 303(e) Approval  
Madison Bay Marsh and Terrace Creation Project (TE-51)  
Terrebonne Parish, Louisiana

Dear Ms. Linder:

By this letter, I am transmitting to you a copy of the Coastal Protection and Restoration Authority of Louisiana's ("CPRA") Temporary Easement, Servitude and Right-of-Way Agreement, Apache Louisiana Minerals form of Temporary Easement, Servitude and Right-of-Way Agreement, and the Louisiana Department of Wildlife and Fisheries Letter Agreement . These documents will be used to acquire the necessary landrights for the project. There are oyster leases, and many oil and gas wells along with pipeline infrastructure in and near the project area.

This document fulfills the requirements as outlined in Section 6(g) (2)(a)(b)(c) of the *Standard Operating Procedures Manual* for CWPPRA projects: the Document is the "Language of Landrights," and the map and exhibit attached to them describe the "Plan" and the "Project Limits." The document was approved by the CPRA counsel and the technical sections of the document and map(s) were overseen by the project engineer and project monitoring biologist. *By this letter, CPRA certifies that land acquisitions have been and will be in accordance with all applicable Federal and State laws and regulations, and all standard real estate practices have been and will be followed.*

This letter and accompanying document may be forwarded under cover letter from the National Marine Fisheries Service (NMFS) to the U. S. Army Corps of Engineers (Corps) as part of your request for CWPPRA Section 303(e) approval.

The Natural Resources Conservation Service must also provide to the USF&WS an overgrazing determination on the project. These two items and a letter requesting 303(e) approval may be sent to the following address:

Attention: Ms. Linda C. LaBure, Chief  
CELMN-RE-L  
U. S. Army Corps of Engineers  
Post Office Box 60267  
New Orleans, Louisiana 70160-0267

If you need further assistance or have any questions regarding this matter, please contact me at (225) 342-5068. We at CPRA look forward to completing the 303(e) approval process and proceeding with project construction.

Sincerely,

  
Ben Barnes  
CPRA Land Specialist

BB

Attachments three (3)

**MADISON BAY MARSH CREATION AND TERRACING PROJECT**

**PHASE II REQUEST**

**ATTACHMENT B**

**Preliminary Design Review: State Concurrence**



Coastal Protection and  
Restoration Authority of Louisiana

# State of Louisiana

**BOBBY JINDAL**  
GOVERNOR

September 23, 2013

Mr. Christopher Doley  
Director, NOAA Restoration Center  
National Oceanic and Atmospheric Administration  
National Marine Fisheries  
1315 East- West Highway, Room 14853  
Silver Spring, MD 20910

Re: 30% Design Review- Madison Bay Marsh Creation and Terracing (TE-51)  
Statement of Local Sponsor Concurrence

Dear Mr. Doley:

The 30% Design Review meeting for the Madison Bay Marsh Creation and Terracing (TE-51) project was held on July 23, 2013. Based on our review of the technical information compiled to date, the land ownership investigation, and the preliminary design, the Coastal Protection and Restoration Authority, as the local sponsor, concurs to proceed with the design of TE-51. In accordance with the CWPPRA Project Standard Operating Procedures Manual, we request that you forward this letter of concurrence to the Technical Committee and the Planning and Evaluation Subcommittee and proceed to 95% design level with the selected alternative and revised project cost estimate.

Sincerely,

Andrew D. Beall  
Project Management Administrator  
Project Management Division

ADB: BKB

cc: John Foret, National Oceanic and Atmospheric Administration  
Cecelia Linder, National Oceanic and Atmospheric Administration  
Chris Allen, Coastal Protection and Restoration Authority  
B. Keith Boeneke, Coastal Protection and Restoration Authority- Contractor

**MADISON BAY MARSH CREATION AND TERRACING PROJECT**

**PHASE II REQUEST**

**ATTACHMENT C**

**Final Design Review: State Concurrence to Proceed**



# State of Louisiana

BOBBY JINDAL  
GOVERNOR

November 12, 2013

Mr. Christopher Doley  
Director, NOAA Restoration Center  
National Oceanic and Atmospheric Administration  
National Marine Fisheries  
1315 East-West Highway, Room 14853  
Silver Spring, MD 20910

Re: 95% Design Review- Concurrence for Phase II Funding Request  
Madison Bay Marsh Creation and Terracing (TE-51)  
Statement of Local Sponsor Concurrence

Dear Mr. Doley:

The 95% Design Review meeting for the Madison Bay Marsh Creation and Terracing (TE-51) project was held on October 31, 2013. Based on our review of the technical information compiled to date, the land ownership investigation, and the final designs, the Coastal Protection and Restoration Authority, as the local sponsor, concur to proceed with requesting Phase II construction funding for the project. In accordance with the CWPPRA Project Standard Operating Procedures Manual, we request that you forward this letter of concurrence to the Technical Committee and the Planning and Evaluation Subcommittee.

Sincerely,

Andrew D. Beall  
Project Management Administrator  
Project Management Division

ADB: BKB

cc: John Foret, National Oceanic and Atmospheric Administration  
Cecelia Linder, National Oceanic and Atmospheric Administration  
Chris Allen, Coastal Protection and Restoration Authority  
B. Keith Boeneke, Coastal Protection and Restoration Authority - Contractor

**MADISON BAY MARSH CREATION AND TERRACING PROJECT**

**PHASE II REQUEST**

**ATTACHMENT D**

**Draft Permit**



# Joint Permit Application

## For Work Within the Louisiana Coastal Zone

**What is the purpose of the Joint Permit Application?**

This Joint Permit Application was developed to facilitate the state and federal permit application process administered by the Louisiana Department of Natural Resources/Office of Coastal Management (OCM) and the U.S. Army Corps of Engineers (COE) for work within the Louisiana Coastal Zone.

To simplify the permit application process, the Joint Permit Application is a multi-purpose application. It may be used to apply for a Coastal Use Permit (CUP) and/or a Department of the Army Permit under Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act. This application may also be used to apply for a Solicitation of Views (SOV) or an OCM Request for Determination (RFD). Review the instructions below, then proceed to Step 1.

**Instructions**

**There are two parts to the Joint Permit Application package:**

1. Joint Permit Application, and
2. Maps and Drawings.

**How do I complete the Joint Permit Application?**

**An accurate/complete application is required for processing; inaccurate/missing information may delay processing. Follow the instructions below to complete the application. Specific instructions are provided with each step.**

- Type or print clearly using black or blue ink;
- Steps 1 through 16 must be completed; write "N/A" if information does not apply to your proposed project. It is not necessary to write "N/A" on the Steps that you have been asked to skip;
- When additional space is needed, include an 8½ x 11 sheet of paper identifying the Step number.

**When you have questions or need assistance in completing the application package:**

- Refer to the "Glossary of Terms" (See page 10.);
- Refer to "Frequently Asked Questions" (See page 11.);
- Contact the Office of Coastal Management at 1-800-267-4019 or 225-342-7591; or
- Contact your local coastal parish program (See page 11.).  
<http://dnr.louisiana.gov/CRM/coastmgt/interagencyaff/lcp/lcp.asp>

**Step 1 of 16**

**Complete the following information about the applicant.**

**Who is the applicant for the proposed project?**

*Note: Applicants may be either the landowner, person or company that is responsible for the proposed project.*

**Applicant/Company Name:** \_\_\_\_\_  
 Individual Person or Corporation/Company

**Mailing Address:** \_\_\_\_\_  
 Street Address or P.O. Box Unit/Apartment #  
 \_\_\_\_\_  
 City State Zip

**Contact Information:** \_\_\_\_\_  
 Name of Contact Person (not the agent) E-Mail Address  
 \_\_\_\_\_  
 ( ) \_\_\_\_\_ ( ) \_\_\_\_\_  
 Area Code Daytime Telephone Number Area Code Fax Number

**Step 2 of 16**

**Is an agent being used for the proposed project?**

*Note: An agent is not required.*

**Is an agent being used for the proposed project?**

- NO** (If NO, proceed to Step 3.)
- YES** (If YES, complete the following information.)

**Company Name:** \_\_\_\_\_  
Corporation/Company

**Mailing Address:** \_\_\_\_\_  
Street Address or P.O. Box Unit/Apartment #

\_\_\_\_\_ State Zip  
City

**Contact Information:** \_\_\_\_\_  
Name of Contact Person E-Mail Address

(\_\_\_\_\_) \_\_\_\_\_ (\_\_\_\_\_) \_\_\_\_\_  
Area Code Daytime Telephone Number Area Code Fax Number

**Step 3 of 16**

**What type of permit or action would you like to request?**

*Note: You may need the approval of other federal, state or local agencies for your project.*

*Note: For questions concerning the CUP, SOV or RFD, call OCM at:  
• 1-800-267-4019  
or  
• 225-342-7591*

**Check  the appropriate box(es) to indicate the type of permit or action that you would like to request.**

**Coastal Use Permit (CUP), Clean Water Act Permit (Section 404), Rivers and Harbors Act (Section 10)**  
The purpose of the CUP is to ensure that any activity affecting the Coastal Zone is completed in a manner that is consistent with the Louisiana Coastal Resource Program.

The purpose of the Department of the Army permit program under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act is to review and evaluate proposals for dredging, filling, and/or placement of structures in waterways and wetlands in order to determine whether a permit should be granted or denied based on expected impacts to the overall public interest.

**Solicitation of Views (SOV) – OCM only**  
If you wish to find out if your project is in the Coastal Zone or if you wish to determine if there are special features of the area that may impact your project design you may request a SOV. No application fee is assessed for SOV requests. The following Steps must be completed to obtain an informal determination.

- Step 1, Step 2, Step 6, Step 14, Step 16; and
- Step 13 - (Vicinity plat showing project location and extent is required; cross section and plan views are useful, if available.)

**Request for Determination (RFD)**  
If you wish to obtain a formal determination as to whether or not a CUP would be required for a particular activity, you may submit a RFD. The appropriate application fee will be assessed for RFD requests. The following Steps must be completed to obtain a RFD.

- Step 1, Step 2, Step 5, Step 6, Step 8, Step 10, Step 14, Step 16; and;
- Step 13 - (Vicinity plat showing project location and extent is required; cross section and plan views are useful, if available.)
- If you think that no permit is required, you must provide a statement explaining why you think a permit is not required.

**Step 4 of 16**

**Have you participated in a Pre-Application or Geological Review Meeting or obtained a wetland determination?**

*Note: To schedule a Pre-Application and/or a Geological Review Meeting, call OCM at 1-800-267-4019.*

*Note: To apply for a wetland determination, call the COE at 504-862-1627.*

**a. Have you participated in a Pre-Application or Geological Review Meeting for the proposed project?**

- NO** (If NO, proceed to Step 4b.) (If you would like to schedule a pre-application meeting, please call 1-800-267-4019)
- YES** (If YES, complete the following information.)

Date meeting was held: \_\_\_\_/\_\_\_\_/\_\_\_\_

Attendees: \_\_\_\_\_  
Individual or Company Representative OCM Representative COE Representative

**b. Have you obtained an official wetland determination from the COE for the project site?**

- NO** (If NO, proceed to Step 4c.)
- YES** (If YES, include a copy with this application.)

JD Number: \_\_\_\_\_

**c. Is this application a mitigation plan for another CUP?**

- NO** (If NO, proceed to Step 5.)
- YES** (If YES, identify the permit number of the project requiring mitigation.)

OCM Permit Number: \_\_\_\_\_

**Continue to page 3 for step 5.**

Step 5 of 16

**What permits/certifications have you previously requested for the proposed project?**

*Note: Additional sheets may be required for agency name, permit number and status information.*

**a. Describe the project.**

**b. Is this application a change to an existing permit?**

- NO** (If NO, proceed to Step 5c.)  
 **YES** (If YES, identify the existing permit number.)

OCM Permit Number: \_\_\_\_\_  
 ↘ Please explain

**c. Have you previously applied for a permit or emergency authorization for all or any part of the proposed project?**

- NO** (If NO, proceed to Step 6.)  
 **YES** (If YES, complete the following information for the proposed project.)

Agency Name	Permit Number	Decision Status			Decision Date
		Approved	Denied	Pending	
OCM _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
COE _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Step 6 of 16

**Where will the proposed project be located?**

*Note: The following websites may provide assistance in completing the latitude/longitude and directions:*

- Sonris on OCM website
- MapQuest.com
- Topozone.com.

*Note: Directions may include the following:*

- Nearest town/city
- Highways
- Intersections
- Street names
- Landmarks
- Start/end point

**Complete the following information to identify the exact location of the proposed project.**

**a. Physical Location:**

Parish \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_  
 Street Address (if known) \_\_\_\_\_  
 Water Body (if known) \_\_\_\_\_

**b. Latitude and Longitude:**

⚠ Must be included in all applications. Latitude: \_\_\_\_\_ Degrees \_\_\_\_\_ Minutes \_\_\_\_\_ Seconds Longitude: \_\_\_\_\_ Degrees \_\_\_\_\_ Minutes \_\_\_\_\_ Seconds

**c. Section, Township, Range: (if available)**

Section #(s) \_\_\_\_\_ Township # (Specify North or South) \_\_\_\_\_ Range # (Specify East or West) \_\_\_\_\_  
 Section #(s) \_\_\_\_\_ Township # (Specify North or South) \_\_\_\_\_ Range # (Specify East or West) \_\_\_\_\_

**d. Lot #, Tract #, Parcel # or Subdivision Name: (if known)**

Lot # \_\_\_\_\_ Parcel # \_\_\_\_\_  
 Tract # \_\_\_\_\_ Subdivision Name \_\_\_\_\_

**e. Site Directions:** Directions to the proposed project site must be identified in order to process the application.

**Example:** START - I-10 toward Baton Rouge. Exit #153 toward Port Allen. US-190 West/LA-1 North ramp. RIGHT onto LA-987 1/Bridge Side Road. RIGHT onto LA-986/North River Road to Popular Grove Plantation directly behind guest parking lot in rear. -END

Continue to page 4 for step 7. ↗

**MADISON BAY MARSH CREATION AND TERRACING PROJECT**

**PHASE II REQUEST**

**ATTACHMENT E**

**HTRW Table of Contents**

**Madison Bay Marsh Creation and Terracing  
Project  
TE-51**

**Hazard, Toxic, and Radioactive Waste (HTRW)  
Analysis**

**Terrebonne Parish, Louisiana**

**August 28, 2013**

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## **1.0 SUMMARY**

The National Oceanic and Atmospheric Administration (NOAA) – National Marine Fisheries Service (NMFS) conducted a Hazard, Toxic, and Radioactive Waste (HTRW) Analysis per Section 6.j of the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) Standard Operating Procedures (SOPs). The CWPPRA SOP required that consideration should be made regarding the potential for contaminants to be located on restoration project sites prior to seeking construction funds. This HTRW Analysis on the Madison Bay Marsh Creation and Terracing Project (subject property) in Terrebonne Parish, Louisiana was completed to provide property-specific information to improve the understanding of the environmental conditions, detail any environmental considerations specific to the subject property.

NMFS performed the HTRW Analysis following the Phase I Environmental Site Assessment (ESA) scope and limitations of American Society for Testing and Materials (ASTM) Standard Practice E 1527-05 on the subject property.

Based on our review of applicable federal and state regulatory agency records, historical records, interviews with persons knowledgeable about the subject property, and a physical site investigation, NMFS, through this assessment, has revealed no evidence of recognized environmental conditions.

## **2.0 INTRODUCTION**

### **2.1 Purpose**

The purpose of a Phase I ESA is to identify, to the extent feasible, pursuant to the processes prescribed herein, recognized environmental conditions in connection with the subject property in accordance with ASTM Standard Practice E 1527-05. The term "recognized environmental conditions" means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. A Phase I ESA is intended to reflect "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" in order to satisfy one of the requirements to qualify for the innocent landowner defense under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

This HTRW Analysis follows the Phase I ESA investigation.

**MADISON BAY MARSH CREATION AND TERRACING PROJECT**

**PHASE II REQUEST**

**ATTACHMENT F**

**303 ( e) Approval**



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS  
P.O. BOX 60267  
NEW ORLEANS, LOUISIANA 70160-0267

DEC 13 2013

Programs and Project Management Division  
Projects and Restoration Branch

Ms. Cecelia Linder  
NOAA Fisheries CWPPRA Program Manager  
U.S. Department of Commerce  
National Marine Fisheries Service  
Office of Habitat Protection  
1315 East West Highway, Restoration Center, Room 7120  
Silver Spring, MD 20910

Dear Ms. Linder:

This is in reference to your request, dated September 20, 2013, for Section 303(e) for Madison Bay Marsh Creation and Terracing Project (TE-51) (Fact Sheet with Map enclosed), located in Terrebonne Parish, Louisiana, in accordance with the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA).

The request includes a letter from the Coastal Protection and Restoration Authority of Louisiana, also dated September 20, 2013, which contains copies of a very comprehensive Temporary Easement, Servitude and Right-of-Way Agreements to be executed by private landowners that will provide the necessary land rights for the project. The letter also explains that there are oyster leases, oil and gas wells along with pipeline infrastructure in the project area. It is assumed that the project will not adversely impact these pre-existing rights. If the project will affect these pre-existing rights, suitable acquisitions, releases or subordinations from all persons or entities with ownership or other property interests in the land adversely affected by the project will have to be acquired.

The Temporary Easement, Servitude and Right-of-Way Agreements to be executed by private land owners contained with your request appear to provide sufficient right-of-way for the project. Prior to construction of the project, the Temporary Easement, Servitude and Right-of-Way Agreements from private land owners must be executed, and any other real property rights must be acquired, subject to such terms and conditions as necessary to ensure that wetlands restored, enhanced or managed through this project will be administered for the long-term conservation of the lands and waters and the dependent fish and wildlife populations. This includes the acquisition of rights from not only the State of Louisiana but also all other persons or entities with ownership or other property interests in the land that may be impacted by the project.

The package also includes a September 13, 2013 determination from the Natural Resources Conservation Service that overgrazing does not occur on the project lands or lands affected thereby. If overgrazing should occur in the future, then a grazing plan must be established for the project.

Accordingly, by the authority delegated to me by the Secretary of the Army, and given compliance with the provisions set forth above, I approve the project in accordance with Section 303(e) of CWPPRA.

Should you have any questions or comments, please feel free to contact Mr. Thomas A. Holden Jr., P.E., Deputy District Engineer for Programs and Project Management, at (504) 862-2204, or Mr. Brad Inman, CWPPRA Program Manager, at (504) 862-2124.

Sincerely,



Richard L. Hansen  
Colonel, U.S. Army  
District Commander

Enclosure

cc: (w/enclosure)

Mr. Ben Barnes  
CPRA Land Specialist  
Coastal Protection and Restoration  
Authority of Louisiana  
P.O. Box 44027  
Baton Rouge, Louisiana 70804-4027

Mr. Keith Boeneke  
Local Sponsor Project Manager  
Coastal Protection and Restoration  
Authority of Louisiana  
450 Laurel Street, Suite 1200  
Baton Rouge, Louisiana 70801

Dr. John Foret  
Federal Sponsor Project Manager  
National Marine Fisheries Service  
646 Cajundome Boulevard  
Lafayette, Louisiana 70506



# Madison Bay Marsh Creation and Terracing (TE-51)

## Project Status

**Approved Date:** 2006      **Project Area:** 1,019 acres  
**Approved Funds:** \$3.00 M      **Total Est. Cost:** \$38.7 M  
**Net Benefit After 20 Years:** 372 acres  
**Status:** Engineering and Design  
**Project Type:** Marsh Creation  
**PPL #:** 16

## Location

The 1,250-acre project area is located in Terrebonne Parish, Louisiana, east of Wonder Lake and adjacent to the Bayou St. Jean Charles Ridge.

## Problems

This area has experienced tremendous wetland loss due to a variety of forces including subsidence, salt water intrusion, a lack of sediment supply, and oil and gas activities. The loss of these marshes has exposed significant infrastructure to open water conditions, and has made the project area less suitable for various wildlife and fish species.

## Restoration Strategy

Project goals include creating and nourishing marsh and associated edge habitat, and promoting conditions conducive to the growth of submerged aquatic vegetation (SAV). Secondly, proposed terraces will reduce the wave erosion of created and existing marshes along the fringes of Madison Bay.

Project goals include creating and nourishing 470 acres of brackish marsh and constructing about 24,600 linear feet (LF) of terraces. Approximately one-half of the marsh creation area will be planted with smooth cord-grass or marsh hay cord-grass. Reducing shoreline erosion would protect about 6 acres of existing marsh (from existing marsh in terrace field only), and the percent cover of SAV is projected to increase in the project area.

## Progress to Date

Project design is underway, with the project Phase 2 request (construction authorization) expected in December 2013.

The estimated total fully funded project cost is \$36,645,499.

This project is on Priority Project List 16.



This dredge pipe is rebuilding marsh by depositing sediment dredged from a nearby borrow area. The placed sediment will reach an elevation conducive for growing and sustaining marsh vegetation.



The above terraces are an example for the proposed project. These terraces would help protect the created and existing marshes from wave erosion.

For more project information, please contact:



**Federal Sponsor:**  
National Marine Fisheries Service  
Baton Rouge, LA  
(225) 389-0508

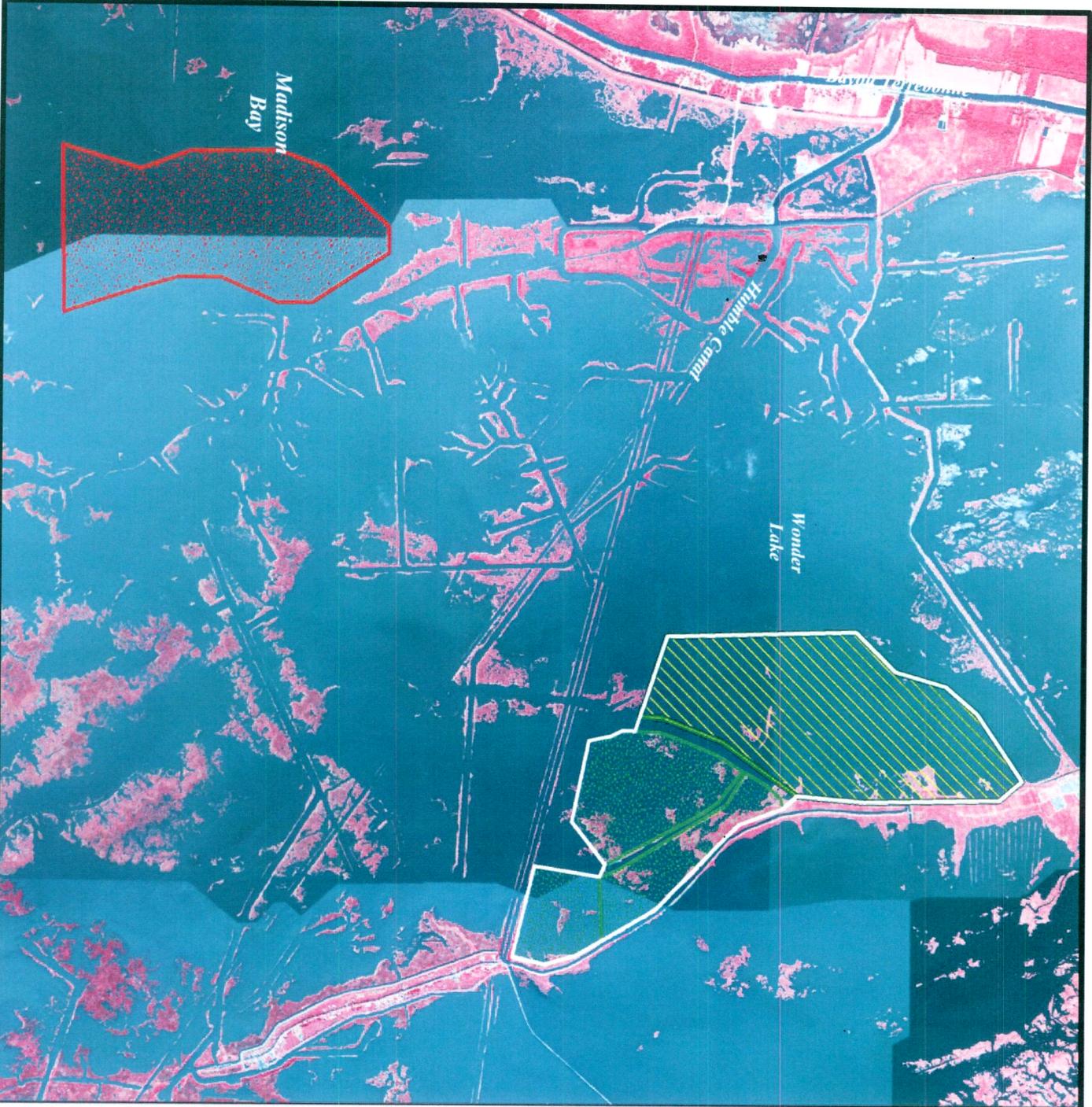


**Local Sponsor:**  
Coastal Protection and Restoration Authority  
Baton Rouge, LA  
(225) 342-4736

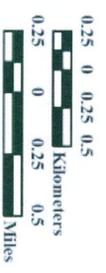
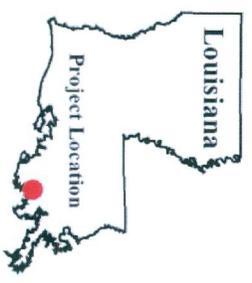
# Madison Bay Marsh Creation and Terracing (TE-51)

 Terrace Field\*  
 Marsh Creation\*  
 Borrow\*  
 Project Boundary

\*denotes proposed features



**USGS**  
science for a changing world



Map Produced by:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Assessment Branch  
Baton Rouge, La.

Background Imagery:  
2010 NAIP Photography  
Map Date: April 25, 2013  
Map ID: USGS-NWRC 2013-11-0020  
Data accurate as of: April 25, 2013

**MADISON BAY MARSH CREATION AND TERRACING PROJECT**

**PHASE II REQUEST**

**ATTACHMENT G**

**Overgrazing Determination**



Natural Resources Conservation Service  
3737 Government Street  
Alexandria, LA 71302

September 13, 2013

Mr. John D. Foret  
National Oceanic and Atmospheric Administration  
Estuarine Habitats & Coastal Fisheries Center  
646 Cajundome Boulevard  
Lafayette, Louisiana 70508

RECEIVED  
SEP 16 2013  
NMFS, LAFAYETTE

Dear Mr. Foret:

RE: Madison Bay Marsh Creation and Terracing (TE-51)

I am in receipt of your request for an overgrazing determination for the Madison Bay Marsh Creation and Terracing (TE-51). I contacted our local district conservationist and our state grazing land specialist to discuss the grazing in the project area. Currently, livestock are not grazing in the area, nor do we see a potential for grazing once the project is installed. Therefore, it is our opinion, overgrazing is not a problem in this project area. If you have any questions please let me know.

Sincerely,

A handwritten signature in blue ink, appearing to read "W. Britt Paul".

W. Britt Paul  
Assistant State Conservationist/ Water Resources

cc: Randolph Joseph, ASTC-FO, Lafayette, Louisiana  
John Boatman, District Conservationist, Boutte, Louisiana  
John Jurgensen, Civil Engineer, Alexandria, Louisiana  
Johanna Pate, State Grazing Land Specialist, Alexandria, Louisiana

**MADISON BAY MARSH CREATION AND TERRACING PROJECT**

**PHASE II REQUEST**

**ATTACHMENT H**

**Phase II Funding Request Spreadsheet**

**MADISON BAY MARSH CREATION AND TERRACING PROJECT**

**PHASE II REQUEST**

**ATTACHMENT I**

**Wetland Value Assessment**

# **Madison Bay Marsh Creation and Terracing**

## **Coastal Wetlands Planning, Protection and Restoration Act**



**Proposed by**

**National Marine Fisheries Service**

**Final Project Information Sheet for Wetland Value Assessment  
Phase Two Revision**

**November 18, 2013**

**Contact: Kimberly Clements, Rachel Sweeney or Patrick Williams - NMFS - 225/389-0508**

**Project Name:** Madison Bay Marsh Creation and Terracing, TE-51

**Sponsoring Agency:** National Marine Fisheries Service

Environmental Workgroup Representative: Kimberly Clements (225)389-0508, ext 204;  
kimberly.clements@noaa.gov

Engineering Workgroup Representative: Patrick Williams (225)389-0508, ext 208;  
patrick.williams@noaa.gov

**Project Location:** The 943 acre project area is located in Terrebonne Parish, Louisiana, near Wonder Lake and Pointe Farm Ridge south of Montegut (Figure 1).



**Figure 1:** Project Location and Features

**Problem:** The project area has experienced significant wetland loss due to subsidence, sea level rise, lack of sediment supply, shoreline erosion and oil and gas activities (Figure 2). Morton et al. (2005)

reported subsidence is responsible for about two thirds of the wetland loss, whereas erosion is responsible for the remainder in the Madison Bay area. Fluid withdrawal is theorized as contributing to the subsidence. With the high rate of land loss both the Montegut levee and that of the Montegut Unit on the Pointe-aux-Chenes Wildlife Management breached with storms during the last ten years.



**Figure 2:** 1971, 1998 and 2010 Aerial Photography of Project Vicinity

**Goals:** Project goals include: (1) Construct an intertidal marsh elevation that last for the longest period of time within the 20 year project life; (2) Provide synergistic protection for the Montegut Flood Protection Levee and St. Jean Charles Ridge from wave energy by reducing the open water fetch of Wonder Lake/Madison Bay, and (3) Protect the newly constructed marsh from wave energy by reducing the open water fetch of Wonder Lake/Madison Bay.

### **Proposed Project Features:**

#### **Marsh Creation/Nourishment**

Approximately 4.4 million cubic yards of sediment will be mined from Madison Bay north of Madison Canal and west of Bayou Barre and pumped to create/nourish a total of 479 acres of marsh as measured to the centerline of the dike (see Appendix for explanation of acres used for benefits vs. those used for cost) in four confined disposal areas (Figure 1). Based on considering mean high and mean low tide adjusted over time for relative sea level rise, the project team selected +1.5 ft NAVD 88 as the desired elevation at year 20, thus requiring a +2.5 ft NAVD 88 target construction elevation (See Figure 3 for typical cross section and Figure 7 for settlement curve).

Marsh fill areas will be confined by containment dikes constructed with material borrowed from inside the marsh fill cells. Containment dikes will be built to an elevation of +3.5 ft NAVD 88 with a 0.5 ft vertical tolerance using two-lift construction with three month idle period between lifts. Planting of the marsh creation and nourishment areas is not proposed.

Containment dikes will be gapped no later than the end of three years after construction to establish tidal exchange, hydroperiod, and associated functions. Cost estimates for gapping planned no later than year three are based upon on one every 500 feet with a 25-ft wide base width excavated to 0.0 ft NAVD 88.

The intent is to field fit gaps, but achieve equivalent of no less than one gap every 1,000 with potentially up to 500 ft.

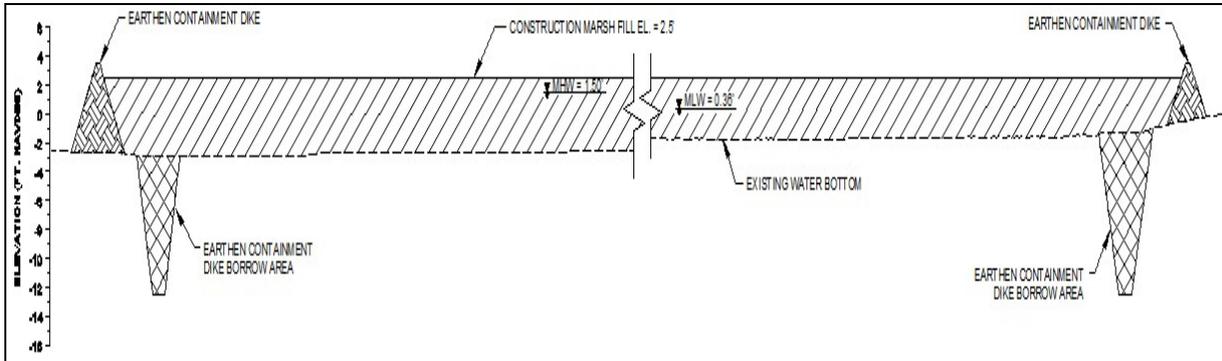


Figure 3: Typical Marsh Fill Area Cross Section

Terracing

Chevron or “duck-wing” style earthen terraces totaling 25,000 linear feet will be constructed across three terrace fields. Terraces will be constructed to +3.0 ft. NAVD 88 elevation with 10-foot crown width and 5:1 side slopes (Figure 4). The design goal is to attain +2.0 ft NAVD 88 by year 20. Similar to containment dikes, terraces will be built in two lifts. Terrace rows will be staggered and 265 feet apart. The terrace crowns will be planted with two staggered rows of Seashore paspalum (*Paspalum vaginatum*) (16,667) and slopes will be planted with two staggered rows of Smooth cordgrass (*Spartina alterniflora*) (33,333 plugs); all plantings will be on 3-ft centers.

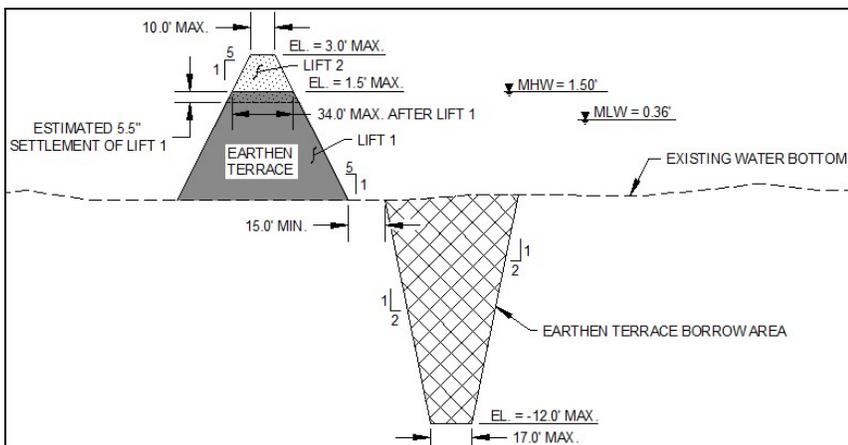


Figure 4: Earthen Terrace Typical Cross Section

**Project Areas:** For purposes of this WVA, the analysis is divided into two areas. Area 1 includes all marsh creation/nourishment areas (four cells) and encompasses 479 acres (as measured at the centerline of containment dikes). Area 2 includes all terrace fields (three), encompassing 464 acres.

**Table 1:** Project Area 2012 Land Cover Types (see USGS cookies TE51 tab in spreadsheet)

Land Cover Type	Area 1 (all MC)	Area 2 (all TF)	Total
Land (acres)	107	7	114
Water (acres)	372	457	829
Total (acres)	479	464	943
land %	22%	2%	
water %	78%	98%	

**Historical and present vegetative community:**

The project area was classified as intermediate to brackish in 1968 and brackish marsh or water in 1978, 1988. In 2001 and 2007 the area remained predominantly water and brackish marsh although the very southern portion of the project area straddled the brackish/saline interface

USGS analysis of the 2007 marsh type indicates the majority of the project area was classified as saline in 2007 although it is noted that the majority of the project area was water therefore marsh type survey alone may not represent an accurate assessment of actual vegetated habitat classification (see USGS cookies TE51 tab in spreadsheet for map and distribution). Current vegetation composition of existing marsh in the project area is *Spartina patens* and *S. alterniflora* mix (J. Foret, pers com). For the purposes of this WVA, it is proposed that the brackish model be used.

For the purposes of informing salinity variables, CRMS station 0315 was selected as most representative of the project area based on vegetative characteristics (Figure 5). The 2012 CRMS vegetation survey classified the area as mesohaline wiregrass dominated by *S. patens*. This classification is more consistent with site observations of vegetated marsh in the project area (pers com, J. Foret).



**Figure 5:** Project vicinity CRMS station locations

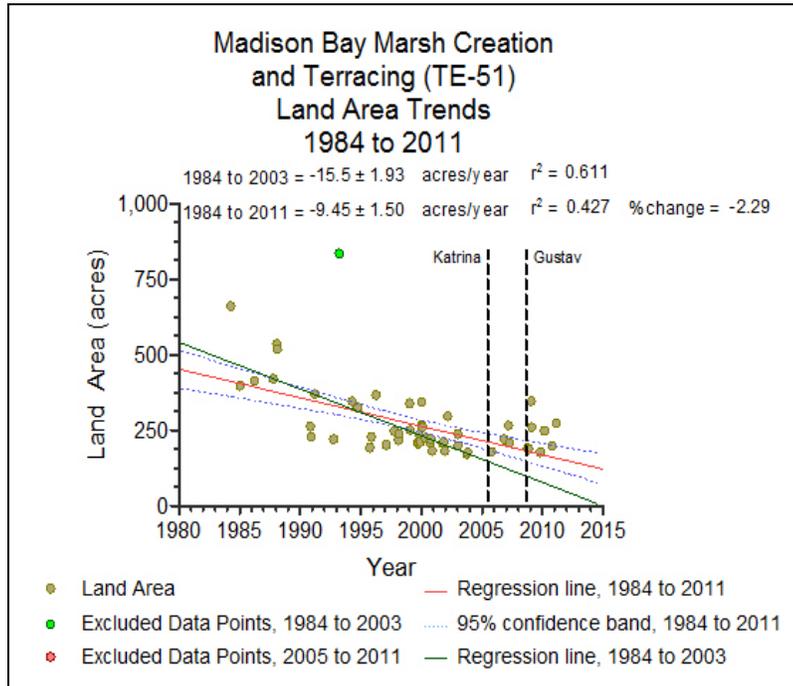
Hydrology

Continuous hourly salinity data from 2006 to 2013 was assessed to determine average annual salinity at station 0315. The average annual salinity during this time period was 9.43 ppt. Additionally, during the design process, tidal datums were calculated for the project area using a long term control station (Grand Isle) and CRMS0315 as a subordinate station (Table 2).

**Table 2:** Summary of Calculated Tidal Datums

CALCULATED VARIABLES	ELEV (FT NAVD88)
MHWS = 19 YEAR MEAN HIGH WATER AT SUBORDINATE STATION	+1.50
MTLS = 19 YEAR MEAN TIDE LEVEL AT SUBORDINATE STATION	+0.93
MLWS = 19 YEAR MEAN LOW WATER AT SUBORDINATE STATION	+0.36
MRS = 19 YEAR MEAN TIDE RANGE AT SUBORDINATE STATION	+1.14

**Land Loss:** Linear regression analysis of a hypertemporal data set (1984-2011), derived a (-2.29%/yr. loss rate based on land area change (Figure 6). Some data points were excluded from the regression analysis due to low and high water events.



**Figure 6:** Loss rate provided by USGS

**AREA 1: MARSH CREATION/NOURISHMENT (MC1, MC2, MC3 & MC4)**

**V1 - Emergent Vegetation**

One year of loss was applied to USGS 2012 land acreage to arrive at TY0 (2013) project acreages.

2012 Acres:	Marsh = 107	Water = 372	Total = 479
TY0 (2013) Acres:	Marsh = 105	Water = 374	Total = 479

**FWOP**

Assume the 1984-2011 loss rate (-2.29 %/yr.) continues (see land loss spreadsheet).

TY0: 105 acres = 22%      Water = 374 acres

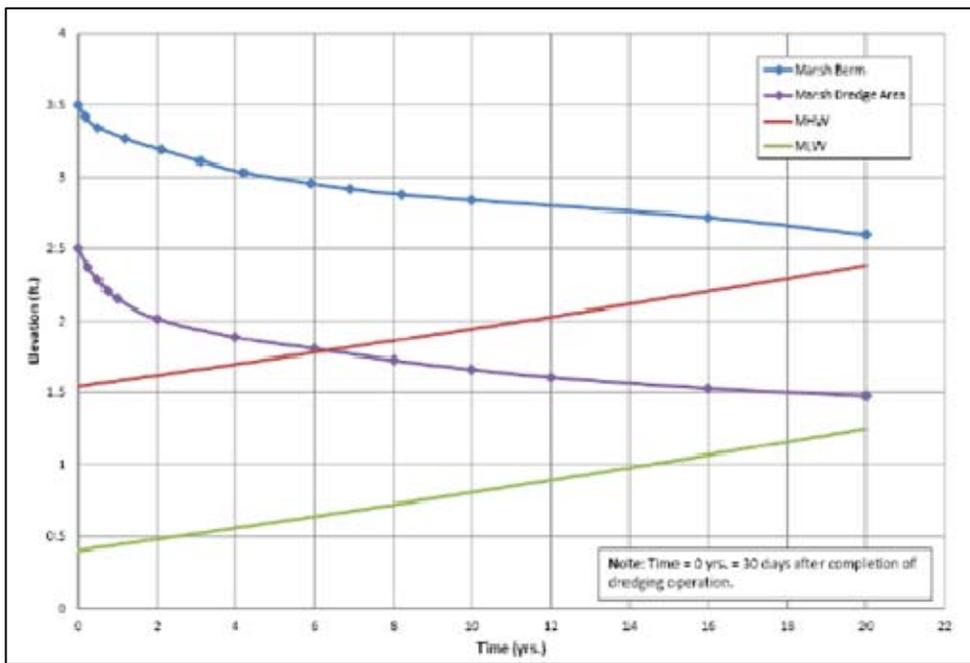
TY1: 102 acres = 21%      Water = 377 acres

TY20: 66 acres = 14%      Water = 413 acres

**FWP**

Standard workgroup assumptions are proposed for the marsh nourishment component. Nourished marsh is lost at half of the historical loss rate, and receives 50% functional marsh credit at TY1 and 100% at TY3.

Marsh acreage and credit for created marsh is proposed based on settlement curves for marsh creation (Figure 7), water level information and experience with previous marsh creation projects.



**Figure 7:** Settlement curves for marsh fill (Elevation +2.5' NAVD proposed). Curves do not include ±0.3 ft. construction vertical tolerance. TY0 illustrates elevation after 30 day initial settlement period.

**NOTE:** Benefits were evaluated and captured in two generalized means: 1) an assumed percent reduction in FWOP loss rates, and 2) functional credit assigned to the remaining acres after assumed loss is applied. Table 4 includes programmatic Phase 0 standards as well as the Phase 1 proposals for this project. A text description is included in the below sections.

Table 3: Standard loss rate reductions and functionality crediting compared with project-specific proposals.

TY	Std. FWP % Reduction	Madison Proposal	Std. Unplanted Marsh Platform	Madison Proposal (unplanted and el. Considerations)
1	50%	75%	10%	5%
3	50%	75%	30%	30%
5	50%	75%	100%	70%
6	50%	50%	100%	100%

Acreege (percent reduction in FWOP land loss rate)

It is proposed that the background loss rate applied to marsh creation acres be reduced by 75% for TY1 through TY5 because subsidence is a major driver of wetland loss in the area and subsidence is incorporated into the settlement curve through the water level projection (i.e., RSLR). Based on Morton et al. (2005), 67% could be suggested as the minimum FWP reduction in loss rate. The settlement curve projects created elevations will be above MHW through year six. Therefore, a higher percentage than 67% is recommended through TY5. FWP loss rate is proposed to occur at 50% of the background loss rate from TY6 through the remainder of the project life. However, settlement curves project created elevations to remain within MHW to MLW adjusted for relative sea level rise, but there will be diversity in elevations due to construction vertical tolerances, differential settlement, and some potential shoreline erosion.

Functional Credit

It is projected that marsh fill areas will settle to the projected MHW level at TY6; however, 1) both MHW and MLW elevations plotted on settlement curves represent average water levels and do not reflect extremes in monthly oscillation such as bi-monthly extreme high (tropic) or low (equatorial) tides or synoptic events; 2) not all marsh creation areas will require a full lift to achieve construction elevation (i.e., in areas of shallow water); 3) ±0.3 ft construction vertical tolerance; and, 4) significant differential settlement of deeper fill sections (e.g., containment dike borrow areas) is anticipated. Functional credit for marsh creation is proposed as follows:

- TY1: 5%      Although the marsh platform will likely remain above mean intertidal elevation and enclosed by containment dikes, some areas (especially borrow areas used for containment dike construction) will settle more rapidly, creating small ponds that provide wetland habitats to birds, mammals and reptile species. Such areas may hold ponded rainwater, providing a significant habitat resource.
  
- TY3: 30%      To ensure tidal function, retention dikes will be gapped no later than TY3. Based on settlement curves, it is also anticipated that the average created marsh elevation will be less than +2ft NAVD 88 and therefore the area is likely to experience at least irregular tidal influence (10%) during extreme high tides and some synoptic events each month.
  
- TY5: 70%      It is anticipated that the marsh platform will provide increased functionality as settlement and consolidation continues and tidal influence (90%) induces the formation of additional

creeks and small water bodies.

TY6: 100% Marsh platform settles within intertidal range

Marsh creation and nourishment

TY1: 70 acres = 15%	Water = 3 acres	TY6: 457 acres = 95%	Water = 22 acres
TY3: 211 acres = 44%	Water = 10 acres	TY20: 389 acres = 81%	Water = 90 acres
TY5: 353 acres = 74%	Water = 16 acres		

**V2 - Submerged Aquatic Vegetation**

Site inspections during Phase 1 observed virtually no SAV cover except for trace amounts along some existing marsh edges. These observations are consistent with previous EnvWG observations. Proposed FWOP values are the same as those used in the 2006 Phase 0 WVA. For FWP, it is assumed that small open water areas within the marsh creation cells could achieve 10% by TY5 and maintain that coverage through TY20.

FWOP

TY0: 2%	TY1: 0%	TY6: 10%
TY1: 2%	TY3: 5%	TY20: 10%
TY20: 2%	TY5: 10%	

FWP

**V3 – Interspersion**

Table 4: USGS analysis provides the following interspersion values:

Sub-area	MC1	MC2	MC3	MC4
Class	4	3/4	4	3/4
Acres	178	156	89	56

FWOP

Baseline (TY0 and TY1) interspersion values are proposed based on pro-rating the total acreage of each cell and associated interspersion value (see V3\_Interspersion tab for calculations). At TY20, there will be 66 acres of marsh and 413 acres of water. Based on project vicinity and geometry, it is anticipated that the majority of marsh remaining at TY20 will be fringe marsh adjacent to Bayou St. Jean Charles and small isolated stands.

TY0: 22% Class 3; 78% Class 4  
 TY1: 22% Class 3; 78% Class 4  
 TY20: 50% Class 4; 50% Class 5

FWP

Interspersion class assignments follow standard workgroup convention for marsh - mostly unvegetated dredged material (Class 5) at TY1, conditions similar to “carpet marsh” (Class 3) at TY3, with the development of small ponds, creeks, and other waterbodies (Class 1) by TY5. At TY20, the marsh

creation/nourishment area will be 81% marsh and 19% water, therefore interspersions was shifted from a Class 1 into a Class 2.

TY1: 100% Class 5                      TY6: 100% Class 1  
TY3: 100% Class 3                      TY20: 100% Class 2  
TY5: 100% Class 1

**V4 - Shallow Open Water Habitat**

FWOP

Water depths were evaluated using design bathymetric and topographic data. All survey data points located in open water areas were plotted in AutoCAD to create a surface representing existing bathymetry in open water areas. Using average water level data from the design report (MWL = +0.93 ft NAVD), this surface was extracted at the -0.57 ft NAVD elevation (+0.93 ft NAVD – 1.5 ft) to identify areas with current water depths ≤ 1.5 ft deep. The acreage of areas with existing elevation ≥ -0.57 feet NAVD were determined using AutoCAD.

Subsidence is applied to the measured water depths to estimate the change in shallow open water over the project life. Per current project design documents, the applicable project area subsidence rate is estimated 0.02 ft. / yr. Twenty years of subsidence were applied to the bathymetric surface described above and the resulting shallow water acreage was determined using AutoCAD. Additionally, we propose that all current marsh lost during the course of the project life (new water) will remain shallow over the 20-year analysis.

TY0: 27%  
TY1: 27%  
TY20: 28%

FWP

For FWP, it is assumed that all open water (3 acres at TY1) is ≤1.5ft deep at TY1 through TY5. By TY20, it is assumed that continued settlement, deepening of the tidal creeks, and tidal exchange will result in the formation of some open water greater than 1.5 feet deep. At TY3 there are 10 acres of open water all of which are projected to be less than 1.5 feet deep, and it is also projected that all 16 water acres at TY5 will remain less ≤ 1.5 feet deep. At TY20, 81% of the marsh creation area will remain as land, and it is estimated that 80% of the TY20 water area will remain less than 1.5 feet deep.

TY1: 100%                      TY6: 100%  
TY3: 100%                      TY20: 80%  
TY5: 100%

**V5 - Salinity**

Mean annual salinity for CRMS station 0315 for the period July 2010 to June 2013 was 9.43 ppt. Salinity is not assumed to change FWOP or FWP.

FWOP: All TYs = 9.4 ppt                      FWP: All TYs = 9.4 ppt

## **V6 - Fisheries Access**

### FWOP

The project area is considered an open system and has an access value of 1.0.

TY0: 1.0

TY1: 1.0

TY20: 1.0

### FWP

The marsh creation/nourishment areas are considered to have no access (access value is 0.0001) at TY1 due to the elevation of the marsh platform. At TY3, the marsh creation area is projected to settle to less than +2.0 ft. NAVD), containment dikes will be gapped, and tidal creek formation should begin.

Although the marsh platform does not settle into the intertidal range until TY6 (1.5 ft NAVD 88), it should receive partial credit for aquatic organism access. By TY5, the marsh platform elevation almost settled into the intertidal range. It is assumed that tidal exchange into and out of the project area has increased. It should not receive full access credit, but at least a value greater than TY3. By TY6, the entire marsh platform is within the tidal range and is given a value of 1.0 from this time through TY20.

TY1 0.0001

TY3 0.8                      TY6 1.0

TY5 0.9                      TY20: 1.0

## **AREA 2: ALL TERRACES (TF1, TF2 & TF3)**

### **V1 - Emergent Vegetation**

One year of background loss was applied to USGS 2012 land acreage to arrive at TY0 (2013) project acreages.

2012 Acreages: Marsh = 7    Water = 457    Total = 464

**TY0 Acreages: Marsh = 7 acres    Water = 457 acres    Total =464 acres**

### FWOP

Assume the background loss rate (-2.29%/yr.) continues (see the land loss spreadsheet).

TY0: 7 acres = 1%                      Water = 457 acres

TY1: 7 acres = 1%                      Water = 457 acres

TY20: 4 acres = 1%                      Water = 460 acres

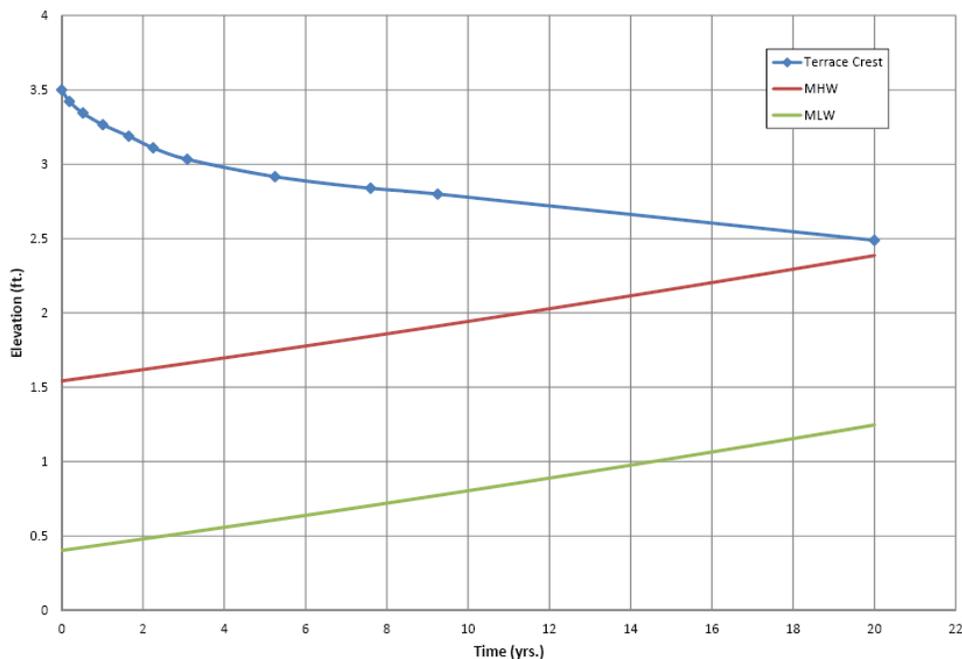
### FWP

Settlement curve for the proposed +3.0 ft NAVD elevation interpolated from existing settlement curve for +3.5 ft NAVD initial construction elevation (Figure 9). Based on this curve, it is projected that the crest elevation of the constructed terrace will enter the intertidal range at about TY14.

It is proposed that the constructed terraces receive credit as follows:

TY1 – TY13: Portions of the terraces not flooded (i.e., crown and upper side slope) do not receive credit due to construction elevation and settlement curve projections. Terrace acreage is calculated for the area

of the terrace slopes anticipated to be within the mean high and mean low water elevation range (0.36 ft. and 1.50 ft.) respectively (see “terrace acreage calculations” at bottom of terrace land loss spreadsheet); because the terraces are planted, standard WG convention for functionality (i.e., 25% at TY1 and 100% at TY3 and after for planted terraces/marsh creation) is applied to this slope acreage. It is also proposed that the background loss rate be reduced by 75% for all terrace acreage between TY1 and TY13 due to the high elevation of the constructed terrace which is anticipated to “settle in place” and simply lower the cross-section over time.



**Figure 8:** Terrace Settlement Curve.

**NOTE:** Must interpolate 0.5 ft adjustments to estimate a curve for +3.0 ft NAVD 88 construction elevation.

TY14 – TY20: It is proposed that the area of intertidal terrace slope and the entire ten-foot wide terrace crown be given full credit beginning at TY14, and that application of standard loss rate assumptions also begin at TY14 (i.e., at half the background rate).

The existing seven acres of marsh within the terrace field are also assumed to experience a reduction in loss based on the findings of Morton et al. (2005) which indicated that shoreline erosion accounted for one-third of the loss of marshes in Terrebonne Parish with subsidence accounting for the remaining two-thirds. A 33% reduction in the background loss rate is proposed due to the reduction in wave energy within the terrace field. The land loss spreadsheet includes all calculations (reference for significant digits and rounding).

TY1: 8 acres = 2%                      Water = 445 acres

[1 acres slope @ 25%] + [6 acres existing marsh] = 8 acres (rounding)  
 TY3: 13 acres = 3% Water = 446 acres  
 [6 acres slope @ 100%] + [6 acres existing marsh] = 13 acres (rounding)  
 TY13: 12 acres = 3% Water = 447 acres  
 [6 acres slope @ 100%] + [5 acres existing marsh] = 12 acres (rounding)  
 TY14: 17 acres = 4% Water = 447 acres  
 [11 acres slope & crown @ 100%] + [5 acres existing marsh] = 17 acres (rounding)  
 TY20: 15 acres = 3% Water = 449 acres  
 [10 acres slope & crown @ 100%] + [4 acres existing marsh] = 15 acres (rounding)

**V2 - Submerged Aquatic Vegetation**

Recent site inspections during Phase 1 indicate virtually no SAV cover except for trace amounts along some existing marsh edges. These observations are consistent with previous ENV WG observations. FWOP estimated SAV coverage is minimal, and projected to reduce to zero by TY20.

SAV cover is probably limited by the water depths in the terrace field location and fetch across the large open water areas. Construction of terrace field would reduce wind generated waves from the south and southwest (likely during the growing season). It is anticipated that SAV colonization will occur during the first three years, and reach maximum coverage at TY3.

<u>FWOP</u>	<u>FWP</u>	
TY0: 1%	TY1: 0%	TY14: 10%
TY1: 1%	TY3: 10%	TY20: 10%
TY20: 0%	TY13: 10%	

**V3 – Interspersion**

FWOP

All terrace fields are classified as Class 5. It cannot get any worse despite ongoing loss of existing marsh.

TY0: 100% Class 5  
 TY1: 100% Class 5  
 TY20: 100% Class 5

FWP

The terrace rows will be spaced 265 ft apart and staggered, therefore standard WG interspersion values are proposed.

TY1: 100% Class 3 TY14: 100% Class 3  
 TY3: 100% Class 3 TY20: 100% Class 3  
 TY13: 100% Class 3

**V4 - Shallow Open Water Habitat**

FWOP: Acreage and percent shallow open water was calculated as described for marsh creation areas using AutoCAD.

TY0: 2%

TY1: 2%  
TY20: 2%

FWP: The terrace slope from just below MLW (i.e., 0.359 ft.) to 1.5' deep is 10.6 acres (2%). Since, the FWOP shallow open water filled or deepened by terrace construction can only be estimated, and there is only 2% SOW FWOP; we only assumed the terrace slope to be shallow and serve as the surrogate for the total amount. What is deep open water will remain deep over the project life.

TY1 – TY20: 2%

### **V5 - Salinity**

Mean annual salinity for CRMS station 0315 for the period June 2006 to July 2013 was 9.43 ppt. Salinity is not assumed to change FWOP or FWP.

FWOP: All TYs = 9.4 ppt

FWP: All TYs = 9.4 ppt

### **V6 - Fisheries Access**

The project area is considered an open system and has an access value of 1.0 under both the FWOP scenario. Under the FWP scenario access was evaluated based on the entire terrace polygon footprint, not just the constructed terraces. The FWP action provides an increase in edge habitat for aquatic organisms and therefore under the standard workgroup assumptions receives the value of 1.0 for all FWP target years.

#### FWOP

TY0: 1.0  
TY1: 1.0  
TY20: 1.0

#### FWP

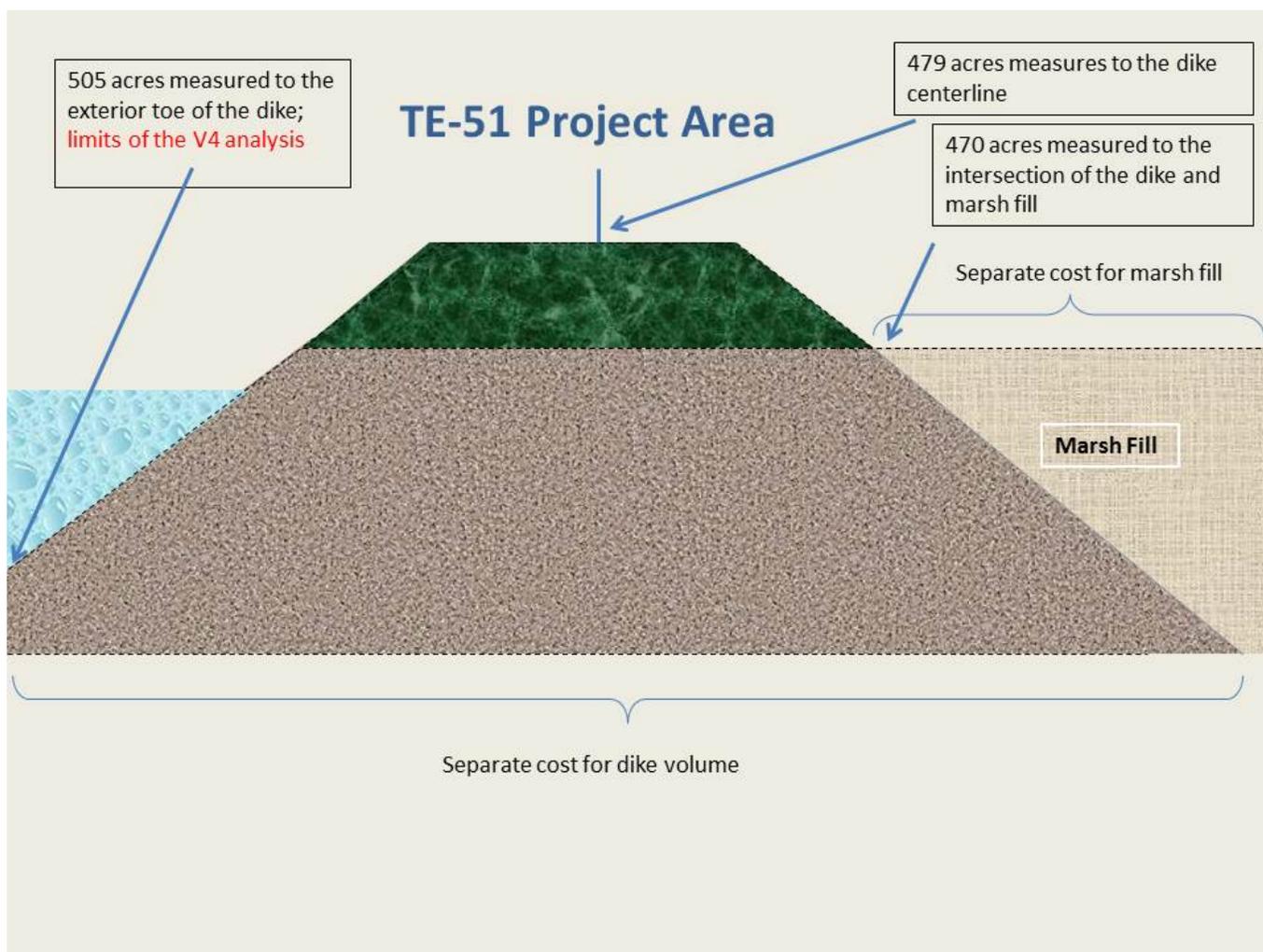
TY0: 1.0  
TY1: 1.0  
TY3: 1.0  
TY13: 1.0  
TY14: 1.0  
TY20: 1.0

### **Literature Cited**

Morton, R.A., J.C. Bernier, J.A. Barras, and N.F. Ferina. 2005. Rapid subsidence and historical wetland loss in the Mississippi delta plain: likely causes and future implications. U.S. Geological Survey Open-File Report 2005-1216.

### Appendix

The total marsh creation and nourishment acres differ from those used in the cost estimate as fill for marsh. The polygon on which USGS land/water was provided is based upon 479 acres which is measured to the centerline of the containment dike of each of three disposal areas, whereas 470 acres is the area for fill to create (nourish) marsh used in the cost estimate. The 470 acres is measured to the intersection of the fill for marsh and the interior slope of the containment dike. Dikes costs are covered as a separate line item. The total project area including the entire base footprint of the dikes is 505 acres. Although the interior portion of the dike is treated as marsh under V1 despite its elevation, the exterior portion of the dike slope that is intertidal is not included, but assumed to be roughly equivalent to the interior portion of the dike above marsh fill (Appendix Figure 1). This is basically a GIS accuracy issue and not a cost issues because the dikes are covered as a separate cost item. The 505 acres is being used to clear land rights (plus buffering for oysters).



Appendix Figure 1: Project area limits

Cameron-Creole Watershed Grand Bayou  
Marsh Creation

(CS-54)

FWS

PPL 20

# Cameron-Creole Watershed Grand Bayou Marsh Creation (CS-54) Phase II Request

## Technical Committee Meeting

December 11, 2014  
Baton Rouge, LA







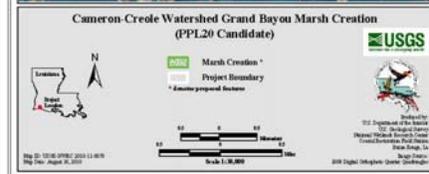
# Project Background and Purpose

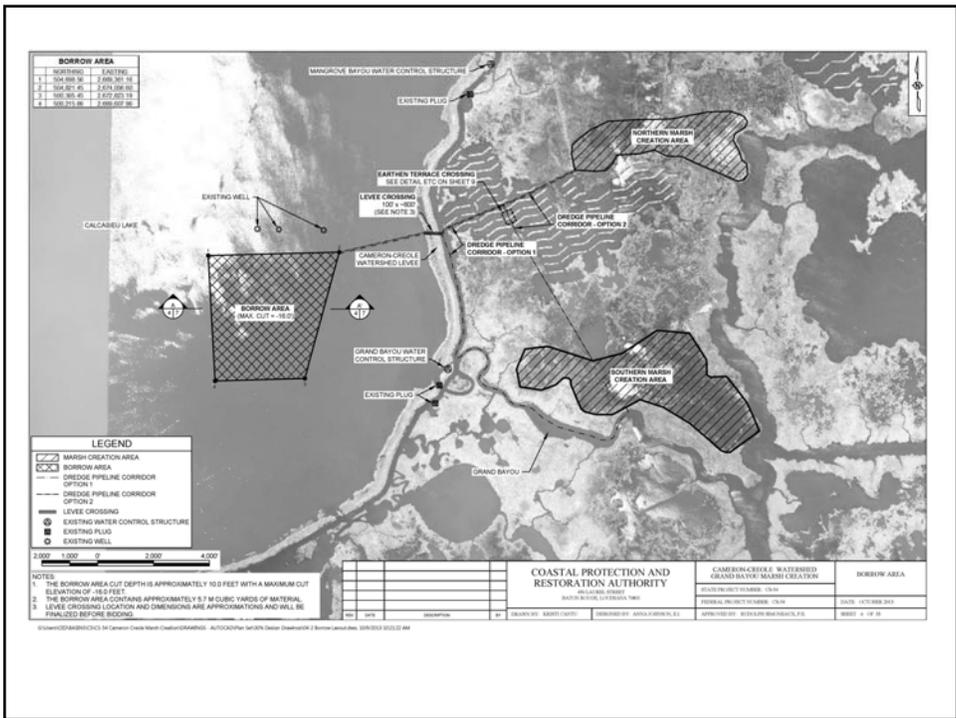
- Phase 1 approval in January 2012 as part of the 20<sup>th</sup> Priority Project List
- Rebuild the marsh lost due to scour and storm surge by Hurricanes Rita and Ike
- Re-create low salinity brackish marsh in the open water areas immediately behind the Cameron-Creole Watershed levee north of Grand Bayou
- Buffer tidal exchange through the Cameron-Creole Watershed.
- Restore marshes that support the Calcasieu Lake estuary



## Marsh Creation & Nourishment

- **Northern Cell**
  - 177 ac created
  - 41 ac nourished
- **Southern Cell**
  - 376 ac created
  - 22 ac nourished
- **616 Acres Total**





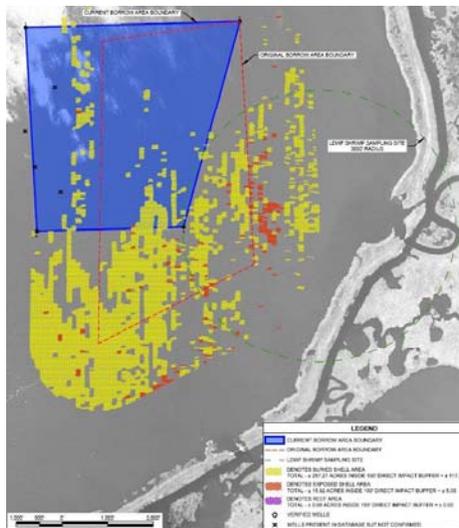
## Project Benefits and Costs

- The project benefits 616 acres of marsh and open water habitats
- 476 net acres at the end of the 20-year project life
- Wetland Value Assessment – 193 net AAHUs
- Fully funded cost of \$28,707,688
- **Today's Phase 2 Increment 1 request - \$25,745,513**



## Avoidance and Minimization of Impacts to Fishery Resources with Calcasieu Lake

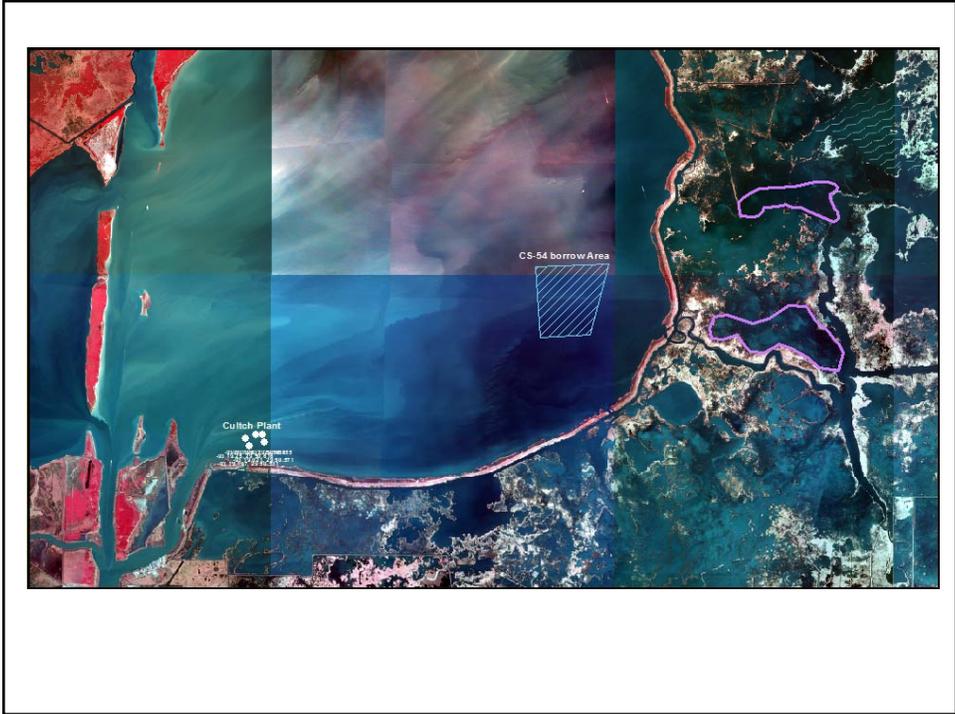
- Conducted Surveys:
  - Bathymetry Surveys
  - Bottom Assessments
  - Seismic Surveys
- Realigned Borrow Area to avoid:
  - Buried or exposed shell (predominantly rangia shell)
  - Pipelines
  - LDWF shrimp sampling site
- Monitoring Plan:
  - Borrow Area Surveys
  - Water Quality Monitoring- DO and Hypoxia
- Outreach



## Why Fund This Project Today?

- Takes advantage of shallow open water created by Hurricanes Rita and Ike
- Would help to buffer tidal exchange within the watershed and to support management of the watershed
- Restores marshes that support fish and wildlife resources within the Cameron Creole Watershed, National Wildlife Refuge, and the Calcasieu Lake Estuary
- Located in an area that is supported by the 2012 State Master Plan







# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
646 Cajundome Blvd.  
Suite 400  
Lafayette, Louisiana 70506

November 21, 2014

Mr. Troy Constance, Chairman  
CWPPRA Technical Committee  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana 70160-0267

Dear Mr. Constance:

The Fish and Wildlife Service and Louisiana Coastal Protection and Restoration Authority would like to submit the Cameron-Creole Watershed Grand Bayou Marsh Creation (CS-54) project for Phase 2 construction funding approval. This project was approved for Phase 1 funding by the Louisiana Coastal Conservation and Restoration Task Force as part of the 20<sup>th</sup> Project Priority List. The enclosed packet includes all information required for a Phase 2 authorization request, per the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Standard Operating Procedures. This Phase 2 authorization request was also sent electronically to all CWPPRA Technical Committee and Planning and Evaluation Subcommittee members.

The CS-54 project has received favorable 30% and 95% Design Reviews and National Environmental Policy Act review, and is, to our knowledge, without controversy.

If you have any questions regarding this letter and submittal, please contact Ms. Angela Trahan of this office at (337) 291-3137.

Sincerely,

Jeffrey D. Weller  
Supervisor  
Louisiana Ecological Services Office

Enclosures

cc: via email

Britt Paul, NRCS, Alexandria, LA  
Bren Haase, LA CPRA, Baton Rouge, LA  
Karen McCormick, EPA, Dallas, TX  
Richard Hartman, NMFS, Baton Rouge, LA  
Stewart Brown, LA CPRA, Baton Rouge, LA  
Brad Inman, COE, New Orleans, LA  
Cecelia Linder, NMFS, Baton Rouge, LA  
John Jurgensen, NRCS, Alexandria, LA  
Adrian Chavarria, EPA, Dallas, TX  
Rudy Simoneaux, LA CPRA, Baton Rouge, LA  
Trey Horne, LA CPRA, Baton Rouge, LA

# Phase II Authorization Request

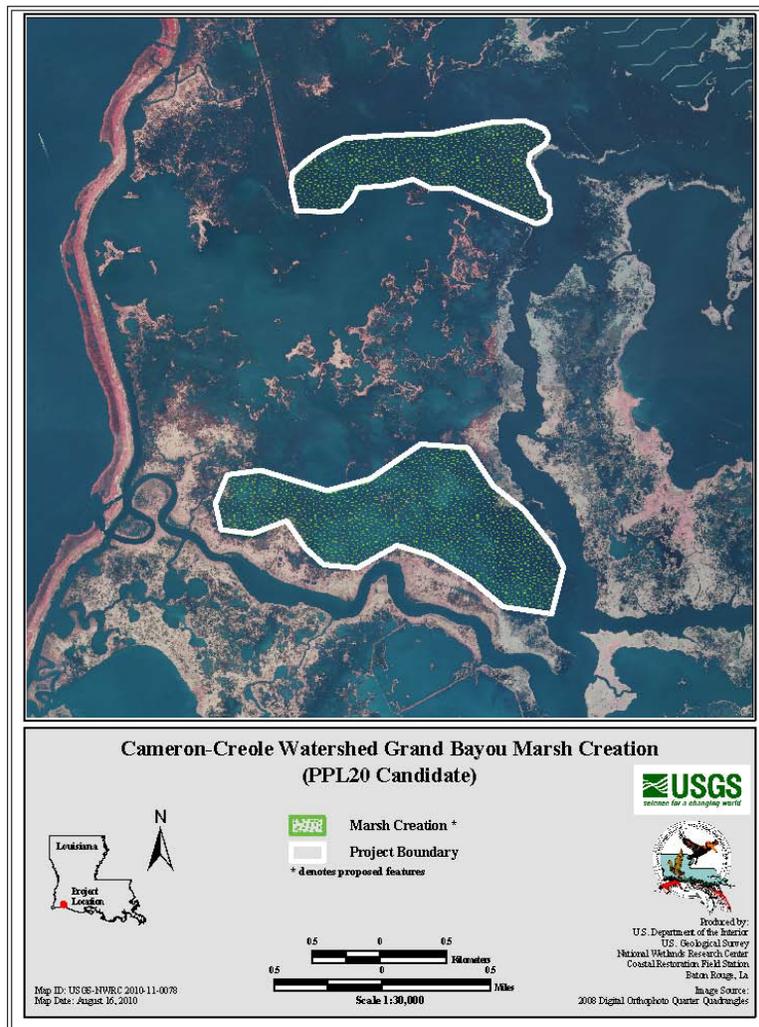
## Cameron Creole Grand Bayou Marsh Creation Project

### CS-54

### Description of Phase I Project

The CS-54 Project was approved for Phase I funding on the 20<sup>th</sup> Priority Project List of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA). At the time of Phase 1 approval the project's goals were to create 603 acres and nourish 13 acres of brackish marsh with dedicated dredged material from Calcasieu Lake to benefit fish and wildlife resources within the Cameron Prairie NWR and adjacent brackish marshes. The following figure illustrates the project features and project boundary at the time of Phase I authorization.

**Figure 1: Project Features and Boundary.**



The original project included construction of two separate marsh creation areas, a 398-acre area on the Cameron Prairie National Wildlife Refuge and a 218-acre area on Miami Corporation

Overgrazing Determination; and 16) 95% Design Review meeting. The details of those E&D tasks were presented and discussed at the 30% and 95% Design Review meetings.

Overall, no major feature change from the approved conceptual project (Phase I) occurred during Phase I development.

### **Description of the Revised (Current) Project Features**

The currently proposed project consists of hydraulically dredging bottom sediments in Calcasieu Lake and pumping that material into open-water and fragmented marsh areas in the project area to create and nourish approximately 616 acres of marsh within two marsh creation areas. Initial fill elevations of between +3.2 and +3.7 feet for the Northern Cell and +3.4 and +3.9 feet for the Southern Cell are proposed and would ultimately settle to an elevation at or near +1.1 feet within the project life. Those values are extremely close to the existing healthy marsh elevation of +1.08 feet and fall within watershed water level projections through the project life. An additional area to the west of the Northern Marsh Creation Area was also included in the surveys and geotechnical investigations per the request of the landowner, Miami Corporation. Figure 1 represents the location (in purple) of this additional area.

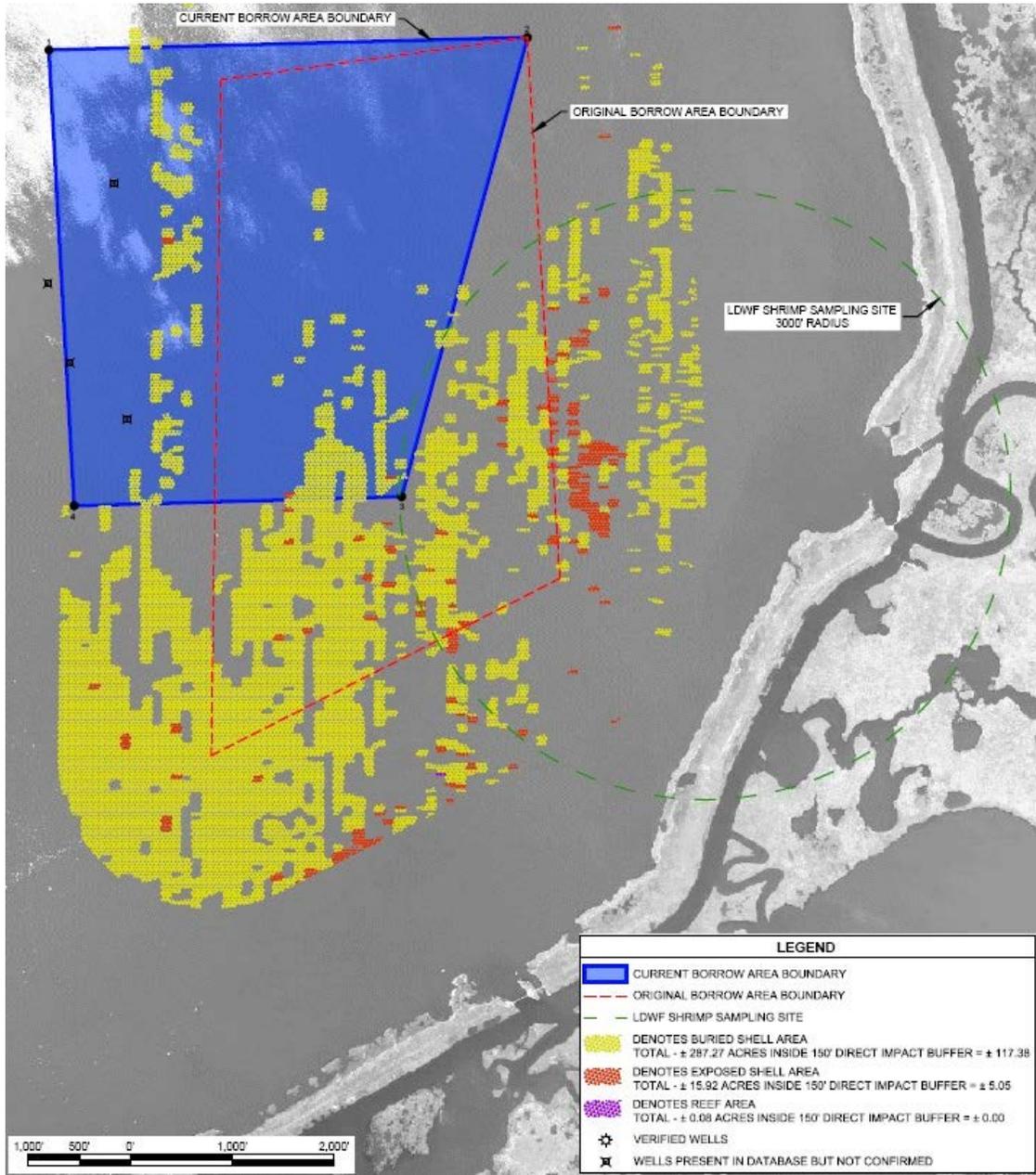
**Figure 2: Additional Marsh Creation Area.**



Though this area will not be a part of the 95% Design and the Phase II funding request, it will be permitted in case of low bids or additional funding.

A 390-acre area of water bottom in Calcasieu Lake has been designated as a borrow area (Figure 3). The maximum dredge depth is 10 feet below the lake bottom (-16 feet North American Vertical Datum of 1988 (NAVD 88) and a side slope of 3 feet horizontal for every foot of vertical rise (3H:1V) will be maintained to lessen the chance of anoxic conditions within the borrow area. A magnetometer survey was conducted in the proposed borrow area to identify pipelines and other hazards, and the borrow area has been configured to avoid those hazards.

Figure 3. Designated Area for Borrow.



**Checklist of Phase II Request Requirements  
Cameron Creole Watershed Grand Bayou Marsh Creation Project (CS-54)**

**A. List of Project Goals and Strategies**

Goals:

1. Protect the Watershed levee from waves generated in the east
2. Act as a buffer for tidal exchange within the Cameron-Creole Watershed
3. Rebuild the marsh lost due to scour and storm surge by Hurricanes Rita and Ike
4. Construct a marsh that will perform comparably to existing healthy marsh in the Cameron-Creole Watershed

Objectives/Strategies

1. Restore 616 acres of brackish marsh that were lost due to scour and storm surge by Hurricanes Rita and Ike through hydraulically dredging material from Calcasieu Lake. Marsh restoration will be done in 2 marsh creation cells via the placement of approximately 2.6 million cubic yards of dredged material from borrow sites located in Calcasieu Lake.

The goals and objectives will be achieved by the project features described above. Project strategies and features have, for the most part, remained as proposed during Phase 0.

**B. A Statement that the Cost-Sharing Agreement Between the Lead Agency and Local Sponsor has been Executed for Phase I.**

Cost Share Agreement between CPRA and FWS was executed on March 14, 2011.

**C. Notification from the State that Land Rights will be Finalized in a Short Period of Time after Phase II Approval.**

The Service forwarded a copy of CPRA's Temporary Easement, Servitude, and Right-of-Way agreement (unsigned) for the CS-54 project to the Corps along with NRCS's Overgrazing Determination for their 303(e) determination on October 31, 2013.

By letter dated September 20, 2013, the State of Louisiana, through its Coastal Protection and Restoration Authority (CPRA) Lands Section also provided a land rights status letter. CPRA has indicated that all ownership investigations should be completed in a reasonable period of time after Phase II approval. Because lands within the project area are owned by two landowners (i.e., Miami Corporation and the Federal Government) no significant land rights acquisition problems are anticipated.

**D. A Favorable Preliminary Design Review (30 Percent Design Level)**

A 30 Percent Design Meeting was held in March 2013, and resulted in favorable reviews of the project design. Responses to all meeting and post-meeting comments were provided. The

Service and CPRA agreed to proceed with the project.

**E. A Favorable Final Project Design Review (95 Percent Design Level)**

A favorable 95 Percent Design Meeting was held on October 24, 2013. No major design issues were identified.

**F. A Draft of the Environmental Assessment for the Project, as Required under the National Environmental Policy Act, must be Submitted 30 days Before the Request for Phase II Approval**

The FWS submitted a preliminary draft Environmental Assessment for agency review on November 27, 2013.

**G. A Written Summary of the Finding of the Ecological Review**

It was determined by CPRA and USFWS that no Ecological Review would be needed for this project.

**H. Application for and/or Issuance of the Public Notices for Permits**

Application for the Corps of Engineers permit and the Louisiana Coastal Resources Program consistency determination has been prepared and will be submitted should Phase II funding be awarded. DNR will forward the application to the LA Department of Environmental Quality for Water Quality Certification Review.

**I. A Statement that a Hazardous, Toxic and Radiological Waste (HTRW) Assessment has been Prepared, if Required**

The USFWS does not have the ability to issue HTRW Assessment at this time. A cursory screening of in-house databases and Environmental Protection Agency and Louisiana Department of Environmental Quality databases did not reveal any HTRW issues.

**J. Section 303(e) Approval from the Corps**

The project is consistent with the requirements of CWPPRA Section 303(e). Section 303(e) approval was received from the Corps on September 19, 2013.

**K. Overgrazing Determination from the NRCS**

The Service received an Overgrazing Determination from the NRCS on October 22, 2013.

**L. Revised Project Cost Estimate**

The revised total budget for Phase II is \$28,707,688. This amount represents an increase of 23 percent (\$5,302,074) over the original Phase II cost estimate (\$23,405,612) (See attached

Request of Phase II Cost Estimate Table).

**M. A Revised Wetland Value Assessment (WVA) must be Prepared if, During the Review of the Preliminary NEPA Documentation, Three of the Task Force Agencies Determine that a Significant Change in the Project Scope Occurred**

A revised WVA was submitted to and reviewed by the Environmental Working Group. While the project scope has not significantly changed, methods in conducting the WVA have been revised by the Environmental Workgroup. The initial WVA completed in October 2010 yielded 534 net acres with a project boundary of 616 acres. The revised WVA completed in October 2013 yielded 476 net acres for the same project boundary area, and those benefits remain valid based on 2014 WVA methods.

Table 2: Comparison of Original and Revised Wetland Value Assessments

Project Phase	Net Acres	Average Annual Habitat Units (AAHUs)
Candidate Project	534	214.41
Phase II Revised Project	476	193.33
Difference	-58	-21.08

**Phase II Request**

Based on the above information, the FWS and CPRA hereby request CWPPRA Task Force Phase II funding approval for the Cameron Creole Watershed Grand Bayou Marsh Creation Project (CS-54) in the 3-year incremental amount of **\$25,745,513**. That amount includes \$18,902,313 for construction; \$884,651 for supervision and inspection; \$4,725,578 for contingencies; \$472,558 for administration by the Federal sponsor and \$338,614 for State administration; \$237,000 for monitoring; \$178,527 for operations and maintenance (State and Federal); and \$6,272 for Corps project management (See attached Request for Phase II Approval Cost Estimate Table).

AT/DC 11-18-2014



# Cameron-Creole Watershed Grand Bayou Marsh Creation (CS-54)

## Project Status

**Approved Date:** 2011      **Project Area:** 616 acres  
**Approved Funds:** \$2.37 M      **Total Est. Cost:** \$23.4 M  
**Net Benefit After 20 Years:** 534 acres  
**Status:** Engineering and Design  
**Project Type:** Marsh Creation  
**PPL #:** 20

## Location

This project is located in Region 4, Calcasieu-Sabine Basin, Cameron Parish, 6 miles northeast from Cameron, LA, on the Cameron Prairie NWR and Miami Corporation property north of Grand Bayou.

## Problems

Approximately 14,390 acres (32%) of the Cameron-Creole Watershed Project (CCWP) marshes were lost to open water from 1932 to 1990 at an average loss rate of 248 acres/year (0.55 percent/year) due to subsidence and saltwater intrusion from the Calcasieu Ship Channel. The CCWP was implemented by the NRCS in 1989 to reduce saltwater intrusion and stimulate restoration through revegetation. Hurricanes Rita and Ike in 2005 and 2008 breached the watershed levee scouring the marsh and allowing higher Calcasieu Lake salinities to enter the watershed causing more land loss. The Calcasieu-Sabine Basin lost 28 square miles (17,920 acres) (4.4%) as a result of Hurricane Rita (Barras et al. 2006). Land loss is estimated to be 1.33 percent/year based on USGS data from 1985 to 2009 within the extended project boundary.



This picture shows the depletion of the marsh due to saltwater intrusion from the Gulf.

## Restoration Strategy

Project goals include restoring and nourishing hurricane-scoured marsh in the Cameron Prairie National Wildlife Refuge and adjacent brackish marshes of the Calcasieu Lake estuary. Approximately 3 million cubic yards of material would be dredged from a borrow site proposed in Calcasieu Lake and placed into two marsh creation areas north of Grand Bayou to restore 609 acres and nourish approximately 7 acres of brackish marsh. The borrow site would be designed to avoid and minimize impacts to oysters and other sensitive aquatic habitat. Tidal creeks would be constructed prior to placement of dredge material and retention levees would be gapped to support estuarine fisheries access and to achieve a functional marsh. The project would result in approximately 534 net acres of brackish marsh over the 20-year project life.

## Progress to Date

This project is on Priority Project List 20. Phase 1 funding approval for engineering and design was given by the Task Force in January 2011.

For more project information, please contact:



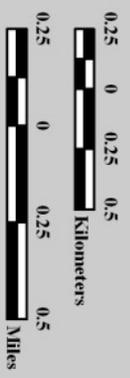
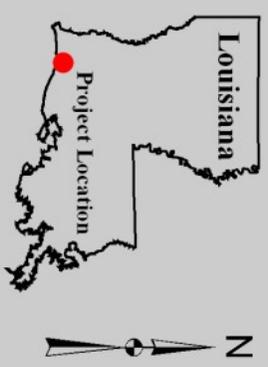
**Federal Sponsor:**  
 U.S. Fish and Wildlife Service  
 Lafayette, LA  
 (337) 291-3100



**Local Sponsor:**  
 Coastal Protection and Restoration Authority  
 Baton Rouge, LA  
 (225) 342-4736

# Cameron Creole Watershed Grand Bayou Marsh Creation (CS-54)

-  Marsh Creation \*
-  Project Boundary
- \*denotes proposed features



Map Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Field Station  
 Baton Rouge, La.

Background Imagery:  
 2008 Digital Orthophoto Quarter Quadrangle  
 Map Date: January 24, 2011  
 Map ID: USGS-NWRC 2011-11-0014  
 Data accurate as of: January 3, 2011

# Oyster Bayou Marsh Restoration

(CS-59)

NMFS

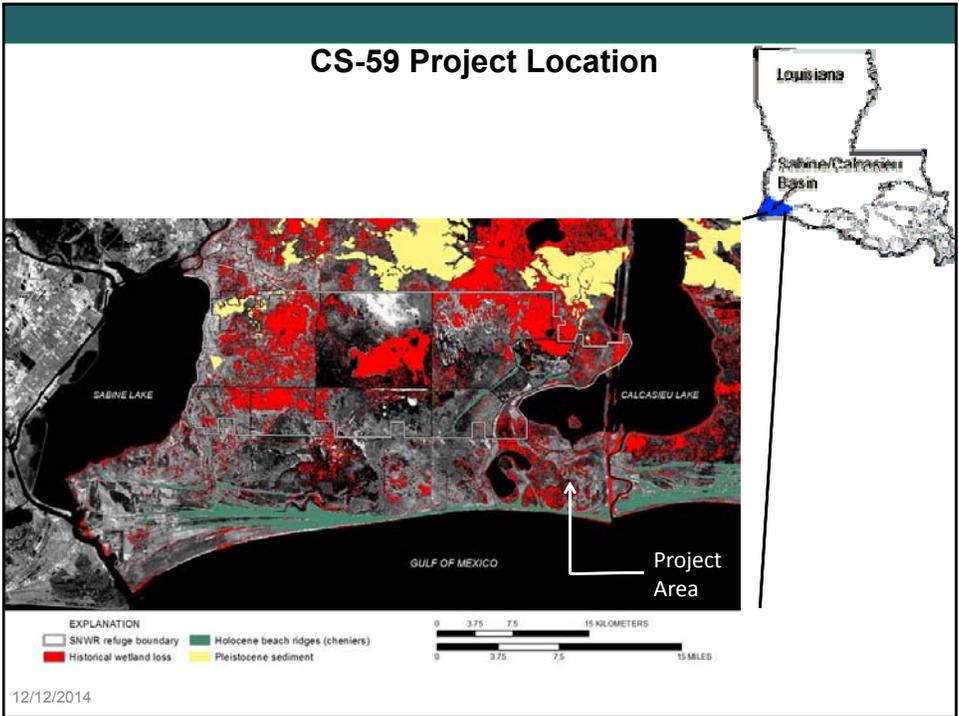
PPL 21

# Oyster Bayou Marsh Restoration Project (CS-59) Phase II Request

Technical Committee Meeting  
December 11, 2014  
Baton Rouge, LA



The slide features a background photograph of a marshy bayou with green vegetation and brown water under a clear blue sky. At the bottom, three logos are displayed: the Coastal Protection and Restoration Authority (CPRA) logo on the left, the United States Fish and Wildlife Service (USFWS) logo in the center, and the National Oceanic and Atmospheric Administration (NOAA) logo on the right.



## Project Background and Purpose

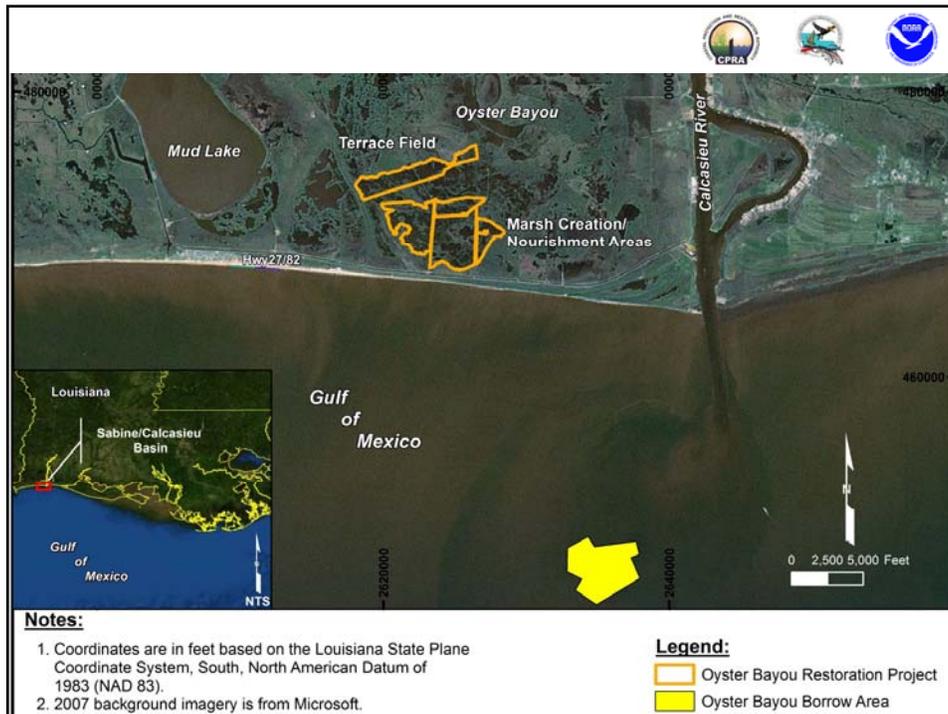
Project initially funded and authorized in accordance with the Coastal Wetlands Planning Protection and Restoration Act: CS-59 Priority List 21

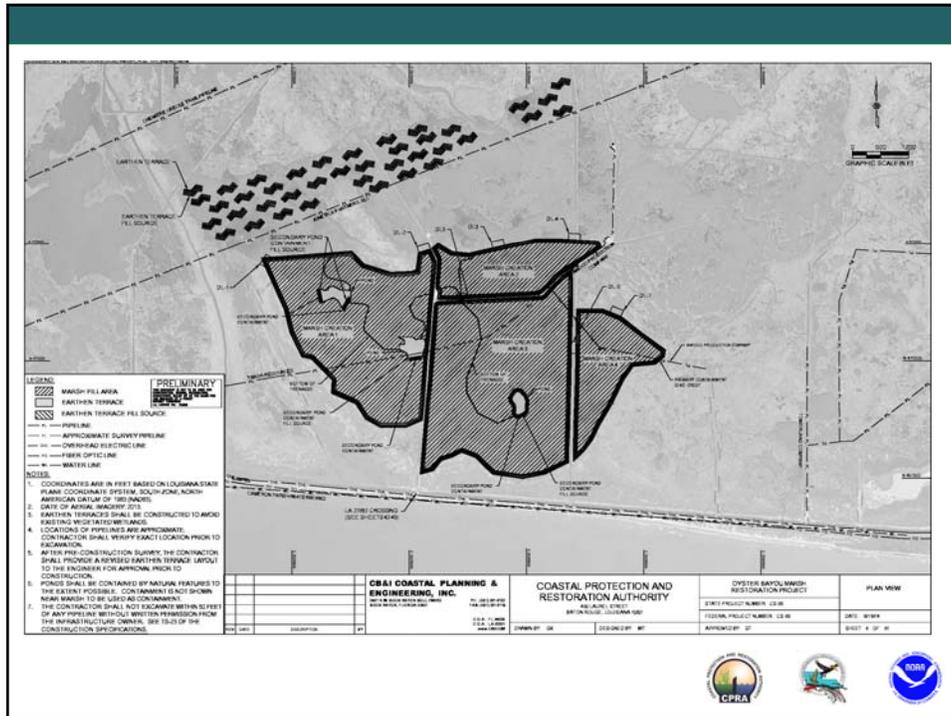
### Problems:

Altered hydrology, drought stress, saltwater intrusion and hurricane induced wetland losses have caused the area to undergo interior marsh breakup. Recent impacts from Hurricane Rita in 2005 and Hurricane Ike in 2008 have resulted in the coalescence of Oyster Lake with interior water bodies increasing wave/wake related erosion.

### Final Project Objectives

- 605 acres marsh creation/nourishment
- Construct 17,550 linear feet of earthen terraces
- Construct 3, 4-acre ponds
- Construct 9,450 linear feet of tidal creeks





## Oyster Bayou (CS-59)

### Benefits and Costs

- The project benefits 605 acres of marsh and open water habitats
- 489 net acres at the end of the 20-year project life
- Fully funded cost = \$31,236,741
- Today's Phase 2 Increment 1 request = \$27,557,097



## Oyster Bayou (CS-59)

### Why this project, why now?

- Restores 605 acres of wetland habitats
- Provides sustainable, productive habitat to an area experiencing rapid interior marsh breakup
- Serves to restore the hydrology of the area to historic levels
- It is a cost effective project





**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, MD 20910

November 24, 2014

Mr. Troy G. Constance  
Acting Deputy District Engineer  
US Army Corps of Engineers  
New Orleans District  
P.O. Box 60267  
New Orleans, LA 70160-0267

Re: Phase II Construction Funds Request for the Oyster Bayou Marsh Restoration (CS-59)

Dear Mr. Constance:

NOAA Fisheries and the Louisiana Coastal Protection and Restoration Authority (CPRA) hereby request approval for Phase II authorization of the Oyster Bayou Marsh Restoration project (CS-59). Phase I activities were authorized on Priority Project List 21 on January 19, 2012, by the Louisiana Coastal Wetlands Conservation and Restoration Task Force under the authority of the Coastal Wetlands, Planning, Protection and Restoration Act (CWPPRA). This request is submitted in accordance with the CWPPRA Project Standard Operating Procedures Manual (SOP).

Enclosed please find the information required for Phase II requests and approval pursuant to Appendix A of the SOP. Should additional information be required for this project, I can be reached at (301) 427-8675. Thank you for your consideration of this request.

Sincerely,

Cecelia Linder  
NOAA CWPPRA Program Manager  
NOAA Fisheries Service

Enclosures

Cc: Members of the CWPPRA Technical Committee  
John Foret, Project Manager, NOAA NMFS  
Andrew Beall, CPRA Project Management Administrator

## INFORMATION REQUIRED IN PHASE II AUTHORIZATION REQUESTS

**I. Description of Phase I Project**

The Oyster Bayou Marsh Restoration Project was proposed by the National Oceanic and Atmospheric Administration (NOAA) as a candidate for the Project Priority List 21. Phase 1 was authorized by the CWPPRA Task Force in January 2012. The project is located in Cameron Parish approximately half way between the Calcasieu Ship Channel and Holly Beach, and immediately north of State Highway 27/82. The candidate project envisioned the creation of 510 acres of saline marsh in recently formed shallow open water, along with the nourishment of an additional 90 acres of existing saline marsh, and creation 14,140 linear feet of earthen terraces to reduce wind induced wave erosion.

A summary of project costs and benefits at Phase I is provided below; the candidate project fact sheet and map can be found in Attachment A.

Fully Funded Total Project Cost	\$29,781,355
Phase II, Increment I Request	\$27,123,786
Net Acres at TY20	489
Average Annual Habitat Units	231

**II. Overview of Phase I Tasks, Process and Issues**

Phase I activities included formation of project goals and objectives, pre-design investigations (i.e., bathymetric and topographic surveys and geotechnical of the project area), a HTRW report, data acquisition and geotechnical analyses, development and evaluation of project alternatives at the Preliminary (30%) Design level and completion of Final Design (95%) of the preferred alternative. Other tasks included the development of the landrights workplan, the preliminary ownership report, application for appropriate permits and regulatory clearances, consultations with the State Historic Preservation Office, the Louisiana Department of Transportation and Development, development of draft Environmental Assessment, and review of updated costs and benefits by the Engineering and Environmental Workgroups.

**III. Description of the Phase II Candidate Project**

The major feature of the proposed project is the creation of over 442 acres of saline marsh and nourishment of 142 acres of existing saline marsh. The marsh creation/nourishment will be accomplished using approximately 3.1 Mcy of fine-grained material mined from the Gulf of Mexico. Initial (no settlement period) fill elevations will be +2.5' NAVD 88 (with a  $\pm 0.5'$  tolerance), which is anticipated to result in marsh elevations that would remain intertidal for the majority of the 20-year project life.

The proposed project also includes creation of 17,500 linear feet of earthen terraces (21 acres of saline marsh) just north of the marsh creation areas. Material for the terraces would be obtained from the open water area immediately adjacent to each terrace. The proposed terrace dimensions are +3.5' NAVD 88 (with +1' tolerance), a 15' crown width, and 1(v):5(h) side slopes, and where applicable, the terraces will tie into existing marsh.

It is anticipated that the elevation of the terraces would remain at or above +3 NAVD 88 throughout the 20-year project life. In addition to the increased wetland habitat function, the terraces serve as a wind generated wave break for the newly created marsh fill areas.

Other project components include vegetative plantings (one-half of the newly created marsh and terrace sides), installation of settlement plates, retention dike gapping as needed to ensure tidal exchange and fisheries support functions, and project-specific monitoring to inform performance assessment and future project designs. A summary of current project costs and benefits is provided below; an updated project fact sheet and map can be found in Attachment B.

Fully Funded Total Project Cost	\$31,236,741
Phase II, Increment I Request	\$27,557,097
Net Acres at TY20	433
Average Annual Habitat Units	238

The current design reflects the following modifications:

- Addition of 3,000 linear feet of earthen terraces to the project area;
- Containment dike realignment (for cost and constructability purposes);
- Pond relocation to use existing features as containment.

#### IV. Checklist of Phase Two Requirements

##### A. *List of Project Goals and Strategies*

The primary project goals are: 1) create/nourish 605 acres of saline marsh in recently formed shallow open water; 2) create 17,550 linear feet of terraces; and, 3) reduce wind wave/wake erosion.

##### B. *Cost Share Agreement*

A cooperative agreement was executed between NOAA and CPRA for Phase I activities February 5, 2013.

##### C. *Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase II approval.*

The State confirmed that the process for landrights acquisition is progressing and that it anticipated that landrights would be finalized in a reasonable amount of time after Phase II Approval (October 6, 2014 e-mail; Attachment C).

##### D. *A favorable Preliminary Design Review (30% Design Level)*

The Preliminary Design Review meeting was held on July 2, 2014; participants included EPA and NRCS. Response to design review comments and the State's letter of concurrence to proceed to final design are included in Attachment D.

##### E. *Final Project Design Review (95% Design Level)*

The Final Design Review meeting was held on October 22, 2014. In addition to the federal and non-federal sponsors, NRCS, EPA, and COE participated in the

meeting. Response to design review comments and the State's letter of concurrence to proceed to Phase II request are included in Attachment E.

- F. *A draft of the Environmental Assessment of the Project, as required under the National Environmental Policy Act, must be submitted two weeks before the Technical Committee meeting at which Phase 2 approval is requested.*  
A draft Environmental Assessment was submitted to the Technical Committee via email on November 25, 2014. Notice of its availability online is planned for publishing via the Lake Charles American Press the first week of December. Additionally, hard copies of the EA will be available at the Cameron Parish library.
- G. *Written summary of the findings of the Ecological Review*  
N/A
- H. *Application for and/or issuance of the public notices for permits*  
Joint permit application materials (LDNR/CMD; COE and LDEQ) were prepared, and are ready for submittal if Phase II funding is approved (Attachment F).
- I. *A hazardous, toxic and radiological waste (HTRW) assessment, if required*  
A HTRW analysis on the project area was completed on September 11, 2014 (Attachment G). The analysis was completed in accordance with Phase I ESA scope and limitations of American Society for Testing and Materials Standard Practice E 1527-05. That review of applicable federal and state regulatory agency records, historical records, interviews with persons knowledgeable about the subject property, and a physical site investigation, revealed no evidence of recognized environmental conditions.
- J. *Section 303(e) approval*  
Request for 303(e) approval was submitted to the New Orleans District on October 10, 2014 (Attachment H).
- K. *Overgrazing determination from the NRCS*  
NRCS has determined that overgrazing by livestock is not a problem in the project area (Attachment I).
- L. *Revised fully funded cost estimate, reviewed and approved by the Engineering Work Group prior to fully funding by the Economic Work Group, based on the revised Project design and the specific Phase Two funding request as outlined in below spreadsheet*  
A revised fully funded cost estimate was finalized by the Economic Workgroup on November 18, 2014. The total fully funded cost is \$31,236,741. The Phase II funding request is included in Attachment J.
- M. *A Wetland Value Assessment, reviewed and approved by the Environmental Work Group*  
A revised WVA reflecting the final project design was completed on October 29,

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2014 (Attachment K). The project is anticipated to result in 433 net acres and 238 AAHUs.

Attachment A  
Candidate Project Factsheet



# Oyster Bayou Marsh Restoration (CS-59)

## Project Status

**Approved Date:** 2012      **Project Area:** 809 acres  
**Approved Funds:** \$3.1 M      **Total Est. Cost:** \$29.8 M  
**Net Benefit After 20 Years:** 489 acres  
**Status:** Engineering and Design  
**Project Type:** Marsh Creation and Terracing  
**PPL #:** 21

## Location

This project is in Region 4, Calcasieu-Sabine Basin, located west of the Calcasieu Ship Channel and south of the west fork of the Calcasieu River.

## Problems

Altered hydrology, drought stress, saltwater intrusion and hurricane induced wetland losses have caused the area to undergo interior marsh breakup. Recent impacts from Hurricane Rita in 2005 and Hurricane Ike in 2008 have resulted in the coalescence of Oyster Lake with interior water bodies increasing wave/wake related erosion. Based on USGS hyper temporal data analysis (1984 to 2011), land loss for the area is -0.75% per year. The subsidence rate is estimated at 0.0 to 1.0 ft per century (Coast 2050, Mud Lake mapping unit).

## Restoration Strategy

The project boundary encompasses 809 acres. Specific goals of the project are: 1) create 510 acres of saline marsh in recently formed shallow open water; 2) nourish 90 acres of existing saline marsh; 3) create 14,140 linear feet of terraces; and, 4) reduce wave/wake erosion.

Approximately 510 acres of marsh would be created and 90 acres would be nourished. Sediment needed for the fill would be mined approximately one and a half miles offshore in the Gulf of Mexico. Half of the created acres would be planted. Tidal creeks and ponds would be constructed prior to placement of dredged material and retention levees would be gapped to support estuarine fisheries access to achieve a functional marsh. Approximately 14,140 linear feet of earthen terraces would be constructed and planted.



Example of a newly completed marsh creation cell located within an interior marsh site. This site has similar characteristics as the Oyster Bayou Marsh Creation site.

## Progress to Date

This project is on Priority Project List 21.

For more project information, please contact:



**Federal Sponsor:**  
National Marine Fisheries Service  
Baton Rouge, LA  
(225) 389-0508

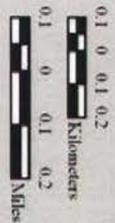


**Local Sponsor:**  
Coastal Protection and Restoration Authority  
Baton Rouge, LA  
(225) 342-4736

# Oyser Bayou Restoration (CS-059)

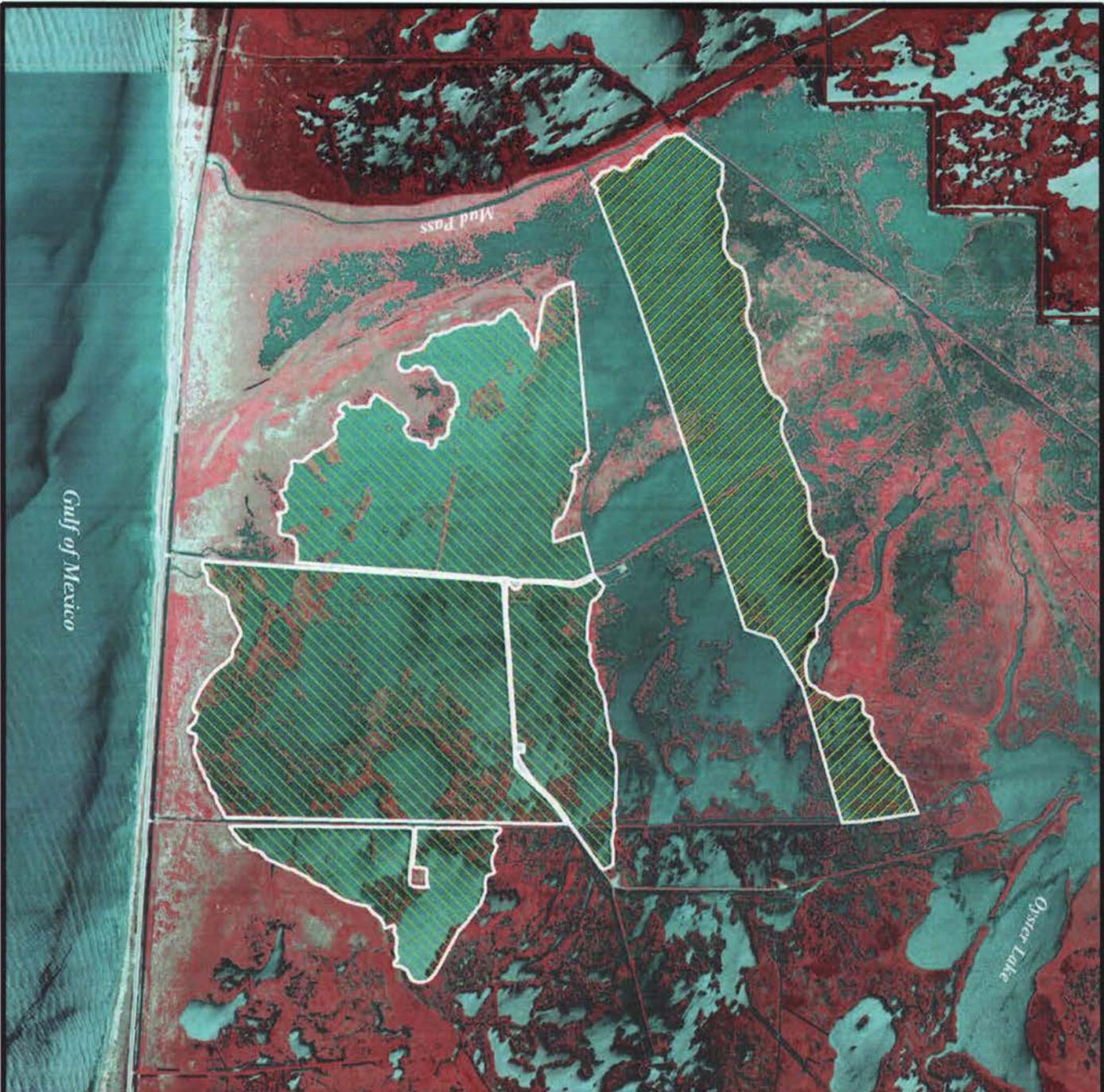
	Terrace Field *
	Marsh Creation/Nourishment *
	Project Boundary

\*denotes proposed features



Map Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Assessment Branch  
 Baton Rouge, La.

Background Imagery:  
 2010 NAIP Photography  
 Map Date: January 31, 2012  
 Map ID: USGS-NWRC 2012-11-0011  
 Data accurate as of September 02, 2011



Attachment B  
Revised Project Factsheet



# Oyster Bayou Marsh Restoration (CS-59)

## Project Status

**Approved Date:** 2012      **Project Area:** 809 acres  
**Approved Funds:** \$3.16 M      **Total Est. Cost:** \$29.7 M  
**Net Benefit After 20 Years:** 489 acres  
**Status:** Engineering and Design  
**Project Type:** Marsh Creation and Terracing  
**PPL #:** 21

## Location

This project is in Region 4, Calcasieu-Sabine Basin, located west of the Calcasieu Ship Channel and south of the west fork of the Calcasieu River.

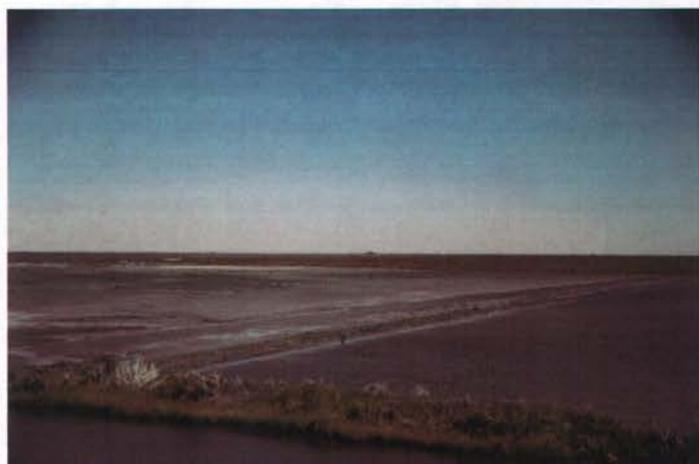
## Problems

Altered hydrology, drought stress, saltwater intrusion and hurricane induced wetland losses have caused the area to undergo interior marsh breakup. Recent impacts from Hurricane Rita in 2005 and Hurricane Ike in 2008 have resulted in the coalescence of Oyster Lake with interior water bodies increasing wave/wake related erosion. Based on USGS hyper temporal data analysis (1984 to 2011), land loss for the area is -0.75% per year. The subsidence rate is estimated at 0.0 to 1.0 ft per century (Coast 2050, Mud Lake mapping unit).

## Restoration Strategy

The project boundary encompasses 809 acres. Specific goals of the project are: 1) create 510 acres of saline marsh in recently formed shallow open water; 2) nourish 90 acres of existing saline marsh; 3) create 17,500 linear feet of terraces; and, 4) reduce wave/wake erosion.

Approximately 510 acres of marsh would be created and 90 acres would be nourished. Sediment needed for the fill would be mined approximately one and a half miles offshore in the Gulf of Mexico. Half of the created acres would be planted. Tidal creeks and ponds would be constructed prior to placement of dredged material and retention levees would be gapped to support estuarine fisheries access to achieve a functional marsh. Approximately 17,500 linear feet of earthen terraces would be constructed and planted.



Example of a newly completed marsh creation cell located within an interior marsh site. This site has similar characteristics as the Oyster Bayou Marsh Creation site.

## Progress to Date

This project is on Priority Project List 21.

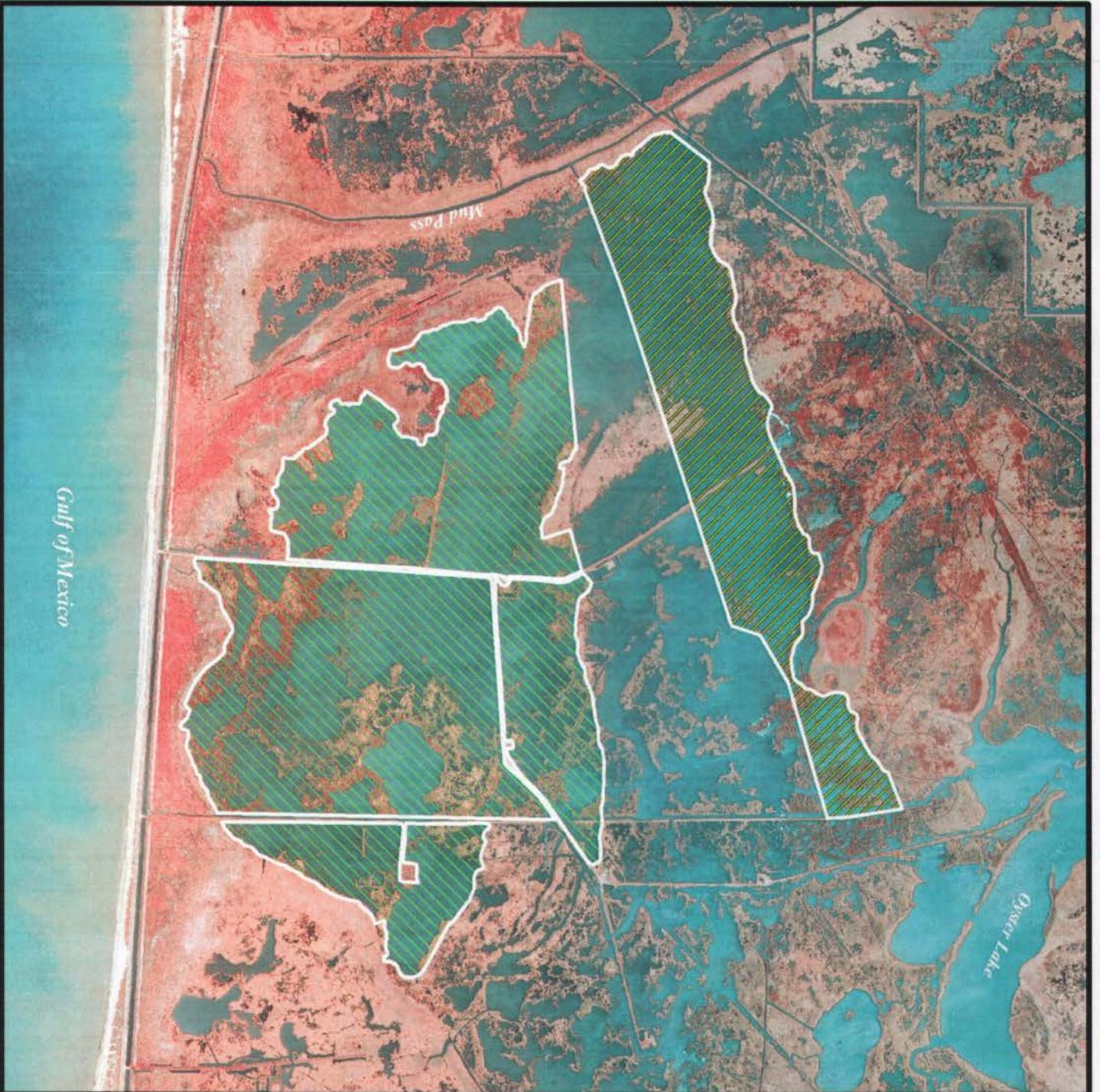
For more project information, please contact:



**Federal Sponsor:**  
National Marine Fisheries Service  
Baton Rouge, LA  
(225) 389-0508



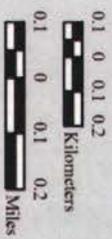
**Local Sponsor:**  
Coastal Protection and Restoration Authority  
Baton Rouge, LA  
(225) 342-4736



# Oyster Bayou Restoration (CS-59)

-  Terrace Field \*
  -  Marsh Creation/Nourishment \*
  -  Project Boundary
- \*denotes proposed features

**USGS**  
science for a changing world



Map Produced by:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Assessment Branch  
Baton Rouge, La.

Background Imagery:  
2012 DOQQ

Map Date: October 08, 2014  
Map ID: USGS-NWRC 2015-11-0002  
Data accurate as of: September 30, 2014

Attachment C  
Project Landrights

**Subject:** CS-0059 – Oyster Bayou Marsh Restoration Project  
**From:** "Angela Thomas (CPRA)" <angelae.thomas@la.gov>  
**Date:** 10/6/14, 10:17 AM  
**To:** "John D. Foret (john.foret@noaa.gov)" <john.foret@noaa.gov>  
**CC:** Vida Carver <Vida.Carver@LA.GOV>, Kodi Guillory <Kodi.Guillory@la.gov>, James Altman <James.Altman@LA.GOV>

Dr. Foret,

Appendix C, Section IV.C. of the CWPPRA SOP requires "Notification from the State or the Corps that land rights will be finalized in a short period of time after Phase II Approval."

This is to inform the CWPPRA committees and Task Force that the process for land rights acquisition is progressing for the CS-0059 Oyster Bayou Marsh Restoration Project. At this time, no significant land rights acquisition problems are anticipated. Therefore, CPRA is confident that land rights for the referenced project will be finalized in a reasonable period of time after Phase II Approval.

If you have questions regarding this matter, please contact me at (225) 342-4642.

Sincerely,

**Angela Esposito Thomas**  
Real Estate / Land Rights Division  
Coastal Protection & Restoration Authority



450 Laurel Street, Suite 1200  
Baton Rouge, LA 70801  
Phone: 225.342.4642  
Email: [angelae.thomas@la.gov](mailto:angelae.thomas@la.gov)

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Attachment D  
30% Design Review Concurrence



# State of Louisiana

BOBBY JINDAL  
GOVERNOR

July 30, 2014

Mr. Christopher Doley  
Director, Habitat Restoration Division  
NOAA Restoration Center  
The National Oceanic and Atmospheric Administration  
National Marine Fisheries  
1315 East-West Highway, Room 14853  
Silver Spring, MD 20910

Re: 30% Design Review for Oyster Bayou Marsh Restoration (CS-59)  
Statement of Local Sponsor Concurrence

Dear Mr. Doley:

The 30% design review meeting was held on July 2, 2014 for the Oyster Bayou Marsh Restoration (CS-59) project. Based on our review of the technical information compiled to date, the preliminary land ownership investigation, and the preliminary design, the Coastal Protection and Restoration Authority, as the local sponsor, concurs to proceed with the design of the project.

In accordance with the CWPPRA Standard Operating Procedures Manual, we request that you forward this letter of concurrence to the Technical Committee and the Planning and Evaluation Subcommittee and proceed to 95% design level with the selected design and revised project cost estimate.

Please do not hesitate to call me if I may be of any assistance.

Sincerely,

*Vida Carver*

Vida Carver  
Project Manager

cc: John Foret, National Oceanic and Atmospheric Administration  
Cecelia Linder, National Oceanic and Atmospheric Administration  
Stuart Brown, Coastal Protection and Restoration Authority

Attachment E  
95% Design Review Concurrence



# State of Louisiana

BOBBY JINDAL  
GOVERNOR

October 27, 2014

Mr. Christopher Doley  
Director, NOAA Restoration Center  
National Oceanic and Atmospheric Administration  
National Marine Fisheries  
1315 East-West Highway, Room 14853  
Silver Spring, MD 20910

Re: 95% Design Review- Concurrence for Phase II Funding Request  
Oyster Bayou Marsh Restoration (CS-59)  
Statement of Local Sponsor Concurrence

Dear Mr. Doley:

The 95% Design Review meeting for the Oyster Bayou Marsh Restoration (CS-59) project was held on October 22, 2014. Based on our review of the technical information compiled to date, the land ownership investigation, and the final designs, the Coastal Protection and Restoration Authority, as the local sponsor, concur to proceed with requesting Phase II construction funding for the project. In accordance with the CWPPRA Project Standard Operating Procedures Manual, we request that you forward this letter of concurrence to the Technical Committee and the Planning and Evaluation Subcommittee.

Sincerely,

Vida S. Carver, P.E.  
Project Manager  
Project Management Division

cc: John Foret, National Oceanic and Atmospheric Administration  
Cecelia Linder, National Oceanic and Atmospheric Administration  
Stuart Brown, Coastal Protection and Restoration Authority

Attachment F  
Project Permit Application  
*(Full version available upon request)*



# Joint Permit Application

For Work Within the Louisiana Coastal Zone

<p><b>What is the purpose of the Joint Permit Application?</b></p>	<p>This Joint Permit Application was developed to facilitate the state and federal permit application process administered by the Louisiana Department of Natural Resources/Office of Coastal Management (OCM) and the U.S. Army Corps of Engineers (COE) for work within the Louisiana Coastal Zone.</p> <p>To simplify the permit application process, the Joint Permit Application is a multi-purpose application. It may be used to apply for a Coastal Use Permit (CUP) and/or a Department of the Army Permit under Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act. This application may also be used to apply for a Solicitation of Views (SOV) or an OCM Request for Determination (RFD). Review the instructions below, then proceed to Step 1.</p>
<p><b>Instructions</b></p> <p>How do I complete the Joint Permit Application?</p>	<p><b>There are two parts to the Joint Permit Application package:</b></p> <ol style="list-style-type: none"> <li>1. Joint Permit Application, and</li> <li>2. Maps and Drawings.</li> </ol> <p><b>An accurate/complete application is required for processing; inaccurate/missing information may delay processing. Follow the instructions below to complete the application. Specific instructions are provided with each step.</b></p> <ul style="list-style-type: none"> <li>• Type or print clearly using black or blue ink;</li> <li>• Steps 1 through 16 must be completed; write "N/A" if information does not apply to your proposed project. It is not necessary to write "N/A" on the Steps that you have been asked to skip;</li> <li>• When additional space is needed, include an 8½ x 11 sheet of paper identifying the Step number.</li> </ul> <p><b>When you have questions or need assistance in completing the application package:</b></p> <ul style="list-style-type: none"> <li>• Refer to the "Glossary of Terms" (See page 10.);</li> <li>• Refer to "Frequently Asked Questions" (See page 11.);</li> <li>• Contact the Office of Coastal Management at 1-800-267-4019 or 225-342-7591; or</li> <li>• Contact your local coastal parish program (See page 11.).  <a href="http://dnr.louisiana.gov/CRM/coastmgt/interagencyaff/lcp/lcp.asp">http://dnr.louisiana.gov/CRM/coastmgt/interagencyaff/lcp/lcp.asp</a></li> </ul>
<p><b>Step 1 of 16</b></p> <p>Who is the applicant for the proposed project?</p> <p><i>Note: Applicants may be either the landowner, person or company that is responsible for the proposed project.</i></p>	<p><b>Complete the following information about the applicant.</b></p> <p><b>Applicant/Company Name:</b> <u>Coastal Protection and Restoration Authority</u>  <small>Individual Person or Corporation/Company</small></p> <p><b>Mailing Address:</b> <u>450 Laurel St.</u> <u>Suite 1200</u>  <small>Street Address or P.O. Box Unit/Apartment #</small>  <u>Baton Rouge</u> <u>LA</u> <u>70801</u>  <small>City State Zip</small></p> <p><b>Contact Information:</b> <u>Vida Carver</u> <u>Vida.Carver@la.gov</u>  <small>Name of Contact Person (not the agent) E-Mail Address</small></p> <p><u>( 225 )</u> <u>342-2799</u> <u>( )</u>  <small>Area Code Daytime Telephone Number Area Code Fax Number</small></p>

**Step 2 of 16****Is an agent being used for the proposed project?***Note: An agent is not required.***Is an agent being used for the proposed project?**

- NO** (If NO, proceed to Step 3.)  
 **YES** (If YES, complete the following information.)

**Company Name:** \_\_\_\_\_  
 Corporation/Company

**Mailing Address:** \_\_\_\_\_  
 Street Address or P.O. Box Unit/Apartment #  
 \_\_\_\_\_  
 City State Zip

**Contact Information:** \_\_\_\_\_  
 Name of Contact Person E-Mail Address  
 (\_\_\_\_\_) (\_\_\_\_\_) \_\_\_\_\_  
 Area Code Daytime Telephone Number Area Code Fax Number

**Step 3 of 16****What type of permit or action would you like to request?***Note: You may need the approval of other federal, state or local agencies for your project.*

*Note: For questions concerning the CUP, SOV or RFD, call OCM at:*  
 • 1-800-267-4019  
 or  
 • 225-342-7591

Check  the appropriate box(es) to indicate the type of permit or action that you would like to request.

- 
- Coastal Use Permit (CUP), Clean Water Act Permit (Section 404), Rivers and Harbors Act (Section 10)**

The purpose of the CUP is to ensure that any activity affecting the Coastal Zone is completed in a manner that is consistent with the Louisiana Coastal Resource Program.

The purpose of the Department of the Army permit program under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act is to review and evaluate proposals for dredging, filling, and/or placement of structures in waterways and wetlands in order to determine whether a permit should be granted or denied based on expected impacts to the overall public interest.

- 
- Solicitation of Views (SOV) – OCM only**

If you wish to find out if your project is in the Coastal Zone or if you wish to determine if there are special features of the area that may impact your project design you may request a SOV. No application fee is assessed for SOV requests. The following Steps must be completed to obtain an informal determination.

- Step 1, Step 2, Step 6, Step 14, Step 16; and
- Step 13 - (Vicinity plat showing project location and extent is required; cross section and plan views are useful, if available.)

- 
- Request for Determination (RFD)**

If you wish to obtain a formal determination as to whether or not a CUP would be required for a particular activity, you may submit a RFD. The appropriate application fee will be assessed for RFD requests. The following Steps must be completed to obtain a RFD.

- Step 1, Step 2, Step 5, Step 6, Step 8, Step 10, Step 14, Step 16; and;
- Step 13 - (Vicinity plat showing project location and extent is required; cross section and plan views are useful, if available.)
- If you think that no permit is required, you must provide a statement explaining why you think a permit is not required.

**Step 4 of 16****Have you participated in a Pre-Application or Geological Review Meeting or obtained a wetland determination?**

*Note: To schedule a Pre-Application and/or a Geological Review Meeting, call OCM at 1-800-267-4019.*

*Note: To apply for a wetland determination, call the COE at 504-862-1627.*

- a. Have you participated in a Pre-Application or Geological Review Meeting for the proposed project?**

- NO** (If NO, proceed to Step 4b.) (If you would like to schedule a pre-application meeting, please call 1-800-267-4019)  
 **YES** (If YES, complete the following information.)

Date meeting was held: \_\_\_\_/\_\_\_\_/\_\_\_\_

Attendees: \_\_\_\_\_  
 Individual or Company Representative OCM Representative COE Representative

- b. Have you obtained an official wetland determination from the COE for the project site?**

- NO** (If NO, proceed to Step 4c.)  
 **YES** (If YES, include a copy with this application.)

JD Number: \_\_\_\_\_

- c. Is this application a mitigation plan for another CUP?**

- NO** (If NO, proceed to Step 5.)  
 **YES** (If YES, identify the permit number of the project requiring mitigation.)

OCM Permit Number: P \_\_\_\_\_

Continue to page 3 for step 5. ↗

**Step 5 of 16**

What permits/certifications have you previously requested for the proposed project?

Note: Additional sheets may be required for agency name, permit number and status information.

**a. Describe the project.**

Approximately 605 acres of saline marsh and 17,550 linear feet of earthen terraces are proposed to be constructed north of LA Highway 27/82 between Mud Lake and the Calcasieu River.

**b. Is this application a change to an existing permit?**

- NO** (If NO, proceed to Step 5c.)
- YES** (If YES, identify the existing permit number.)

OCM Permit Number: P

⚡ Please explain

**c. Have you previously applied for a permit or emergency authorization for all or any part of the proposed project?**

- NO** (If NO, proceed to Step 6.)
- YES** (If YES, complete the following information for the proposed project.)

Agency Name	Permit Number	Decision Status			Decision Date
		Approved	Denied	Pending	
OCM _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
COE _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Step 6 of 16**

Where will the proposed project be located?

Note: The following websites may provide assistance in completing the latitude/longitude and directions:

- Sonris on OCM website
- MapQuest.com
- Topozone.com

Note: Directions may include the following:

- Nearest town/city
- Highways
- Intersections
- Street names
- Landmarks
- Start/end point

**Complete the following information to identify the exact location of the proposed project.**

**a. Physical Location:** Cameron Holly Beach  
 Parish City Zip  
 Street Address (if known)  
South of Oyster Lake  
 Water Body (if known)

**b. Latitude and Longitude:**  
 ▽ Must be included in all applications. Latitude: 29 46 38.000 Longitude: 93 24 14.000  
 Degrees Minutes Seconds Degrees Minutes Seconds

**c. Section, Township, Range: (if available)**

<u>4-17</u> Section #(s)	<u>T14S</u> Township # (Specify North or South)	<u>R10W</u> Range # (Specify East or West)
_____	<u>T15S</u> Township # (Specify North or South)	_____
_____	_____	_____

**d. Lot #, Tract #, Parcel # or Subdivision Name: (if known)**

Lot # \_\_\_\_\_ Parcel # \_\_\_\_\_  
 Tract # \_\_\_\_\_ Subdivision Name \_\_\_\_\_

**e. Site Directions:** Directions to the proposed project site must be identified in order to process the application.

**Example:** START - I-10 toward Baton Rouge. Exit #153 toward Port Allen. US-190 West/LA-1 North ramp. RIGHT onto LA-987 1/Bridge Side Road. RIGHT onto LA-986/North River Road to Popular Grove Plantation directly behind guest parking lot in rear. -END

START - I-10 west. Exit #20, Louisiana 1256 south toward Cameron. Continue onto LA27. LA27 will become Gulf Beach Highway, LA27/82. Fill area is north of the highway between Mud Lake and the Calcasieu River. -END

Continue to page 4 for step 7. ↗

Attachment G  
HTRW for project  
*(Full version available upon request)*

# Hazardous, Toxic, or Radioactive Waste (HTRW) Investigations

Oyster Bayou Marsh Restoration Project  
Cameron, Cameron Parish, Louisiana

Project No. 152663  
September 2014

Prepared for:



Coastal Protection and Restoration Authority  
450 Laurel Street  
12th Floor Chase Tower North  
Baton Rouge, Louisiana 70801

Prepared by:

CB&I Environmental & Infrastructure, Inc.  
4171 Essen Lane  
Baton Rouge, Louisiana 70809



Attachment H  
Section 303(e) Approval

**Subject:** RE: [EXTERNAL] Oyster Bayou Marsh Creation CS-59 303(e) Certification (UNCLASSIFIED)

**From:** "Hennington, Susan M MVN" <Susan.M.Hennington@usace.army.mil>

**Date:** 10/10/14, 7:13 AM

**To:** Cecelia Linder - NOAA Federal <cecelia.linder@noaa.gov>

**CC:** "angelae.thomas@la.gov" <angelae.thomas@la.gov>, John Foret - NOAA Federal <john.foret@noaa.gov>, Vida Carver <Vida.Carver@la.gov>, Benjamin Barnes <Benjamin.Barnes@la.gov>, James Altman <James.Altman@la.gov>, "Inman, Brad L MVN" <Brad.L.Inman@usace.army.mil>, Stuart Brown <stuart.brown@la.gov>

Classification: UNCLASSIFIED

Caveats: NONE

Hi CeCe,

You are most welcome! Your application package appears in good order- will be processing the electronic version immediately. Have a great weekend-

Susie

-----Original Message-----

From: Cecelia Linder - NOAA Federal [<mailto:cecelia.linder@noaa.gov>]

Sent: Thursday, October 09, 2014 3:38 PM

To: Hennington, Susan M MVN

Cc: [angelae.thomas@la.gov](mailto:angelae.thomas@la.gov); John Foret - NOAA Federal; Vida Carver; Benjamin Barnes; James Altman; Inman, Brad L MVN; Stuart Brown

Subject: [EXTERNAL] Oyster Bayou Marsh Creation CS-59 303(e) Certification

Susan,

Please see the attached information for fulfillment of Section 303(e) of CWPPRA. Once I receive the hard copy version of CPRA's letter, then I will send a hard copy version to you. This can get the process flowing, I think.

We should have the 303(e) for Rockefeller Refuge (ME-18) request for approval soon as well.

Thank you so much for your continued diligence on this item leading into phase 2 requests!

Cece

--

Cecelia Linder

NOAA CWPPRA Program Manager

1315 East-West Highway

SSMC #3, F/HC3, Rm 15861

Silver Spring, MD 20910

301-427-8675

[www.restoration.noaa.gov](http://www.restoration.noaa.gov) <<http://www.restoration.noaa.gov/>>

Classification: UNCLASSIFIED

Caveats: NONE

Attachment I  
Overgrazing Determination



September 15, 2014

Mr. John D. Foret  
National Oceanic and Atmospheric Administration  
Estuarine Habitats & Coastal Fisheries Center  
646 Cajundome Boulevard  
Lafayette, Louisiana 70508

Dear Mr. Foret:

RE: Oyster Bayou Marsh Restoration Project (CS-59)

I am in receipt of your request for an overgrazing determination for the Oyster Bayou Marsh Restoration Project (CS-59). I contacted our local district conservationist and our state grazing land specialist to discuss the grazing in the project area. Currently, livestock are not grazing in the area, nor do we see a potential for grazing once the project is installed. Therefore, it is our opinion, overgrazing is not a problem in this project area. If you have any questions please let me know.

Sincerely,

W. Britt Paul  
Assistant State Conservationist/Water Resources

Cc: (electronic distribution only)  
Randolph Joseph, Assistant State Conservationist/Field Operations, Lafayette, Louisiana  
Frank Chapman, District Conservationist, Lake Charles, Louisiana  
John Jurgensen, Civil Engineer, Alexandria, Louisiana  
Johanna Pate, State Grazing Land Specialist, Alexandria, Louisiana

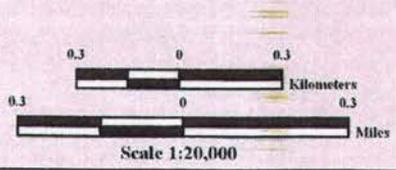


### Oyster Bayou Restoration (PPL21 Candidate)



- Terraces \*
- Marsh Creation/Nourishment \*
- Project Boundary \*

\* denotes proposed features  
NOTE: Size and orientation of terraces have yet to be determined.



Produced by  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Field Station  
Baton Rouge, La

Image Source  
2010 NAIP Photography

Map ID: USGS-NWRC 2011-11-0045  
Map Date: August 12, 2011

Attachment J  
Phase II Funding Request

Attachment K  
Revised Project Wetland Value Assessment  
*(Full version available upon request)*

# CS-59 Oyster Bayou Marsh Restoration

21<sup>st</sup> Priority Project List  
of the  
Coastal Wetlands Planning, Protection and Restoration Act



**Proposed by**

NOAA National Marine Fisheries Service

**FINAL Project Information Sheet for Wetland Value Assessment  
PHASE II**

**October 2014**

**Contact:** Kimberly Clements, NOAA NMFS, (225) 389-0508

**OYSTER BAYOU MARSH RESTORATION  
ENVIRONMENTAL ASSESSMENT  
Fed No. CS-59  
Cameron Parish, Louisiana**



**Prepared by National Marine Fisheries Service**

***DRAFT***  
**November 2014**

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## ACRONYMS

CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CPRA	Louisiana Coastal Protection and Restoration Authority
CRMS	Coastwide Reference Monitoring System
CWA	Clean Water Act
CWPPRA	Coastal Wetlands Planning, Protection, and Restoration Act
CZMA	Coastal Zone Management Act
DO	Dissolved Oxygen
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FIRM	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
GMFMC	Gulf of Mexico Fisheries Management Council
HTRW	Hazardous, Toxic, and Radioactive Waste
LCWCRTF	Louisiana Coastal Wetlands Conservation and Restoration Task Force
LDEQ	Louisiana Department of Environmental Quality
LDWF	Louisiana Department of Wildlife and Fisheries
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NAVD	North American Vertical Datum
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration, U.S. Department of Commerce
NRCS	Natural Resources Conservation Service, U.S. Department of Agriculture
NRHP	National Register of Historic Places
SAV	Submerged aquatic vegetation
SHPO	State Historic Preservation Office
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service, U.S. Department of Interior
WCRA	Wetlands Conservation and Restoration Authority
WRI	World Resources Institute
WVA	Wetland Value Assessment

## UNITS OF MEASURE

cm	centimeters
ft	feet
m	meter
yr	year

## EXECUTIVE SUMMARY

- Project:** Oyster Bayou Marsh Restoration (CS-59)
- Sponsor:** National Marine Fisheries Service and Louisiana Coastal Protection and Restoration Authority
- Contact:** Cecelia Linder; 1315 East-West Hwy, Silver Spring MD 20910; ph 301-427-8675
- Project Size:** Approximately 809 acres of shallow open water and marsh.
- Location:** In Cameron Parish, Louisiana west of the Calcasieu Ship Channel approximately 4 miles west of Cameron, Louisiana.
- Need:** Hydrological alterations, drought stress, saltwater intrusion and hurricane induced land loss have resulted in interspersion of marsh and coalescence of interior lakes. The large open water areas increase continued conversion of marsh to open water, a less valuable fish and wildlife habitat, due to wave/wake erosion.
- Purpose:** Support the objectives of the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) by creating marsh, and nourishing existing marsh.
- Proposal:** Construct approximately 17,550 ft (20 acres) of terraces and 605 acres of marsh to reduce wave erosion of created and existing marsh and create saline marsh habitat. Create 9,490 linear feet of trenasses (minor waterways), and three 4.5-acre ponds.

### **Public Participation:**

State resource agencies, federal resource agencies, and local government coordinated throughout project development as described in section 1.2. The draft Environmental Assessment (EA) will be available for public review at the Cameron Parish Public Library in Cameron, Louisiana, and online ([http://www.habitat.noaa.gov/pdf/oyster\\_CS\\_59\\_draft\\_environmental\\_assessment.pdf](http://www.habitat.noaa.gov/pdf/oyster_CS_59_draft_environmental_assessment.pdf)). We will publish notice of the draft EA in the Advocate (State newspaper) and the Cameron Parish Pilot (local newspaper), as shown in Appendix C. Comments received on the draft will be included in this EA.

### **Summary of statement and conclusions:**

Long-term benefits to Louisiana coastal resources without substantial long-term adverse environmental impacts are expected of the preferred alternative. Construction-related adverse impacts are considered minor and insubstantial because they are temporary or reversible. Benefits are moderate and sustained. This conclusion is based on a review of relevant literature; site-specific data; project-specific engineering reports related to biological, physical and cultural resources; and experience gained through more than a decade of coastal restoration in Louisiana. An increase to fisheries habitat is expected to have social and economic benefits for recreational and commercial fishing. Also, the action would increase protection of adjacent marsh in the area to be restored.

**Potential adverse impacts:** None

**Issues to be resolved:** None

## 1 INTRODUCTION

The proposed project (**Oyster Bayou Marsh Restoration, CS-59**) is authorized under the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) of 1990 (16 United States Code [U.S.C.] §777c, 3951-3956), which stipulates that five federal agencies and the State of Louisiana jointly develop and implement a plan to reduce the loss of coastal wetlands in Louisiana (16 U.S.C. §3952 (b) (2)). The National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (Fisheries Service), Department of Commerce is the federal sponsor responsible for project oversight, including National Environmental Policy Act (NEPA) compliance. The Louisiana Coastal Protection and Restoration Authority (CPRA) is the non-federal local project sponsor. Other federal agencies that make up the CWPPRA Task Force selected this project through a publicly vetted process for engineering and design (Louisiana Coastal Wetlands Conservation and Restoration Task Force [LCWCRTF] 2011).

For NOAA and CPRA to request funds and authorization to construction this project, the CWPPRA standard operating procedures require an Environmental Assessment (EA) at this time. The EA provides information for the decision of whether or not to fund and authorize this project, including the proposed action and alternatives, and to determine whether the proposed re-establishment of marsh features have the potential for significant impacts. This EA discloses information on and analyzes the direct, indirect, and cumulative impacts on the human environment likely to result from the Oyster Bayou Marsh Restoration Project proposed action and the alternatives. It was prepared in compliance with the NEPA of 1969 and Council on Environmental Quality (CEQ) regulations for implementation of NEPA (Title 40 *Code of Federal Regulations* [CFR] Parts 1500 through 1508 [CEQ 1992]). Significant sources used to consider environmental impacts are:

- Environmental Impact Statement (EIS) for the CWPPRA program (LCWCRTF 1993).
- Louisiana Coastal Area Ecosystem Restoration Study (LCA) EIS (U.S. Army Corps of Engineers (USACE) 2004).
- Wetland Value Assessment (WVA, NOAA Fisheries Service)
- Engineering design analyses and associated data and surveys (Thompson 2014, and Thompson and Borne 2014)
- State coastal plans (LCWCRTF and WCRA 1998), (OCPR 2012)
- Regional studies (USDA 1994) (Louisiana Department of Wildlife and Fisheries (LDWF) 2011).
- Coast 2050 Plan (LCWCRTF and Wetlands Conservation and Restoration Authority (WCRA) 1998)
- and other restoration efforts in coastal (LCWCRTF 2011 and OCPR 2012)

The CWPPRA EIS and LCA EIS provide general information on the need for action, the affected environment, and the environmental consequences.

The CWPPRA WVA evaluates wetland impacts through a quantitative, habitat-based assessment model developed to estimate anticipated environmental benefits. The WVA compares conditions over a 20-year period to determine the net difference in “future without project” and “future with project” scenarios. Initial and future conditions are set based on historical land loss, aerial imagery, and on-site visits to the proposed project area. Expected benefits are based on a combination of experience with previous projects, construction plans, models, and biological and engineering experience of the assessment team.

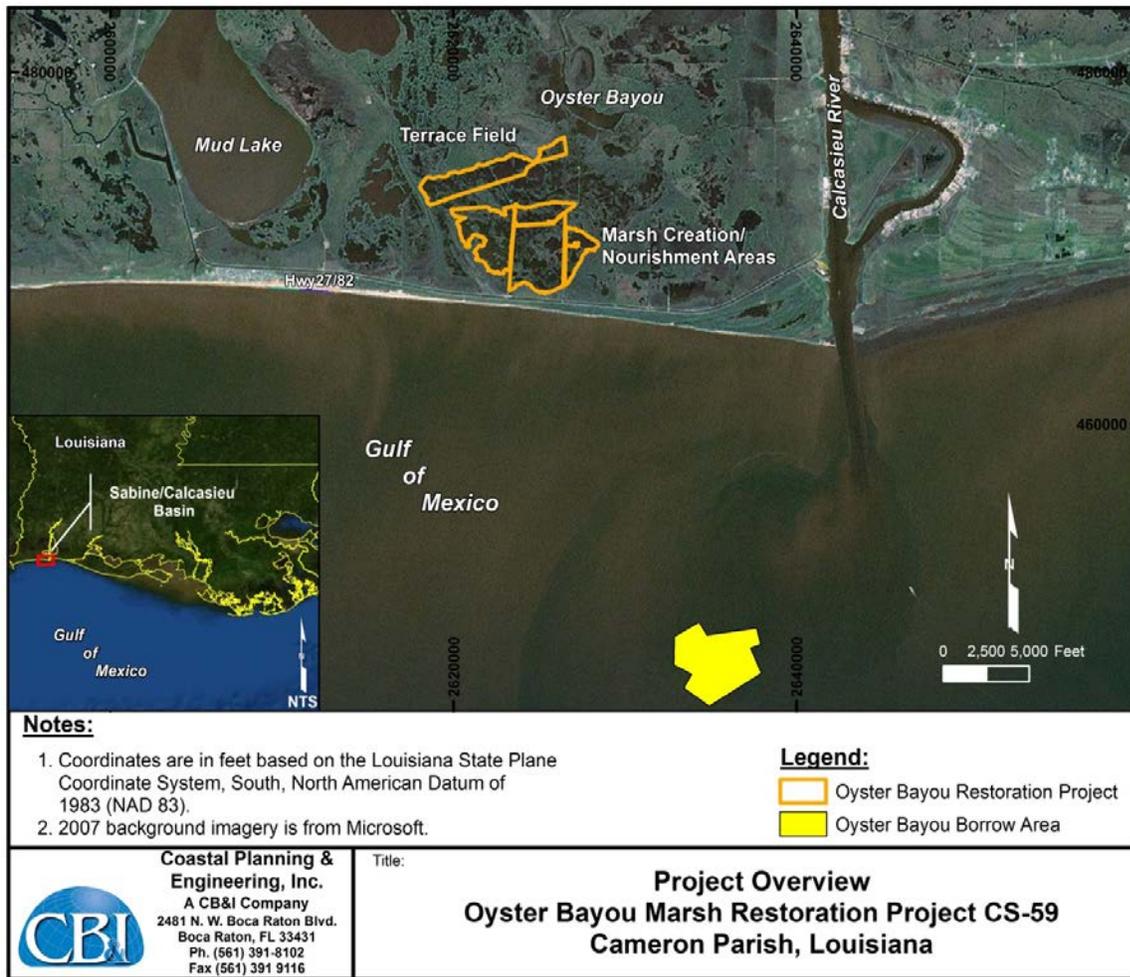
The engineering design analyses evaluate the cost efficiency and feasibility of components to achieve project goals. The design process includes surveying the proposed project area, testing soils for type and strength, determining options for access and staging of work, and proposed feature longevity. The CWPPRA program operating principles stipulate that, during engineering and design, reports are required

at 30% and 95% completion. The reports are circulated, and meetings are held at which the CWPPRA participating agencies, landowners, and other interested parties are presented with the design process to date, and provided opportunity to comment at that time. The 30% and 95% design meetings occurred in July and October of 2014.

### 1.1 Project Location

The proposed project is located in Cameron Parish, Louisiana west of the Calcasieu Ship Channel approximately 4 miles west of Cameron, Louisiana (Figure 1). Three miles west of the proposed project area is Holly Beach, Louisiana that was populated prior to hurricanes of 2005. The proposed project area encompasses approximately 809 acres of saline marsh and open water (2007 Survey, Sasser and others 2014). The borrow area and pipeline corridor proposed for this project are located offshore in the Gulf of Mexico. The proposed project area is in Calcasieu/Sabine Basin Region 4 of the Coast 2050 Restoration Plan (Mud Lake mapping unit; LCWCRTF and Wetlands Conservation and Restoration Authority [WCRA] 1998, 1999) and the Louisiana Coastal Area Restoration Plan (USACE 2004).

**FIGURE 1. PROPOSED PROJECT LOCATION**



### 1.2 CWPPRA Process

The CWPPRA project selection process takes several months to complete, involves extensive public involvement and review by federal and state agencies, and narrows the field of potential projects down to approximately four a year that are approved to enter the formal engineering and design process. As a result of this process, the field of available alternatives under consideration for a project generally

includes those alternatives that would meet project goals developed during the engineering and design process and that take place within the general proposed project area.

During the engineering and design process, a CWPPRA project is subjected to layers of public, academic, and interagency review to ensure that effective projects move forward for design and ultimate construction. The project selection process begins around February of each year when Regional Planning Teams across the coast convene to solicit project nominations from the public, State, and federal agencies, as well as members of industry and academia. The meetings are publicized via public notices, and all members of the public are invited to attend. Every nominated project contains conceptual project features, approximate construction costs, and anticipated benefits to wetland resources. The nominated projects are screened and pared down to 20 nominees at a public voting meeting. Each federal agency represented in the CWPPRA program, the State, and each coastal parish participates in voting.

Interagency and academic working groups then evaluate the conceptual project features for cost and project-associated wetland benefits for feasibility and appropriateness to addressing the local land loss. The 20 nominee projects are then voted on by the program's federal agencies and the State to obtain a list of the 10 top-ranking projects to continue through the process. These candidate projects undergo several months of further design and interagency evaluation to determine whether the proposed project features are feasible, the anticipated benefits are likely, and the project costs are within the funding constraints of the program. Certain project features are typically discounted during this preliminary design phase based on concerns about inferior performance, adverse impacts, technical infeasibility, or unreasonable costs. In the first months of each calendar year, the candidate projects are publicly presented and voted on by the program agencies to be funded for Phase 1 analysis, which includes the activities necessary to complete engineering and design, permitting, land rights, and environmental compliance before the project moves to construction.

### **1.3 Environmental Setting**

The proposed project is part of the Chenier Plain of the southwest Louisiana coast, which developed 3,000 years ago (Gould and McFarlan, 1959) as mudflats prograded when the Mississippi River delivered sediment to the western edge of its delta complex. The geologically unique development of this area was recently described by McBride and others (2007). The unique features, cheniers, are shore-parallel ridges where historic marine processes concentrated sediments (Figure 2). These cheniers are less than 3 m (10 ft) above sea level and are the highest topographic features among thousands of acres of mudflat, marsh and natural "bayou" waterways.

Generally, altered hydrology has increased saltwater intrusion to Cameron Parish. Coupled with drought and hurricane stresses, the marshes have deteriorated. The low marshes in the project area (near sea level) are frequently inundated with several feet of gulf water during hurricanes and tropical storms.

The area is predominantly marsh habitat, which in the 1940s included brackish, less saline, marsh. The brackish marsh has converted to saline marsh since, though some brackish marsh remains on the east side of the project area (Sasser and others 2014). Subsidence (2.1 to 3.5 feet/century), wind and wave erosion, and altered hydrology are historic causes of land loss (LCWCRTF and WCRA 1999) that continue to convert land to open water in the area (Figure 3). The local subsidence when combined with global sea level rise further exacerbates the conversion to open water (Boesch and others 1994).

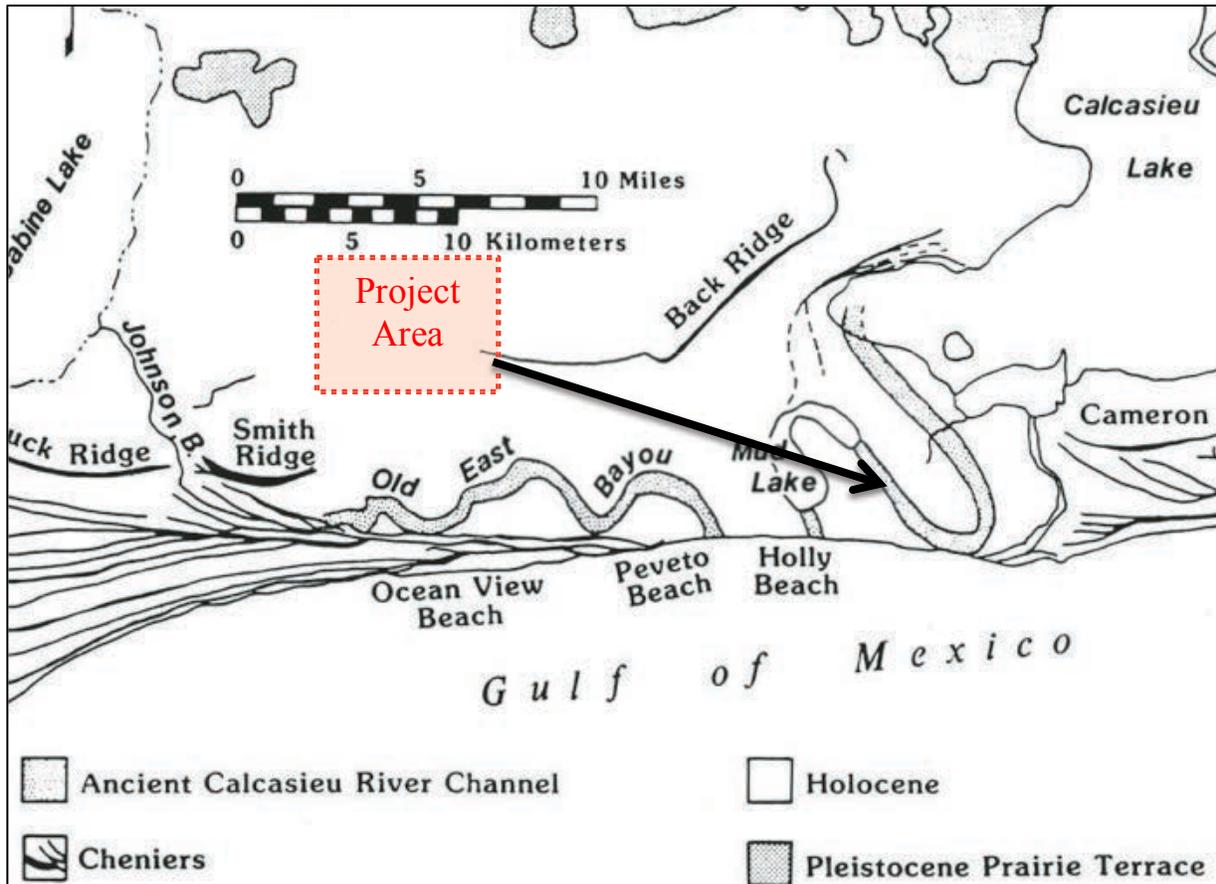
In preparation of this assessment, previous studies of the area were consulted, which contain information on the environmental setting of the proposed action and referenced elsewhere in this analysis.

- The Hydrologic Investigation of the Chenier Plain (LDNR 2002) contains an overview of the chenier plain ecosystem, a general description of previous basin-scale characterizations, studies,

and restoration plans, and specific characteristics and management issues of the Calcasieu-Sabine basin.

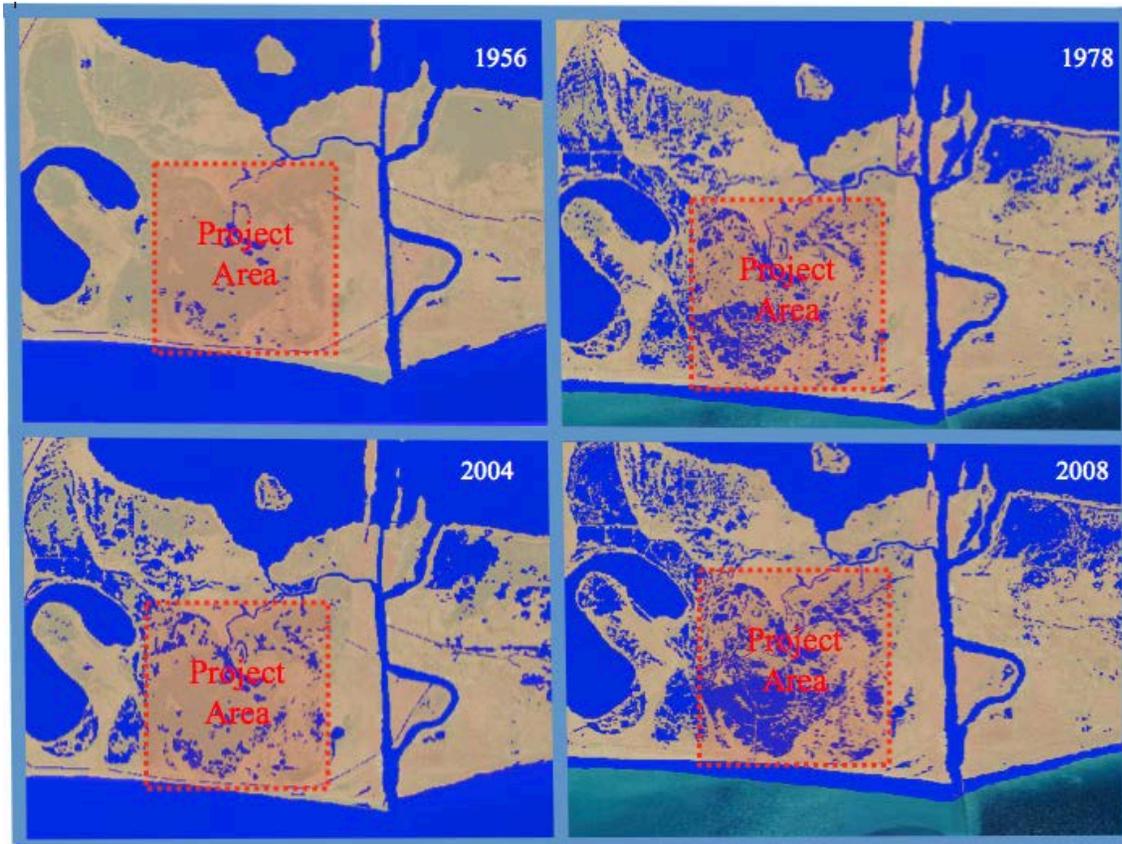
- The Calcasieu-Sabine River Basin (USDA 1994) report describes a cooperative resource planning effort developed among landowners, land users, volunteers, local units of government and local, state and federal agencies that includes the Calcasieu Basin.
- An EA for beach nourishment along the shores south of the proposed project area provides relevant analysis, as the action is similar to the proposed action in location and offshore sediment transport (Providence Engineering and Environmental Group, LLC 2012).

**FIGURE 2. GEOLOGIC SETTING OF PROPOSED PROJECT AREA**



Source: Penland and Suter 1989

**FIGURE 3. AREA LAND LOSS FROM 1956 TO 2008 LAND/WATER IMAGES**



Source: USGS

## **1.4 Purpose and Need**

### **1.4.1 Purpose**

The purpose of the proposed project is to support the coastal restoration objectives of CWPPRA by re-establishing marsh in the project area using offshore sediment. After construction, native saline marsh would be planted to help stabilize the rebuilt marsh habitat. Specific objectives are below, and proposed alternatives meet or exceed these goals.

- Create 510 acres of saline marsh and nourish approximately 90 acres of existing saline marsh through pipeline sediment delivery.
- Protect 18 acres of existing marsh projected to be lost in 20 years without action and reduce wave/wake erosion by constructing about 14,140 linear feet (ft) of terraces.

### **1.4.2 Need for Action**

The proposed action is needed to re-establish the structural integrity and value of the marsh as habitat. A healthy coastal marsh has value as rearing habitat for shellfish and finfish; habitat for waterfowl, wading birds, small mammals, and numerous amphibians and reptiles; reducing storm surge to interior land; and helping maintain water quality. Louisiana's coastal wetlands, such as the proposed project area, are essential to sustain renewable fishery resources integral to the local, state, and national economies. Of the 1.7 billion pounds of fisheries landings reported for the Gulf Coast in 2011, more than 73% were caught in Louisiana (NOAA 2012). Marshes provide nursery, foraging, and spawning habitat for numerous marine and estuarine species of commercial and recreational importance.

## 2 PROPOSED ACTION AND ALTERNATIVES

### 2.1 Alternatives Considered but Eliminated

Through the CWPPRA process, it was determined that re-establishment of the marsh was the appropriate approach to restoration. Alternatives available to achieve this goal focus on protecting existing marsh, adding sediment for elevation and nutrient enrichment of existing marsh, and establishing new marsh using borrow sediments of the surrounding bay area. When a proposed project is approved to proceed to formal engineering and design (Phase 1) by the CWPPRA Task Force, evaluation of project performance often includes the use of modeling to determine what project features are likely to be the most cost effective. Project features are refined based on results of field investigations and quantitative modeling, where applicable. Comprehensive engineering and design efforts focus on project alternatives that are considered technically feasible and cost effective while still meeting the project purpose and need. Project features are typically vetted to landowners and the public before the project moves into Phase 1, so that untenable features are eliminated from the evaluation process prior to investment of significant resources in data collection and detailed design.

For the Oyster Bayou Project Area, both interior marsh losses and shoreline losses were explored. Using USGS imagery from 1984-2011 interior loss rates and shoreline erosion were compared. Shoreline loss rates were low; therefore, features to abate shoreline erosion were no longer considered in this project (NOAA Fisheries Service 2011).

Similar project concepts were previously considered for the general area, but were not selected for development. A variety of options to address the needs of the area were discussed among resource managers and aided the selection of the currently proposed action. Opinions of agency representatives and public on these alternatives not-considered-in-detail and the alternatives considered aided the proposal of alternative 2, the preferred alternative.

### 2.2 Alternatives Considered in Detail

To meet the immediate need of the area, the build alternatives were designed based on results of geotechnical reports, and topographic, bathymetric, and magnetometer surveys. All build alternatives consider using gulf borrow sources and have similar elevations of marsh and terrace (Table 1).

Scientific studies and monitoring have been conducted on marsh creation/ terracing projects and evidence exists that open-water areas can be filled to create marsh with this method. The successes of marsh creation/ terracing projects are apparent, as the method has been adopted by numerous restoration actions being constructed by the state, CWPPRA, Ducks Unlimited/NAWCA, Coastal Impact Assistance Program, NOAA Community-based Restoration Program, and as compensatory mitigation. Therefore, marsh creation and terracing options were pursued to meet the goals of the project.

**TABLE 1. FEATURE DIFFERENCES OF ALTERNATIVES CONSIDERED**

Alternative	Features	Net acres of marsh projected after 20 years
No action	No features created, 130 acres marsh existing	112, a loss of 18 acres
Alternative 1	300 acres marsh created, 100 acres marsh nourished, 10 acres of terrace created, 10 – 25 acres of ridge habitat created	307
Alternative 2- Preferred	605 acres marsh created, 20 acres of terraced marsh created, and 18 acres protected; no ridge habitat created	473+ acres

\*All numbers are approximations from estimates in Thompson and Borne 2014, NOAA Fisheries Service 2011, candidate fact sheets, and subsequent wetland value assessments and project design documents.

### 2.2.1 The No-Action Alternative

NEPA refers to the no-action alternative as the continuation of baseline conditions without implementation of the proposed action. Evaluation of the no-action alternative is required by CEQ regulations.

### 2.2.2 Alternative 1 – Ridge, Terrace, and Marsh Creation

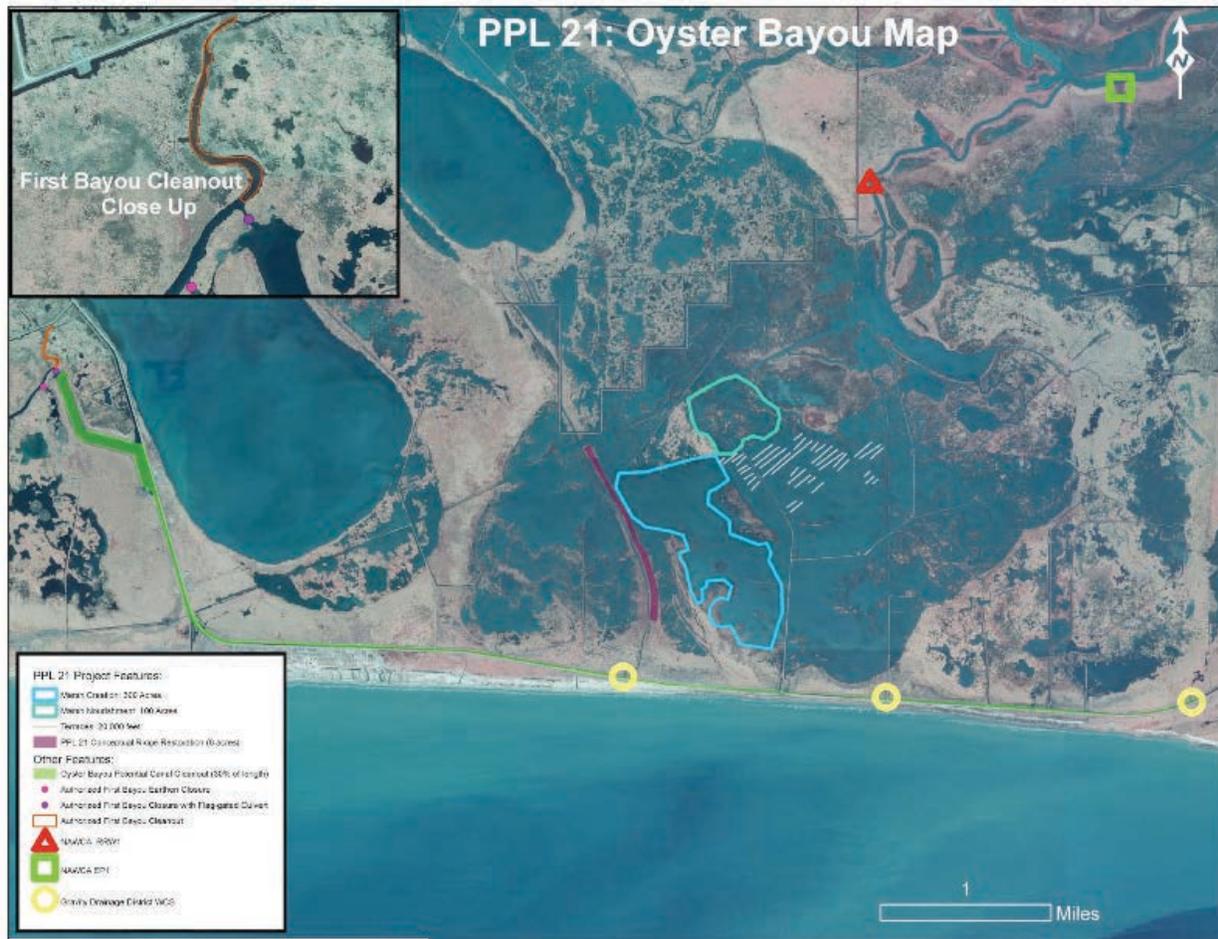
This alternative includes ridge restoration, terrace creation, and marsh creation. The alternative is similar to an alternative nominated in 2011 (Figure 7). The nomination included the cleanout of a pass but the action was completed by the parish prior so is not included as a feature in this alternative. A key feature is to rebuild the ridge of Mud Pass.

**Ridge** Mud Pass would be dredged by marsh buggy to minimize intrusion by equipment and a relatively low ridge (+4 ft NAVD 88) would be constructed. The conceptual ridge is 10 acres, but may be scalable up to 25 acres and would support a scrub/shrub community.

**Marsh** Sediment would be mined from offshore and placed to create 300 acres of saline marsh. Approximately 100 acres of marsh may be nourished. Disposal would be semi-confined. Marsh creation via dedicated dredging of sediment would be the primary technique with terraces as a supplemental feature. Material would be placed to +2.5 feet NAVD 88 and expected to remain in the intertidal range for the duration of the project (20 years). Retaining dikes would be constructed to +3.5 feet NAVD 88 elevation and a 5 ft crown width to contain the fill. Sediment needed for the fill would be mined approximately 1.5 miles offshore in the Gulf of Mexico.

**Terrace** Twenty thousand (20,000) feet of terraces would be constructed. Terrace construction would add between 10 and 25 additional acres of marsh creation. Typical terrace construction would occur with a crown width averaging 15 ft, side slopes of 1:5, and a settled height of +3.5 ft NAVD88.

**FIGURE 7. ALTERNATIVE 1 – RIDGE, TERRACE, AND MARSH CREATION**



Source: Technical Committee Nominee Fact Sheet, 2011

### 2.2.3 Preferred - Alternative 2 – Terrace and Marsh Creation

As described below, the alternative consists of building marsh and terraces east of Mud Pass (Figure 1). Marsh would be created utilizing offshore borrow sediments, while terrace would be constructed using local material. The design optimized existing marsh for containment, thus shortening the length of containment dikes needed. A permanent concrete pipe (per permit consultation with Louisiana Department of Transportation and Development) would be installed underneath highway LA 27/82 to facilitate sediment delivery for this and future projects in the vicinity.

**Terrace** The terrace construction would be approximately 17,550 linear ft in length, with a crown width averaging 15 ft, side slopes of 1:5, and a settled height of +3.5 ft NAVD88. The terraces would produce approximately 20 acres of emergent marsh. Each terrace would be ~450 ft in total length and comprised of 3 segments, and constructed with adjacent material borrowed from shallow open waters at a minimum 15 ft distance and maximum 11 ft borrow depth. The placements of the terraces would reduce wave fetch between terraces and along existing marsh shoreline.

**Marsh** Approximately 3,307,600 cubic yards of borrow sediments would be hydraulically dredged and transported via pipeline to the creation/nourishment locations. The placement area would be filled via a 4-cell design, to avoid filling an existing canal and best utilize existing sediment retention features. Approximately 605 acres of marsh would be created. Material would be placed to +2.5 feet NAVD 88

and expected to remain in the intertidal range for the duration of the project (20 years). Temporary dikes would be constructed to +3.5 feet NAVD 88 elevation and a 5 ft crown width to contain the fill. Sediment needed for the fill would be mined approximately 1.5 miles offshore in the Gulf of Mexico (Figure 1). Project features include the pre-excavation of tidal creeks (9,490 linear feet) and ponds (~14 acres total at 3 locations).

**Plantings** After initial settlement of marsh creation sediments, half the created (~303 acres) marsh would be planted with plugs of smooth cordgrass (*Spartina alterniflora* cv. Vermilion) or saline marsh type species appropriate to the area. The constructed terrace acres would be vegetated along the crown and side slopes with one row each of saline marsh type species.

**Water Features** Small water features, called trenasses and ponds, would be excavated prior to pumping fill material in the marsh creation areas. Differential settlement would be sufficient to recreate interior habitat access areas over time. Excavation would be a 10 ft width and 2.5 ft depth for the trenasses. Duck ponds would range from 4 to 5 acres with low containment dikes and existing marsh shoreline.

### 3 AFFECTED ENVIRONMENT AND CONSEQUENCES

Effects of alternatives were designated as having *no impact*, *no significant impact (minor or moderate)*, or *significant impact*. Consideration was given to both length of time and severity of the impact. *Minor impacts* are those that may be measurable but not result in adverse effects to humans or their resources; these are short-term and reversible. *Moderate impacts* may have longer-term adverse effects that have a measurable change to the identified environment, and thus warrant consideration of revision of the project component causing the adverse impact. *Significant impacts* are harmful to humans or their environment and long lasting that warrant preparation of a full EIS. The qualitative assessment is based on reference material and professional judgment. A quantitative assessment is included when sufficient data are available to do so. Table 2 presents a summary of environmental impacts associated with the no-action and build alternatives. Table 3 presents avoidance and minimization measures of the preferred alternative.

**TABLE 2. SUMMARY OF ENVIRONMENTAL IMPACTS OF ALTERNATIVES**

Resource	No Action	Alternative 1	Alternative 2 (Preferred)
Geology, Soils & Topography	long-term, direct, moderate to significant adverse from loss of soils	long-term, indirect, moderate benefit from marsh creation	long-term, indirect, moderate benefit fewer adverse impacts than alternative 1
Climate & Air Quality	long-term, indirect, minor adverse for CO <sub>2</sub> cycle due to marsh loss	long-term, direct, minor benefits from carbon sequestration short-term, direct, minor adverse from machinery emissions	long-term, direct, minor benefits greater than other alternatives short-term, direct, minor adverse greater than other alternatives
Water	long-term, indirect, moderate adverse from turbidity from conversion to open water	long-term, indirect, minor benefit from nutrient removal/water clarity short-term, direct, minor to moderate adverse from dredging	same as alternative 1
Vegetation	long-term, direct, moderate adverse from conversion to open water	long-term, direct, minor benefit from increases in elevation and diversity short-term, direct, minor adverse from sediment burial	greater benefit than other alternatives from 100+ acres more marsh in 20 yrs same adverse as alternative 1
Aquatic & Benthic Habitats	none	long-term, indirect, minor benefit short-term, local, direct, minor to moderate adverse from burial or sediment disturbance	same as alternative 1
Essential Fish Habitat & Fisheries	long-term, direct, moderate from conversion of marsh to open water	long-term, direct and indirect, moderate benefits short-term, direct and indirect, adverse related to construction	same as alternative 1

<b>Resource</b>	<b>No Action</b>	<b>Alternative 1</b>	<b>Alternative 2 (Preferred)</b>
Marine Mammals	long-term, indirect, minor adverse from habitat related declines in forage species	long-term, indirect, moderate benefit from increased longevity and quality of habitat for forage species short-term, indirect, minor adverse from displacement in the borrow area	greater benefit than other alternatives from 100+ acres more marsh in 20 yr greater adverse than other alternatives from 2-4 months longer construction
Migratory Birds	long-term, indirect, minor adverse from reduced habitat quality and quantity	long-term, indirect, minor benefit from increased diversity and longevity of habitat short-term, direct, minor adverse impact from displacement	similar (not substantially different) from alternative 1
Wildlife	long-term, indirect, moderate adverse from reduced habitat quality and quantity	long-term, direct, moderate benefit from increased diversity and longevity of habitat short-term, local, direct, minor adverse from displacement	similar to alternative 1
Threatened & Endangered Species	long-term, indirect, moderate adverse impacts from prey habitat declines	long-term, moderate, indirect benefits to listed species may result from increasing the quality of forage species	same as alternative 1
Historic, Prehistoric & Native American	none	none	none
Socioeconomics	long-term, direct, moderate adverse from habitat decline	short-term, direct, moderate benefits from job and fisheries habitat creation short-term, direct, minor adverse impact through disruption	similar to alternative 1
Land Use & Infrastructure	long-term, indirect, minor adverse from increased exposure to storms and erosion	long-term, direct and indirect, minor benefits from protection short-term, direct and indirect, minor adverse from construction disruption	same as alternative 1
Hazardous, Toxic, & Radioactive Waste	long-term, indirect, minor adverse impacts due to increased exposure to oil and gas infrastructure to exposure	long-term, indirect, minor benefit due to reducing exposure of adjacent oil and gas resources to erosion and storms	same as alternative 1

**TABLE 3. AVOIDANCE AND MINIMIZATION MEASURES OF THE PREFERRED ALTERNATIVE**

<b>Resource</b>	<b>Potential Avoidance and Minimization Measures</b>
Geology, Soil & Topography	None
Climate & Air Quality	None
Water	Retention to maximize settling of turbidity-causing flocculants
Vegetation	Care will be taken and measures included in the construction contracts to increase awareness to rare plants and excessive disruption to existing vegetation by heavy machinery.
Aquatic & Benthic Habitats	None
Essential Fish Habitat & Fisheries	None
Marine Mammals	Workboats would be instructed to maintain a distance of 300 ft should any manatee or dolphin be seen, and a distance of 150 ft from sea turtles, as safety permits.
Migratory Birds	None identified at this time, but coordination with USFWS ongoing.
Wildlife	Care will be taken and measures included in the construction contracts to increase awareness to wildlife and potential sources of disruption.
Threatened & Endangered Species	Measures will be included in construction contracts detailing avoidance of takings of threatened and endangered species.
Historic, Prehistoric & Native American	None
Socioeconomics	None
Land Use & Infrastructure	Contract provisions will include plans to keep one lane open, and to open both lanes as soon as practicable if an evacuation route is needed. Highway alteration would be completed outside hurricane season.
Hazardous, Toxic & Radioactive Waste	Contract provisions will require pre-construction magnetometer surveys to avoid potential oil and gas pipeline interactions and construction plans include offsets from identified pipeline areas.

### 3.1 Physical Environment

#### 3.1.1 Geology, Soils, and Topography

The proposed project area lies among cheniers, or relic beaches, and natural levees that are unique geologic features. The ridges are shore parallel rises in elevation as much as 10 feet or as little as a few inches that are valuable to a diversity of wildlife. In concern for these features, the state of Louisiana conducted a study of the habitat, which provides further information about the features history, development, and importance (LDNR 2009).

The soils underlying the proposed marsh creation and terracing area consist of Creole mucky clay, and Banker muck (Soil Survey Staff 2013). These soils are unsuitable for urban or agricultural use. Soil surveys specific to the proposed action were conducted by Ardaman and Associates, and CB&I as provided in Thompson and Borne 2014. The borrow area consists of soft clay with trace of organic soils, and is located approximately 1.5 miles from the center of the marsh fill area (Figure 1).

A Coastwide Reference Monitoring System (CRMS) station is located in the proposed project area (site 0655), which is representative of the area conditions. Soil information from 2007-2012, with the exception of 2010, is summarized here (CRMS 2013). Elevation at the site is 1.13 ft NAVD88 in Bancker

Muck soils. Sediment cores in 2007 indicate low organics in the upper cm increasing with depth up to 43% organics at 20 cm.

Elevation changes since 2007 average a rate of 0.2 cm/yr less than the projected sea level rise, meaning that the natural soil formation through primary productivity is not enough to keep up with sea level rise, subsidence, and coastal storms. The recent conversion of marsh to open water is evident by the 1 km area around the monitoring station that is 42% water, 34% land, and 23% flooded land. In 2006 and prior years, land was approximately 80% of that area.

**Impacts of No Action** Under the no-action alternative, material from the borrow areas would likely be used for other restoration projects in the area as sediment sources have long been recognized as a limited resource (Galliano and van Beek 1973). Long-term, direct, moderate to significant adverse impacts could be expected. With no action, the existing marsh would continue to erode in storm conditions. Without terracing and marsh creation, waves from wind and tide would erode the area, moving sediments around, and undercutting existing vegetation. This would continue until all the marsh vegetation dies leaving only shallow open water and increased exposure to gulf waters. Natural ridges to the north and south of the project area would be increasingly exposed to erosion.

**Impacts of Alternative 1** Long-term, indirect, moderate benefits to this resource would result as vegetation colonizes the recreated emergent areas. The created habitat would reduce wave energy and allow establishment of vegetation on terraces and protected marshes, reduce turbidity of the water, reduce the wind-induced marsh loss, and possibly allow increases in submerged aquatic vegetation. The proposed elevation increase would reduce vegetation stress caused by subsidence, and placed sediments would increase nutrient availability to plants. An increase in plant productivity and subsequent increases in organic material in the plant soils would be expected.

Short-term, direct, minor adverse effects would result from the burial of current marsh habitat, because remnants of marsh exist in the area. This impact would be temporary for some marsh, as long-term, direct benefits of recreating more marsh is the project goal. However, some existing marsh would be converted to ridge in the reconstruction of the natural levee, resulting in long-term, minor, direct impacts to the marsh. Those impacts would be adverse for species dependent on the marsh habitat, and beneficial to those reliant on the ridge habitat, as discussed in other sections.

The dredged material used for the terraces would consist of naturally occurring material to the area. Native vegetative plantings would be used to stabilize soil, reduce resuspension of recently deposited sediment, and encourage sedimentation and colonization.

**Impacts of Preferred - Alternative 2** The long-term, indirect, moderate beneficial impacts are similar to the build alternative 1. The adverse impacts to the marsh would be decreased in comparison to the build alternative 1, because the affect to marsh would be temporary rather than a long-term conversion to ridge habitat. Less area of soil would be disturbed because this alternative includes fewer terraces, while increasing the amount of marsh area to be created. With more marsh, more carbon would be sequestered in the global carbon cycle. Assuming 491 acres of wetland would be created and an average rate of 6.4 metric tons of carbon per acre per year, an additional 3,142.4 metric tons of carbon sequestered each year with this alternative.

### 3.1.2 Climate and Air Quality

The subtropical climate of coastal Louisiana is characterized by long, hot summers and, mild winters with high humidity year round. Over the past 40 years, air temperature ranged from 14 to 102 °F; average winter and summer temperatures are 55.3 and 82.4 °F, respectively. In a typical year, more than 60 inches

of rain falls, mostly in the spring and summer. In the fall and winter, winds tend to be from the north-northeast; in spring and summer, winds are generally from the south-southeast.

Hurricanes and tropical storms typically occur over the study area between June and November. On average, since 1871, a tropical storm or hurricane is expected somewhere within the state of Louisiana every 0.7 years; hurricanes make landfall about every 2.8 years (Roth 1998). Historic data from the National Hurricane Center dataset on tropical cyclones (including tropical depressions, tropical storms, and hurricanes) along the Louisiana coast from 1899 to 2007 indicates a total of 63 storms, of which 49 were Category 3 or less.

Louisiana air quality is good, having “attainment” status according to the National Ambient Air Quality Standards. Air quality monitoring throughout the state exceeds the monitoring required, however, the Louisiana Department of Environmental Quality (LDEQ) does not have air quality monitoring sites in the parish (LDEQ 2013). In Cameron Parish, offshore breezes mix and freshen the air. Frequent precipitation prevents accumulation of particulates. The American Lung Association and other air quality sources do not report on the parish air quality. Sources of air emissions in the parish are mainly associated with industries to the west at Port of Sabine Pass, Texas; oil and gas industry; commercial vessel traffic; and recreational fishing.

Wetlands, such as those of the proposed project area, are more valuable than other ecosystem types as carbon sinks due to high carbon sequestration and negligible methane emissions (Choi and Wang 2004). Average soil carbon accumulation in estuarine emergent wetlands is 6.4 metric tons of carbon per acre per year, and has been reported as high as 42.7 metric tons per acre per year at Sabine National Wildlife Refuge near the project area (Bryant and Chabreck 1998; Engle 2011). The latter is roughly equivalent to the annual carbon emissions per person in Louisiana (WRI 2013; total greenhouse gas emissions, 44.1 metric tons per year). A review of the process and amounts of carbon sequestration in Gulf of Mexico wetlands was considered in this analysis (Engle 2011).

**Impacts of No Action** The no-action alternative would not substantially affect the climate or weather, and would not result in any changes to existing air quality in the area. Air quality would not be impacted by the volatilizing of organic materials, nor emissions from dredging equipment from the proposed build alternatives. However, air quality would have some long-term, indirect, minor adverse impacts from the reduction of 18 acres of marsh over 20 years reducing the ability of the project area to extract carbon from the air during photosynthetic processes of the marsh plants. The area's ability to sequester atmospheric carbon would continue to decline due to the projected 18 acres of wetland loss. Assuming the average carbon sequestration rate of 6.4 metric tons of carbon per acre per year, this decline would be -115.2 metric tons of carbon per year.

**Impacts of Build Alternatives** Neither the no-action alternative nor any of the build alternatives would substantially affect the climate or weather. Differences between the emissions of the build alternatives are unquantifiable. Emissions from the dredged material and the machinery are considered in this analysis. Anderson and Barkdoll (2009) summarize impacts of dredging to air quality and list steps that have been taken to reduce environmental impacts from activities such as that proposed in the build alternatives. Increases in marsh area would increase the ability of the area to hold carbon, which is a significant contributor to global climate change. Benefits of carbon sequestration of the build alternatives are negligible compared to the need for carbon sequestration, but contribute to cumulative beneficial impacts of restoring marsh. The Louisiana Department of Environmental Quality was consulted in analysis (LDEQ 2013 and Appendix C).

Short-term, direct, minor adverse impacts to air quality from construction would be associated with emissions from diesel engines that would power the dredging machinery, and material placement

operations. Emissions would occur over a period of a few months, with most emissions occurring at the dredge and creation sites. The emissions would consist predominantly of nitrogen oxides, with smaller amounts of carbon monoxide, sulfur dioxide, particulate matter, and volatile organic compounds.

Prevailing winds would dissipate airborne pollutants and limit them to the proposed project's construction phase. In addition, newly placed, unconsolidated dredged material is subject to drying and blowing during high wind events, adding particulates to the air. Revegetation would hold sediments in place after a time. The impact to human health would be negligible because the proposed project area is remote from any residential area. In the long term, air quality in the area is expected to be unchanged.

Dredging is required to attain the necessary amounts of sediment for marsh creation. Because there is some suggestion that increases in marsh acreage can contribute to the overall carbon sink and mitigate the effects of atmospheric carbon on global warming, any short-term, direct, minor adverse impacts from dredge material and machine operation would be negated by the long-term, direct, minor beneficial impacts.

Alternative 2 creates more marsh than the other alternatives, therefore more carbon would be sequestered in the global carbon cycle and therefore have the greatest beneficial impact. Carbon sequestration with alternative 1 would be increased by the creation of approximately 300 acres of wetland and nourishment of 100 acres. Assuming the average rate of 6.4 metric tons of carbon per acre per year, an additional 1,920 metric tons of carbon would be sequestered each year with alternative 1 than with no action. However, the 491 acres of wetland that would be created and 90 acres nourished with alternative 2, equates to 3,142 metric tons of carbon sequestration each year with this alternative.

### 3.1.3 Water Resources

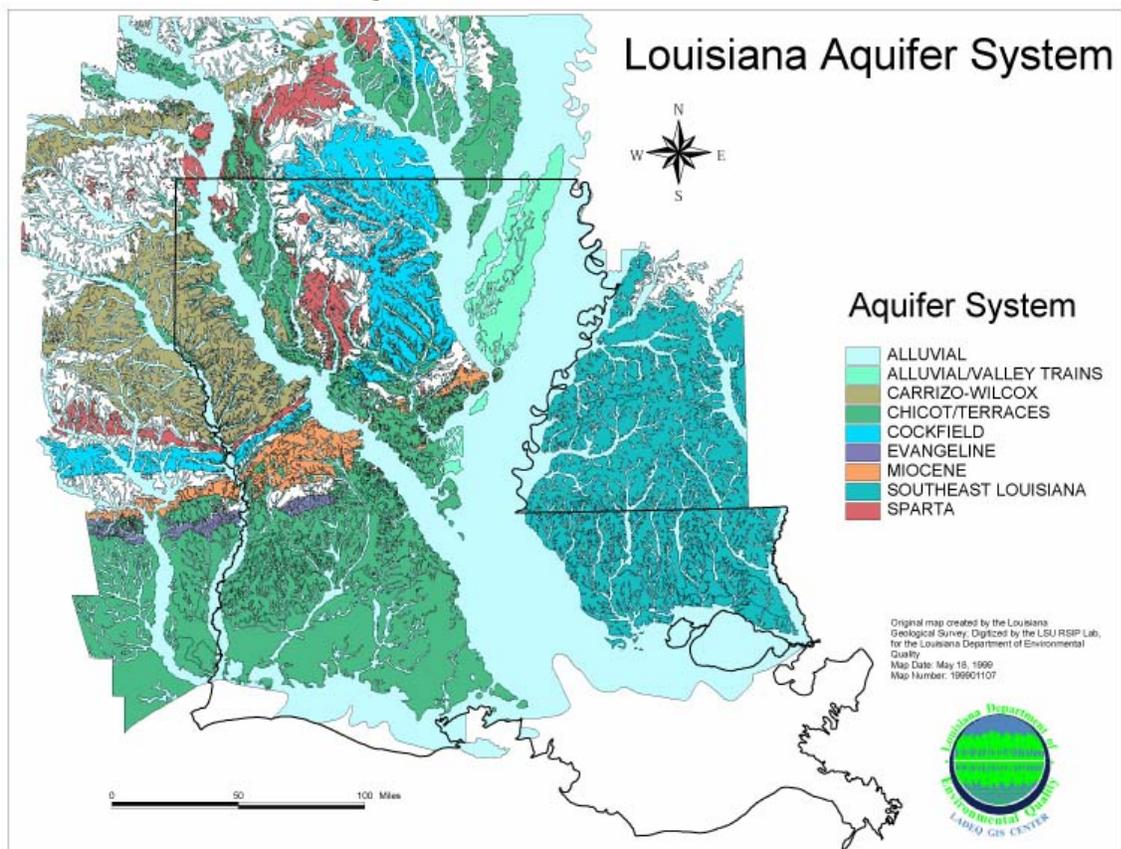
The U.S. Environmental Protection Agency (EPA) has authority through Section 1424(e) of the Safe Drinking Water Act of 1974 to review federally financed projects to determine their potential for contaminating sole source aquifers. There is no underground water source/aquifer for the proposed project area (Figure 10); Chicot Aquifer is a few miles east of the proposed project location. Chicot Aquifer has high concentrations of chloride and is being impacted by freshwater withdraws for industry and agriculture. Saltwater encroachment from Gulf of Mexico is also occurring from the saltwater wedge that underlies the proposed project area and extends from 5 to 40 miles north of the Gulf of Mexico shoreline (LDNR 2002).

The proposed project is within the Calcasieu River Basin LDEQ subsegment 030401. The project area is "fully supporting the designated use" of swimming, boating, fishing, and oyster propagation (LDEQ 2012, Figure 11). The core indicators used to support the determination for each use is based on the following standards:

- Primary contact (swimming): fecal coliform, temperature, and metals and toxic substances
- Secondary contact (boating): fecal coliform, and metals and toxic substances
- Fish and Wildlife propagation (fishing): DO ambient and continuous, temperature, pH, chloride, sulfate, total dissolved solids, turbidity, toxic substances, metals
- Oyster propagation: fecal coliform

Precipitation and tide are the primary factors that affect surface water in the proposed marsh creation area. Low dissolved oxygen (DO) waters occur offshore of coastal Louisiana periodically due to Mississippi River discharge (Osterman and others 2008) and may occur after storm events in inland water bodies as a result of the decomposition of debris deposited in the water bodies.

**FIGURE 10. LOUISIANA AQUIFER SYSTEM**



**Impacts of No Action** The no-action alternative would not directly affect local water quality. Long-term, indirect, moderate adverse impacts would result from increased turbidity of the water from land erosion, and a decrease in the nutrient uptake of area marshes.

**Impacts of Build Alternatives** Impacts on water quality between the build alternatives would not be measurably different. Short-term, direct, minor adverse impacts associated with the dredging required for implementation of the preferred alternative include: (1) increased turbidity and decreased dissolved oxygen in the water column at the dredge sites (dredge plume) and fill sites; (2) potential decreased dissolved oxygen in the water column at the borrow area due to increased water depth (>5 meters); (3) possible exhumation of buried debris; and (4) discharges from the dredge vessel. During dredging, silt or clay may become suspended in the water column near the dredge site. The suspended sediment would settle in a matter of hours to days (depending on current). If the disturbed sediments were anoxic, the dissolved oxygen levels in the water column would decrease. Turbidity and suspended particulate levels in the water column above the borrow area are normally high as a result of coastal processes.

Long-term, indirect, minor benefits to water quality would result from the ability of created marsh to remove nitrates and phosphate. Construction of terraces is expected to reduce turbidity in adjacent water bodies by lessening the amount of wind generated water turbulence. Beneficial impacts to water quality are likely to result from the ability of terraces to trap sediments and decrease shoreline-erosion (Steyer and others 1993) thereby reducing turbidity, and increase submerged aquatics (Rozas and Minello 2001, Cannaday 2006) that trap sediments and consume nitrates and phosphates.

### 3.2 Biological Environment

Approximately 735 species of birds, finfish, shellfish, reptiles, amphibians, and mammals spend all or part of their life cycle in the estuaries of coastal Louisiana (USACE 2004).

#### 3.2.1 Vegetation Resources

Coastal Louisiana contains an estimated 40 percent of the vegetated estuarine wetlands in the contiguous United States (USACE 2004). The 809-acre project area is marsh and open water. The marsh was all brackish in 2001 and prior according to USGS surveys, and has been increasingly becoming saline. Saline marsh is frequently dominated by saltmeadow cordgrass, and saltgrass (*Distichlis spicata*).

The CRMS station in the project area reports 63% saltgrass in 2013 and recent decreases in both total plant cover and floristic quality. The majority of the project area vegetation is likely to be saltmeadow cordgrass.

Rare plants that may occur in Cameron Parish are mostly of freshmarsh, dune, or prairie habitats, and would not occur in the project area. The LDWF Natural Heritage Program lists rare plant species and their associated habitat, threats, and recommended practices. None are reported to occur in the project area (Appendix C).

**Impacts of No Action** With no action, continued erosion and subsidence are expected to occur, resulting in losses to vegetative resources of marsh, ridge, and beach habitats. With time, the losses would be irreversible in any practical sense, as the area would convert to open water in the foreseeable future.

**Impacts of Alternative 1** The alternative would exert long-term, direct, minor benefits on vegetative communities of the area by adding elevation to marshes. This would offset some subsidence, increase vegetative productivity, and decrease conversion of remaining marshes to open water for 20 years. The increase in elevation would be beneficial to vegetative communities by reducing flooding stress on the plants and allow time for vegetation to colonize and contribute to the elevation. Accumulation of organic material is a primary factor influencing the vertical accretion of marshes.

Increases of SAV in terraced shallow water have been reported to be 3.5 times more abundant than SAV in unterraced shallow open water (Cannaday 2006), therefore an increase in SAV would be expected. Creation of the terraces and ridge would allow vegetation to colonize and stabilize the terrace sediments, while protecting marsh vegetation from waves that erode their soils. The three components of ridge, terrace and marsh provide suitable habitat for a diverse vegetative assembly from shrubs, grasses, aquatic plants, and possibly trees.

Implementing this alternative would unavoidably have short-term, direct, minor adverse impacts to the existing marsh, and shallow open water areas and their associated vegetative communities. The purpose of this alternative is to create marsh and ridge where it has been lost. Some marsh (on the scale of tens of acres) would be adversely impacted by burial during construction of the marsh (on the scale of hundreds of acres).

**Impacts of Preferred - Alternative 2** The impacts would be similar to the build alternative 1. Without the ridge construction, plant diversity may be less for the area than in build alternative 1, but the terraces and containment dikes of this alternative could naturally vegetate and provide similar plant diversity. A greater amount of marsh would be created, increasing the long-term, direct, minor benefits compared to build alternative 1 and would further delay erosion of the existing marsh that would be lost with no action. The larger area of substrate for marsh vegetation is the most beneficial alternative for this area because the marsh loss has been substantial for this area, as shown in the photographs since 1959 (Figure 3).

### 3.2.2 Aquatic and Benthic Habitats

The project area is primarily shallow (<1 ft) open-water and benthic habitat as recorded in 155 water depths taken in May 2011 (NOAA Fisheries Service 2011). The borrow area is benthic habitat under open marine water column. Benthic habitats near marsh support bacteria, fungi, microalgae, meiofauna, and microfauna, such as mollusks, polychaetes, decapods, and nematodes (Day and others 1989). The benthic community supports higher levels of the food chain, such as shrimp and demersal fish (Conner and Day 1987). Substrate quality strongly influences the distribution of benthic fauna. Other variables affecting the distribution of benthic organisms include water depth, salinity, illumination, food availability, currents, and tides.

Oyster, which are a significant resource as benthic organisms that create reef habitat, filter water, a commercial and recreational resource, are not located in the affect area.

**Impacts of No Action** The benthic area would continue to increase as marsh converts to open water. The area would become more exposed to marine processes and disruption from storm events either by resuspension or movement of sediments and the associated infauna.

**Impacts of Alternative 1** Long-term, indirect, minor benefits would be expected in surrounding areas from improved water quality resulting from reduced turbidity and increased primary productivity. The created marsh would contribute to detritus and decrease turbidity with the build alternatives. Short-term, local, direct, minor to moderate adverse impacts to aquatic and benthic resources would occur from the direct disturbance or burial of sediment and associated organisms during dredging. Other direct, adverse impacts could include entrapment and likely death of slow-moving organisms and polychaetes during dredging, and smothering of benthic organisms in the deposition sites. Mobile invertebrates would be expected to vacate the proposed project area during construction and return after construction is complete. Organisms that do not move out of the area would likely be injured by suffocation from suspended sediments. Dredging would change substrate topography, causing a temporary redistribution of organisms in the immediate vicinity.

Benthic organisms would likely re-colonize borrow areas. Early-stage recruitment of defaunated sediments occurs rapidly in coastal systems (Grassle and Grassle 1974, McCall, 1977, Simon and Dauer 1977, Ruth and others 1994, all as cited in EPA 2003). Later stages of colonization would be more gradual and would depend on environmental conditions after cessation of dredging. Fish and invertebrates are expected to recover as turbidity returns to pre-construction levels. There is expected to be a low potential for creation of persistent low DO conditions that would impact fisheries and aquatic biota in the borrow and placement areas given the patterns of water flow over the borrow sites and the shallow elevation of placement area.

**Impacts of Preferred - Alternative 2** Minor to moderate adverse impacts to aquatic and benthic resources would be similar to alternative 1. While more benthic organisms would be impacted from the larger area of deposition, greater borrow amount needed, and longer period of entrapment, there would be less adverse impact to the channel that would be dredged for ridge creation in alternative 1.

### 3.2.3 Essential Fish Habitat (EFH)

The proposed project area contains EFH as designated by the Gulf of Mexico Fisheries Management Council (GMFMC) for species that are federally managed under the Magnuson-Stevens Fishery Conservation and Management Act, P.L. 104-297; 16 U.S.C. 1801 et seq. (Magnuson-Stevens Act). Categories of EFH in the project area include estuarine emergent wetlands, mud substrates, SAV, and estuarine water column (GMFMC 2005). Table 4 lists the EFH, federally managed species, and their life stages expected to occur in the proposed project and borrow areas.

Red drum, brown shrimp and white shrimp are estuarine-dependent species. In the Calcasieu/ Sabine Basin, the estuarine-dependent assemblage, including white and brown shrimp, has shown decreasing trends over the last 10 to 20 years (LCWCRTF and WCRA 1999). These species migrate through tidal passes during their post-larval life stage and depend on the estuarine environment for survival and reproduction. Shrimp are prey species for other federally managed fish and crustaceans (GMFMC 1998).

**TABLE 4. ESSENTIAL FISH HABITAT OF PROPOSED PROJECT AND BORROW AREAS**

Common Name	Life Stage System M=marine, E=estuarine	Essential Fish Habitat (1 meter (m)= approximately 3.3 ft)
Brown Shrimp	larvae/postlarvae M/E	<82 m, planktonic, sand/shell/soft bottom, SAV, marsh, oyster reef
	juvenile E	<18 m, sand/shell/soft bottom, SAV, marsh, oyster reef
	adults M	14 m or deeper sand/shell/soft substrate of borrow area
White shrimp (Estuarine-dependent)	eggs	Water column <9-34 m; sand/shell/soft bottom
	larvae /postlarvae M/E	Water column <82 m, planktonic, soft bottom, marsh
	juvenile E	Water column <30 m, soft bottom, marsh
Red drum (Estuarine-dependent)	larvae/postlarvae E	planktonic, SAV, sand/shell/soft bottom, marsh
	juvenile M/E	Water column <5 m, SAV, sand/shell/soft/hard bottom, marsh
	adults M/E	1-46 m SAV, sand/shell/soft/hard bottom, marsh
Stone crab	eggs M/E	Water column <18 m; sand/shell/soft bottom
	larvae/postlarvae M/E	Water column <18 m; oyster reef/soft bottom
	juvenile E	Water column <18 m; sand/shell/soft bottom, oyster reef

Source: GMFMC 2005

In addition to being designated as EFH for the species mentioned above, wetlands and water bottoms in the project area provide nursery and foraging habitat supportive of a variety of economically important marine fishery species such as Atlantic croaker, black drum, blue crab, Gulf menhaden, spotted seatrout, sand seatrout, southern flounder, and striped mullet. Some of these species serve as prey for other fish species managed under the Magnuson-Stevens Act by the GMFMC (e.g., mackerels, snappers, and groupers) and highly migratory species managed by NOAA Fisheries Service (e.g., billfishes and sharks).

**Impacts of No Action** The variety and quality of EFH associated with estuarine areas are expected to continue to decrease as the remaining marsh converts to open-water. Open-water EFH that is already plentiful in the area would increase.

**Impacts of Alternative 1** Long-term, direct and indirect, moderate benefits of the build alternatives would result from re-establishing marsh, improving estuarine-related EFH. Marsh and marsh edge habitat, aided by vegetative plantings, would increase post-construction vegetation. Detrital material, formed by the breakdown of emergent vegetation, would contribute to the aquatic food web of the surrounding ecosystem. Decreases in wind erosion would protect estuarine mud bottoms around the proposed project area. Thus, the preferred alternative would restore more productive habitats supportive of brown shrimp, white shrimp, and red drum.

Short-term, unavoidable, direct and indirect, adverse impacts to habitats supportive of various life stages of brown shrimp, white shrimp, stone crab, and red drum would occur during the construction phase of the proposed project as marsh is filled and created. Potential impacts to EFH include movement of prey species away from the construction area, smothering of benthos, interruption of feeding or spawning by some species, and other effects on behavioral patterns. No significant adverse impacts on EFH are expected. Post-construction long-term benefits of increased quality and quantity of the marsh would be greater than the short-term adverse impacts. Turbidity would return to ambient conditions post-construction, and improve in terrace-protected waters.

**Impacts of Preferred - Alternative 2** Long-term, direct and indirect, moderate benefits and short-term, unavoidable, direct and indirect, moderate adverse impacts are similar to alternative 1. More productive marsh is expected than with the other alternatives. The adverse impacts may be greater due to the potentially longer time to construct and greater habitat area disturbed. However, the net benefit after 20 years is expected to result in more than 100 acres more marsh than with other alternatives (Table 1).

#### 3.2.4 Marine Fishery Resources

A wide variety of estuarine-dependent fishery species found in the Calcasieu/Sabine Basin (LCWCRTF and WCRA 1999) are of national economic importance. Most species vary in abundance from season to season due to their migratory life cycle, habitat preferences according to life stage, and the variation in salinity (Herke 1978, Rogers and others 1993, LCWCRTF and WCRA 1999). Most spawn offshore in the open Gulf of Mexico and enter the marsh area as postlarvae or young juveniles to use the marshes as a nursery, and return to the open gulf as subadults or adults.

Population trends and projections for the estuarine-dependent species: red drum, black drum, spotted seatrout, Gulf menhaden, southern flounder, white shrimp, brown shrimp, blue crab are listed as having a decreasing trend, and projected to continue to decline toward the year 2050 (LCWCRTF and WCRA 1998).

**Impacts of No Action** Abundant open-water fisheries habitat is available in coastal Louisiana and increasing. The increase in open-water fisheries habitat comes at the expense of submerged vegetation and emergent fisheries habitats, which are less common and more vulnerable to disturbance than open-water habitat. The quality of fish habitat is expected to decrease as remaining marsh converts to open water reducing the nursery function of the area for estuarine-dependent species.

**Impacts of Alternative 1** Short-term, local, direct, minor adverse impacts to fishery resources would occur during construction from dredging and placement of sediments. Dredging would directly move benthic organisms that live in the sediment and indirectly entrap the slow-moving organisms and polychaetes of the borrow areas. In the placement area, smothering of benthic organisms, and sessile fish and invertebrate species would occur. Mobile aquatic animals would move during construction and return after construction completes. Short-term moderate to severe effects on fish eggs and larvae in the immediate area may occur. Early-stage recruitment of defaunated sediments occurs rapidly in coastal systems (Grassle and Grassle 1974, McCall, 1977, Simon and Dauer 1977, Ruth and others 1994, all as cited in EPA 2003). Dredged sites would be rapidly colonized by opportunistic infauna (EPA 2003). Later stages of colonization would be more gradual and would depend on environmental conditions after cessation of dredging. Fish and invertebrates are expected to recover as turbidity returns to pre-construction levels.

Long-term, direct and indirect, moderate beneficial impacts would result from the increase in marsh habitat providing nursery for estuarine-dependent fisheries that would decline with the no-action alternative. Access to the marsh habitat would be maintained after construction through dike gapping.

**Impacts of Preferred - Alternative 2** Impacts are the same as alternative 1. Both alternatives increase habitat diversity by disturbing sediments and temporarily adversely impacting turbidity with long-term benefits expected through increased fishery nursery area. Short-term moderate to severe effects on fish eggs and larvae in the immediate area may occur. Dredging would directly move benthic organisms that live in the sediment and indirectly entrap the slow-moving organisms and polychaetes of the borrow areas. In the placement area, smothering of benthic organisms, and sessile fish and invertebrate species would occur, and dredged sites would be rapidly colonized by opportunistic infauna (EPA 2003). The long-term, direct and indirect, moderate beneficial impacts would be similar to alternative 1, from increasing marsh habitat that provides nursery for estuarine-dependent fisheries. Dike gapping would be utilized, if needed, to maintain fisheries access.

### 3.2.5 Marine Mammal Resources

Marine mammals that occur in Louisiana waters include the blue, sei, finback and humpback whales, several species of dolphin, and the endangered West Indian manatee. NOAA Protected Resources division reports that whales occur in nearshore waters of Louisiana, defined as waters 0 to 650 ft in depth, rarely at depths less than 25 ft. The borrow area is at a depth of less than 25 ft and whale are unlikely to occur, so are not further discussed. West Indian manatees may be found in Louisiana coastal waters, as discussed in the Threatened and Endangered Species section (3.2.8). Dolphins are common along the shore and should be expected to occur in surface waters in the borrow area. Dolphin follow schooling fishes, such as menhaden that are prey, and seek food and refuge in interior bay waters.

**Impacts of No Action** With no action, the marsh used by marine mammal forage species, such as small fish, would decline resulting in long-term, indirect, minor adverse impacts.

**Impacts of Alternative 1** Dolphin and their prey species may be temporarily displaced to other similar habitat, so short-term, indirect, minor adverse impacts may be associated with the build alternatives. In the long-term, indirect, moderate benefits would result from increasing the quantity and longevity of prey nursery grounds and refuges.

**Impacts of Preferred - Alternative 2** Dolphin and prey species could be temporarily displaced to other similar habitat, so short-term, indirect, minor adverse impacts may be associated with this alternative. Due to the larger size, and thus potentially longer construction, this alternative may have slightly more adverse impacts than alternative 1. Long-term, indirect, moderate benefits would result from increasing the quantity and longevity of prey nursery grounds and refuges. The larger area of prey habitat (100+ acres) created would provide potentially greater beneficial impacts than alternative 1. The construction time would be 2 to 4 months longer than with alternative 1. Contractors would be instructed to watch for marine mammals. Should any manatee or dolphin be seen, any workboats in the area would be instructed to cease work until the marine animal is over 500 ft away.

### 3.2.6 Migratory Bird Resources

Waterbirds were specifically considered pursuant to the Migratory Bird Treaty Act. No colonies of colonial-nesting waterbirds have been observed in the proposed project area but could occur. This resource consists of heron, egret, night-heron, ibis, roseate spoonbill, anhinga, and/or cormorant. Woody vegetation is used for roosting and shallow water used as forage habitat.

**Impacts of No Action** With no action, the marsh used by migratory birds and their forage species would decline, and no ridge habitat would be constructed for roosting birds. Long-term, indirect, minor adverse impacts would be related to habitat quality and quantity reduction.

**Impacts of Alternative 1** No migratory birds are known to nest in the area. Short-term, direct, minor adverse impact would result from the displacement of foragers. Long-term, indirect, minor benefits after

construction would result from increased habitat diversity and longevity of the foraging marsh and creation of roosting habitat.

**Impacts of Preferred - Alternative 2** Foragers would be temporarily displaced to an abundance of nearby foraging habitat the same as with alternative 1. Therefore, short-term, direct, minor adverse impacts would be the same as for alternative 1. Long-term, indirect, minor benefits related to new habitat diversity, and longevity of the foraging marsh are the same as alternative 1. Roosting habitat would not be created with this alternative, but greater foraging habitat would be created.

The USFWS would be contacted to report the colonies location and consult on the species present and their non-nesting periods. If nesting were to occur it would be prior to construction, as the disturbance of construction would prevent colonies from selecting the area for nesting during construction. Long-term, direct and indirect, moderate benefits would occur by creating nesting areas for colonial waterbirds once vegetation becomes established, and increasing the quantity and quality of foraging area.

### 3.2.7 Wildlife Resources

Louisiana's coastal zone supports 19 percent of the United States' winter population for 14 species of ducks and geese. The North American Waterfowl Management Plan identified coastal Louisiana as one of the most important regions for the maintenance of continental waterfowl populations in North America (USACE 2004).

The proposed project area is unlikely to support the species that frequent woody or freshwater habitats. The basin is located at the bottom of the Mississippi Flyway, and birds from central and northern North America start to converge in the fall. Waterfowl populations in the area have declined as marsh converts to open water (LCWCRTF and WCRA 1999). The proposed project area is not known by the State Natural Heritage Program to have any rare, endangered, or otherwise significant animal species (Appendix C). Avian fauna surveys of 2010, related to an oil spill response, report dead brown pelican, black skimmer, willet, northern gannet, royal tern and laughing gull on the Gulf shoreline south of the project area (<http://gomex.erma.noaa.gov/erma>).

Table 5 lists the wildlife species and/or species groups prominent (LCWCRTF and WCRA 1998) within coastal Louisiana along with the habitat function, status, trend, and projection within the project area.

**TABLE 5. AVAIAN AND OTHER POPULATION FUNCTIONAL GROUPS STATUS AND TRENDS**

1988 Habitat		Open Water	Brackish Marsh
% of area		34	62
Brown Pelican	Function	Wintering area	.
	Status	Low numbers	Not historically present (NH)
	Trend/Proj.	Increasing/Increasing	.
Bald Eagle	Status	NH	NH
Seabirds	Function	Multiple functions	Multiple functions
	Status	High numbers	Moderate numbers
	Trend/Proj.	Steady/Steady	Steady/Decreasing
Wading Birds	Function	.	Multiple functions
	Status	NH	High numbers
	Trend/Proj.	.	Steady/Decreasing
Shorebirds	Function	.	Multiple functions
	Status	NH	High numbers
	Trend/Proj.	.	Steady/Decreasing
Dabbling Ducks and Diving Ducks	Function	Wintering area	Wintering area
	Status	Moderate numbers	Moderate numbers
	Trend/Proj.	Increasing/Steady	Increasing/Steady
Geese	Function	Wintering area	Wintering area
	Status	Low numbers	Low numbers
	Trend/Proj.	Increasing/Steady	Increasing/Steady
Raptors	Function	.	Multiple functions
	Status	NH	Low numbers
	Trend/Proj.	.	Steady/Decreasing
Rails, Coots, and Gallinules	Function	Wintering area	Wintering area
	Status	Low numbers	Low numbers
	Trend/Proj.	Steady/Steady	Steady/Steady
Other Marsh/OW Residents	Function	Multiple functions	Multiple functions
	Status	Moderate numbers	High numbers
	Trend/Proj.	Steady/Steady	Steady/Decreasing
Other Marsh/OW Migrants	Status	NH	NH

<b>Furbearers</b>	Nutria	Function	Multiple functions	Multiple functions
		Status	Low numbers	Low numbers
		Trend/Proj.	Steady/Steady	Steady/Steady
	Muskrat and Mink, Otter, Raccoon	Function	Multiple functions	Multiple functions
		Status	Low numbers	Moderate numbers
		Trend/Proj.	Steady/Steady	Steady/Steady
<b>Game</b>	Rabbits and Deer	Function	.	Multiple functions
		Status	NH	Low numbers
		Trend/Proj.	.	Steady/Steady
	Squirrels	Status	NH	NH
<b>Reptiles</b>	American Alligator	Function	Multiple functions	Multiple functions
		Status	Low numbers	Low numbers
		Trend/Proj.	Increasing/Steady	Increasing/Steady

\*Projection (Proj.), Function, Status, and Trends for Mud Lake unit (LCWCRTF and WCRA 1998)

**Impacts of No Action** With no action, long-term, indirect, moderate adverse impacts are expected for wildlife as a result of the remaining marsh and mud flat converting to open water. Habitat would become less suitable for waterfowl, and small mammals. Current waterfowl declines would continue (LCWCRTF and WCRA 1999).

**Impacts of Alternative 1** Short-term, local, direct, minor adverse impacts to wildlife would result from displacement. Wildlife would vacate or avoid the area and return once construction is complete. Proposed project modifications to avoid impacts to wildlife were coordinated with USFWS. Long-term, direct, moderate benefits would result from increasing wildlife habitat through marsh and ridge creation. Creation of the ridge would provide habitat for birds, furbearer and game mammal populations that does not exist and would not exist with no action. However, USFWS advised that marsh at the proposed ridge creation site was more valuable habitat for wildlife at this location than the ridge reconstruction would be. Many bird species are migratory or permanent residents and depend on marsh of the proposed project area.

**Impacts of Preferred - Alternative 2** The short-term, local, direct, minor adverse impacts from disturbance of wildlife during construction would be similar to alternative 1. Long-term, direct, moderate benefits of increased diversity of habitat and marsh creation would be greater than for alternative 1. Should any significant animal species be encountered, such as that tracked by the LDWF Natural Heritage program, their data manager would be contacted as requested (Appendix C).

### 3.2.8 Threatened and Endangered Species

Loggerhead, Kemp's ridley, hawksbill, leatherback, and green sea turtles occur in Louisiana. Marine turtle strandings have increased since 2010 along the northern Gulf of Mexico and are generally found to be Kemp's ridley. The majority of the strandings are Kemp's ridley in spring and summer.

Green sea turtles may be in the borrow area while migrating between their nesting and foraging sites in Florida and Texas. Major threats to sea turtles in the U.S. include destruction and alteration of nesting and foraging habitats; incidental capture in commercial and recreational fisheries; marine debris; and vessel strikes. They feed on phytoplankton, zooplankton, SAV, and small fish or crab. Kemp's ridley nest in Mexico and immature individuals are believed to stay in shallow, warm, nearshore waters in the northern Gulf of Mexico. They forage for crabs, mollusks, shrimp, and small fish. Loggerhead sea turtles occur in coastal and marine areas along the margins of the Atlantic, Pacific, and Indian Oceans. Their major threats are direct take, incidental capture in fisheries, and loss of habitat. The loggerhead turtle is the most abundant species of U.S. sea turtles and have a complex life history that is highly migratory. No sea turtle nesting is known to occur in the vicinity of the project.

Gulf sturgeon and smalltooth sawfish may occur near the project area or borrow areas. Gulf sturgeons utilize rivers in the summer and marine waters in the winter. They do not have designated critical habitat occurring in the project area. The smalltooth sawfish favors warm, estuarine, shallow waters over mud or sand such as those of the proposed project area and historically occurred along the coast from Texas to North Carolina. However, range of the species has decreased and currently only includes areas of Florida. No critical habitat is designated for this species in Louisiana and sightings in Louisiana are very rare (Wiley and Simpfendorfer 2010), so the species is not further considered.

Threatened or endangered marine mammals are not known to occur near the project, but those that occur in Louisiana are the Blue, Sei, Sperm, and Fin whales and the West Indian manatee.

The West Indian manatee may be found in lakes Pontchartrain and Maurepas (approximately 200 miles east of the proposed project area), and the Louisiana coastal waters. West Indian manatees are not known

to travel into interior marshes, such as the proposed marsh creation area, are highly unlikely to occur. Young males are known to migrate along nearshore waters of Louisiana, but sightings are rare and unlikely, so these are not further discussed.

**Impacts of No Action** Without action existing marsh that is habitat for the sea turtle and marine mammal forage species, such as species of shrimp and fish, would continue to be lost. Long-term, indirect, moderate adverse impacts would result from no action.

**Impacts of Build Alternatives** The build alternatives are not substantially different as they pertain to impacts to this resource. The leatherback sea turtle, hawksbill sea turtle, Gulf sturgeon, smalltooth sawfish, and endangered whales are not likely to be adversely affected, because they do not commonly occur in the project area. We do not expect these species to be adversely affected from this project and do not discuss them further. Placement of dredged material is unlikely to adversely affect threatened and endangered species. Manatees rarely occur in coastal Louisiana during the warmer months and are unlikely to occur in the project area. Green sea turtles are unlikely to be impacted by construction activities at the borrow area, where they could occur, because hopper dredges would not be used for project construction. No critical habitat or known sea turtle nesting sites occur in the project area.

Avoidance measures would be a condition of contract, including all attempts to keep a distance no less than 150 ft from sea turtles/ small cetaceans, and 300 ft from dolphin or manatee, if sighted.

Both USFWS and National Marine Fisheries Service (Appendix C) have concurred that the proposed project is not likely to adversely affect federally-listed threatened or endangered species or associated critical habitat. Long-term, moderate, indirect benefits to listed species may result from increasing the quality of forage species habitat and quantity of refuge area.

### **3.3 Cultural Resources**

#### **3.3.1 Historic, Prehistoric and Native American**

This section considers both terrestrial and submerged cultural resources. There are no known terrestrial or submerged cultural resources in this location. A cultural resources report prepared for a pipeline constructed north of the proposed project was consulted (Fulmer and Norton 2006), and the State Division of Archaeology records were reviewed April 14, 2014 in preparation of this EA. A magnetometer survey was conducted in 2013 to establish the presence of exclusion zones around any potential under water shipwrecks, submerged hazards, or any other features that would affect future borrow area delineation or dredging activities (Thompson and Borne 2014).

**Impacts of No Action** The identified potential submerged cultural resources in the borrow area would not be affected. No other resources have been identified in the area.

**Impacts of Build Alternatives** Dredging will primarily be located where previous settlements, therefore artifacts, are unlikely. Hydraulic dredging of open water bay areas and mechanical dredging in shallow open waters that were marsh within recent history would be used. The only elevations that would support settlements, and therefore have potential artifacts are where the proposed project would lay a pipeline to convey dredge materials. Fulmer and Norton 2006 reported no sites along this coastal area in a Phase I visual and shovel-test survey. No resources are likely to be affected by these actions, because these would not have been elevations suitable for habitation, major waterways, nor the banks of shorelines.

#### **3.3.2 Socioeconomics (Income and Environmental Justice)**

The population of Cameron Parish is 6,702 (U.S. Census 2010). Table 6 provides population/poverty data for Cameron Parish, and Louisiana. This data is considered because population is one standard for the number of humans impacted, and population by race, and poverty level are standards in considering

environmental justice. Industries providing the majority of employment are agriculture, forestry, fishing and hunting, and mining (16.6%); educational, health and social services (16.2%); construction (11.2%); and retail trade (10.2%).

**TABLE 6. POPULATIONS OF LOUISIANA, CAMERON PARISH, AND CAMERON**

Topic	Louisiana*	Cameron Parish*	Cameron CDP**
Total Population	4,601,893	6,702	409
White alone	63.8%	96%	94.1%
Black or African American alone	32.4%	2.3%	2.7%
American Indian and Alaska Native alone	0.7%	0.6%	3%
Asian alone	1.6%	0.2%	0.5%
Native Hawaiian and Other Pacific Islander alone	0.1%	0%	0%
Persons of Hispanic or Latin Origin	4.4%	2.8%	2.5%
2007-2011 percent persons below poverty level	18.4%	9.5%	not available

\*U.S. Census 2012 estimates and \*\* U.S. Census 2010 (U.S. Census 2013).

**Impacts of No Action** As the remaining marsh is lost to open water and mud flats deepen, the benefit of the area as shrimp habitat declines. Loss of shrimp leads to loss of income in the region because marsh habitats provide essential nursery function to shrimp. Fisheries related activities would decline with a result of long-term, direct, moderate adverse impacts.

**Impacts of Alternative 1** This alternative would have a short-term, direct, minor adverse impact through disruption of localized fishing during construction. Short-term, direct, moderate benefits through local job creation would result from construction activities. Long-term, indirect, moderate benefits would result from increasing shrimp habitat, and recreational and fishing value of the area.

**Impacts of Preferred - Alternative 2** All impacts would be similar to the preferred alternative. The marsh habitat in the area that supports shrimp, a major component of the commercial and recreational fishing economy, may not last as long as it would with a ridge feature; however, there would be more marsh habitat created than with alternative 1.

### 3.3.3 Land Use and Infrastructure

The area is remote, with primarily recreational and oil and gas field use. There are two pipelines that run through the area. Highway LA 27/82 parallels the coast (Appendix B). The highway is a State scenic highway, called the Creole Nature Trail and a hurricane evacuation route. There are no towns or permanent residences on the property to be restored. The marshes and bayous of Cameron Parish are used for recreation, such as hunting, fishing, and birding. Several duck blinds are in the proposed marsh creation area, signifying the importance of the area in recreation. Gulf waters of borrow and access areas are for shallow-draft vessels and not located within the navigation channel. The State of Louisiana has no leased or oyster production areas in Cameron Parish.

**Impacts of No Action** Conversion of the proposed project area to open water increases exposure of active and inactive pipelines posing threats to human safety, and decreases the commercial and recreational value of the area. Increased storm surges would erode nearby land and increase structural damages from storms. Therefore, long-term, direct, moderate adverse impacts are expected with no action.

**Impacts of Alternative 1** Long-term, direct and indirect, minor benefits would result from the terrace and marsh acting as a land buffer from waves during storms, with added support for birding activities. Wave erosion would decrease for surrounding land, pipelines, and infrastructure. Short-term, reversible, direct and indirect, minor adverse impacts on recreational use and highway use would occur during construction. Recreation may be interrupted by displacement of targeted hunting, fishing, and birding species. After construction, recreational value would increase from the added habitat. Highway use would be disturbed during the 1-week installation of the permanent pipeline. The two-lane highway will be reduced to one for this period. The work would be conducted outside of peak hurricane season and “if a storm enters the Gulf, both lanes of highway LA 27/82 will be reopened to facilitate evacuations. Adequate warning lighting will be required during nighttime hours, and flaggers will be utilized during the day (Thompson 2014).”

**Impacts of Preferred - Alternative 2** Impacts to land use/ recreation would be similar to alternative 1. Recreational uses would not be prevented because tidal creeks and ponds would be located within the marsh creation area. Location of the proposed project considered impacts to highway LA 27/82. Sediment delivery lines would be placed under the highway and thus there would only be a minor (7 day) disruption of traffic flow. The equipment used is not expected to adversely impact the scenic nature of the Creole Nature Trail, as activity would be in the distance and rarely visible.

#### 3.3.4 Hazardous, Toxic, and Radioactive Wastes

CB&I were contracted to conduct an HTRW survey of the area for hazardous, toxic, and radioactive waste (HTRW) verification. The report listed a 55-gallon plastic drum containing an unknown liquid, and a large empty storage tank. The area has a history of oilfield industrial activity, but no standing structures remain. CB&I visually inspected the structures listed here for evidence of HTRW; service pads, two marked below-ground pipelines, one submerged pipeline, one aboveground pipeline, and three valve locations containing various valves and piping. No oily waste, former oil pits, stressed vegetation, or surface staining were observed at these locations. The report stated that one of the oil field valves appeared to be in service and associated with TARGA Midstream Services pipeline. The landowners informed NOAA that they have since had the plastic drum and empty storage tank removed.

**Impacts of No Action** Long-term, indirect, minor adverse impacts due to increased exposure of oil and gas infrastructure

**Impacts of Build Alternatives** Care would be taken during construction activities to avoid impacts to the existing oil and gas infrastructure within the project area. The state of Louisiana, whom would contract out construction of the project, specifies contract conditions that minimize adverse impacts. These provisions include conducting magnetometer surveys to verify submerged oil and gas pipelines, and identifying any potential hazards. Other contract provisions include avoidance or remediation of on-site contaminant release from machinery and specification of no work zones near pipelines. The build alternatives do not differ in HTRW considerations. Long-term, indirect, minor benefits may result from reducing exposure of oil and gas infrastructure to erosion and storms.

### 3.4 Other Considerations

#### 3.4.1 Cumulative Impacts

Direct and indirect impacts of past, present, and reasonably foreseeable future events were considered in the analysis of the proposed project consequences. These impacts include historical and predicted future land loss rates for the area and other restoration projects in the vicinity. The preferred alternative would have temporary reversible adverse impacts to some environmental resources but cumulative benefits to the environmental resources.

Coastal Louisiana, including the project area, has been greatly impacted by natural subsidence (Reed and Yuill 2009), levees, hurricanes, and oil and gas infrastructure. Recent events, such as hurricanes or oil spills, contribute to the loss of habitat but are largely indiscernible from other impacts. No direct impacts from the 2010 Deep Water Horizon oil spill are known for this area. Currently, land loss is at an average rate of an acre every 38 minutes. If the current rate of loss is not slowed by the year 2040, an additional 800,000 acres of wetlands will convert to open water.

Though CWPPRA projects are nominated and implemented one at a time and must have individual merit, the cumulative value of all wetland restoration and protection projects in an area can exceed the summed values of the individual projects. Similar wetland restoration projects in the area would operate synergistically with the proposed alternative to enhance the structural and functional integrity of the ecosystem, improve primary productivity rates, and thereby improve the overall environmental resources. The nearest projects for restoration listed by the state database involve shoreline protection, marsh management, and hydrologic restoration: East Mud Lake Marsh Management, Holly Beach Sand Management, Holly Beach Shoreline Protection, Cameron Creole Plugs, Cameron-Creole Maintenance, Replacement of Control Structures, Cameron-Creole Structure Automation, Calcasieu Ship Channel Salinity Controls, and Cameron Parish Shoreline Restoration. The proposed project is consistent with coastwide planning, as shown in the 2012 Coastal Master Plan For Southwest Louisiana (Appendix B).

Physical cumulative impacts are related to mining borrow sediments. The effect of borrowing from offshore sources has been evaluated in other reports and determined to have no adverse cumulative impact.

The cumulative impact of the proposed action on air and water quality would not differ substantially from the effects of the alternatives considered individually, as similar impact producing events would not occur in space or time. The cumulative beneficial impact to water quality would be a long-term increase in quality as a result of reduced turbidity, decrease nitrogen and phosphorus, thereby reducing low DO within the terraced areas.

Biological cumulative impacts would be similar to the direct and indirect impacts of the alternatives described previously. All build alternatives would work with existing projects to enhance habitat for fish, wildlife, vegetation, and EFH. Cumulatively, all build alternatives would increase benefits to the area by decreasing land loss rates. No cumulative adverse impacts are anticipated. The permanent placement of a sediment pipeline under the highway in the preferred alternative provides the opportunity for greater benefits in the future.

Cultural cumulative impacts would result from synergy of the build alternatives with nearby restoration projects. These projects would cumulatively decrease losses of habitat, thereby maintaining more of the economy and storm protection than with no action. The build alternatives are similar to previous actions in the area that have had no adverse cultural impacts. No adverse cumulative impacts would be expected.

#### 3.4.2 Invasive Species

Executive Order 13112 requires federal agencies to use authorities to prevent introduction and control (in cost effective and environmentally sound manners) invasive species, and to provide for restoration of native species and habitats in ecosystems that have been invaded. As stated above, the purpose of the preferred alternative is to restore the native habitat. The proposed project would not introduce invasive species. If woody invasive species colonize the project area, an eradication plan is being developed and funds for its execution are envisioned as part of the project's 20-year maintenance. The State of Louisiana, whom administers contracts for plantings, uses only plantings authorized for release. This ensures appropriate (noninvasive) species and cultivars are provided.

### 3.4.3 Coordination

Coordination in development of the proposed action, its alternatives and selection of the preferred alternative has been maintained with each CWPPRA Task Force agency. The project was vetted publicly through the CWPPRA process, which includes opportunities for the public and CWPPRA agencies to comment on the proposed project. The project was discussed in public meetings for CWPPRA where project details were made available on several occasions. Prior to initiating the draft EA, a solicitation of views was sent to those listed in the distribution section. Comments received are summarized in Appendix C. A draft EA will be circulated to participating restoration agencies and the public. The preferred alternative is not expected to cause adverse environmental impacts that would require compensatory mitigation.

### 3.4.4 Compliance with Laws and Regulations

Many federal, state, and local laws and regulations are considered during development of the proposed restoration project, as well as several regulatory requirements that are typically evaluated during the permitting process. A brief review of potentially applicable laws and regulations that may pertain to this proposed project is available in Appendix A. Relevant correspondence is provided in Appendix C and the status in Table 7. The project manager would ensure that there is coordination among these programs where possible and that project implementation and monitoring comply with all applicable laws and regulations.

**TABLE 7. STATUS OF LAW AND REGULATION COMPLIANCE**

<b>Law or Regulation</b>	<b>Status</b>
Archeological & Historic Preservation Act of 1974	Completed as per SHPO letter 4-29-13
Clean Air Act of 1970	Coordinated with LDEQ 5-16-13
Clean Water Act	Pending, Permit application to USACE for section 404 is being prepared concurrent with the completion of this EA
Coastal Zone Management Act of Louisiana Executive Order 11998, Floodplain Management	Completed per letter of 8-1-2012
Endangered Species Act of 1973	Pending for NOAA, Coordination complete with USFWS 4-2-2013
Executive Order 11990, Protection of Wetlands	Coordinated with Floodplain Administration of Cameron Parish and FEMA
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations & Low-Income Populations	In compliance, assessed with this EA
Fish & Wildlife Coordination Act	Coordination with USFWS for ESA 4-30-13, and as a CWPPRA participating agency
Magnuson-Stevens Fishery Conservation & Management Act	To be reviewed with EA draft, as requested.
Migratory Bird Treaty Act of 1918	Coordinating with USFWS per letter 4-30-13
National Environmental Policy Act of 1969	In Process with this EA draft
National Historic Preservation Act of 1966	Completed as per coordination with SHPO 4-29-13

## **4 CONCLUSIONS**

The natural processes of subsidence, habitat switching, and erosion of wetlands have been exacerbated by widespread human alterations of sediment delivery and other processes, resulting in marked degradation of the Louisiana coastal area. Without intervention to slow or reverse the loss of marshes, Louisiana's healthy and highly productive coastal ecosystem would not be maintained.

This EA discloses information on the direct, indirect, and cumulative impacts on the human environment likely to result from the Oyster Bayou Restoration Project. It has disclosed long-term beneficial impacts on the coastal resources of south Louisiana and does not anticipate any substantial long-term adverse environmental impacts. Construction-related adverse impacts are considered minor, as they are temporary or reversible. This EA predicts beneficial impacts that would be minor. This effects analysis is based on a review of relevant literature, site-specific data, and project-specific engineering reports related to biological, physical, and cultural resources, as well as on the cumulative experience gained through many similar coastal restoration projects in south Louisiana over the past decade. The increase of fisheries habitat is anticipated to have long-term beneficial impacts on the local economy and culture as it relates to recreational and commercial fishing. In addition, the preferred alternative would result in increased protection of adjacent marsh in the area to be restored. NOAA Fisheries Service will review, evaluate and consider the information in this EA to determine whether to issue a Finding of No Significant Impact (FONSI) for the proposed action.

## **5 PREPARERS**

This EA was prepared by biologists Joy Merino, Cecelia Linder, and John Foret Ph.D. of NOAA Fisheries Service.

## **6 PERSONS / AGENCIES CONSULTED**

References in the literature cited and the following persons / agencies were consulted in the preparation of this EA.

- Amity Bass, National Heritage Program Coordinator, LDWF
- Amy Powell, USACE Solicitation of Views Manager
- Beth Altazan-Dixon, Louisiana Department of Environmental Quality
- Beth Bourgeois, NOAA port agent, personal communication
- Dana Masters, Cultural Director, Jena Band of Choctaw Indians
- James Welsh, Louisiana Commissioner of Conservation
- Jeff Weller, US Fish and Wildlife Service
- Michael Bechdol, EPA Sole Source Aquifer Program Coordinator
- Pam Breaux, Louisiana State Historic Preservation Officer
- Pam Lightfoot, Floodplain Management, Department of Transportation and Development
- Yuanda Zhu, Louisiana Office of Public Health

## **7 DISTRIBUTION LIST**

This EA will be distributed for comment to agencies of the CWPPRA Task Force and resource agencies as listed below. A minimum 30-day comment period will be provided. A draft EA will be available for

public review. A final EA will be made available to the public at <http://www.lacoast.gov> along with other public records for the project. The EA was distributed to:

**Thomas A. Holden** Chairman Deputy District Engineer, U.S. Army Engineer District, New Orleans Office of the Chief. 7400 Leake Ave. New Orleans, Louisiana 70160-0267

**Darryl Clark** Senior Field Biologist, U.S. Fish and Wildlife Service. 646 Cajundome Blvd, Suite 400 Lafayette, Louisiana 70506

**Bren Haas** Deputy Chief- Studies & Environmental Branch, Coastal Protection and Restoration Authority. 617 North 3rd Street Baton Rouge, Louisiana 70804-4027

**Richard Hartman** Fishery Biologist, National Marine Fisheries Service. Rm 266 Military Science Bldg South Stadium Drive, LSU Baton Rouge, Louisiana 70803-7535

**Karen McCormick** Section Chief Environmental Protection Agency, Region 6 Marine and Coastal Protection Division (6WQ-EC). 1445 Ross Avenue Dallas, Texas 75202-2733

**Britt Paul**, P.E. Assistant State Conservationist, Water Resources, Natural Resources Conservation Service. 3737 Government Street Alexandria, Louisiana 71302

Dana Masters Cultural Director, Jena Band of Choctaw Indians P.O. Box 14 Jena, Louisiana 71342-0014 (requested information on the area in letter received October 10, 2013).

A solicitation of comments on the proposed project was conducted by mailing letters to the following listed entities prior to this analysis. Comments received are summarized in Appendix C and considered in analysis and project design. Full letters of reply are available in the project files maintained by the NOAA Fisheries Service.

8th Coast Guard District Commander  
Cameron Parish Civil Defense  
Cameron Parish Police Jury  
Cameron Parish School Board  
Cameron Parish Sheriff  
Chitimacha Tribe  
Choctaw Nation of Oklahoma  
Coalition to Restore Coastal Louisiana  
Coushatta Tribe of Louisiana  
Department of Health and Hospitals Chief Sanitarian and Division of Environmental Health  
Department of Public Safety Highway Safety Commission  
Department of the Army Technical Support  
Department of the Army, Galveston District Corps of Engineers  
Department of Wildlife & Fisheries Louisiana Natural Heritage Program  
Department of Agriculture and Forestry - Office of Soil & Water Conservation and Office of Forestry  
Department of Culture Recreation & Tourism/Division of Archaeology and Office of State Parks  
Department of Economic Development Office of Business Development  
Division of Administration State Land Office and State Planning Office  
Environmental Protection Agency Source Water Protection and Federal Activities  
Federal Transit Administration Region 6  
Federal Emergency Management Agency Region VI  
Flood Plain Administrator, Cameron Parish Police Jury  
Floodplain Management Program District 64  
Gulf coast soil and water conservation District of Louisiana  
Imperial Calcasieu Regional Planning and Development  
Inter-Tribal Council of Louisiana, Inc.  
Jena Band of Choctaw Indians  
Lake Charles Harbor and Terminal

Louisiana Department of Environmental Quality Beth Altazan-Dixon, Office of the Secretary  
 Louisiana House of Representatives District 47 Bob Hensgens  
 Louisiana Senate District 25 Dan Blade Morrish  
 Louisiana Department of Natural Resources Office of Conservation, Office of Mineral Resources, and  
 Coastal Management Division  
 Louisiana Forestry Association  
 Louisiana Good Roads Association  
 Louisiana State Police, Troop D  
 Louisiana State University Sea Grant Legal Advisory Service  
 Mississippi Band of Choctaw Indians  
 Natural Resources Conservation Service  
 Office of Civil Defense Jefferson Davis Parish  
 Office of Indian Affairs  
 Seminole Nation of Oklahoma  
 South Central Planning and Development Commission  
 South Louisiana Economic Council  
 Tunica - Biloxi Tribe of Louisiana  
 U.S. Geological Survey  
 U.S. House of Representatives; District 1 - Steve Scalise, District 2 - Cedric Richmond, District 3 -  
 Charles Boustany, Jr. MD, District 4 - John Fleming, MD, District 5 - Rodney Alexander, District 6 - Bill  
 Cassidy, MD  
 U.S. National Park Service  
 U.S. Senate - David Vitter and Mary Landrieu

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## APPENDIX A- ENVIRONMENTAL LAWS AND REGULATIONS

The proposed action is compliant or in the process of compliance with the following laws and regulations. A current status of compliance is provided in the attached EA.

**Archeological and Historic Preservation Act of 1974** The Archeological and Historic Preservation Act of 1974 states that, if an activity may cause irreparable loss or destruction of significant scientific, prehistoric, historic, or archeological data, the responsible agency is authorized to undertake data recovery and preservation activities, in accordance with implementing procedures promulgated by the Secretary of the Interior.

**Clean Air Act of 1970** Under the Clean Air Act of 1970, Congress established procedures for developing National Ambient Air Quality Standards (NAAQS) for the protection of human health and public welfare. EPA published the NAAQS in 1971, and they became effective at that time. Standards are provided for the following criteria pollutants: carbon monoxide, sulfur dioxide, nitric oxide, ozone, lead, and fine particulate matter.

**Clean Water Act (CWA)** The CWA is the principal law governing pollution control and water quality of the nation's waterways. It requires the establishment of guidelines and standards to control the direct or indirect discharge of pollutants to waters of the United States. Discharges of material into navigable waters are regulated under Sections 401 and 404 of the CWA. The USACE has the primary responsibility for administering the Section 404 permit program. Under Section 401 of the CWA, projects that involve discharge or fill to wetlands or navigable waters must obtain certification of compliance with state water quality standards.

**Coastal Zone Management Act** The Coastal Zone Management Act (CZMA) provides for protection of resources found in the coastal zone, proactive land management practices, and preservation of unique coastal resources. Included in the CZMA is the requirement that all federal actions within the coastal zone of Louisiana must be consistent with the federally approved State of Louisiana Coastal Resource Management Plan.

**Endangered Species Act of 1973 (ESA)** The ESA directs all federal agencies to conserve endangered and threatened species and their habitats and encourages such agencies to utilize their authorities to further these purposes. Under the Act, NOAA Fisheries Service and USFWS publish lists of endangered and threatened species. Section 7 of the act requires that federal agencies consult with these agencies to minimize the effects of federal actions on endangered and threatened species.

**Executive Order 11990, Protection of Wetlands** The intent of Executive Order 11990, Protection of Wetlands, is to avoid, to the extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support for new construction in wetlands whenever there is a practicable alternative.

**Executive Order 11998, Floodplain Management** Executive Order 11998, Floodplain Management, requires each agency (including military departments) to determine whether any action undertaken would occur in a floodplain. The Federal Emergency Management Agency provides Flood Insurance Rate Maps (FIRM) for more than 19,000 communities in the country as part of the Flood Insurance Studies the agency completes. In addition to the 100-year floodplain, which is the area of the community with a 1 percent chance of flooding in any given year, the FIRM also illustrates coastal high hazard areas, the floodway, and the 500-year floodplain, which is the area of the community with a 0.2 percent chance of flooding in any given year.

**Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations** Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, directs that the programs of federal agencies identify and address disproportionately high and adverse effects on human health and the environment of minority or low-income populations.

**Fish and Wildlife Coordination Act** The Fish and Wildlife Coordination Act requires agencies to consult with the USFWS, NOAA Fisheries Service, and appropriate state agencies, prior to modification of any stream or other body of water, to ensure conservation of wildlife resources. Compliance with the FWCA is integrated into the USACE interagency review process under Section 404 of the CWA as well as through the NEPA review process.

**Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act)** In 1996, the act was reauthorized and changed by amendments to require that fisheries be managed at maximum sustainable levels and that new approaches be taken in habitat conservation. EFH is defined broadly to include “those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity” (62 Fed. Reg. 66551, § 600.10 Definitions). The act requires consultation for all federal agency actions that may adversely affect EFH. Under Section 305(b)(4) of the act, NOAA Fisheries Service is required to provide advisory EFH conservation and enhancement recommendations to federal and state agencies for actions that adversely affect EFH. Where federal agency actions are subject to ESA Section 7 consultations, such consultations may be combined to accommodate the substantive requirements of both ESA and the Magnuson-Stevens Act.

**Marine Mammal Protection Act of 1972 (MMPA)** All marine mammals are protected under the MMPA. With its’ amendments, it prohibits, with certain exceptions, the "take" of marine mammals in U.S. waters.

**Migratory Bird Treaty Act of 1918 (MBTA)** The MBTA requires the protection of all migratory bird species and protection of ecosystems of special importance to migratory birds against detrimental alteration, pollution, and other environmental degradation. Coordination under MBTA is generally incorporated into Section 404 of the CWA, NEPA, or other federal permit, license or review requirements.

**National Environmental Policy Act of 1969** NEPA was enacted in 1969 to establish a national policy for the protection of the environment. The CEQ was established to advise the President and to carry out certain other responsibilities relating to implementation of NEPA by federal agencies. Pursuant to Presidential Executive Order, federal agencies are obligated to comply with NEPA regulations adopted by the CEQ (40 CFR Parts 1500-1508). These regulations outline the responsibilities of federal agencies under NEPA and provide specific procedures for preparing environmental documentation to comply with NEPA.

**National Historic Preservation Act of 1966** The National Historic Preservation Act of 1966, as amended in 1992, requires that responsible agencies taking action that affects any property with historic, architectural, archeological, or cultural value that is listed on or eligible for listing on the National Register of Historic Places (NRHP) comply with the procedures for consultation and comment issued by the Advisory Council on Historic Preservation. The responsible agency also must identify properties affected by the action that are potentially eligible for listing on the NRHP, usually through consultation with the state historic preservation officer.



# Land use



## APPENDIX C- CORRESPONDENCE

### LDWF Natural Heritage Program



BOBBY JINDAL  
GOVERNOR

State of Louisiana  
DEPARTMENT OF WILDLIFE AND FISHERIES  
OFFICE OF WILDLIFE

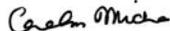
ROBERT J. BARHAM  
SECRETARY  
JIMMY L. ANTHONY  
ASSISTANT SECRETARY

**Date** June 13, 2013  
**Name** John Foret  
**Company** NOAA Fisheries Service  
**Street Address** 646 Cajundome Blvd  
**City, State, Zip** Lafayette, La 70506  
**Project** Oyster Bayou Marsh Restoration (CS-59)  
**Project ID** 2022013  
**Invoice Number** 13061306

Personnel of the Habitat Section of the Coastal & Nongame Resources Division have reviewed the preliminary data for the captioned project. After careful review of our database, no impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specified site within Louisiana's boundaries.

The Louisiana Natural Heritage Program (LNHP) has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. Heritage reports summarize the existing information known at the time of the request regarding the location in question. The quantity and quality of data collected by the LNHP are dependent on the research and observations of many individuals. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Louisiana have not been surveyed. This report does not address the occurrence of wetlands at the site in question. Heritage reports should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. LNHP requires that this office be acknowledged in all reports as the source of all data provided here. If at any time Heritage tracked species are encountered within the project area, please contact the LNHP Data Manager at 225-765-2643. If you have any questions, or need additional information, please call 225-765-2357.

Sincerely,

  
Amity Bass, Coordinator  
Natural Heritage Program

USFWS Concurrence



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
SEFC/Estuarine Habitats & Coastal Fisheries Center
646 Cajundome Boulevard
Lafayette, Louisiana 70506

April 2, 2013

Jeffery Weller
U.S. Fish and Wildlife Service
646 Cajundome Blvd.
Lafayette, LA 70506

Dear Jeffery Weller,

The NOAA National Marine Fisheries Service is the federal sponsor of the Oyster Bayou Marsh Restoration (CS-59) in Calcasieu/Sabin Basin. As part of the preparation of the Environmental Assessment, in compliance with the National Environmental Policy Act, we ask the Service to provide a list of endangered, threatened, and proposed species and designated and proposed critical habitats that may occur in the project area, shown in the enclosed information.

This CS-59 project is being funded under the Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA), of which your agency is a cooperating partner. We appreciate your participation in identifying any concerns you have regarding fish and wildlife resources, including threatened and endangered species that may be affected by the proposed project.

The project location is saline marsh and open water, and is shown on the map provided. Our proposed action includes creating and nourishing marsh from nearby offshore sediments. We propose constructing terraces and marsh to reduce wave erosion to existing and created marsh, and increase SAV habitat suitability.

Please do not hesitate to call or write (337) 291-2107, john.foret@noaa.gov with any questions or concerns that this request raises.

Sincerely,

[Handwritten signature of John Foret]
John Foret, PhD
NOAA NMFS

This project has been reviewed for effects to Federal trust resources under our jurisdiction and currently protected by the Endangered Species Act of 1973 (Act). The project, as proposed,
[ ] Will have no effect on those resources
[ ] Is not likely to adversely affect those resources.
This finding fulfills the requirements under Section 7(a)(2) of the Act.

[Handwritten signature of David A. Fuller] April 30, 2013
Acting Supervisor
Louisiana Field Office
U.S. Fish and Wildlife Service



**SHPO Concurrence**



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
SEFC/Estuarine Habitats & Coastal Fisheries Center  
848 Cajundome Boulevard  
Lafayette, Louisiana 70508

March 20, 2013

Pam Breaux  
State Historic Preservation Officer  
Louisiana Office of Cultural Development  
P.O. Box 44247  
Baton Rouge LA 70804-44247

Dear Ms. Breaux,

The NOAA, National Marine Fisheries Service is considering construction of a terrace and marsh creation project in Calcasieu-Sabine Basin, Cameron Parish. We have prepared a cultural resources assessment for this activity (summarized here), as required under Section 106 of the National Historic Preservation Act of 1966, as amended. By transmittal of this letter and the attached cultural resource assessment, we request consultation with your office for cultural resources, and request a concurrence with our determination of effect.

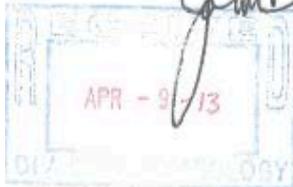
The Oyster Bayou Marsh Restoration Project (CS-59) is funded under the Coastal Wetlands Planning, Protection and Restoration Act. The Area of Potential Effects (APE) is located in the Holly Beach Quadrangle. During a recent visit to your office, we found no records of identified sites in the APE, nor in the Holly Beach Quadrangle.

Our proposed action includes creating and nourishing marsh from offshore sediments. Potential impacts can occur from dredging that could unearth unknown sites. The dredging proposed for this project will primarily be located where previous settlements are unlikely, such as shallow open water and the Gulf of Mexico. Hydraulic dredging would be done in federal waters of the Gulf of Mexico, where the borrow site is currently under investigation and a report will be sent to you upon completion due in June of this year.

The area in the attached map is where mechanical dredging would occur in shallow open waters that were marsh within recent history. The only elevations that would have supported settlements, and therefore have potential artifacts are where the proposed project would lay a pipeline to convey dredge materials. PBS&J surveyed the coastal area here (Fulmer and Norton 2006, your report # 22-2822) and report no sites along this coastal area in a Phase I visual and shovel-test survey. We believe no additional investigation is necessary, because these would not have been elevations suitable for habitation, major waterways, nor the banks of shorelines. Our determination is that no resources are likely to be affected by our proposed actions.

Your comments/ concerns would be appreciated no later than May 1, 2013, and may be addressed to me.

Sincerely,



No known historic properties will be affected by this undertaking. This effect determination could change should new information come to our attention.  
*Pam Breaux* 29 April 2013  
Pam Breaux Date  
State Historic Preservation Officer



## Summary of Comments

- EPA “determined that the project, as proposed, should not have an adverse effect on the quality of the groundwater underlying the project site,” located on the Chicot aquifer system. 6-11-13
- Louisiana Office of Public Health has “no objection” and advises compliance with any applicable State Sanitary Code regulations such as Title 51, Public Health –Sanitary Code [to be included in the States contracting for project work] and Title 48, Public Health-General [not applicable]. 6-12-13
- FEMA Region VI “request that the Parish Floodplain Administrator be contacted [which has been done]...and be in compliance with EO11988 and EO11990 [as described in appendix A].” 6-3-13
- Louisiana Department of Wildlife and Fisheries provide “no impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specified site within Louisiana’s boundaries... if at any time Heritage tracked species are encountered within the project area, please contact the LNH Data Manager at 225-765-2643.” 6-13-13
- Louisiana Office of Conservation indicate the SONRIS data website records “oil and/or gas wells located in the project area. The DNR water well database indicates that there are no registered water wells in the vicinity of the project area. However, it is possible that unregistered water wells may be located in the area...please contact Louisiana One Call at 1-800-272-3020 prior to commencing operations” involving pipelines and underground hazards [to be included in the States contracting for project work]. 6-26-13
- Louisiana Department of Transportation and Development provide a Flood Insurance Rate Map for Oyster Lake and Mud Pass, and require an “allowance for adequate flow of water and assurance that there will be no back up of water. There must be no instance of the creation of flooding where there was no flooding prior to construction.” They request cleaning debris and keeping the surrounding area clear [as is a standard in State contracting and will be for project work], and that the Parish floodplain administrator is contacted [as has been done]. 7-2-13
- USACE “do not anticipate any adverse impacts to [USACE] projects” and advise on permitting.
- Jena Band of Choctaw Indians requests we provide “any information concerning the possibility of culturally significant areas. Recent history shows this area to be inundated and classified as marsh lands, [they] are interested in discovering how this area has changed over time.” They have been added to the draft EA distribution that will provide the requested information. 10-10-13
- Louisiana State Police –Troop D requested Sgt. Adaway 337-491-2058 be contacted if we require input, as they do not see the need to do so on an open waterway project. Via email to J. Foret 6-5-13

Bayou Dupont Sediment Delivery – Marsh  
Creation #3

(BA-164)

EPA

PPL 22

# Bayou Dupont Sediment Delivery Marsh Creation #3 and Terracing (BA-164)

## Phase II Request Technical Committee Meeting



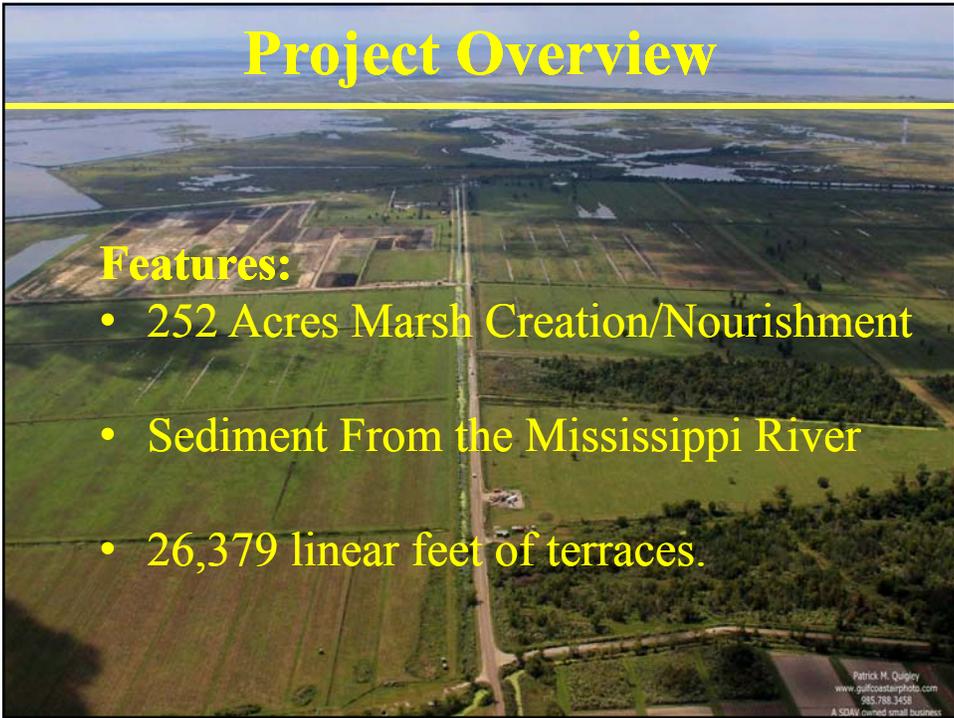
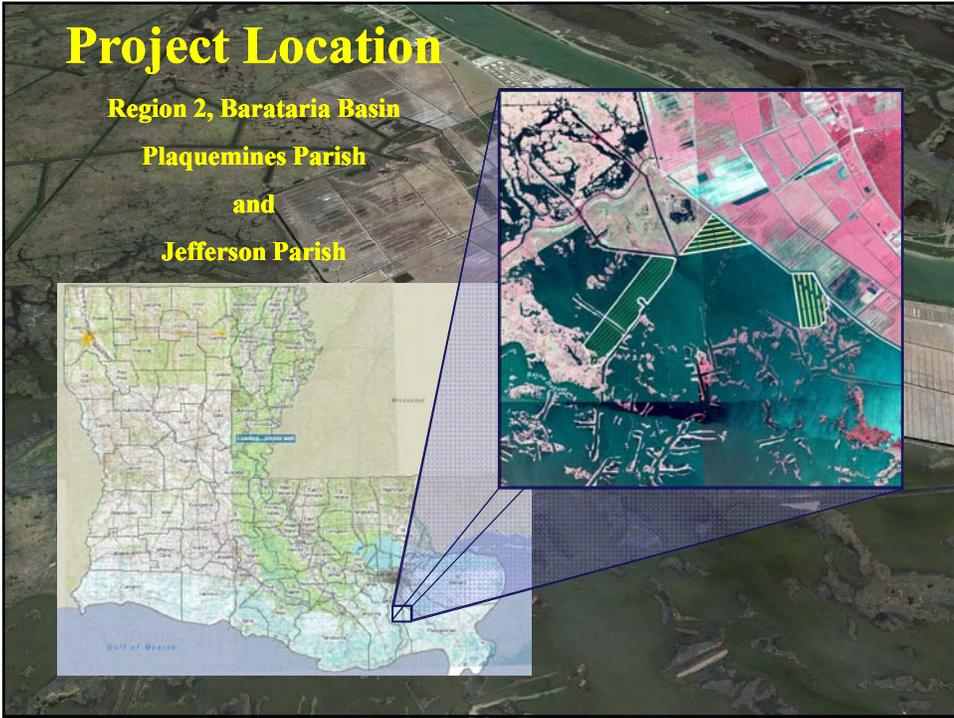
December 11, 2014  
Baton Rouge, LA



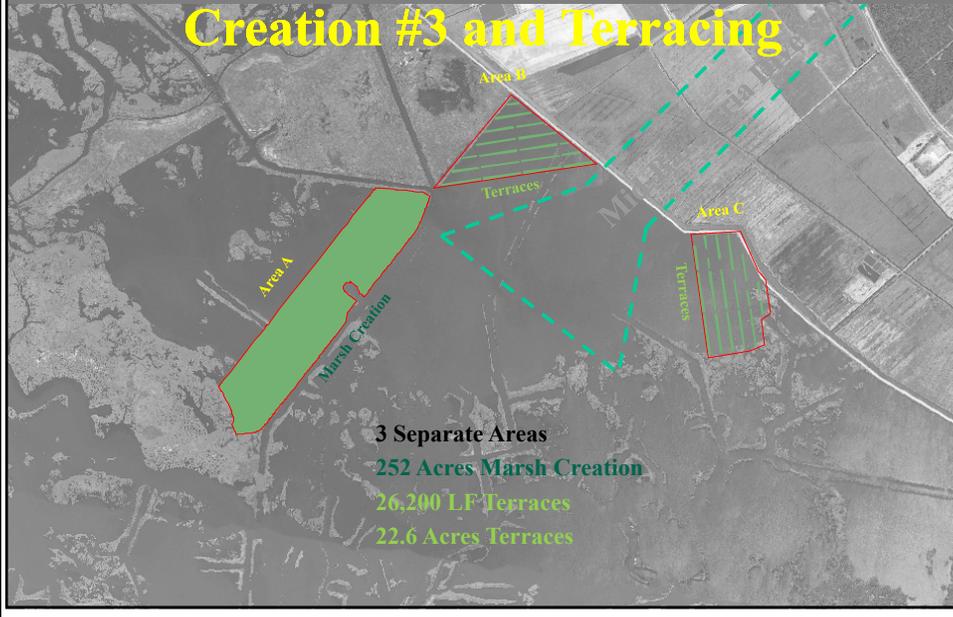
Patrick M. Quigley  
www.gulfcoastairphoto.com  
985.788.3150  
A SBAW owned small business

## Project Schedule Overview

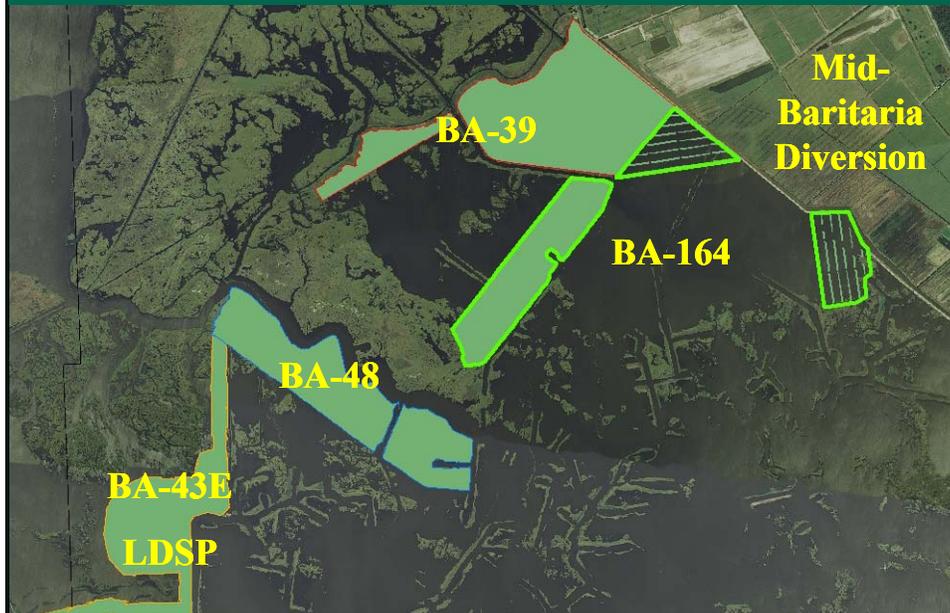
- **01/24/2013: Phase 1 Approved (PPL22)**
- **08/16/2013: Cooperative Agreement Awarded**
- **12/05/2013: Project Kickoff Meetings**
- **07/24/2014: 30% Design Presentation**
- **10/30/2014: 95% Design Presentation**



## Proposed Bayou Dupont Marsh Creation #3 and Terracing



## Project Synergy



## **Project Benefits & Costs**

**252 Acres of Marsh Creation**

**26,400 LF of Terraces**

**230 Net Acres after 20 years**

**101 Net AAHUs**

**The Fully Funded Cost: \$34,320,926**

**Phase 2 request is: \$33,633,490**

Patrick M. Quigley  
www.gulfcoastphoto.com  
985.788.3458  
A SDMV owned small business

## **Why Should We Fund This Project Now?**

- **Synergy with other projects**
- **Stabilize the Barataria Landbridge**
- **Sustained via Mid-Barataria Diversion**
- **Landrights 75% Complete**
- **Mob/Demob Savings from Sequencing Project**

Patrick M. Quigley  
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985.788.3458  
A SDMV owned small business

# Questions?



**Brad Crawford**  
US Environmental  
Protection Agency  
(214) 665 - 7255



**Kodi Guillory**  
LA Coastal Protection and  
Restoration Authority  
(225) 342-5175  
www.guilloryphoto.com  
985.788.3158  
A SOAW owned small business



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS TX 75202-2733

NOV 25 2014

Mr. Troy G. Constance,  
Acting Deputy District Engineer for Project Management  
U.S. Army Corps of Engineers  
New Orleans District  
P.O. Box 60267  
New Orleans, LA 70160-0267

RE: Bayou Dupont Sediment Delivery Marsh Creation #3 and Terracing (BA-164)  
Request for Phase II Construction Authorization

Dear Mr. Constance;

The U.S. Environmental Protection Agency (EPA) and Louisiana's Coastal Protection and Restoration Authority (CPRA), hereby request construction funding for the Bayou Dupont Sediment Delivery Marsh Creation #3 and Terracing project (BA-164). This project was authorized for Phase 1 on January 19, 2012 by the Louisiana Coastal Wetlands Conservation and Restoration Task Force (Task Force) under the authority of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA). This request is submitted in accordance with the CWPPRA Project Standard Operating Procedures Manual (SOP).

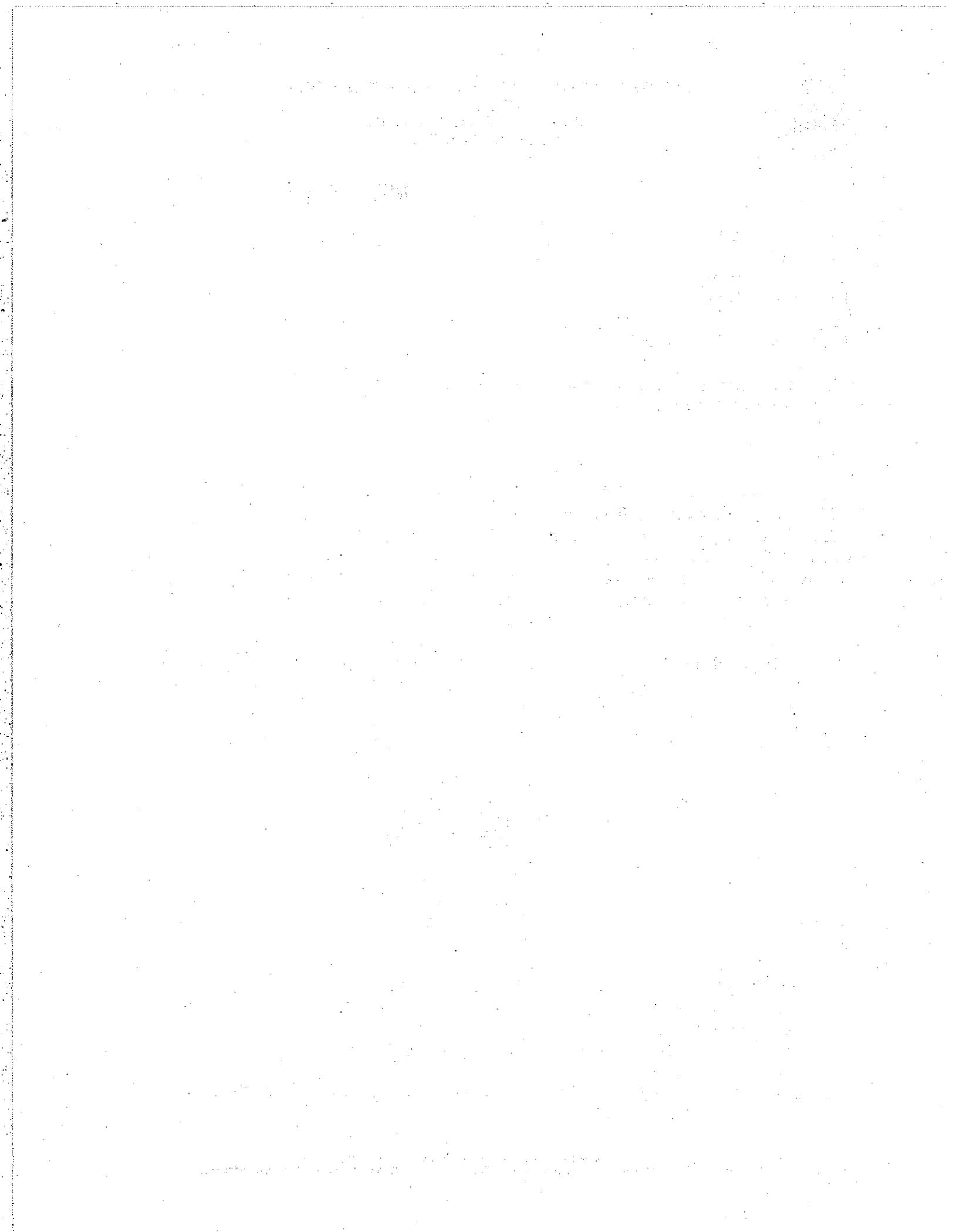
Enclosed please find the information required for Phase II construction funding request and approval pursuant to Appendix C of the SOP (Revision 22). If you have any questions or need additional information about this project, please contact Brad Crawford at (214) 665-7255 or email: [Crawford.brad@epa.gov](mailto:Crawford.brad@epa.gov).

Sincerely,

Karen McCormick, Chief  
Marine & Coastal Section

Enclosures

cc: Mr. Darryl Clark, USFWS  
Mr. Britt Paul, NRCS  
Mr. Bren Haas, CPRA  
Mr. Richard Hartman, NMFS  
Mr. Adrian Chavarria, EPA  
Ms. Kodi Guillory, CPRA  
Mr. Kevin Roy, USFWS  
Mr. John Jurgensen, NRCS  
Mr. Stuart Brown, CPRA  
Ms. Cece Linder, NMFS  
Mr. Brad Inman, USACE  
Mr. Brian (Keith) Boeneke, CPRA (Contractor)



**Enclosure I – Original Fact Sheet and Map**

## **PPL22 Bayou Dupont Sediment Delivery – Marsh Creation #3**

### **Coast 2050 Strategy:**

Coastwide Common Strategies: Dedicated dredging to create, restore, or protect wetlands; Offshore and riverine sand and sediment resources.

Region 2 Regional Ecosystem Strategies: Restore and Sustain Marshes.

### **Project Location:**

Region 2, Barataria Basin, Jefferson and Plaquemines Parishes. The borrow location will be in the Mississippi River. The project is immediately adjacent to the Mississippi River Sediment Delivery System project (BA-39).

### **Problem:**

Wetlands in the Barataria Basin were historically nourished by the fresh water, sediment and nutrients delivered by the Mississippi River and its many distributary channels. Following the creation of levees along the lower river for flood control and navigation, these inputs ceased. In addition, numerous oil and gas canals in the area contributed significantly to wetland loss. Recent information suggests that actual subsurface oil and gas withdrawal was a major cause of wetland loss. From 1932 to 1990, the Barataria Basin lost over 245,000 acres of marsh, and from 1978 to 1990, it experienced the highest rate of wetland loss in coastal Louisiana.

### **Goals:**

The primary goal of this project is to create/nourish approximately 415 acres of emergent intermediate marsh using sediment from the Mississippi River. Specific goals include: 1) Create approximately 402 acres of intermediate marsh; 2) Nourish approximately 13 acres of existing intermediate marsh; and 3) Create approximately 2500 linear feet of tidal creeks.

### **Proposed Solution:**

The proposed project consists of features to create/nourish 415 acres of marsh adjacent to the Mississippi River Sediment Delivery System – Bayou Dupont (BA-39) project, again *using sediment from the Mississippi River*. The target elevation of +1.3 feet is estimated to be met at year 10. Approximately 50% of created marsh will be planted using intermediate marsh plant species. Approximately 2500 linear feet of tidal creeks will be created throughout the project area.

### **Project Benefits:**

The project would result in approximately 383 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$ 38,279,163.

### **Preparers of Fact Sheet:**

Ken Teague, EPA, (214) 665-6687; [Teague.kenneth@epa.gov](mailto:Teague.kenneth@epa.gov)

Paul Kaspar, EPA, (214) 665-7459; [kaspar.paul@epa.gov](mailto:kaspar.paul@epa.gov)

Adrian Chavarria, EPA, (214) 665-3103; [Chavarria.adrian@epa.gov](mailto:Chavarria.adrian@epa.gov)

Chris Llewellyn, EPA, (214) 665-7239; [Llewellyn.chris@epa.gov](mailto:Llewellyn.chris@epa.gov)

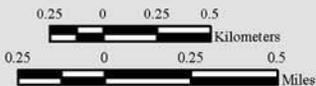


### Bayou Dupont Marsh Creation 3 (PPL22 Candidate)



-  Marsh Creation \*
-  Project Boundary

\* denotes proposed features



Scale: 1:35,000

Map Produced By:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Assessment Branch  
Baton Rouge, LA

Image Source:  
2010 NAIP Photography

Map ID: 2012-11-0017  
Map Date: July 25, 2012

## **Enclosure II – Revised Fact Sheet and Map**

## **PPL22 Bayou Dupont Sediment Delivery – Marsh Creation #3 and Terracing (BA-164)**

### **Coast 2050 Strategy:**

Coastwide Common Strategies: Dedicated dredging to create, restore, or protect wetlands; Offshore and riverine sand and sediment resources. Region 2 Regional Ecosystem Strategies: Restore and Sustain Marshes.

### **Project Location:**

Region 2, Barataria Basin, Jefferson and Plaquemines Parishes. The borrow location will be in the Mississippi River. The project is immediately adjacent to the Mississippi River Sediment Delivery System project (BA-39).

### **Problem:**

Wetlands in the Barataria Basin were historically nourished by the fresh water, sediment and nutrients delivered by the Mississippi River and its many distributary channels. Following the creation of levees along the lower river for flood control and navigation, these inputs ceased. In addition, numerous oil and gas canals in the area contributed significantly to wetland loss. Recent information suggests that actual subsurface oil and gas withdrawal was a major cause of wetland loss. From 1932 to 1990, the Barataria Basin lost over 245,000 acres of marsh, and from 1978 to 1990, it experienced the highest rate of wetland loss in coastal Louisiana.

### **Goals:**

The primary goal of this project is to create/nourish approximately 252 acres of emergent intermediate marsh using sediment from the Mississippi River and construct approximately 26,379 linear feet of terraces. Specific goals include: 1) Create approximately 232 acres of intermediate marsh; 2) Nourish approximately 20 acres of existing intermediate marsh; and 3) Create approximately 26,379 LF of terraces (22.6 acres).

### **Proposed Solution:**

The proposed project consists of features to create/nourish 252 acres of marsh adjacent to the Mississippi River Sediment Delivery System – Bayou Dupont (BA-39) project, again *using sediment from the Mississippi River* and creation of 26,379 LF of terraces adjacent to the Plaquemines Parish flood protection levee and east of BA-39. The initial marsh creation placement target elevation is +2.5' feet (+/- 0.5') with an estimated marsh elevation of 0.8' at year 20. Approximately 50% of created marsh will be planted using intermediate marsh plant species. The terraces will be constructed to an initial target elevation of 2.5 feet (+0.5') creating approximately 22.6 acres.

### **Project Benefits:**

The project would result in approximately 230 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$ 34,320,925.

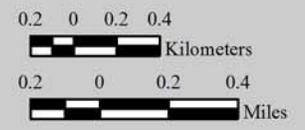
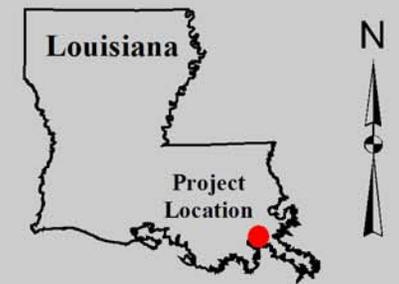
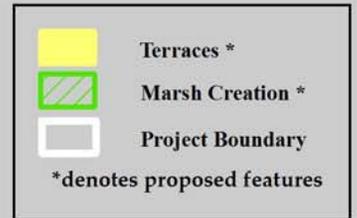
### **Preparers of Fact Sheet:**

Brad Crawford, EPA, (214) 665-7255; [Crawford.brad@epa.gov](mailto:Crawford.brad@epa.gov)

Barbara Aldridge, EPA, (214) 665-2712; [Aldridge.barbara@epa.gov](mailto:Aldridge.barbara@epa.gov)

Adrian Chavarria, EPA, (214) 665-3103; [Chavarria.adrian@epa.gov](mailto:Chavarria.adrian@epa.gov) □ □

# Bayou Dupont Sediment Delivery - Marsh Creation 3 (BA-164)



Map Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Assessment Branch  
 Baton Rouge, La.

Background Imagery:  
 2013 NAIP Photography

Map Date: October 01, 2014  
 Map ID: USGS-NWRC 2015-11-0001  
 Data accurate as of: October 01, 2014



## **Enclosure III – 30% Design Comments and Responses**



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

August 11, 2014

Mr. Andrew D. Beall, Administrator  
Project Management Division  
Coastal Protection and Restoration Authority of Louisiana  
PO Box 44027  
Capital Station  
Baton Rouge, Louisiana 70804-4027

RE: Bayou Dupont Sediment Delivery – Marsh Creation #3 (BA-164)  
30% Engineering and Design Review

Dear Mr. Beall:

As you are aware, on July 24, 2014, we held the 30% Engineering and Design (E&D) review meeting as required by the Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA) Standard Operating Procedures (SOP) for the project noted above. While there were only a few comments noted as a result of that effort, we are confident that the project is still viable and recommend that the project move forward to 95% E&D.

Per the CWPPRA SOP, Section 6.(e), the Federal Sponsor will prepare a notification to the Technical Committee as to the results of the 30% E&D review. Also, the SOP states that the notification shall include a letter of concurrence from the Local Sponsor. Therefore, we will need your official concurrence as soon as possible since we are on a tight schedule.

We will continue to work with your staff in providing the required information to the Technical Committee as well as moving the project forward to final design. If you have any questions or need additional information about this project, please contact Mr. Brad Crawford, (6WQ-EC), Project Manager, at the above address or telephone (214) 665-7255 (email: [Crawford.brad@epa.gov](mailto:Crawford.brad@epa.gov)).

Sincerely yours,

A handwritten signature in blue ink, appearing to read "Karen McCormick", written over a circular stamp or seal.

Karen McCormick, Chief  
Marine and Coastal Section (6WQ-EC)  
Water Quality Protection Division

cc: Mr. Brian (Keith) Boeneke, CPRA PM  
Ms. Kodi Guillory, CPRA



# State of Louisiana

**BOBBY JINDAL**  
GOVERNOR

August 19, 2014

Ms. Karen McCormick, Chief  
United States Environmental Protection Agency, Region 6  
Marine & Coastal Section – Water Quality Protection Division  
1445 Ross Avenue, Suite 1200  
Dallas, TX 75202-2733

Re: 30% Design Review  
Bayou Dupont Sediment Delivery – Marsh Creation No. 3 (BA-164)  
Statement of Local Sponsor Concurrence

Dear Ms. McCormick:

The 30% Design Review meeting for the Bayou Dupont Sediment Delivery – Marsh Creation No. 3 (BA-164) project was held on July 24, 2014. Based on our review of the technical information compiled to date, the land ownership investigation, and the preliminary design, the Coastal Protection and Restoration Authority, as the local sponsor, concurs to proceed with the design of BA-164. In accordance with the CWPPRA Project Standard Operating Procedures Manual, we request that you forward this letter of concurrence to the Technical Committee and the Planning and Evaluation Subcommittee and proceed to 95% design level.

Sincerely,

Andrew D. Beall  
Project Management Administrator  
Project Management Division

ADB: BKB

cc: Brad Crawford, U.S. Environmental Protection Agency  
Stuart Brown, Coastal Protection and Restoration Authority  
B. Keith Boeneke, Coastal Protection and Restoration Authority - Contractor

**Bayou Dupont Sediment Delivery – Marsh Creation No. 3 (BA-164)  
Comments Received from 30% Design Review Meeting**

As a result of the 30% Design Review Meeting held on July 24, 2014, several questions were submitted from the participating Federal Agencies. The following is a compilation of all comments received and responses offered by the project team. The comments/responses are grouped according to the agency that submitted them.

**Louisiana Coastal Protection & Restoration Authority (CPRA)**

P. 3 - The data used to calculate the tidal datums (Monitoring Gage BA-03C-CR-61) is 11 to 14 years old. We have three CRMS Stations in the area, with 7+ years of data which I would recommend using.

*Eleven nearby CRMS stations with water level records greater than 6+ years of data have been analyzed to determine MTL, MHW and MLW for each. No significant differences in water levels on the order which would impact BA-164 design were found between these 11 nearby CRMS stations and the original BA-39 water level analysis.*

*More specifically, the BA03C-61 gage was re-analyzed with data from June 22, 1999 thru May 23, 2014. This gage is nearest to the project site, and also has the longest data record of all nearby gages.*

*Results of the analysis are shown in the table below. Even when the raw, (not converted via range-ratio method) values are used, the difference between the original BA-39 water levels and 1999-2014 analysis is no more than approximately 0.25 ft (3 inches).*

*Table 1. BA03C-61 water level datums.*

	<i>Range-Ratio BA-39 2000-2003</i>	<i>Raw 1999-2014</i>	<i>Range-Ratio 1999-2014</i>
<i>MHW [ft NAVD88 GEOID99]</i>	<i>0.87</i>	<i>1.08</i>	<i>0.90</i>
<i>MTL [ft NAVD88 GEOID99]</i>	<i>0.69</i>	<i>0.92</i>	<i>0.76</i>
<i>MLW [ft NAVD88 GEOID99]</i>	<i>0.50</i>	<i>0.77</i>	<i>0.63</i>

P. 3 - CRMS stations in the area have MTLs of +1.17 to +1.39ft NAVD88 compared to +0.69 MTL calculated (and 0.83ft NAVD88 recoded at the subordinate gage) for this project. Is this a Geoid issue? RSLR? Poorly surveyed gages (CRMS or original)?

*These differences are mainly due to the application of the range ratio method which reduces the MTL by about 0.30 ft for the 11 nearby CRMS stations. Also, there are small water level datum differences between the nearby CRMS stations and BA03C-61. Finally, analysis of all currently available data as opposed to the data available during the original analysis will result in slight differences as well.*

*Per CPRA guidance, subsidence for the project site is 3.6mm/yr (0.14 in/yr); this is a total of 2.1 inches from 1999 thru 2014. Over the same time period, eustatic sea level rise is estimated to be .07 inches per CPRA guidelines. Therefore RSLR at the project site from 1999 thru 2014 would be about 2.2 inches or 0.18 ft.*

*Orthometric heights for CRMS water level data are calculated using GEOID 99. The water level calculations are all completed in GEOID 99. Therefore this is not a Geoid issue.*

P. 3 - Range-Ratio - I think that using range-ratio method to relate 14-year-old data to the 19-year epoch using Grand Isle gage is inappropriate. While this method is apparently the standard for coastal engineering, I do not think it is appropriate in Louisiana—or more specifically: when using the NOAA Grand Isle Gage (NOAA #8761724) as the control station. This method of normalizing tidal datums to a 19-year epoch is intended to control for multi-year cycles of high and low water, which we do not see at the GI gage. Water levels at the GI gage have had a steady trend upward of about 9.25mm/year (as measured over the last 70 years). By averaging water levels over 19 years we are underestimating the current water levels. If we are confident that the CRMS gages are properly surveyed, I would recommend using that water level data. Five to seven years of data should be enough to minimize error.

*The 19 year tidal epoch is necessary to account for the approximate 19 year Metonic cycle of the moon. With a project design life of 20 years, it is therefore necessary to account for deviations in water levels due to this 19 year cycle. While the effects of the 19 year Metonic cycle at Grand Isle are not as severe as at other locations in the United States, the use of a low-pass filter on Grand Isle water level data reveals that time scale fluctuations on the order of years do indeed exist. Also, as only 3 years of the BA03C-61 water level data was used in the original BA-39 water level calculations, it was appropriate that the BA-39 water levels were modified using the range-ratio method with tidal epoch data from the Grand Isle gage to account for long time-scale fluctuations in water levels. The project team will continue to use the range-ratio method to account for long time-scale fluctuations in water level.*

*Further, as shown above in Table 1 the analysis of nearby CRMS stations with recent data suggest that the difference between converting water levels with the range-ratio method and not converting yields only a difference of +0.3 ft, or 3.6 inches. Therefore any differences resulting from the prediction of water levels that is mentioned is minimal and should not affect project design.*

P. 5 - Average Marsh Elevations ~0.2-0.55 are significantly lower than CRMS Marsh Surveys (~1.2ft) in the area. Is this a Geoid issue? CRMS marsh data is in GEOID 99.

*Marsh elevations are provided in GEOID 03. 1.2 ft (GEOID99) is equal to 1.2 ft – 0.54 ft = 0.66 ft (GEOID 03) at the project site, which is in-line with reported average marsh elevations.*

P. 11 – Marsh Fill Settlement Analysis - In addition to considering the E&D level geotech analysis from BA-39, was observed settlement data for BA-39 considered? The project was constructed 4 years ago, and we have as-builts and at least 1 monitoring report. Anecdotally, I have heard that

there was less (possibly much less) settlement than the geotech analysis predicted. I believe this is what led the engineering workgroup to assume no settlement in the Phase 0 cost estimate.

*Data from settlement plates and data gathered as part of BA-39 project was provided to the project geotechnical engineers and accounted for in the design process. Final geotechnical evaluation of settlement rates will be incorporated in the 95% design.*

P. 13 - We need to make sure that we are consistent in the datums and geoids that we are using. For example, BA-39's target elevation was based on a Datum and Geoid in which surveyed marsh elevations were about +1.3. This project is being designed in a datum and geoid in which marsh elevations are + 0.4 ft. I'm not sure what the discrepancy is, but we need to be careful when we are pulling information from previous design reports.

*Agreed care has been taken to insure consistency. Orthometric heights for the 95% design report will be consistent and clearly referenced to the same geoid.*

P. 13 – Will there be any consideration given to relative sea level rise in the 95% design?

*Yes, RSLR will be addressed in the 95% design report.*

P. 31 - “The hopper dredge will transport and place the fill material at the Alliance Anchorage borrow site where it will be hydraulically dredged and pumped to the three marsh creation areas” How will this be placed in the Alliance Borrow area? I assume they would have to pump out of the hopper dredge or barge.

*Any material dredged by hopper will be placed at the Alliance Anchorage from where it will be hydraulically dredged into the pipeline delivery system. The hopper dredge will simply open its doors to deposit sediment in the Alliance Anchorage borrow area. While pump out of the hopper dredge is a possible option, it is currently envisioned that the hopper dredge will simply be used to refill the Alliance Borrow area.*

### **National Marine Fisheries Service (NMFS)**

NMFS recognizes the importance of using riverine sediments as a source of marsh creation work, as evidenced by our support of work in this area through the funding of additional work adjacent to BA-39 and sponsoring of BA-48 and coordination with the Long Distance Sediment Pipeline corridor project (LDSP). Having been through that process, we recognize first hand some of the sequencing challenges of these projects, particularly with availability of borrow areas.

NMFS has the following specific observations or recommendations for future work on this project:

1. There is some difficulty in judging the likelihood of various project alternatives as they will be dependent on other factors. It may be best to propose an option that is more feasible and within the funding bounds of CWPPRA such that it could be compared with other projects. From the information provided, NMFS felt that Option 3 or 4 (cell A and alternative) fell within likely funding limits and also seemed more technical feasible with the information provided to date.

Figure 10-1 could benefit from having the green outline and white box identified if they are meant to represent the cone of influence from the Mid-Barataria Diversion. Were any assumptions made in the orientation of the revised cells B and C – are they proposed to provide some benefit to guiding the sediments expected from the future diversion? Geotechnical data appears to show that increasing distance from Bayou Dupont results in less conducive site conditions. Future efforts may benefit from focusing closer to Bayou Dupont and/or the LDSP corridor.

*Comments are noted. Producing a cost effective marsh creation project is certainly the goal. The revision of cells B and C was to accommodate the proposed path and “cone of influence” of the Mid-Barataria Diversion. While intended to be out of the direct influence of the diversion the marsh creation areas could potentially aid in the guiding of flow and sediment into the basin. Revised cells B and C will be further reviewed with the current geotechnical analysis as part of the 95% design.*

2. Borrow source material availability will be one of the largest challenges in scoping for this project. Infill may vary annually and delays in proceeding with BA-48 and LDSP are influencing data collection regarding infilling rates post construction. Would the use of hopper dredges in this location of the river propose any additional restrictions and has the US Army Corps of Engineers or the navigation industry been consulted about the potential use of hopper dredges?

*Borrow site availability and the timing of other projects is important consideration in the construction of this project. The proposal of multiple possible borrow areas in the 30% design is intended to address the need for flexibility to accommodate varying demands on the borrow material resources and contractor bid preferences. As with all projects within the river, close coordination is required with the navigation industry and this would be started early in the permitting process.*

3. According to the site specific settlement curve (provided post meeting) there may be a delayed function and credit under V1 in regards to performance at the fill elevation +3.0 +/- 0.5 ft. This is especially a concern with river sand and low settlement. The project should not receive credit under the WVA until the curve falls within the upper limit of intertidal range. This may also need to be reflected in V6 (as seen with Madison Bay last year).

*Comment is noted.*

4. Dike gapping is mentioned with respect to the BA-39 and BA-48 projects. As a matter for cost estimation and future operations and maintenance budgeting, NMFS generally requests containment dikes be gapped no later than three years post fill placement on all projects. A gapping plan is encouraged to be developed to allow intertidal exchange with the created marsh surface, to encourage development of creeks and ponds, and to allow fisheries access. As there are site-specific conditions that will determine the nature and timing of dike gapping, we have no firm recommendations at this point but encourage you to work with NMFS in developing and reviewing gapping plans.

*Comment is noted. The project team intends to closely examine containment dike heights and gapping as part of the 95% design. NMFS input is welcome.*

## **United States Army Corps of Engineers (USACE)**

### Operations Division

The project must adhere to the same special conditions as previously included in the Long Distance Sediment Pipeline and Bayou Dupont BA-48 project permits for use of the Alliance Anchorage Borrow Area (Saltwater Barrier Sill Primary Borrow Area #1). These permit conditions are as follows:

- a. The borrow site (Alliance Anchorage Borrow Area), identified for use on this project, is the saltwater barrier sill's primary Borrow Area #1, (Mississippi River Mile 63.8 to Mile 65 AHP). The project, shall in no way adversely affect the cost, time, end schedule of the planning and/or construction of the saltwater barrier sill by the USACE.
- b. Within the Alliance Anchorage Borrow area, 500,000 cubic yards (cy) above elevation -70 NGVD, must always be available. A reserve area for this material has been designated and the reserve quantity must be located within the boundaries shown on the enclosed (Mississippi River Hydrographic Survey Saltwater Sill Borrow Area Borrow Area #1 map), as Attachment 1.
- c. While this project is on-going, the permittee must be aware that the USACE may issue a contract to build the sill. If USACE issues a sill solicitation, the permittee shall allow its contractor to bid on the sill contract. If the permittee's contractor is awarded the sill contract, then the permittee shall release the contractor for the time required to build the sill. If the permittee's contractor chooses not to bid on the sill contract or another contractor is awarded the sill contract, the permittee's contractor shall suspend operations and move off site so as not to interfere with or delay the USACE notice to proceed or the sill contractor's work.
- d. Until the Alliance Anchorage Borrow Area is naturally restored from the effects of this permit, any additional costs associated with USACE's construction of the sill shall be borne by the permittee. These additional costs could occur after this permit has expired. These additional costs will be calculated by the USACE. The permittee will provide funds prior to USACE opening bids for the saltwater barrier sill contract.
- e. The permittee shall submit for approval a detailed dredging plan for the Alliance Anchorage Borrow Area. The plan shall be submitted at least 30 days prior to the scheduled commencement of work in the site and shall include hydrographic surveys of the borrow area with plans for dredging; thereby identifying the material to be removed and the 500,000 cy reserved area (material to be reserved above elevation -70 NGVD). USACE must approve the dredging plan prior to the commencement of permittee's work. The surveys and plans shall be updated every 30 days until project completion. All updated plans must also be approved before the permittee can

implement the updated plan. The surveys and dredging plan shall be submitted in electronic format and hardcopy to the USACE Mississippi River Operations Manager.

f. All operations shall not interfere with Mississippi River navigation and be coordinated with the US Coast Guard.

g. The Wills Point borrow area, identified for use on this project, is adjacent to and shares a boundary with the USACE Saltwater Barrier Sill's primary borrow area #2, (Mississippi River Mile 67.0 to Mile 67.4 AHP).

h. All material in the Saltwater Barrier Sill borrow area #2 must always be available for emergency construction of the Saltwater Barrier Sill. The permittee shall submit for approval a detailed dredging plan for the Wills Point borrow area. The plan must include provisions for ensuring that material in the Saltwater Barrier Sill's primary borrow area #2 remains undisturbed. The plan shall be submitted at least 30 days prior to the scheduled commencement of work in the site and shall include hydrographic surveys covering both the Wills Point borrow area and the Saltwater Barrier Sill borrow area #2. USACE must approve the dredging plan prior to the commencement of permittee's work. The surveys and plans shall be updated every 30 days until project completion. All updated plans must also be approved before the permittee can implement the updated plan. The surveys and dredging plan shall be submitted in electronic format and hardcopy to the USACE Mississippi River Operations Manager.

*All conditions outlined above (a-h) are understood by the project team.*

### **United States Fish & Wildlife Service (USFWS)**

1) Tides and Water Levels - More consideration should be given to utilizing CRMS data to determine an intertidal range for the project area. Several CRMS stations near the project site now have 6-8 years of continuous hydrologic data. The 0.37 ft intertidal range calculated for the project area seems small for an open system in this area of the coast. The 2013 90% and 10% water level values for four nearby CRMS stations range from 1.8-2.0 ft for the 90% water level and from 0.6 to 0.9 ft for the 10% water level. Those values should be somewhat comparable to MHW and MLW values.

If a greater intertidal range does exist at the project site, it allows for a greater range of acceptable marsh platform elevations and consideration of functional marsh over a greater period of time (per the geotechnical settlement analysis).

*The previous water level analysis has been checked, 11 nearby CRMS stations as well as more recent data for BA03C-61 have also been analyzed. The range of intertidal ranges for the 11 CRMS stations is from 0.16 ft to 0.53 ft. Therefore the calculated intertidal range of 0.37 ft at BA03C-61 is in-line with nearby CRMS gages.*

2) Geotechnical Evaluation - The information provided is inadequate to evaluate the performance of marsh creation in each of the fill cells for the designated fill elevations. Although geotechnical data was collected in all 3 marsh creation cells, a settlement curve was only provided for Cell A

and was not provided in advance of the 30% design meeting. As indicated in the CWPPRA SOP, and typically required by CPRA for 30% design review meetings, a full geotechnical analysis should be provided.

In addition, it is not clear if the settlement curve provided for Fill Area A is a composite curve for all borings or for only one boring location.

*The 30% design used extensive geotechnical information from recent project in the direct area (BA-39, BA-48, BA-43 EB) as well as the preliminary project specific geotechnical information provided at the meeting. A full geotechnical analysis will be provided in the 95% design report.*

3) Construction Cost Estimate - This is another piece of information that was not provided in advance of the 30% design review meeting. However, it was provided a few days after the meeting.

A 25% construction contingency appears to be standard for projects at the 30% design level. It is recommended that a 25% contingency be applied to Options 1 and 2. Although there is previous construction experience in the area, Options 1 and 2 involve dredging from multiple borrow sites and the use of hopper dredging (Option 1) which have not been part of previous construction in the area. It may be appropriate to use a 15% contingency for Option 3 as there is the potential to use the current mobilization for the LDSP/BA-48 project. Even though the intent is to add Option 4 to the existing LDSP/BA-48 contract, a small contingency should be applied. A 5% contingency is recommended for Option 4.

*Comment is noted. The cost estimate was provided to the CWPPRA team outside of the public meeting so as to keep the details of the cost estimate private as has been done on many past projects. The contingencies used are felt appropriate for the level of design already completed and the knowledge of past and recent bids in the area. The cost estimate will be refined as part of the 95% design.*

**Enclosure IV – 95% Design Comments and Responses and 95%  
Concurrence Letter**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS TX 75202-2733

November 6, 2014

Mr. Andrew D. Beall, Administrator  
Project Management Division  
Coastal Protection and Restoration Authority of Louisiana  
PO Box 44027  
Capital Station  
Baton Rouge, Louisiana 70804-4027

RE: Bayou Dupont Sediment Delivery – Marsh Creation #3 (BA-164)  
95% Engineering and Design Review

Dear Mr. Beall:

As you are aware, on October 30, 2014, we held the 95% Engineering and Design (E&D) review meeting as required by the Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA) Standard Operating Procedures (SOP) for the referenced project. While there were only a few comments noted as a result of that effort, we are confident that the project is still viable and recommend that the project move forward and request construction funding.

Per Section 6.(h)1 of the CWPPRA SOP, the Local Sponsor will prepare a letter of concurrence to the Technical Committee and Planning and Evaluation subcommittee as to the results of the 95% E&D review. If you can provide us the letter, we can include it along with the change in scope and phase 2 requests that are currently being prepared for this project.

We will continue to work with your staff in providing the required information to the Technical Committee as well as moving the project forward to final design and construction. If you have any questions or need additional information about this project, please contact Mr. Brad Crawford, (6WQ-EC), Project Manager, at the above address or telephone (214) 665-7255 (email: [Crawford.brad@epa.gov](mailto:Crawford.brad@epa.gov)).

Sincerely yours,

A handwritten signature in black ink, appearing to read "Karen McCormick", written over a circular stamp or seal.

Karen McCormick, Chief  
Marine and Coastal Section (6WQ-EC)  
Water Quality Protection Division

cc: Mr. Brian (Keith) Boeneke, CPRA PM  
Ms. Kodi Guillory, CPRA



# State of Louisiana

**BOBBY JINDAL**  
GOVERNOR

November 6, 2014

Ms. Karen McCormick, Chief  
United States Environmental Protection Agency, Region 6  
Marine & Coastal Section – Water Quality Protection Division  
1445 Ross Avenue, Suite 1200  
Dallas, TX 75202-2733

Re: 95% Design Review- Concurrence for Phase II Funding Request  
Bayou Dupont Sediment Delivery – Marsh Creation No. 3 (BA-164)  
Statement of Local Sponsor Concurrence

Dear Ms. McCormick:

The 95% Design Review meeting for the Bayou Dupont Sediment Delivery – Marsh Creation No. 3 (BA-164) project was held on October 30, 2014. Based on our review of the technical information compiled to date, the land ownership investigation, and the final designs, the Coastal Protection and Restoration Authority, as the local sponsor, concur to proceed with requesting Phase II construction funding for the project. In accordance with the CWPPRA Project Standard Operating Procedures Manual, we request that you forward this letter of concurrence to the Technical Committee and the Planning and Evaluation Subcommittee.

Sincerely,

Andrew D. Beall  
Project Management Administrator  
Project Management Division

ADB: BKB

cc: Brad Crawford, U.S. Environmental Protection Agency  
Stuart Brown, Coastal Protection and Restoration Authority  
B. Keith Boeneke, Coastal Protection and Restoration Authority - Contractor

**Bayou Dupont Sediment Delivery – Marsh Creation No. 3 (BA-164)**  
**Comments Received from 95% Design Review Meeting**

As a result of the 95% Design Review Meeting held on October 30, 2014, questions were submitted from the participating Federal Agencies. The following is a compilation of all comments received and responses offered by the project team. The comments/responses are grouped according to the agency that submitted them.

**United States Fish & Wildlife Service (USFWS)**

- 1) Table 4-1 on page 16 indicates a Year 20 marsh fill surface elevation of 0.7 ft. for a fill height of +2.5 ft. for Area A. Section 4.5, page 17, indicates a Year 20 marsh fill surface elevation of 0.82 ft. Paragraph 2 on page 25 indicates a Year 20 elevation of 0.8 ft. Please clarify.
  - a. The discrepancies have been addressed. The marsh elevation is expected to settle from 2.5 feet to 0.82 feet at year 20. Edits will be addressed in the report.
  
- 2) At the 30% design level, marsh creation was proposed in Areas B and C. The 95% design report indicates on page 37 "As the geotechnical data was more favorable in Area A than B and C, the decision was made to construct earthen terraces in Areas B and C." However, the settlement curves for Areas B and C (Figures D-5 and D-6 in the geotech report) indicate that intertidal marsh elevations can be created in Areas B and C using the same construction fill height as that proposed for Area A. By Year 20, marsh platform elevations in Areas A, B, and C all range from approximately 0.6 ft. to 0.8 ft. and fall within the projected intertidal range.

Based on the discussion at the 95% design review meeting, it appears that terraces are now proposed for Areas B and C to reduce project costs and not due to poor geotechnical conditions. Settlement curves for Areas B and C should be included in the main body of the final 95% design report and the report should be revised to reflect that terraces are now proposed in order to reduce project costs and not because of poor geotechnical conditions.

- a. A modification to the approved project was necessary to present a project which fits within the CWPPRA Program.

## **Enclosure V – Draft Environmental Assessment**

**DRAFT**

**ENVIRONMENTAL ASSESSMENT**

**Bayou Dupont Sediment Delivery Marsh Creation #3 and Terracing**

**CWPPRA PROJECT BA-164**

**Jefferson and Plaquemines Parishes Parish, Louisiana**

**Prepared by: The U.S. Environmental Protection Agency, Region 6**

**November 20, 2014**



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## **Part 1. Purpose and Need for Proposed Action**

### **1.0 Introduction**

Coastal land loss in Louisiana has proceeded at catastrophic rates for many decades and may represent 90 percent of the coastal wetland loss in the lower 48 states (Dahl 2000). The land area loss rate in coastal Louisiana was approximately 17 square miles per year from 1985 to 2010. Some 1,883 square miles were lost from 1932 to 2010 (Couvillion et al., 2011). The causes of wetland loss in Louisiana are varied and complex and include subsidence, erosion, sediment deprivation, saltwater intrusion, altered hydrology, and sea level rise (Turner and Cahoon 1987, Turner 1990). The effects of natural processes like subsidence and storms have combined with human actions at large and small scales to produce a system on the verge of collapse (Coast 2050 Report).

Congress recognized the ongoing severe coastal wetland losses in Louisiana and the increasing impacts on resources when it passed the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) in 1990 (Public Law 101-646, Title III). CWPPRA established a process to identify, assess, design, and fund the construction of coastal wetland restoration projects. CWPPRA seeks to provide long-term conservation of coastal wetlands through the restoration, creation, protection, and enhancement of wetlands. On a yearly cycle, projects are selected from a list of projects (“priority project lists” or PPLs) for funding engineering, and design.

CWPPRA identified five federal agencies as Task Force members to participate in the program. These include the U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS) and the Natural Resource Conservation Service (NRCS). The other partner is the Coastal Protection and Restoration Authority of Louisiana (CPRA), which participates in CWPPRA project selection, planning, analysis, implementation and funding.

The EPA is the federal sponsor for the BA-164 Bayou Dupont Sediment Delivery Marsh Creation #3 and Terracing project (BA-164) and is responsible for oversight of the project, in partnership with the CPRA. The proposed BA-164 project was approved for engineering and design on the 22nd Priority Project List of the CWPPRA. Construction authorization is contingent on several factors including: compliance with appropriate environmental laws and regulations; complete project plans and specifications; and, availability of funding. Under CWPPRA, the project is cost-shared between the federal sponsoring agency and the State of Louisiana.

Project BA-164 is located in CWPPRA Region 2, Barataria Basin, Jefferson and Plaquemines Parishes. The general project area is about 10 miles south of Belle Chasse, LA, west of LA Hwy 23, and north of the Myrtle Grove Marina. The project is immediately adjacent to the completed CWPPRA Mississippi River Sediment Delivery System – Bayou Dupont (BA-39) project, and approximately 3.7 miles northwest of Myrtle Grove. The proposed sediment borrow site is located west of the Mississippi River navigation canal between river miles 63.4 and 65.0.

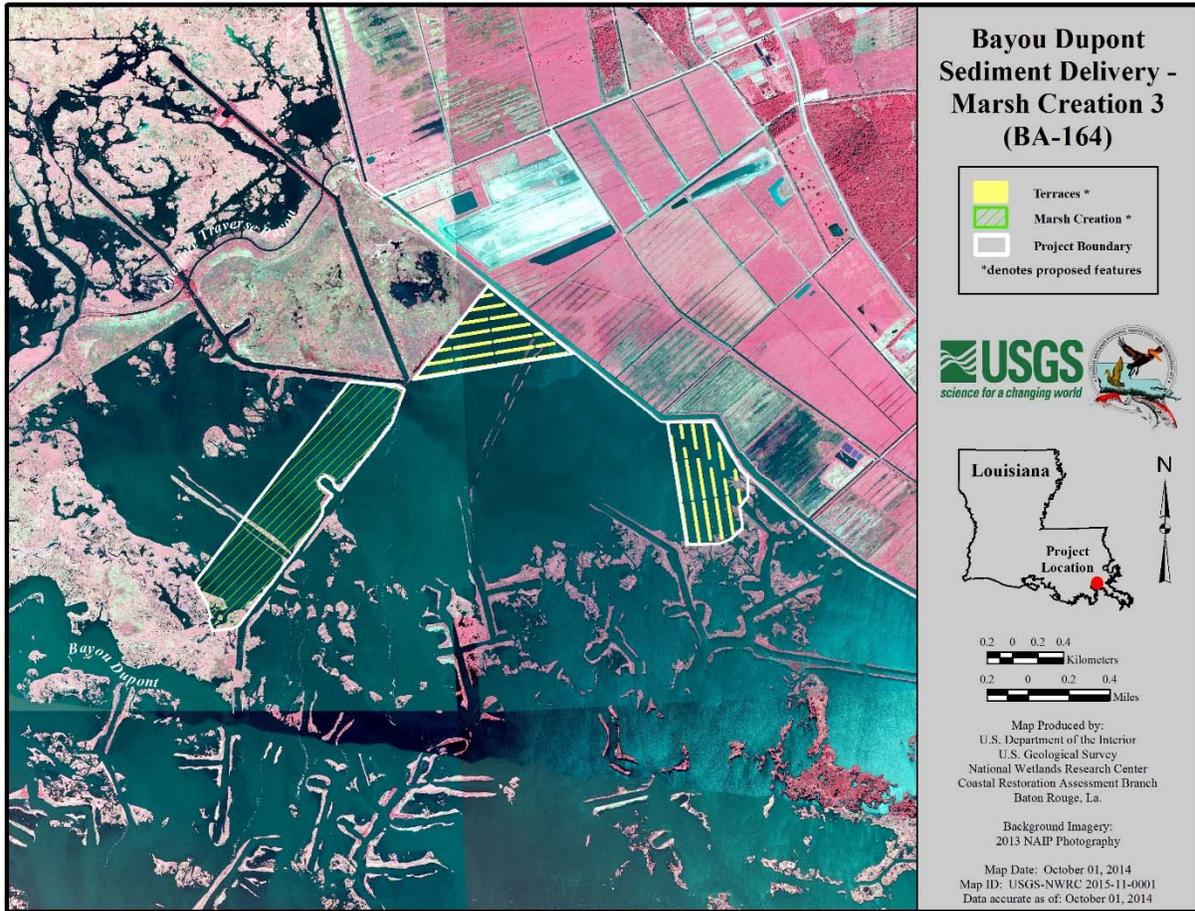


Figure 1 Project Map and Location showing proposed marsh creation area and terracing areas.

## 1.2 Purpose and Need for Proposed Action

The wetlands in the Barataria Basin provide a wide range of valuable functions that benefit the human environment. The wetlands buffer against storm surges, protecting coastal communities, as well as capture nutrients and improve water quality. Wetlands also serve as vital habitat and nurseries for fish and wildlife species. Louisiana wetlands are within the Mississippi flyway, a bird migration route, and serve as wintering habitat for migratory waterfowl. Louisiana's coastal marshes provide wintering and migration habitat for two-thirds of the Mississippi Flyway waterfowl population (LDWF, 2014).

Historically, the wetlands in the Barataria Basin were nourished by the fresh water, sediment and nutrients delivered by the Mississippi River and the many distributary channels. Anthropogenic activities, such as flood protection levee construction, have cut off fresh water and sediments from the Mississippi River. Oil and gas exploration and extraction activities in the area contributed significantly to wetland losses. Additionally, the closure of Bayou Lafourche has also prevented further inflow from the Mississippi River and exacerbated the emergent marsh loss conditions within the Barataria Basin. Data suggest that from 1932 to 1990, the basin lost over 245,000 acres of marsh, and from 1978 to 1990, this area has experienced the highest rate of

wetland loss along the entire coast. Since 1932, the Barataria Basin has lost almost 17 percent of its land area (Dunbar et al. 1992). Annual wetland loss estimates in Barataria Basin range between 5,200 (Dunbar et al. 1992) and 7,100 (Barras et al. 1994) acres per year. At this rate, Barataria Basin will lose up to 142,340 acres of land during the next 20 years, representing a loss greater than any other basin in Louisiana's coastal zone.

To calculate the background land loss rate specific to the project area, the CWPPRA Environmental Workgroup delineated an extended project boundary. Land water data from 1985 to 2011 was used to determine the historical loss rate. The loss rate is determined by plotting the percent of land present within the extended project boundary over time. A linear regression is created with the data and the slope of this line is the annual percent land loss rate (Fig. 2). A land loss rate of -1.16 percent per year was estimated (USGS 2012).

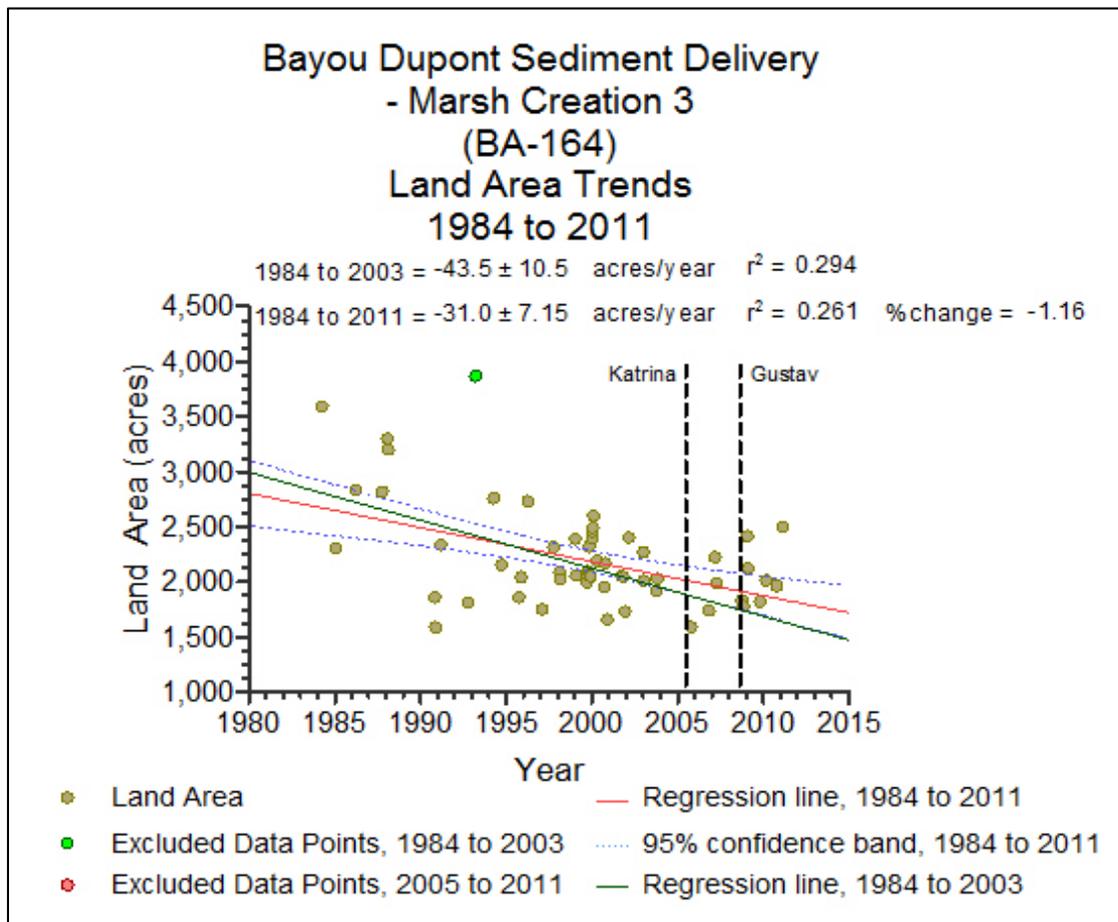


Figure 2 shows Land Area Trends with a land loss rate of 1.16% a year.

Sediment replenishment projects restore and protect the Louisiana coastal landscape. The Bayou Dupont BA-164 project will use sediment hydraulically dredged from the Mississippi River to build a 252-acre marsh platform in an area that lies within a rapidly eroding and subsiding section of the Barataria Landbridge. Two terrace fields, each containing 18 earthen terraces, will also be constructed in the area using sediment dredged from within the project area. The BA-164 project will demonstrate the practice of using Mississippi River sediment as a resource in the

restoration of marsh communities by transporting the sediment by pipeline. Other wetland restoration projects, including sediment delivery and river diversions in the vicinity, could benefit significantly through the restoration efforts of this project. The proposed project will continue a gradual process of re-creating marsh in an area that has experienced a high rate of wetland loss, as demonstrated by the adjacent CWPPRA project Bayou Dupont Sediment Delivery System, BA-39 (326 acres), completed in 2009.

The primary goals of this project are; 1) Restore marsh habitat in the open water areas via marsh creation and terracing and 2) reduce fetch and wave energy in open water areas via the construction of terraces. Specific goals of the project are:

- 1) Create approximately 252 acres of marsh with dredged material from the Mississippi River.
- 2) Create 26,379 linear feet (22.6 acres) of terraces.

The three areas that compose the BA-164 project area are located on the west bank of the Mississippi River in Jefferson and Plaquemines Parishes, west-northwest of the town of Myrtle Grove, Louisiana (Figure 1 and Figure 3). The project area is situated between the Plaquemines Parish flood protection levee and Bayou Dupont. The northern boundary of the marsh creation area and the northwest boundary of the northernmost terrace area are directly adjacent to the Mississippi River Sediment Delivery System–Bayou Dupont (BA-39) marsh creation project (Figure 3). These two areas are also located within the project boundary for Naomi Outfall Management (BA-03c).

### **1.3 Coordination and Consultation**

Coordination has been maintained with each of the CWPPRA Task Force agencies, the Louisiana Department of Natural Resources (LDNR), and the Louisiana Coastal Protection and Restoration Authority (CPRA). Consultation has been conducted with the USFWS and Louisiana Department of Wildlife and Fisheries (LDWF), in accordance with the Endangered Species Act of 1973 and the Fish and Wildlife Coordination Act. The EA has been prepared in coordination with NMFS in determining categories of Essential Fish Habitat (EFH) and associated fisheries species within the project vicinity. Submittal of the EA is provided to initiate formal federal consultation requirements pertaining to EFH under the MSFCMA. Federal, State, Tribal and local agencies, as well as other interested stakeholders, will receive a copy of this EA. Consultation has also been conducted with the State Historic Preservation Office (SHPO) in accordance with the National Historic Preservation Act of 1966, and Archaeological and Historic Preservation Act of 1974. Responses from the respective agencies with regard to the proposed action are included in Part 6.0, Appendix A.

Under the development of PPL 22, the public and parish representatives, along with state and federal agencies, met at four regional coastal meetings in early 2012 to nominate projects across the nine identified hydrologic basins. Ten candidate projects were selected from the list of nominees at the Technical Committee meeting on April 12, 2012. These PPL 22 candidate projects were evaluated to determine the long-term net wetlands benefits based on a 20-year project life. The candidate projects were also evaluated to determine conceptual project designs and cost estimates. Economic analyses were conducted to determine the total fully funded cost estimate for feasibility planning, construction, and 20 years of operations and maintenance. Cost-

effectiveness was calculated for each project using the fully funded cost estimate and net wetland benefits over the 20-year project life. At the end of the PPL 22 development process the Task Force authorized the BA-164 project (Louisiana Coastal Wetlands Conservation and Restoration Task Force 2013, 22nd Priority Project List Report, October 2013). A 95 percent Engineering and Design Review meeting was held on October 30, 2014. Approval of construction funding will be requested of the CWPPRA Task Force in January 2015.

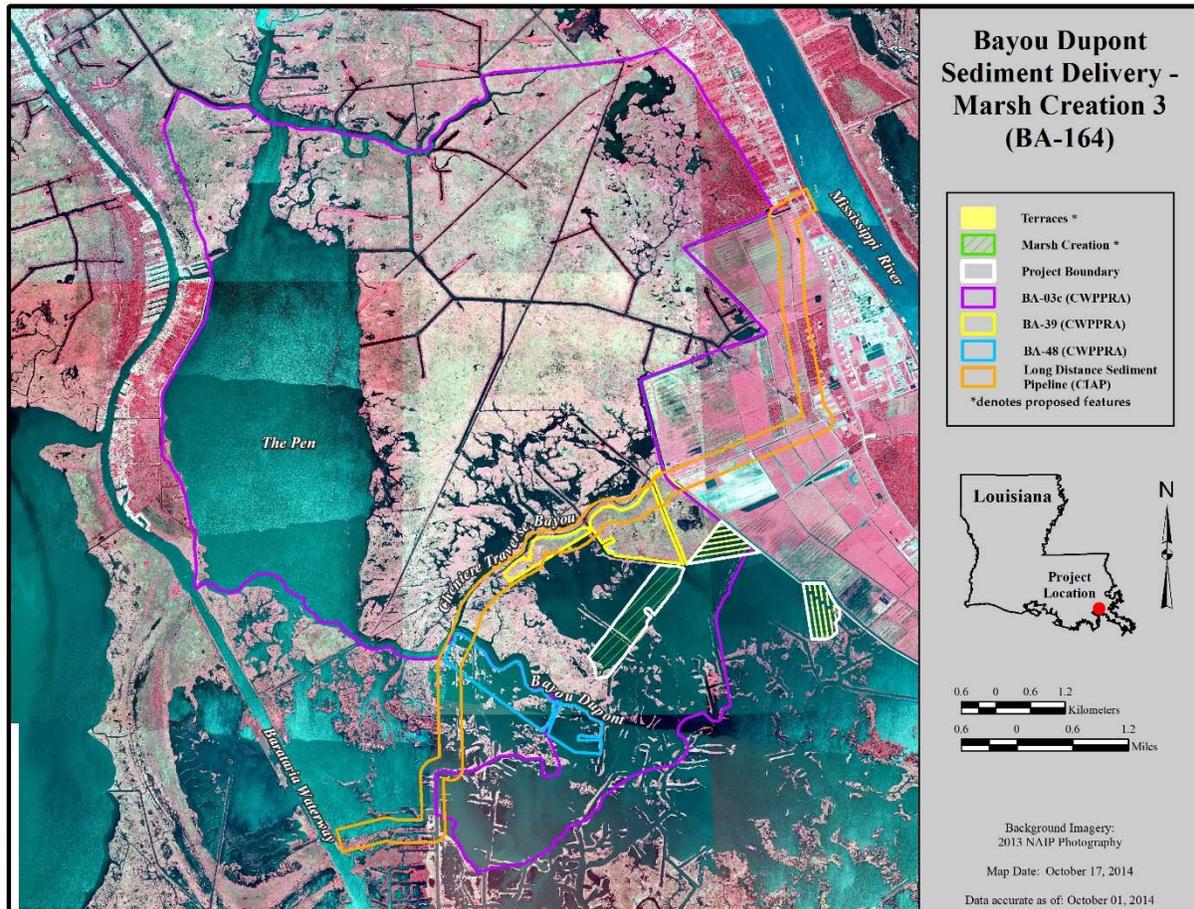
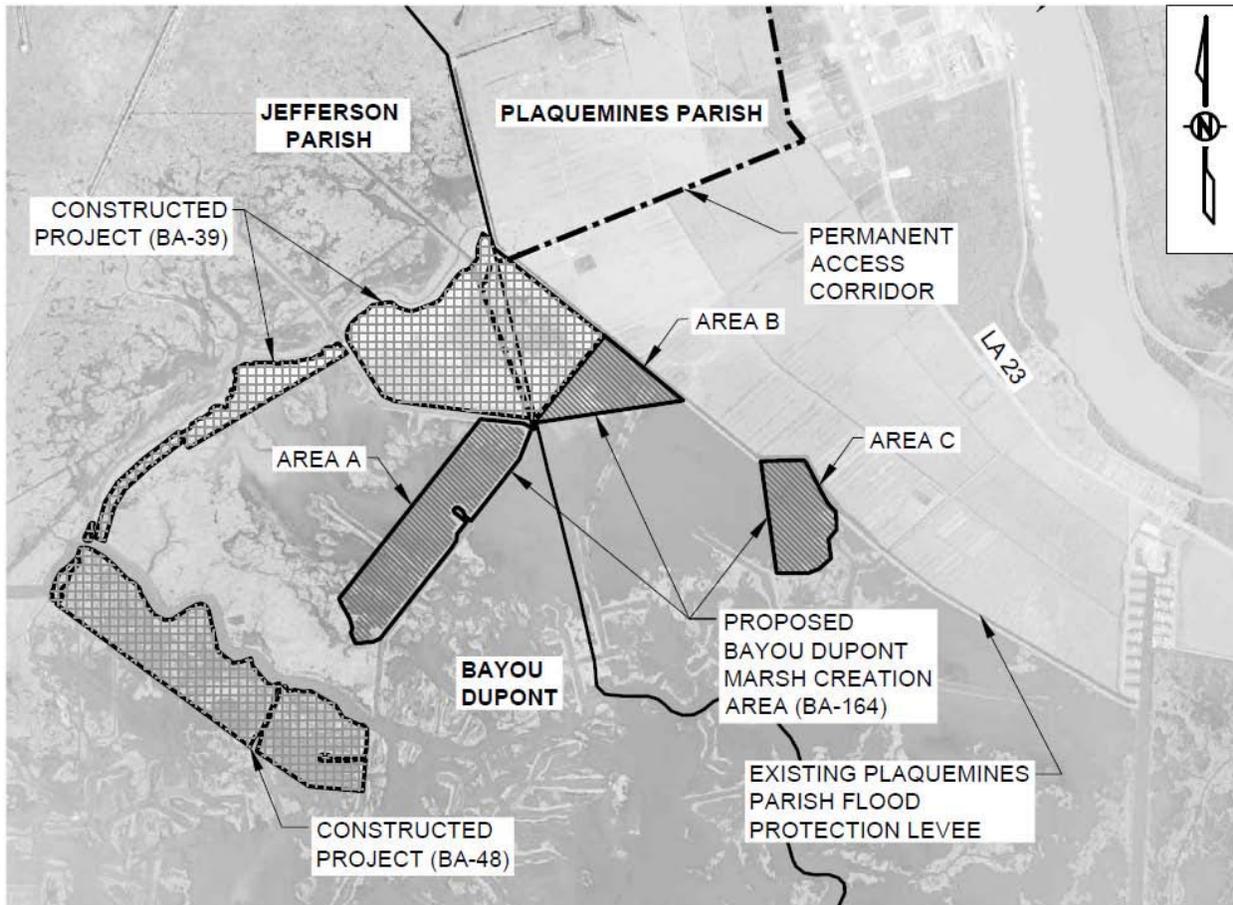


Figure 3: Aerial Map showing proposed BA-164 and adjacent projects, including the Naomi Outfall (BA-03c) area of influence.

## Part 2.0 Proposed Action and Alternatives

The project area targeted for BA-164 restoration is a portion of the “Large-Scale Barataria Marsh Creation-Component E” (002.MC.05e), as identified in the Louisiana’s Comprehensive Master Plan (MP) for a Sustainable Coast. The BA-164 project is a continuation of the Bayou Dupont Sediment Delivery System (BA-39) marsh creation constructed under CWPPRA in 2009-2010. The project concept includes utilizing the pipeline corridor from the Mississippi River to the marsh that was originally developed for BA-39 and is currently being utilized for the construction of the Long Distance Sediment Pipeline (LDSP) project currently under construction (Figure 3). The BA-164 project footprint was modified slightly from the original project to avoid the outfall area of the proposed Mid-Barataria Diversion (002.DI.03), also listed

in the MP, which included splitting the easternmost marsh creation area (Plaquemines Parish) into two areas.



**Figure 4: Proposed project BA-164's areas augment constructed projects BA-39 and BA-48.**

## 2.1 Design Alternatives – Marsh Creation Area A and Terrace Areas B and C

No-Action Alternative 1. Under this alternative, no action would be taken to create marsh or terraces in the shallow open water within the project area. The shallow open water conditions resulting from past marsh loss would persist, and no storm buffering or ecosystem stabilizing effects would be added to Barataria Basin. Coastal land loss in the Basin would continue.

Preferred Action Alternative 2 - Creation of One Marsh Area (252 Acres) Using Renewable Sediment Resources and 26,379 LF of Terraces. The BA-164 project will demonstrate the feasibility of using renewable sediment sources through the creation of one marsh area, (area A) and two terrace areas (areas B and C). A hydraulic cutter-head dredge is to be used to excavate an estimated 2,828,024 yd<sup>3</sup> of sediment to be obtained from the Alliance Borrow Area, located west of the Mississippi River navigation channel, between river miles 63.8 and 65.2 (Fig. 5). Mississippi River sediment would be transported via pipeline to the project area using the alignment described in Section 2.2 (See Fig. 5). The marsh creation area Area A will be filled to an elevation of +2.5 feet NAVD88, with a maximum vertical elevation tolerance of ± 0.5 feet.

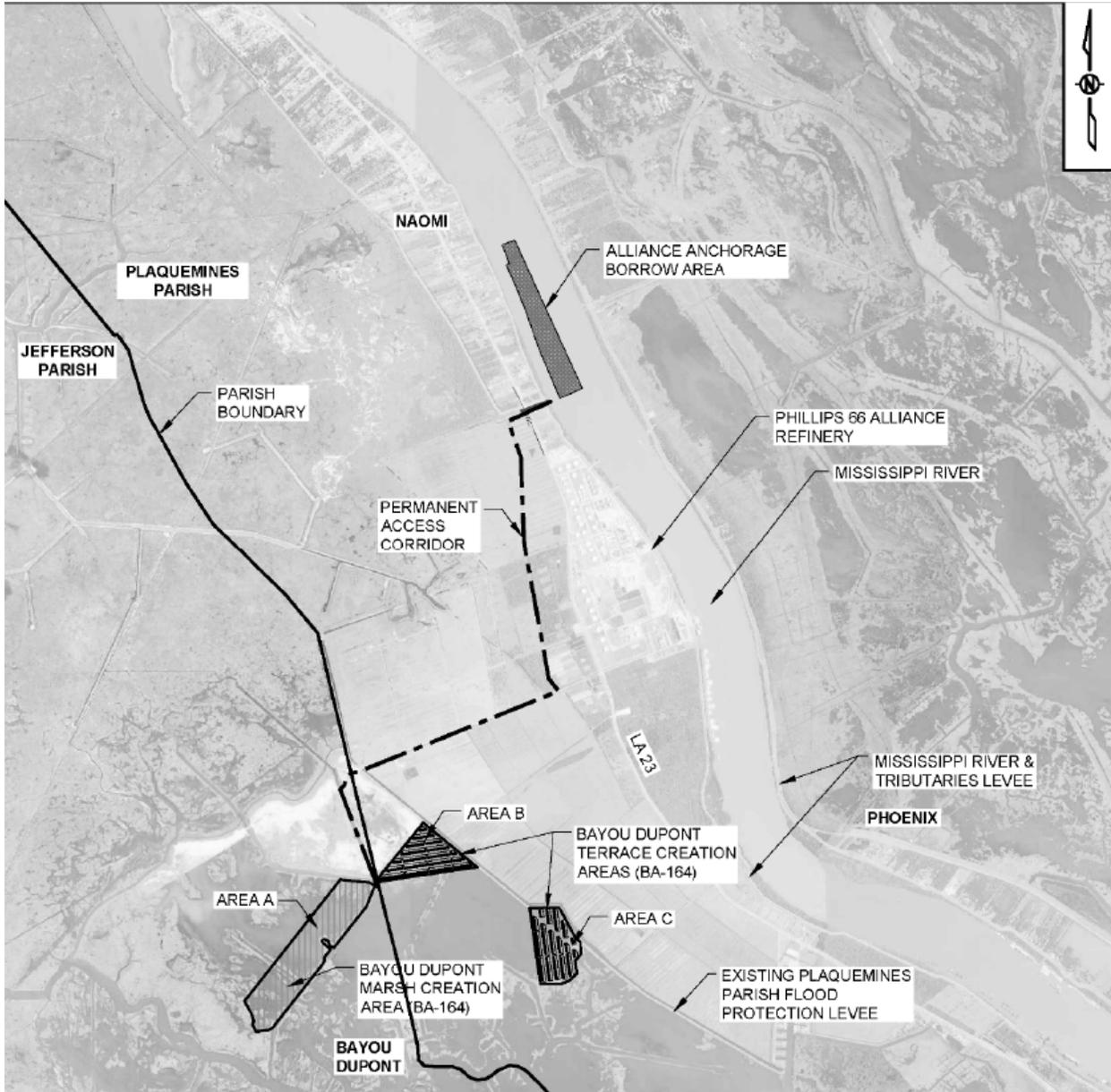
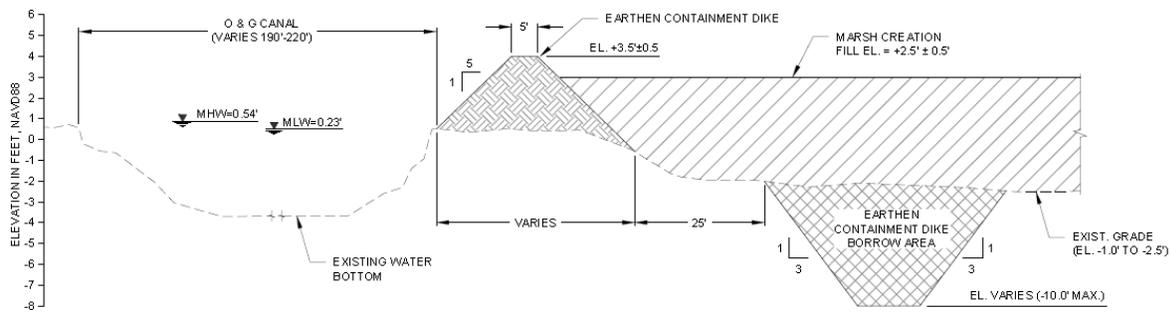


Figure 5 Project area detail showing borrow sites, pipelines, terrace creation and marsh creation areas.

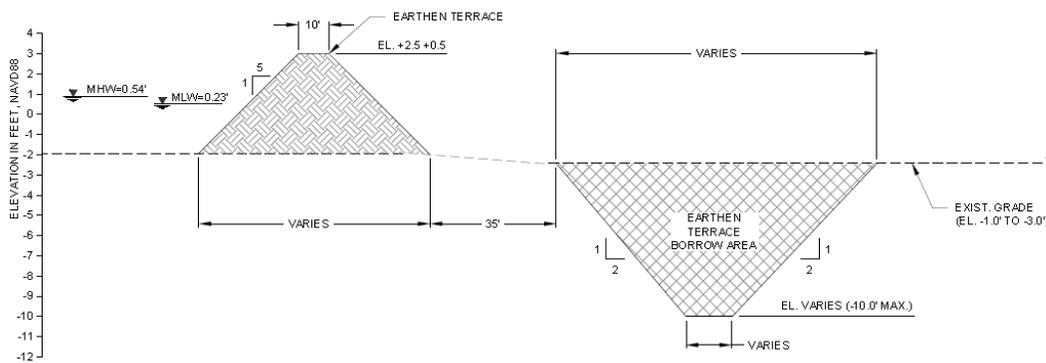
Approximately 18,534 linear feet of new containment dikes will be constructed around the perimeter of marsh creation Area A. Figure 6 illustrates the typical cross-sectional design of the containment dikes.



12  
23 AREA 'A' EARTHEN CONTAINMENT DIKE TYPICAL SECTION

Figure 6 Containment Dike Typical Section

The primary goals of this project also include the construction of earthen terraces in Areas B and C in locations as shown in Figure 5. A total of 36 terraces would be constructed (18 in each of the two areas) with a base of 60 feet and a crown of 10 feet. The terraces will be constructed using a marsh buggy excavator or a bucket dredge. Also, there is a pipeline which runs through each of Areas B and C, and the terraces were delineated such that no borrow area is within 50 feet of any pipeline. Figure 7 illustrates the typical cross-sectional design of the terraces.



13 AREA 'B' AND AREA 'C' EARTHEN TERRACE TYPICAL SECTION

Figure 7 Terrace Typical Section

The earthen terrace design has three basic components:

- The spatial delineation within each area;
- The terrace design elevation; and,
- Analysis of slope stability.

Area B covers 103 total acres with approximately 11.6 acres of earthen terraces. There are a total of 18 terraces covering a total length of 13,554 feet. The fill volume is estimated to be approximately 72,000 cubic yards (CY) with a cut volume of approximately 180,000 CY. Area C covers an additional 113 acres. The terrace acreage is approximately 11.0 acres. There are 18 terraces with a total length of approximately 12,825 feet. The fill volume is estimated to be approximately 62,000 cubic yards (CY) with a cut volume of approximately 155,000 CY.

Taking into account the relevant design water level and the effects of both subsidence and relative sea level rise, the terrace crest elevation is then set such that the terrace provides freeboard over the 16 percent inundation water level over the 20-year design life of the project. Construction of the earthen terraces to 2.5 feet + 0.5 feet construction tolerance will provide an acceptable level of freeboard throughout the 20-year design life for both Area B and Area C terraces.

The earthen terraces in Areas B and C shall be constructed using in-situ material from within each fill area. Table 1 summarizes the terrace volume calculations for Area B and Area C, and also lists the area of terraces created, calculated as the horizontal surface at MTL -1 standard deviation (-0.15 feet NAVD88-Geoid03).

**Table 1: Earthen Terrace Volume Summary**

Containment Dike	Total Terrace Length (feet)	Total Terrace Area (acres)	Calculated Fill Volume (CY)	Calculated Cut Volume (CY) 2.5:1 Cut:Fill
Area B	13,554	11.6	72,139	184,769
Area C	12,825	11.0	62,026	162,126

Ultimately, 252 acres of marsh, 18,534 linear feet of containment dikes, and 26,379 linear feet of terraces will be created in areas that are mostly open water. The containment dikes will be degraded to marsh elevation upon construction completion. The newly constructed marsh platforms will be inspected one year after construction to determine if vegetative plantings are necessary.

## **2.2 Preferred Design Alternative - Pipeline Corridor**

The hydraulic cutterhead dredge, along with the floating pipeline and submerged pipeline, will lead from the Alliance Anchorage borrow site to the Mississippi River levee crossing immediately south of the Naomi siphon. The designed LDSP Pipeline Corridor makes use of the Plaquemines Parish tract of land near the Naomi siphon. A suitable Mississippi River levee crossing has been designed as per the USACE’s requirements, as will be done where the pipeline crosses the Plaquemines Parish flood protection levee. A steel casing was previously installed underneath the railroad and LA 23 in this tract of land in accordance with the New Orleans and Gulf Coast Railway Company and the Louisiana Department of Transportation and Development specifications. At this location, the railroad is far enough from the Mississippi River levee to enable placement of the dredge pipeline underneath the tracks. The pipeline will be placed along a dirt road through the pasture west of LA 23 to West Ravenna Road. At this point, West Ravenna Road will be excavated to place the pipeline underneath a layer of crushed aggregate sufficient for vehicle crossings. The pipeline will then be placed along the southern side of West Ravenna Road to the Plaquemines Parish flood protection levee. After crossing this levee, the pipeline will run at grade and continue across BA-39. At the point where the pipeline reaches the canal crossing in BA-39, the pipeline will transport dredged material from the LDSP pipeline corridor through the canal that runs through BA-39. Alternatively the dredge pipeline may follow the flood protection levee to the start of Area B. This alignment along the levee requires further

discussion with Plaquemines Parish and potentially the USACE if the levee is upgraded and brought into the USACE levee system under the New Orleans to Venice Project. From there, pipeline will be added as required to transport discharge material to the various marsh areas. (Moffat & Nichol, 2014).

### **2.3 Other Alternatives Considered:**

In the initial design phase, four additional alternatives were also evaluated:

Alternative 1: Construct three marsh creation cells in the near term to take advantage of the LDSP mobilization;

Alternative 2: Construct three marsh creation cells after sufficient time to allow the Alliance borrow area to refill;

Alternative 3: Break the project into construction units and construct cell A in the near term possibly taking advantage of the LDSP contract and/or mobilization; and,

Alternative 4: Break the project into construction units and construct Alternate cell A (reduced cell A) in the near term possibly taking advantage of the LDSP contract and/or mobilization.

These four initial restoration alternatives are similar in scope – all utilize Mississippi River sediment for marsh creation in the Barataria Basin, differing only in scale and timing. Due to soil conditions, the depth of fill required for areas B and C, and limitations on available sediment, marsh creation in these areas were considered economically infeasible and the preferred alternative was developed to construct terraces in place of marsh creation.

The No Action alternative was also evaluated and discussed.

## **PART 3.0 AFFECTED ENVIRONMENT**

### **3.1 Physical Environment**

**3.1.1 Hydrology.** Historically, the hydrology of the Barataria Basin was dominated by springtime flooding of the Mississippi River (MR) and its tributary channels maintaining a stable fresh water regime in the upper basin, gradually changing through intermediate, brackish and ultimately to intertidal salt marsh in the lower basin. However, the hydrologic/tidal connections between the upper basin and lower basin are no longer buffered by the inflow of freshwater and gradation of healthy marsh. Hence, the increased salinity is evident up through the central basin probably as a result of the increased tidal connectivity. Bayou Dupont, for which the project is named, is hardly discernable in the project vicinity due to the loss of defining land forms because the marshes have subsided and converted to open water.

Since the abandonment of the Lafourche Delta system about 300 years ago by the Mississippi River (MR) and the total leveeing of the MR, the Barataria Basin has become sediment-starved, its seaward edge has regressed, and many of its marshes have broken up and been replaced by

open water. The Barataria hydrologic unit receives no riverine input. Most water inputs come from rainfall and the outer Gulf with minor lateral interbasin exchange (Costanza, et al 1983.)

There is a limited and largely artificial influence from the Mississippi River on the basin at the project area, including freshwater diversion projects such as the Naomi siphon river reintroduction. The Naomi siphon includes eight parallel siphons to divert water from the Mississippi River, over the levee, and into the adjacent wetlands near Naomi, Louisiana (see Figure 3). The maximum discharge of the siphons is 2,100 cubic feet per second (cfs), which will potentially deliver up to 150,000 yd<sup>3</sup> of river sediment into the wetlands annually.

**3.1.2 Soils.** NRCS Soil Type Maps for the marsh creation area show the project soil is predominately Lafitte-Clovelly soil. Lafitte-Clovelly consists of very poorly drained soils typical of intermediate and brackish marshes that have a thick or moderately thick mucky surface layer and mucky clayey underlying material. The two terracing areas consist of Harahan-Westwego-Rita soils, poorly drained soils that have a clayey surface layer and a clayey subsoil layer (USDA 2000 Soil Survey of Jefferson Parish and Plaquemines Parish, Louisiana). Organic content of the soils in the area are illustrated in Figure 8. (Coastwide Reference Monitoring System - CRMS)

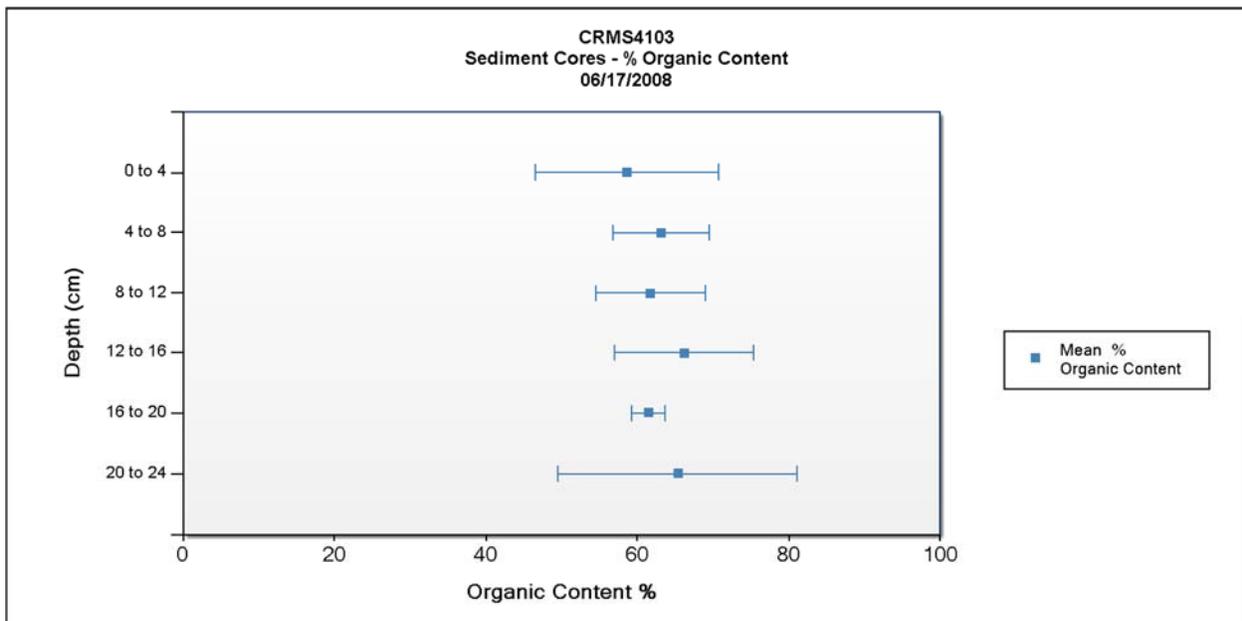


Figure 8 Organic Content of Soils from CRMS 4103.

**3.1.3 Water Quality** Under the Clean Water Act (CWA), the Louisiana Department of Environmental Quality (LDEQ) is responsible for developing water quality standards for surface waters of the State. The LDEQ is also responsible for identifying water bodies that fail to meet State water quality standards and measuring progress towards achieving water quality goals. The LDEQ has defined seven (7) designated uses for surface waters as: 1) primary contact recreation; 2) secondary contact recreation; 3) fish and wildlife propagation; 4) drinking water supply; 5) oyster propagation; 6) agriculture; and 7) outstanding natural resource waters. The fish and wildlife propagation designated use contains a subcategory, limited aquatic and wildlife use, that applies primarily to waters that have been designated as such by a use attainability analysis

(UAA), which is required for modifying a designated use that is identified under CWA 101(a)(2).

Project BA-164 is located in the Wilkinson Canal and Wilkinson Bayou (estuarine) subsegment number 020904. The subsegment is designated for the following uses: primary contact recreation, secondary contact recreation, fish and wildlife propagation, and oyster propagation. Oyster propagation was set as the criteria for maintaining biological systems supportive of economically important species so that their productivity is preserved and human health is protected (Louisiana Administrative Code Title 33, Part IX, Chapter 11.11).

*303(d) Listed Waters.* Under section 303(d) of the CWA, each state must prepare a list of waters that are not meeting their water quality standards. The EPA recommends these lists be submitted to EPA for review and approval by April 1st of even years (e.g., 2010, 2012). Total Maximum Daily Loads (TMDLs) are then established from the most recently approved list. The *2012 Louisiana Water Quality Inventory: Integrated Report* (IR) identified Wilkinson Canal and Wilkinson Bayou (ID LA-020904-2012) as impaired for oyster propagation and fish and wildlife propagation (LDEQ, 2012). The parameter of concern for this listing cycle was fecal coliform. A TMDL would be required for this subsegment; however, Wilkinson Canal and Bayou were not identified as impaired in the final draft 2014 Louisiana Integrated Report.

The most recent draft of the 2014 IR submitted to EPA identifies parts of subsegment 020904\_001 as impaired to fish and wildlife propagation and oyster propagation due to commercial and recreational fishing closures relating to impacts from the Deepwater Horizon oil spill. Additionally, 020904\_001 is listed for suspected impairment to primary contact recreation due to ongoing indications of oiling following the Deepwater Horizon oil spill. These impairments were first placed on the 2012 IR and they encompass only a portion of the segment identified as, “Shoreline and open water areas within 100 yards of the bay shores and unnamed islands within Wilkinson Bay and Bay Chene Fleur, located in southern area of LA020904\_00.” These impairments are in category 4b in the IR, indicating that “measures other than a TMDL are expected to result in attainment of designated uses” (LDEQ, 2014).

**3.1.4 Climate and Weather.** Most of Louisiana has a hot, humid, subtropical climate. It is one of the wettest states, with a yearly average of 57 inches of precipitation. Southern Louisiana has an average January temperature of 55 degrees F, and a July average of 82 degrees F. Hurricanes sometimes strike the coastal areas of Louisiana, causing loss of life and damage to property (Ning and Abdollahi, 2000). Prevalent winds from the south/southeast bring in warm, moist air from the Gulf, resulting in abundant rainfall. The statewide annual average precipitation varies from 48 inches in the northwestern part of the state near Shreveport to 64 inches in the southeastern coastal plains near Thibodaux (LDEQ, 2004).

Temperatures vary from season to season, but are typically warm. January is the coldest month, with averages lows in the 40s and highs in the 60s. The warmest months are July and August, with average lows in the 70s and highs in the 90s. In October through December, temperatures range from the 60s at night to 70s during the day.

Plaquemines Parish can be very wet, with an average yearly rainfall of about 55-60 inches. During the summer months, afternoon thunderstorms are common. Hurricane season is from June 1 to November 30, and Plaquemines and Jefferson Parishes do have threats from tropical systems, including hurricanes. Due to the effect of hurricanes Katrina and Rita in 2005, approximately 57.2 square miles of wetlands were lost throughout Plaquemines parish (Plaquemines, 2014).

Regional climate change findings note that temperatures are increasing, and that regional temperature changes are several times larger than the global average. Other findings, such as a decrease in daily temperature range, more atmospheric water vapor, more precipitation, more intense precipitation events, and stronger extra tropical storms are evidence of an enhanced hydrologic cycle (Ning, et al, 2003).

## **3.2 Biological Environment**

**3.2.1 Vegetation.** The 1956 vegetative community classification of this area was fresh marsh. However, that historic classification included only two classes of marsh, fresh and non-fresh marsh; the area may have been intermediate marsh at that time. In 1978, 1988, and 2000, the project area was predominately brackish marsh with an insignificant amount of scrub-shrub along the spoil banks. The most recent habitat classification of the area, based on 2007 conditions, indicates that all the existing marsh and water in the proposed marsh creation area is intermediate, while proposed terracing areas are 50 percent intermediate, 50 percent brackish. (Fig. 9; from Sasser et al. (2008), as cited in USGS (2012) and EPA, 2014, Final Project Information Sheet for Wetland Value Assessment, BA-164 Bayou Dupont Sediment Delivery – Marsh Creation and Terracing, October 15, 2014.)



Figure 9. 2013 Marsh Type with 2013/14 Landsat TM 8.

Information collected from nearby CRMS station 4103 indicates that in recent history, the area is mostly supported by an intermediate marsh community type (Figure 10 below).

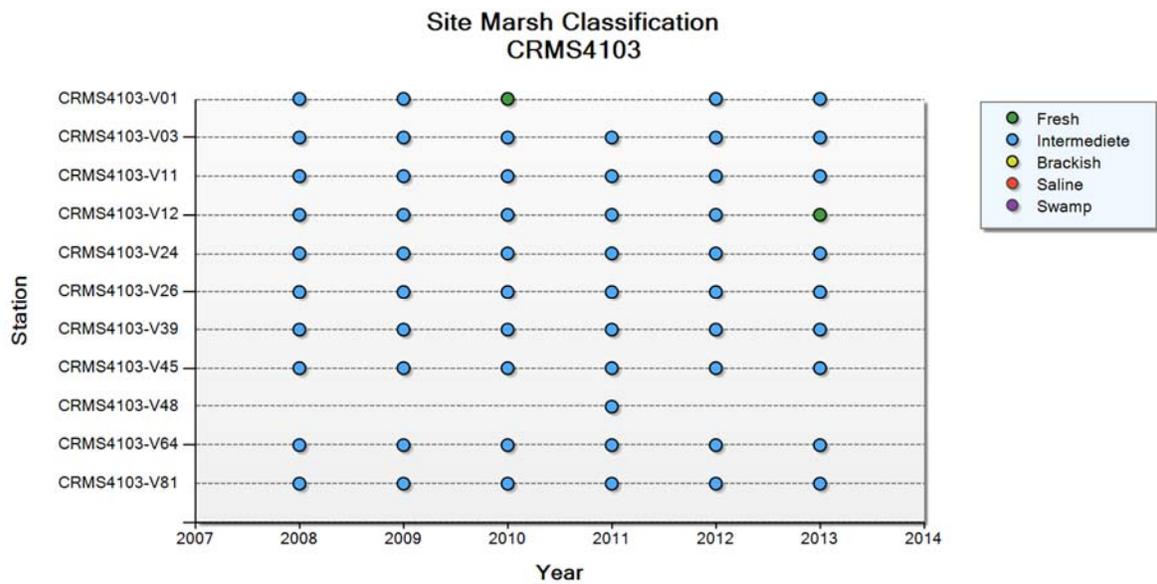


Figure 10-Marsh classification based on CRMS station 4103, 2007-2013, shows Intermediate type predominating.

In June 2012, the herbaceous marsh community appeared to be dominated by saltmeadow cordgrass (*Spartina patens*). More recent information from the nearby CRMS station 4103 (Fig.11) indicates that hairy pod cowpea (*Vigna luteola*), saltmeadow cordgrass (*Spartina patens*), and bulltongue arrowhead (*Sagittaria lancifolia*) account for a majority of the herbaceous cover in the area (Figure 11, below).

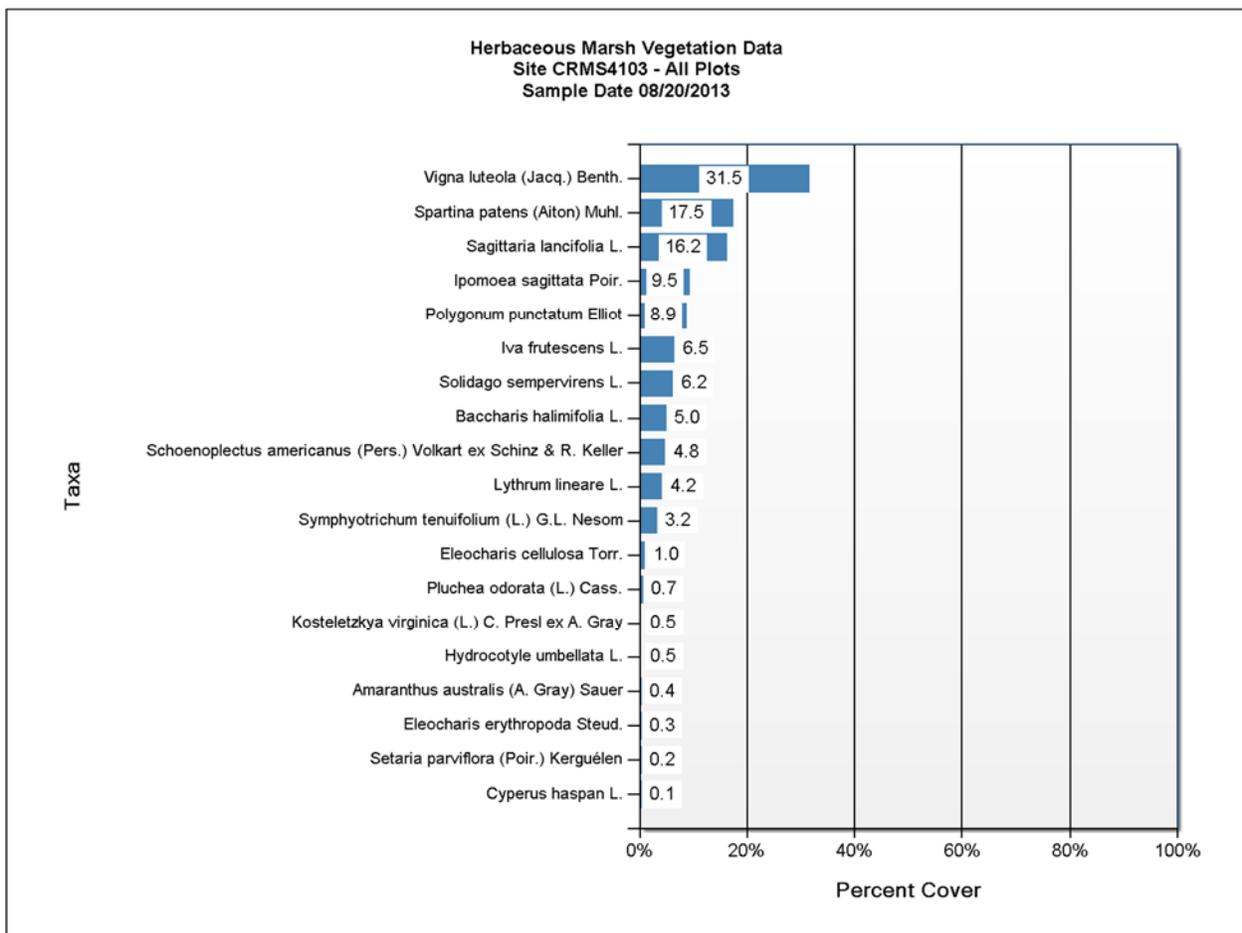


Figure 11. Herbaceous Marsh Vegetation data from nearby CRMS station 4103 (Louisiana Office of Coastal Protection and Restoration, 2014). Coastwide Reference Monitoring System-Wetlands Monitoring Data. Retrieved from Strategic Online Natural Resource Information System (SONRIS) database, at website <http://coastal.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=92> Accessed 8/19/14.

**3.2.2 Fisheries.** As reported in the Dedicated Dredging on the Barataria Basin Landbridge (BA-36) EA, (USFWS, November 2005), this area supports a diverse assemblage of estuarine-dependent fishes and shellfishes, and species presence is largely dictated by salinity levels and season. During low-salinity periods, species such as Gulf menhaden, blue crab, white shrimp, and striped mullet are present in the project area. During high-salinity periods, more salt-tolerant

species such as spotted sea trout, black drum, red drum, Atlantic croaker, sheepshead, southern flounder, and brown shrimp may move into the project area. Wetlands throughout the project area also support small resident fishes and shellfish such as least killifish, sheepshead minnow, sailfin molly, grass shrimp, and others. Those species are typically found along marsh edges or among submerged aquatic vegetation, and provide forage for a variety of fish and wildlife.

**3.2.3 Essential Fish Habitat.** The project is located within an area identified as Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). The generic amendment No. 3, March 2005, of the Fishery Management Plans for the Gulf of Mexico prepared by the Gulf of Mexico Fishery Management Council, identifies EFH in the project area to be estuarine emergent wetlands, submerged aquatic vegetation, estuarine water column, and mud substrates. Under the MSFCMA, wetlands and associated estuarine waters in the project area are identified as EFH for postlarval/juvenile and subadult brown shrimp; postlarval/juvenile and subadult white shrimp; and postlarval/juvenile, subadult, and adult red drum. Table 2 provides a more detailed description of EFH within the project area.

Table 2: EFH Requirements for managed species that occur in the project area.

<i>Species</i>	<i>Life Stage</i>	<i>Essential Fish Habitat</i>	<i>Occurrence in project area</i>
Brown Shrimp	Postlarval/juvenile	Marsh edge, SAV, tidal creeks, inner marsh	All habitats found throughout project area
	subadult	Mud bottoms Marsh edge	All habitats found throughout project area
White Shrimp	Postlarval/juvenile	Marsh edge, SAV, marsh ponds, inner marsh, oyster reefs	All habitats found throughout project area (Excluding oyster reefs)
	subadult		
Red Drum	Postlarval/juvenile	SAV, estuarine mud bottoms, marsh/water interface	All habitats found throughout project area
	subadult	Mud bottoms, oyster reefs	Mud bottoms found within open water areas

**3.2.4 Wildlife.** Although emergent wetlands in the immediate project vicinity have suffered great decline, important habitat is still utilized by a number of species of wildlife, including waterfowl, wading birds, shorebirds, mammals, reptiles and amphibians. According to the FWS, the project area provides wintering habitat for migratory puddle ducks including gadwall, blue-winged teal, green-winged teal, American widgeon, and northern shoveler. Diving duck species which utilize the project area include lesser scaup and ring-necked ducks. Other resident and migratory waterfowl that use this habitat include the red-breasted merganser and mottled duck, which nests in fresh to brackish marshes. Nesting areas on the project site are virtually not existent but will be restored when the project is complete.

Great blue heron, green heron, tricolored heron, great egret, snowy egret, yellow-crowned night-heron, black-crowned night-heron, and white ibis are common wading birds that use or would use this area. Mudflats and shallow-water areas provide habitat for numerous species of shorebirds and seabirds, although current conditions within the project area are not optimum, due to the water depth and lack of marsh edge habitat. Shorebirds include the American avocet, willet, black-necked stilt, dowitchers, common snipe, and various species of sandpipers. FWS

reported seabirds including the white pelican, herring gull, laughing gull, and several species of terns.

While little emergent marsh currently exists on the project site, non-game birds expected to use emergent marsh in the area include species such as the boat-tailed grackle, red-winged blackbird, seaside sparrow, northern harrier, belted kingfisher, and marsh wrens. Important game birds that are expected to use the restored marsh include the clapper rail, sora rail, Virginia rail, American coot, common moorhen, and common snipe.

Nutria, muskrat, mink, river otter, and raccoon, all of which are commercially important furbearers occur in the area. Increased availability of low-salinity brackish marshes will benefit reptiles and amphibians that are fairly common in the low-salinity brackish marshes in the project vicinity. Reptiles include the American alligator, western cottonmouth, water snakes, speckled king snake, rat snake, and eastern mud turtle. Typically, bullfrog, southern leopard frog, and Gulf Coast toad appear in healthy brackish marshes in this vicinity.

**3.2.5 Threatened and Endangered Species.** Section 7 of the Endangered Species Act (ESA) requires that activities authorized by federal agencies consider potential impacts to threatened or endangered species and their critical habitat. To comply with the ESA, consultation with the USFWS is required. The USFWS has indicated that the West Indian manatee (*Trichechus manatus*), and pallid sturgeon (*Scaphirhynchus albus*) may occur in the proposed project vicinity (USFWS, Letter of February 11, 2014, to EPA)

#### 3.2.5.1 West Indian manatee (*Trichechus manatus*).

The West Indian manatee was originally listed as an endangered species in 1967, and listed again in December 1970 by the amended Appendix A of 50 CFR 17 which added names to the list of foreign endangered species. West Indian manatees in the United States are also protected under federal law by the Marine Mammal Protection Act of 1972.

According to the U.S. Fish and Wildlife Service, West Indian manatees occasionally enter Lakes Pontchartrain and Maurepas and associated coast waters and streams during the summer months (June through September). Manatee occurrences appear to be increasing, and they have been regularly reported in the Amite, Blind, Tchefoncté, and Tickfaw Rivers, and in canals within the adjacent coastal marshes of Louisiana. Manatees have also been occasionally observed elsewhere along the Louisiana gulf coast. The manatee has declined in numbers due to collisions with boats and barges, entrapment in flood control structures, poaching, habitat loss, and pollution. Cold weather and outbreaks of red tide (harmful algal blooms) may also adversely affect these animals (USFWS letter of February 11, 2014).

#### 3.2.5.2 Pallid Sturgeon (*Scaphirhynchus albus*).

The pallid sturgeon (*Scaphirhynchus albus*) was listed as an endangered species on September 6, 1990. The pallid sturgeon is a bottom-oriented fish that inhabits large river systems from Montana to Louisiana. Within this range, pallid sturgeon tend to select main channel habitats in the Mississippi River and main channel areas with islands or sand bars in the upper Missouri River.

According to the Fish and Wildlife Service, in Louisiana, the pallid sturgeon occurs in the Atchafalaya and Mississippi Rivers, and below Lock and Dam Number 3 on the Red River (with known concentrations in the vicinity of the Old River Control Structure Complex). The pallid sturgeon is adapted to large, free-flowing, turbid rivers with a diverse assemblage of physical characteristics that are in a constant state of change. Many life history details and subsequent habitat requirements of this fish are not known. However, the pallid sturgeon is believed to utilize Louisiana riverine habitat during reproductive stages of its life cycle. Habitat loss through river channelization and dams has adversely affected this species throughout its range (USFWS letter of February 11, 2014).

**3.2.6 Recreation.** Recreation in the area is generally oriented towards hunting and fishing. The natural and recreational resources of the project area provide wide and varied opportunities for outdoor enjoyment. Recreational activities taking place in Bayou Dupont and adjacent marshes may include boating, hunting, fishing and natural and cultural study. The project area is an area of vital importance as a fishery nursery ground, waterfowl wintering and hunting area. Recreational fishing is by far the most popular activity in the project area because of the access to water bodies, bayous, and the marsh. Small game hunting is also popular due to abundance of habitat and the wide range of species available to the hunter.

## **4.0 Environmental Consequences**

In general, emergent marsh will provide the organic matter that is the basis for the coastal food web, and will provide high primary production and essential fish habitat for many fish and shellfish species of the area. The emergent marsh systems lying further to the north in the upper Barataria Basin will receive some added protection from the rebuilt Bayou Dupont marshes, and, together with similar projects in the area, will provide additional storm buffering capacity.

### **4.1 Physical Environment**

#### **4.1.1 Hydrology**

*No Action Alternative.* Under a No Action Alternative, hydrologic conditions in the project area would continue to degrade and land loss would continue. Marshes would continue to subside and break up to be converted to open water.

*Alternative 2 - Preferred Alternative.* Under the Preferred Alternative, hydrologic conditions within the project area would be impacted by the creation of marsh and the creation of terraces. The open water areas through which water exchange now occurs would be filled with dredged material. Marsh creation would not prevent tidal exchange in the surrounding marshes.

Containment dikes will be built to surround the marsh creation area and contain the dredged material slurry. The containment dikes will have a temporary effect on water exchange. The dikes will be gapped or degraded at the end of project construction to allow tidal exchanges to re-establish between the newly-created marsh and adjacent waters. As the marsh platform subsides, more tidal connections would form in the project area.

The terraces are designed to reduce fetch, and therefore, wave energy, thus promoting the deposition of suspended sediments in the shallow water adjacent to the terraces in the project area. The terracing feature will slowly build more marsh over the life of the project as subaerial land is built and plants become more naturally established.

#### **4.1.2 Soils**

*No Action Alternative.* Under a No Action Alternative, the existing soils in the marsh creation sites would remain under open water and the sediment resources of the river would not be utilized.

*Alternative 2 - Preferred Alternative.* Under the Preferred Alternative, sediment from the Borrow Area is considered most likely to be free of contaminants and would be used in the marsh fill area. The area was tested to establish its suitability as source of sediment and was determined to be predominately sand. Consideration was also given to determine the need for testing of the borrow area sediment. According to the Evaluation of Dredged Material Proposed for Discharge in Waters of the US-Testing Manual (1998), the decision to forgo testing is based on the type of material to be dredged and/or its potential to be contaminated. Therefore, the need to provide additional sediment testing was determined not to be needed. No adverse impacts are expected.

#### **4.1.3 Water Quality**

*No Action Alternative.* The No Action Alternative would continue to allow the conversion of fresh and brackish marsh habitats into more saline estuarine conditions. As a result, a higher salinity tidal exchange would encroach further into the upper reaches of the Barataria Basin causing additional losses of emergent vegetation, land erosion and potential storm buffering capabilities. The continued deterioration of the existing marshes could also potentially contribute to an increase in turbidity.

*Alternative 2 - Preferred Alternative.* The preferred alternative would have no long-term adverse impact on present conditions. However, short-term adverse temporary impacts due to increased turbidity from placement of material could occur during project construction. The slurry discharge can contain suspended silt, clay, and organic matter, which could temporarily degrade the water quality in a dredge plume. These impacts are minor and would be limited to the construction phase of the project. Turbidity levels would be expected to return to pre-construction conditions shortly after construction ended. The proposed construction of this project would not affect fecal coliform levels and would not threaten oyster propagation. The project also would not affect the part of subsegment 020904\_001 noted as impaired due to the Deepwater Horizon oil spill.

### **4.2 Biological Environment**

#### **4.2.1 Vegetation**

*No Action Alternative.* Without implementation of the project, the area will continue to convert to open water and increase the potential for continued vegetation loss in surrounding areas. The

Wetland Value Assessment assumes that the loss rate of 1.16 percent a year would continue and marsh acres would continue to be lost to open water under a “future without project” scenario.

*Alternative 2 - Preferred Alternative.* By re-establishing the marsh platform at an elevation conducive to the establishment of marsh vegetation, the life of the wetlands should be increased by providing an additional 252 acres of emergent wetlands and 26,379 LF of terraces (22.6 acres) post construction and a net of 230 acres over the 20-year life of the project.

#### **4.2.2 Fisheries**

*No Action Alternative.* Under the no action alternative, the area would continue to provide nursery habitat and associated food resource for small resident fishes. However, continued land loss will lead to increasing water depth and the value of the area as a food source and nursery will decline. As a marsh complex exceeds 70 percent unvegetated open water, shrimp and blue crab populations may decline (Minello and Rozas 2002).

*Alternative 2 - Preferred Alternative.* The creation of healthy marsh habitat would provide a greater diversity of foraging, breeding, spawning, and cover habitat for a greater variety of adult and juvenile fish and shellfish species. The marsh would contribute nutrients and detritus would be added to the existing food web, providing a positive benefit to local area fisheries.

#### **4.2.3 Essential Fish Habitat**

*No Action Alternative.* The project area contains approximately 448-ac of open water and 102-ac of estuarine marsh. Under the no action alternative, the estuarine marsh areas would continue to convert to shallow open water. Although an increase in some types of EFH (i.e. mud bottom and estuarine water column) could occur, adverse impacts would occur to more productive types of EFH (i.e., estuarine emergent wetlands). The loss of estuarine emergent wetlands would result in negative impacts to postlarval/juvenile and subadult brown shrimp; postlarval/juvenile and subadult white shrimp; and postlarval/juvenile red drum.

*Alternative 2 - Preferred Alternative.* With the preferred alternative, the creation of estuarine emergent wetlands would result in the loss of mud bottom and estuarine water column. However, emergent marsh would replace those habitat types. Loss of mud bottom EFH could result in negative impacts to subadult brown shrimp and postlarval/juvenile, red drum. Although adverse impacts would occur to some types of EFH, more productive types of EFH (i.e., estuarine emergent wetlands) would be created under the preferred alternative. Coverage of submerged aquatic vegetation, another important type of EFH, is not projected to occur within the project area under the preferred alternative. Therefore, the preferred alternative would result in a net positive benefit to all managed species that occur in the project area.

#### **4.2.4 Wildlife**

*No Action Alternative.* Under the no action alternative, there is a continual prolonged risk as the marsh and wetland habitat continues to degrade. As the limited amount of existing marsh habitat decreases to open water over time, habitat value for all wildlife species continues to degrade and diminish.

*Alternative 2 - Preferred Alternative.* The newly created marsh would provide improved habitat conditions for several species of wildlife such as migratory and resident waterfowl, shorebirds, wading birds, and furbearers. Intertidal marsh and marsh edge will also provide increased foraging opportunities for shorebirds and wading birds. Small fishes and crustaceans are often found in greater densities along vegetated marsh edge (Castellanos and Rozas 2001, Rozas and Minello 2001). The preferred alternative would protect existing marsh, create vegetated wetlands, reduce future land loss, and increase the diversity of habitat for a greater variety of wildlife species.

#### **4.2.5 Threatened and Endangered Species**

**4.2.5.1: Impact Analysis on West Indian Manatee.** With implementation of the USFWS recommendations, the project would not likely adversely affect the manatee. Although unlikely, the West Indian Manatee may be found in the estuarine waters in or near the project area. Construction equipment (e.g., boats, barges, dredges, etc.) may encounter manatees in the waterbodies within and around the project area. Specific language will be included in the project's plans and specifications to avoid/minimize impacts to the West Indian manatee. The following precautions will be implemented from May to October, when manatees have the greatest potential for entering the project area:

- All construction personnel will be instructed about the possible presence of manatees and the need to avoid collisions with and injury to manatees.
- All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s).
- Temporary signs will be posted prior to and during all construction and dredging activities to remind personnel to be observant for manatees during operations or within vessel movement zones (i.e., work areas).
- At least one sign will be placed where it is visible to the vessel operator.
- Siltation barriers, if used, will be made of material in which manatees could not become entangled, and will be properly secured and monitored.

The following special operating conditions shall be implemented upon the sighting of a manatee within 100 yards of the active work zone:

- No operation of moving equipment within 50 feet of a manatee.
- All vessels will operate at no wake/idle speeds within 100 yards of the work area.
- Siltation barriers, if used, will be re-secured and monitored.
- Any sighting of, collision with, or injury to a manatee must be reported immediately to the USFWS, Lafayette, Louisiana Field Office (337.291.3100), and the Louisiana Department of Wildlife and Fisheries, Natural Heritage Program (225.765.2821).

**4.2.5.2: Impact Analysis on Pallid Sturgeon.** With implementation of the USFWS recommendations, the project would not likely adversely affect the pallid sturgeon.

To ensure protection of the pallid sturgeon, all personnel associated with the project will be informed of the potential presence of the pallid sturgeon and take actions to induce them to leave the immediate work area prior to dredging regardless of water depth or time of year. The USFWS recommends the following practices to minimize potential impacts to the pallid sturgeon associated with dredging:

- The cutterhead to remain completely buried in the bottom material during dredging operations;
- If pumping water through the cutterhead is necessary to dislodge material, or to clean the pumps or cutterhead, etc., the pumping rate to be reduced to the lowest rate possible until the cutterhead is at mid-depth, when the pumping rate can then be increased;
- During dredging, the pumping rates to be reduced to the slowest speed feasible while the cutterhead is descending to the channel bottom.

#### **4.2.6 Recreation**

*No Action Alternative.* Recreational use within the project area would continue at its present level. The marshes surrounding the project area provide numerous areas for hunting and fishing opportunities. However, over time these marshes would erode and subside, converting to more open water areas. Continued marsh loss translates into less edge and estuarine marsh habitat available to fish. Lost nursery and breeding grounds would result in less productive fishing in the future.

*Alternative 2 - Preferred Alternative.* The recreational environment in and around the project area would experience limited short-term disruption imposed by the physical size and working activities of the construction phase of the project. Dredging activities would increase the turbidity in the area of work and in the vicinity of the discharge pipes. This turbidity may disrupt water-oriented recreational activity occurring within the vicinity; however, these adverse impacts would be temporary. Positive long-term benefits would be the creation of the marsh and the added benefits of providing shelter and habitat for wildlife.

## **5.0 OTHER ENVIRONMENTAL CONSIDERATIONS**

**5.1 Cultural Resources.** The State Historic Preservation Officer of Louisiana has concurred with the determination that there are no known cultural or historic sites in the Bayou Dupont project area (Letter of September 25, 2014, from Pam Breaux, State Historic Preservation Officer).

**5.2 Socio-Economic and Environmental Justice (EJ).** According to a basic EJ analysis performed for the Bayou Dupont area, there are no significant EJ issues for a five-mile radius (EPA NEPA Assist analysis).

### **5.3 Coastal Zone Management, Floodplains, and Prime Farmlands**

5.3.1 Coastal Zone Management (CZM). In compliance with CZM requirements, the project will need a Coastal Use Permit (CUP) prior to construction. Applications for the CUP and USACE 404 permits will be submitted in 2015 after construction funding is approved. The USACE will issue a Joint Public Notice.

5.3.2 Floodplains: The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps delineate the 100-year Special Flood Hazard Areas, designated “A” or “V” zones. A-zone Special Flood Hazard Areas are areas that have a one (1) percent chance of experiencing a 100-year level flood in any given year. Coastal zone areas are designated “V” zones in which structures are subject to damage from both flooding and significant wave action. The proposed project area is designated a “V” zone area. The proposed project would not have a negative effect on the floodplain.

5.3.3 Prime Farmland/Overgrazing. According to NRCS, there are no livestock currently grazing in the area, nor is there a potential for grazing once the project is installed. (NRCS, August 22, 2014, letter from Britt Paul to EPA regarding overgrazing determination).

**5.4 Hazardous, Toxic and Radioactive Waste (HTRW)**. Federal databases at the EPA and state databases at the LDEQ were reviewed to determine the location of any hazardous material sites and to identify any potential hazardous materials sites within the project area. None of the federal or state databases searched located any potential hazardous materials sites in the project area, including the borrow area.

**5.5 Cumulative Impacts**. Potential cumulative impacts would be the aggregate impacts to the environment resulting from the proposed action in combination with other ongoing actions, and actions being considered within the reasonably foreseeable future. No significant adverse cumulative impacts are expected. The proposed action is part of an effort under CWPPRA to create, protect, restore and enhance wetlands in coastal Louisiana. CWPPRA provides federal funds for planning and implementation of such projects. Other restoration projects located in the area of the proposed project can be seen in Figure 3.

**5.6 Unavoidable Adverse Effects**. The primary unavoidable adverse effects are the immediate impacts from construction related sediment excavation and deposition on the non-mobile benthic organisms in areas adjacent to specific project features, minor and temporary disturbance to adjacent wetlands, water and air quality. Any effects on air quality and the noise generated by the proposed project will be of a temporary nature

**5.7 Relationship between Local, Short-term Use of the Environment and the Maintenance/Enhancement of Long Term Beneficial Uses**. All structural and non-structural alternatives have short-term localized impacts during construction, but offer significant long-term environmental benefits. No long-term adverse impacts to wetlands water quality, threatened or endangered species, species managed by the Gulf of Mexico Fishery Management Council or their essential habitat, other fish and wildlife resources, recreational or socio-economic resources, or cultural resources are expected.

## 6.0 CONSULTATION AND COORDINATION LETTERS – See Appendix A.

### 7.0 Preparers:

Barbara Aldridge Brad Crawford Matt Hubner	NEPA Coordinator, Project Manager Engineer, Project Manager Water Quality Coordinator
Marine & Coastal Section, Ecosystems Protection Branch, Water Quality Protection Division, U.S. Environmental Protection Agency, Region 6, Dallas, TX.	

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS TX 75202-2733

September 17, 2014

Colonel Richard L. Hansen  
New Orleans District Commander  
U.S. Army Corps of Engineers  
ATTN: CEMVN-PM-BC  
P.O. Box 60267  
New Orleans, LA 70160-0267

Subject: BA-164, Bayou Dupont Sediment Delivery Marsh Creation #3  
Section 303(e) Approval

Dear Colonel Hansen:

In accordance with Section 303(e) of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA), the U.S. Environmental Protection Agency and Coastal Protection and Restoration Authority (CPRA) are seeking approval that the Bayou Dupont Sediment Delivery Marsh Creation #3 "...is subject to such terms and conditions as necessary to ensure that wetlands restored, enhanced or managed through that project will be administered for the long-term conservation of such lands and waters and dependent fish and wildlife populations."

The project entails restoration of degraded marsh in Jefferson and Plaquemines Parishes. Per Section 6(g)(2) of the CWPPRA Standard Operation Procedures, we are enclosing the following documents for you use in the Section 303(e) approval:

1. CPRA transmittal letter containing a statement certifying that all standard real estate practices will be followed in acquiring land rights;
2. Temporary Easement, Servitude and Right-of-Way Agreement;
3. \*Copy of fully executed and recorded Perpetual Easement, Servitude and Right-of-Way Agreement with River Rest, LLC;
4. \*Copy of fully executed and recorded Perpetual Easement, Servitude and Right-of-Way Agreement with Wildlife Lands, LLC;
5. Map depicting the Bayou Dupont Sediment Delivery - Marsh Creation #3 Project Limits; and,
6. Overgrazing Determination from the Natural Resources Conservation Service

\*These are non-project specific agreements that are applicable to the referenced project.

If you have any questions or concerns, please feel free to contact me at the above address or telephone Brad Crawford of my staff at (214) 665-7255 or by email at [crawford.brad@epa.gov](mailto:crawford.brad@epa.gov).

Sincerely,



William K. Honker P.E.

Director

Water Quality Protection Division

Enclosures

cc: **Brian (Keith) Boeneke (CBI/CPRA)**  
**Ben Barnes (CPRA)**  
**Brad Inman (USACE)**

**Enclosure VI – 303(e) Request Cover Letter**



# State of Louisiana

BOBBY JINDAL  
GOVERNOR

September 15, 2014

Brad Crawford, P.E.  
Environmental Engineer  
Marine and Coastal Section  
US EPA (6WQ-EC)  
1445 Ross Ave.  
Dallas, TX 75202

RE: CWPPRA Section 303(e) Approval  
Bayou Dupont Sediment Delivery – Marsh Creation #3 (BA-164)  
Jefferson and Plaquemines Parishes, Louisiana

Dear Mr. Crawford:

By this letter, I am transmitting to you a copy of the Coastal Protection and Restoration Authority (CPRA) of Louisiana's Temporary Easement, Servitude and Right-of-Way Agreement, which will be used to acquire the necessary remaining landrights for the project; copy of fully executed and recorded Perpetual Easement, Servitude and Right-of-Way Agreement with River Rest, LLC; a copy of fully executed and recorded Perpetual Easement, Servitude and Right-of-Way Agreement with Wildlife Lands, LLC, both of which are non-project specific agreements that are applicable to the above-mentioned Project, and includes lands within the proposed Project areas; and a map depicting the Bayou Dupont Sediment Delivery – Marsh Creation #3 Project Limits.

The enclosed documents and statements provided below fulfill the requirements as outlined in Section 6(g) (2)(b) of the *Standard Operating Procedures Manual* for CWPPRA projects: the "Language of land rights" which states the "type of landrights required", and a map and to describe the "Plan showing project limits." The "Language of land rights" documents were approved by the CPRA counsel and the technical sections of the document and map(s) were overseen by the project engineer and project monitoring biologist. *By this letter, CPRA certifies that land acquisitions have been and will be in accordance with all applicable Federal and State laws and regulations, and all standard real estate practices have been and will be followed.*

The Environmental Protection Agency must also provide to the COE a statement from NRCS "as to whether overgrazing in the project area is a problem and whether easements restricting grazing are required" for this project.

In accordance with Section 6(g) (2)(b): Please provide "One hard copy of the Section 303(e) request materials shall be sent to the below address. In addition, submit one copy of the 303(e) request materials electronically to the COE CWPPRA 303(e) point of contact (or the P&E Chairman and he will distribute accordingly)."

U.S. Army Corps of Engineers  
ATTN: CEMVN-PM-BC (CWPPRA Program)  
P.O. Box 60267  
New Orleans, LA 70160-0267

If you need further assistance or have any questions regarding this matter, please contact me at (225) 342-5068. We at CPRA look forward to completing the 303(e) approval process and proceeding with project construction.

Sincerely,



Ben Barnes  
CPRA Land Specialist

BB

Attachments: Four (4)

Coastal Protection and Restoration Authority of Louisiana's  
Temporary Easement, Servitude and Right-of-Way Agreement

**TEMPORARY EASEMENT, SERVITUDE AND RIGHT-OF-WAY AGREEMENT**

**PROJECT NAME**

**PARISH, LOUISIANA**

**STATE OF LOUISIANA**

**PARISH OF \_\_\_\_\_**

THIS AGREEMENT, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between: (Grantor name), a \_\_\_\_\_ corporation, tax identification number \_\_\_\_\_, with the business address of \_\_\_\_\_, herein represented by \_\_\_\_\_, its \_\_\_\_\_ hereinafter called the "GRANTOR" (whether one or more), as owner(s) of the below described property; and

The STATE OF LOUISIANA herein represented by and appearing as follows through:

The **COASTAL PROTECTION AND RESTORATION AUTHORITY ("CPRA")**, as authorized and directed by the policy of the Coastal Protection and Restoration Authority Board, herein represented by and appearing through the Executive Director of CPRA, Kyle Graham, domiciled in East Baton Rouge Parish, Louisiana, with offices located at 450 Laurel Street, Suite 1200, Baton Rouge, Louisiana, 70801, and whose mailing address is P.O. Box 44027, Baton Rouge, Louisiana, 70804-4027, appearing pursuant to the provisions of La. R.S. 49:214.1, *et seq.*, as amended by Act 523 of the 2009 Regular Session and as amended by Act 604 of the 2012 Regular Session of the Louisiana Legislature;

The above mentioned hereinafter collectively referred to as "STATE".

WITNESSETH: For and in consideration of the promises and undertakings by STATE to GRANTOR herein, and further for other good and valuable consideration, including the potential benefits to GRANTOR'S property interests resulting from the hereinafter described project, the receipt and adequacy of which are hereby acknowledged, GRANTOR hereby grants unto STATE, its successors, assigns or transferees, the temporary rights-of-way, servitudes and easements (hereinafter called "the Agreement"), together with the right to enter in, on, and over, GRANTOR'S property interests, for integrated coastal protection purposes as defined in La. R.S. 49.214.2(11) as part of the \_\_\_\_\_ Project (hereinafter called the "Project") located in, on, or over GRANTOR'S property interests. The Project will be publicly funded and shall be located on the following described property interest, including expressly, but not limited to, any interest in lands or water-covered lands which might be owned by GRANTOR (hereinafter called "said Lands"), to-wit:

(PROPERTY DESCRIPTION)

GRANTOR hereby warrants that GRANTOR understands the Project and accepts any and all impacts to said Lands resulting from construction and implementation of the Project.

I. This Agreement grants the rights to enter said Lands, (further identified on Exhibit A, attached hereto), to perform construction, operation, modification, monitoring, and maintenance and such other activities described on Exhibit B, (attached hereto), necessary to complete the Project.

II. STATE agrees to give reasonable notice to GRANTOR prior to initiation of access to the said Lands for the purpose of implementing, constructing, operating, modifying, monitoring and maintaining the Project.

III. To the extent permitted by Louisiana law, STATE shall, indemnify, and hold harmless GRANTOR against and from all costs, expenses, claims, demands, penalties, suits, fines, and actions of any kind and nature arising from the Project and caused by the actions and fault of STATE or its agents, employees, contractors, successors, assigns and transferees, including any court costs and reasonable and actual litigation expenses and attorneys' fees. However, nothing herein shall be construed as indemnifying or holding GRANTOR or any third person not a party hereto harmless against its own fault or negligence or that of its agents, employees, contractors, successors, assigns and transferees. Should work on said Lands be performed via contract, STATE shall ensure that the contractor lists GRANTOR as additional insured on any policies carried by the contractor, including completed operations coverage. The STATE acknowledges, declares and stipulates that GRANTOR has provided this Agreement at no cost to the STATE under the provisions of La. R.S. 49:214.6.10 C, as amended by 2010 Acts No. 734. This clause shall survive the term of this agreement.

IV. STATE shall be responsible for repair in like manner of any fences, bridges, roads, and other similar facilities and appurtenances located on said Lands which may be damaged or destroyed by STATE, or its designees while on said Lands, but such repair shall be to that condition which existed immediately prior to STATE's activities. STATE shall remove or dispose of all debris associated with construction, operation and maintenance of the Project.

V. STATE acknowledges that La. R.S. 49:214.5.5 provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal, or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures through the Coastal Protection and Restoration Fund or other sources of funding in accordance with the provision of La. R.S. 49:214.6.2. The STATE further agrees that in the event legal proceedings are instituted by any person seeking recognition of a right of ownership, servitude, or use in or over private property solely on the basis of the expenditure of funds through the Coastal Protection and Restoration Fund or other sources of funding in accordance with the provision of La. R.S. 49:214.6.2, that the State shall indemnify and hold harmless the owner of such property for any costs, expense, or loss related to such proceeding, including court costs and attorney fees. To the extent permitted by La. R.S. 49:214.5.5, the servitude and right-of-way rights granted herein shall be considered real rights and covenants running with the land.

VI. It is understood GRANTOR shall retain the limits of its title and all property rights (subject to the rights of STATE herein) in and to said Lands, and all minerals in, on and under said Lands are not affected in any way hereby. However, no structures and/or appurtenances constructed hereunder pursuant to the Project on said Lands shall be adjusted, removed and/or interfered with by GRANTOR, or anyone holding rights by, through or under GRANTOR.

VII. Subject to the above, in its exercise of the rights herein granted, STATE agrees not to unreasonably interfere with (a) oil and gas operations, (b) agricultural operations, and (c) hunting, trapping and alligator egg operations, (d) fishing, crabbing, or shrimping, now occurring, or authorized to occur, on said Lands. STATE specifically acknowledges the continuing right of GRANTOR, its heirs, successors, assigns, transferees or lessees, to use, occupy and enjoy all of said Lands, for all purposes, in such manner at such times as they, or any of them, shall desire to use same, including, but without limitation, for the purpose of conducting oil, gas or other mineral operations on any of said Lands, for the exploration, discovery, production, storage, transportation and disposition of oil, gas, sulphur or other minerals, under oil, gas and mineral leases or otherwise, and for the purpose of farming, grazing, hunting and trapping fur-bearing animals, alligator egg operations, fishing, crabbing, or shrimping thereon, provided, however, that such use, occupation, and enjoyment shall not unreasonably interfere with the lawful activities of STATE pursuant to this Agreement.

VIII. GRANTOR does not warrant title. GRANTOR specifically does not warrant or represent the correctness of any survey, or any of the plats attached hereto which purport to show the location of said Lands. If at any time any questions or litigation should arise as to the ownership of any part of the property covered hereby, or as to any boundary or limit of any part of the separate and various Lands covered by this Agreement, this Agreement shall not be construed to

be, or permitted to serve as, evidence or as a basis of waiver of any legal rights against any party hereto, or prevent any party hereto from establishing its ownership, or having the boundaries or limits of its property determined, in any lawful manner, anything herein contained to the contrary notwithstanding.

IX. STATE may assign or transfer, in whole or in part, any or all of its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the said Lands.

X. This Agreement shall become effective upon the date of the signature of STATE, and shall remain in effect for a term of \_\_\_\_\_ years unless sooner released by STATE.

XI. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

XII. This Agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon any of the parties executing same. To facilitate recordation of this agreement, the parties hereto agree that individual signature and acknowledgment pages from the various counterparts may be merged and combined with signature and acknowledgment pages from other counterparts.

XIII. This Agreement does not confer or waive any rights except as provided herein.

IN WITNESS WHEREOF, GRANTOR has executed this Agreement in the presence of the undersigned witnesses on the date below:

**WITNESSES:**

**GRANTOR**

\_\_\_\_\_

By: \_\_\_\_\_

Print: \_\_\_\_\_

Print: \_\_\_\_\_

\_\_\_\_\_

Title: \_\_\_\_\_

Print: \_\_\_\_\_

Date: \_\_\_\_\_

IN WITNESS WHEREOF, STATE has executed this Agreement in the presence of the undersigned witnesses on the date below:

**WITNESSES:**

**COASTAL PROTECTION AND RESTORATION AUTHORITY**

\_\_\_\_\_

By: \_\_\_\_\_

**KYLE GRAHAM**

Print: \_\_\_\_\_

Title: Executive Director

Print: \_\_\_\_\_

Date: \_\_\_\_\_

**CORPORATE ACKNOWLEDGMENT**

**STATE OF LOUISIANA**

**PARISH OF \_\_\_\_\_**

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish/County and State aforesaid, on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally came and appeared \_\_\_\_\_, to me known, who, being by me duly sworn, declared and acknowledged to me, Notary, that he/she is \_\_\_\_\_, of \_\_\_\_\_, that as such duly authorized officer, by and with authority of the Board of Directors of said corporation, he/she signed, and executed the foregoing instrument, as the free and voluntary act and deed of said corporation, for and on behalf of said corporation, and for the object and purposes therein set forth.

\_\_\_\_\_  
Print: \_\_\_\_\_  
NOTARY PUBLIC

Notary or Bar # \_\_\_\_\_  
My commission expires: \_\_\_\_\_  
(SEAL)

**INDIVIDUAL ACKNOWLEDGMENT**

**STATE OF \_\_\_\_\_**

**PARISH/COUNTY OF \_\_\_\_\_**

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish/County and State aforesaid, on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally appeared \_\_\_\_\_, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he/she executed it as his/her free act and deed.

\_\_\_\_\_  
Print: \_\_\_\_\_  
NOTARY PUBLIC

Bar/Notary # \_\_\_\_\_  
My commission expires: with life  
(SEAL)

**WITNESS ACKNOWLEDGMENT**

**STATE OF LOUISIANA**

**PARISH/COUNTY OF** \_\_\_\_\_

BEFORE ME, the undersigned Notary, duly commissioned and qualified in and for said Parish/ County and State aforesaid, on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally came and appeared \_\_\_\_\_, who, known to me, being duly sworn, declared and acknowledged to me, Notary, that he was one of the subscribing witnesses to the foregoing instrument and that the same was signed by \_\_\_\_\_, who signed and executed the foregoing instrument as his free and voluntary act and deed, in the presence of \_\_\_\_\_ and in the presence of the other subscribing witness or witnesses.

\_\_\_\_\_  
SUBSCRIBING WITNESS

Print: \_\_\_\_\_

SWORN TO AND SUBSCRIBED before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Print: \_\_\_\_\_  
NOTARY PUBLIC

Notary Number: \_\_\_\_\_  
My commission expires: with life  
(SEAL)

**ACKNOWLEDGMENT**

**STATE OF LOUISIANA**

**PARISH OF EAST BATON ROUGE**

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally came and appeared **Kyle Graham**, me known, who declared that he is the **Executive Director**, of the Coastal Protection and Restoration Authority, State of Louisiana, that he executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him by said State Agency and that he acknowledged the instrument to be the free act and deed of said State Agency.

\_\_\_\_\_

Print Name: \_\_\_\_\_

NOTARY PUBLIC

Notary or Bar # \_\_\_\_\_

My commission expires: with life

(SEAL)

Perpetual Easement, Servitude and Right-of-Way Agreement  
River Rest, LLC

# Plaquemines Parish Recording Page

Dorothy M Lundin  
Clerk of Court  
PO Box 40  
Belle Chasse, LA 70037  
(504) 297-5180

**Received From :**

GCR & ASSOCIATES, INC.  
ATTN: MONA NOSARI  
2021 LAKESHORE DR., SUITE 500  
NEW ORLEANS, LA 70122

**First VENDOR**

RIVER REST LLC

**First VENDEE**

LOUISIANA STATE

**Index Type :** Conveyance

**File Number :** 2012-00002443

**Type of Document :** Servitude

**Book :** 1271      **Page :** 1

**Recording Pages :** 8

### Recorded Information

I hereby certify that the attached document was filed for registry and recorded in the Clerk of Court's office for Plaquemines Parish, Louisiana

On (Recorded Date) : 06/08/2012

At (Recorded Time) : 12:01:39PM



Doc ID - 002978320008

CLERK OF COURT,  
DOROTHY M LUNDIN  
Parish of Plaquemines  
I certify that this is a true copy of the attached  
document that was filed for registry and  
Recorded 06/08/2012 at 12:01:39  
Recorded in Book 1271 Page 1  
File Number 2012-00002443



*Caralee Robert*  
Deputy Clerk

**Return To :**

**PERPETUAL EASEMENT, SERVITUDE AND RIGHT-OF-WAY AGREEMENT**

**COASTAL PROTECTION AND RESTORATION PURPOSES**

**JEFFERSON AND PLAQUEMINES PARISHES, LOUISIANA**

STATE OF LOUISIANA

PARISHES OF JEFFERSON AND PLAQUEMINES

THIS AGREEMENT, made and entered into this 29<sup>th</sup> day of May, 2012, by and between: **RIVER REST L.L.C.**, a Louisiana Limited Liability Company, with the business address of 1800 Carol Sue Ave., Gretna, LA 70056, herein represented by Mike Jeansonne, hereinafter called the **"GRANTOR"**, as owner of the below described property; and

The STATE OF LOUISIANA herein represented by and appearing as follows through:

The **OFFICE OF COASTAL PROTECTION AND RESTORATION ("OCPR")**, as authorized and directed by the policy of the Coastal Protection and Restoration Authority ("CPRA"), herein represented by and appearing through the Executive Director of OCPR, Jerome Zeringue, domiciled in East Baton Rouge Parish, Louisiana, with offices located at 450 Laurel Street, Suite 1200, Baton Rouge, Louisiana, 70804, and whose mailing address is P.O. Box 44027, Baton Rouge, Louisiana 70804-4027, appearing pursuant to the provisions of La. R.S. 49:214.1, et seq., as amended by Act 523 of the 2009 Regular Session of the Louisiana Legislature;

The above mentioned hereinafter collectively referred to as **"STATE"**.

WITNESSETH: For and in consideration of the promises and undertakings by STATE to GRANTOR herein, and further for other good and valuable consideration, including the potential benefits to GRANTOR'S lands resulting from coastal protection and restoration projects by the STATE, the receipt and adequacy of which are hereby acknowledged, GRANTOR hereby grants unto STATE the perpetual rights-of-way, servitudes, and easements (hereinafter called "the Agreement"), together with the right to enter in, on, and over GRANTOR'S property interest, for integrated coastal protection purposes as defined in La. R.S. 49.214.2(10) as part of the **State of Louisiana's Master Plan for Coastal Protection and Restoration** (hereinafter called "Project"), located in, on, and over GRANTOR'S property interest. The Project will be publicly funded and shall be located on the following described property interest, including expressly, but not limited to, any interest in lands or water-covered lands which might be owned by GRANTOR (hereinafter called the "Lands"), to-wit:

All of Sections 46, 47, 50, 51, 52, and 53, the S/2 and the S/2 of the N/2 of Section 48, the S/2 and the S/2 of the N/2 of Section 49, T16S – R24E, Jefferson Parish; a portion of Section 16, T16S – R24E, West of the non-federal levee, Section 41, T17S – R24E, Plaquemines Parish, Louisiana, as shown on Exhibit A.

GRANTOR hereby warrants that GRANTOR understands the Project and accepts any and all impacts to said Lands resulting from construction and implementation of the Project. The rights granted by GRANTOR pursuant to this Agreement in, on and over the Lands are specific to coastal protection purposes with respect to the Project as it exists and is defined as of the date of this Agreement, and the STATE shall have no rights pursuant to this Agreement in, on, and over the Lands with respect to any changes to the general scope of or specific implementation plans for the Project after the date of this Agreement that are not approved by GRANTOR in writing; however, such approval shall not be unreasonably withheld.

I. This Agreement grants the rights to enter said Lands, (further identified on Exhibit A, attached hereto), to perform construction, operation, modification, monitoring, maintenance, and such other activities described on Exhibit B, (attached hereto), necessary to complete the Project.

II. STATE agrees to give reasonable notice to GRANTOR prior to initiation of access to the said Lands for the purpose of implementing, constructing, operating, modifying, monitoring and maintaining the Project.

III. To the extent permitted by Louisiana law, STATE shall, indemnify, and hold harmless GRANTOR against and from all costs, expenses, claims, demands, penalties, suits, fines, and actions of any kind and nature arising from the Project and caused by the actions and fault of STATE or its agents, employees, contractors, successors, assigns and transferees, including any court costs and reasonable and actual litigation expenses and attorneys' fees. However, nothing herein shall be construed as

indemnifying or holding GRANTOR or any third person not a party hereto harmless against its own fault or negligence or that of its agents, employees, contractors, successors, assigns and transferees. Should work on said Lands be performed via contract, STATE shall ensure that the contractor lists GRANTOR as an additional insured on any policies by the contractor, including completed operations coverage. The STATE acknowledges, declares and stipulates that GRANTOR has provided this Agreement at no cost to the STATE under the provisions of La. R.S. 49:214.6.10 C, as amended by 2010 Acts No. 734. This clause shall survive the term of this Agreement.

IV. STATE shall be responsible for repair or replacement in like manner of any fences, bridges, roads, and other similar facilities and appurtenances located on said Lands which may be damaged or destroyed by STATE, or its designees while on said Lands, such repairs shall to the extent practical be completed within one hundred and twenty (120) days after completion of STATE's activities that resulted in the damage and such repairs to be to that condition which existed immediately prior to STATE's activities. STATE shall remove or dispose of all debris associated with construction, operation and maintenance of the Project.

V. STATE acknowledges that La. R.S. 49:214.5.5 provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal, or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures from the Coastal Protection and Restoration Fund or expenditures of federal funds. The STATE further agrees that in the event legal proceedings are instituted by any person seeking recognition of a right of ownership, servitude, or use in, or over private property solely on the basis of the expenditure of funds from the Coastal Protection and Restoration Fund or expenditure of federal funds, that the STATE shall indemnify and hold harmless the owner of such property for any costs, expense, or loss related to such proceeding, including court costs and attorney's fees. To the extent permitted by La. R.S. 49:214.5.5, the servitude and right-of-way rights granted herein shall be considered real rights and covenants running with the Lands.

VI. Subject to the rights-of-way, servitude and easements afforded the STATE herein, it is understood and agreed that GRANTOR shall retain the limits of its title and all property rights in and to said Lands, and all minerals in, on and under said Lands are not affected in any way hereby. However, no structures or appurtenances constructed hereunder pursuant to the Project on the Lands shall be adjusted, removed, and/or interfered with by GRANTOR, or anyone holding rights by, through or under GRANTOR.

VII. Subject to the above, in its exercise of the rights herein granted, STATE agrees not to unreasonably interfere with (a) oil, gas, sulphur or other mineral operations, (b) farming, grazing, and other agricultural operations, and (c) hunting, trapping and alligator egg operations, (d) fishing, crabbing, or shrimping operations on said Lands. STATE specifically acknowledges the continuing right of GRANTOR, its heirs, successors, assigns, transferees or lessees, to use, occupy and enjoy all of said Lands, for all purposes, in such manner at such times as they, or any of them, shall desire to use same, including, but without limitation, for the purpose of conducting oil, gas or other mineral operations on any of said Lands, for the exploration, discovery, production, storage, transportation and disposition of oil, gas, sulphur or other minerals, under oil, gas and mineral leases or otherwise, and for the purpose of farming, grazing, and other agricultural operations, hunting and trapping fur-bearing animals, alligator egg operations, fishing, crabbing, or shrimping thereon, provided, however, that such use, occupation, and enjoyment shall not unreasonably interfere with the coastal protection activities of STATE with respect to the Project. Without limiting the foregoing, STATE agrees to place no structures and/or appurtenances on the Lands in any manner without the express written consent of GRANTOR, which may not be unreasonably withheld by GRANTOR. Provided further that no structures and/or appurtenances specifically authorized by GRANTOR and constructed hereunder pursuant to the Project on the Lands shall be adjusted, removed and/or unreasonably interfered with by GRANTOR.

VIII. GRANTOR does not warrant title, and STATE acknowledges the existence of various rights of third parties in and to the Lands. GRANTOR specifically does not warrant or represent the correctness of any survey, or any of the plats attached hereto which purport to show the location of said Lands. If at any time any questions or litigation should arise as to the ownership of any part of the property covered hereby, or as to any boundary or limit of any part of the separate and various Lands covered by this Agreement, this Agreement shall not be construed to be, or permitted to serve as, evidence or as a basis of waiver of any legal rights against any party hereto, or prevent any party hereto from establishing its ownership, or having the boundaries or limits of its property determined, in any lawful manner, anything herein contained to the contrary notwithstanding.

IX. STATE may assign or transfer, in whole or in part, any or all of its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the said Lands.

X. This Agreement shall become effective upon the date of the signature of STATE, and shall remain in effect in perpetuity until the Project is terminated or abandoned, unless sooner released by STATE.

XI. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

XII. This Agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon any of the parties executing same. To facilitate recordation of this agreement, the parties hereto agree that individual signature and acknowledgment pages from the various counterparts may be merged and combined with signature and acknowledgment pages from other counterparts.

XIII. This Agreement does not confer or waive any rights except as provided herein.

IN WITNESS WHEREOF, GRANTOR has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

Tammy Gagliano  
Print: Tammy Gagliano  
Janice Mercatante  
Print: JANICE MERCATANTE

GRANTOR: RIVER REST, L.L.C.

M. J. Jeanson  
Print: Mike Jeanson  
Title: Member  
Date: 5-29-12

IN WITNESS WHEREOF, GRANTOR has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

Patricia Pouch  
Print: PATRICIA POUCH  
Cindy D'Amico  
Print: Cindy D'Amico

OFFICE OF COASTAL PROTECTION AND  
RESOTRATION

Jerome Zeringue  
Print: Jerome Zeringue  
Title: Executive Director  
Date: June 4, 2012

FILED AND RECORDED, JEFFERSON PARISH, LOUISIANA  
11226303 DATE 6/8/2012 11:32:54 AM  
JON A. GEGENHEIMER, CLERK OF COURT & RECORDER  
CERTIFIED TRUE COPY  
BY M. Williams  
DEPUTY CLERK & RECORDER  
CB BOOK 3 3297 PAGE 323

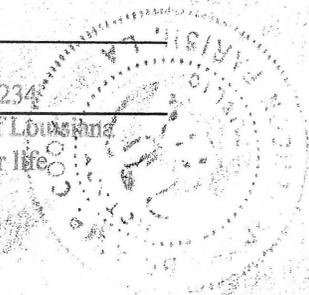
**CORPORATE ACKNOWLEDGEMENT**

STATE OF LOUISIANA

PARISH OF AA

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish/County and State aforesaid, on this 29 day of May, 2012, personally came and appeared MIKE JEANSONNE, to me known, who, being by me duly sworn, declared and acknowledged to me, Notary, that he/she is a Member of River Rest L.L.C., that as such duly authorized officer, by and with authority of the Board of Directors of said corporation, he/she signed, and executed the foregoing instrument, as the free and voluntary act and deed of said corporation, for and on behalf of said corporation, and for the object and purposes therein set forth.

00x  
Print: Brian P. Cook  
Notary Public # 038234  
Parish of Jefferson, State of Louisiana  
**NOTARY PUBLIC**  
My commission is for life



Notary or Bar # 038034  
My commission expires: aduh  
(SEAL)

**ACKNOWLEDGEMENT**

STATE OF LOUISIANA

PARISH OF EAST BATON ROUGE

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this 4th day of June, 2012, personally came and appeared Jerome Zeringue, to me known, who declared that he is the Executive Director, of the Office of Coastal Protection and Restoration, State of Louisiana, that he executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him by said State Agency and that he acknowledged the instrument to be the free act and deed of said State Agency.

Clifton D. Byrd  
Print: Clifton D. Byrd  
**NOTARY PUBLIC**



Notary or Bar # LA03052  
My commission expires: with life  
(SEAL)

**Exhibit B To RIVER REST L.L.C**  
**PERPETUAL EASEMENT, SERVITUDE AND RIGHT-OF-WAY AGREEMENT**

Attached to and made a part of that certain Perpetual Easement, Servitude, and Right-of-Way Agreement by and between GRANTOR and the OFFICE OF COASTAL PROTECTION AND RESTORATION dated 5-29, 2012.

Subject to the terms and conditions set forth in the Agreement and attachments and exhibits thereto, STATE shall have the right to enter said Lands to perform the following activities all at the sole expense of the STATE for "integrated coastal protection" purposes in accordance with the STATE's comprehensive master coastal protection plan (La. R.S. 49:214.1 et seq.) and/or coastal wetlands restoration projects authorized by 16 U.S.C. 3951 et seq.:

- a. The right to deposit dredged sediment and/or fill material on, over and across said Lands by either natural or mechanical means, including the right to alter land and/or water contours and undertake management practices to enhance or extend the beneficial use of dredged or sediment deposition for wetland/marsh creation, restoration and enhancement;
- b. The right to plant or cause the growth of vegetation in, on, over and across said Lands, including the right to nourish, replenish and maintain said vegetation;
- c. The right to relocate, alter, replace or remove appropriate pipelines, utility lines, facilities or other structures in, on, under, and across said Lands, as may be deemed necessary by STATE;
- d. The right to construct, locate, maintain and service required monitoring devices and equipment on said Lands and on other lands as may be owned by GRANTOR;
- e. The right to post warning signs or notices on or near appropriate Project features on said Lands, as may be deemed necessary by STATE;
- f. The right to construct and maintain and to alter or remove structures and/or appurtenances constructed on said Lands by STATE pursuant to the Project;
- g. The right to enter said Lands for the purpose(s) of conducting surveys, inspections and investigations required by STATE to evaluate the effectiveness of the Project and Project features, including maintaining/improving wetland and/or restored land quantity and quality;
- h. The right to enter and traverse said Lands to access Project features located on adjacent lands;
- i. The right to make modifications to the above, but only insofar as changes pertain to materials for Project features and minor changes to Project feature locations, as may be deemed necessary by STATE to fully and properly implement and maintain the Project.
- j. The right to construct, operate, maintain and monitor channel improvements works on, over and across said lands, including the right to enlarge, improve, deepen or realign existing channels, canals, ditches or other waterways;
- k. The right to construct and maintain fencing material to encourage the deposition of sand/sediment;
- l. The right to dredge a temporary floatation channel(s) for access and to build a containment dike(s) within portions of the Project area to retain deposited sediment;
- m. The right to construct (including the necessary excavation and/or filling) a sediment conveyance channel for the delivery (via dredge pipe) of sand and/or sediment.
- n. The right to borrow, excavate, grade, and remove soil, vegetation and associated materials from the said Lands;

o. The right to plug, close or fill selected channels, canals, ditches, streams or waterbodies located on said Lands;

p. The right to construct (including the necessary borrow areas), maintain and monitor overflow banks so as to preclude the exchange of channelized water on, over and across said Lands;

q. The right to construct (including the necessary excavation and/or filling), operate, maintain and monitor water control structures including all appurtenances thereto, in, over and across the said Lands; and

r. The rights to construct, operate, maintain and monitor structures or improvements to enhance the deposition of sediment upon said Lands.

s. GRANTOR reserves the right to review, comment, and request changes to Project features, structures and appurtenances but only insofar as changes pertain to materials for Project features and changes to Project locations and only for so long as such changes do not interfere with the goals of the Project, provided such comments and requests are made in writing no later than 30 days after the Project is presented to GRANTOR for review, unless otherwise agreed by both parties. STATE agrees to consider in good faith any comment or requested change to the Project.

t. For purposes of the indemnity provided by the STATE pursuant to Section III of the Agreement, the term "GRANTOR" shall include not only River Rest, L.L.C., but also all managers, members, agents and representatives (collectively the "Representatives") of the entity except for actions by such Representatives that are beyond the course and scope of their duties to and/or engagement with GRANTOR or for which such Representatives have engaged in intentional or wrongful misconduct. However, nothing herein shall be construed as indemnifying or holding Grantor or any third person not a party hereto harmless against the fault or negligence of Grantor's Representatives.

u. Should work on said Lands be performed via contract, STATE shall ensure that all policies of insurance provided by each contractor and subcontractor pursuant to Section III of the Agreement are primary and non-contributory and shall name Grantor as an additional insured using ISO Commercial General Liability Endorsement Forms CG 20 37 07 04 and CG 20 10 07 04.

Perpetual Easement, Servitude and Right-of-Way Agreement  
Wildlife Lands, LLC

FILED AND RECORDED, JEFFERSON PARISH, LOUISIANA  
11241394 DATE 9/6/2012 10:43:56 AM  
JON A. GEGENHEIMER, CLERK OF COURT & RECORDER  
CERTIFIED TRUE COPY  
BY   
DEPUTY CLERK & RECORDER  
CB BOOK 3302 PAGE 194

**PERPETUAL EASEMENT, SERVITUDE AND RIGHT-OF-WAY AGREEMENT**

**COASTAL PROTECTION AND RESTORATION PURPOSES**

**JEFFERSON PARISH, LOUISIANA**

STATE OF LOUISIANA

PARISH OF JEFFERSON

THIS AGREEMENT, made and entered into this 15<sup>th</sup> day of August, 2012, by and between: **WILDLIFE LANDS, LLC**, a Limited Liability Company, with the business address of 601 Poydras Street, Suite 1815, New Orleans, Louisiana, 70130, herein represented by Shawn S. Killeen, it's Manager; hereinafter called the "**GRANTOR**", as owner of the below described property; and

The STATE OF LOUISIANA herein represented by and appearing as follows through:

The **COASTAL PROTECTION AND RESTORATION AUTHORITY** ("**CPRA**"), as authorized and directed by the policy of the Coastal Protection and Restoration Authority Board ("**CPRAB**"), herein represented by and appearing through the Executive Director of CPRA, Jerome Zeringue, domiciled in East Baton Rouge Parish, Louisiana, with offices located at 450 Laurel Street, Suite 1200, Baton Rouge, Louisiana, 70804, and whose mailing address is P.O. Box 44027, Baton Rouge, Louisiana, 70804-4027, appearing pursuant to the provisions of La. R.S. 49:214.1, et seq., as amended by Act 523 of the 2009 Regular Session and as amended by Act 604 of the 2012 Regular Session of the Louisiana Legislature;

The above mentioned hereinafter collectively referred to as "**STATE**".

WITNESSETH: For and in consideration of the promises and undertakings by STATE to GRANTOR herein, and further for other good and valuable consideration, including the potential benefits to GRANTOR'S lands resulting from coastal protection and restoration projects by the STATE, the receipt and adequacy of which are hereby acknowledged, GRANTOR hereby grants unto STATE, the perpetual rights-of-way, servitudes and easements (hereinafter called "the Agreement"), together with the right to enter in, on, and over, GRANTOR'S property interests, for integrated coastal protection purposes as defined in La. R.S. 49.214.2(10) as part of the **State of Louisiana's Master Plan for Coastal Protection** (hereinafter called "the Project") located in, on, or over GRANTOR'S property interests. The Project will be publicly funded and shall be located on the following described property interest, including expressly, but not limited to, any interest in lands or water-covered lands which might be owned by GRANTOR (hereinafter called "said Lands"), to-wit:

All of Section 2 west of the Parish line, Section 3, Sections 4, 5, 10 lying north of Bayou Dupont and Section 11 lying north of Bayou Dupont and west of the Parish line, all in Township 17 South, Range 24 East, Jefferson Parish, State of Louisiana, and as further described and shown on Exhibit A, attached hereto and made a part hereof.

GRANTOR hereby warrants that GRANTOR understands the Project and accepts any and all impacts to said Lands resulting from construction and implementation of the Project. The rights granted by GRANTOR pursuant to this Agreement in, on and over the Lands are specific to coastal protection purposes with respect to the Project as it exists and is defined as of the date of this Agreement, and the STATE shall have no rights pursuant to this Agreement in, on, and over the Lands with respect to any changes to the general scope of or specific implementation plans

for the Project after the date of this Agreement that are not approved by GRANTOR in writing; however, such approval shall not be unreasonably withheld.

I. This Agreement grants the rights to enter said Lands, (further identified on Exhibit A, attached hereto), to perform construction, operation, modification, monitoring, maintenance and such other activities described on Exhibit B (attached hereto) necessary to complete the Project.

II. STATE agrees to give reasonable notice to GRANTOR prior to initiation of access to the said Lands for the purpose of implementing, constructing, operating, modifying, monitoring and maintaining the Project.

III. To the extent permitted by Louisiana law, STATE shall indemnify and hold harmless GRANTOR against and from all costs, expenses, claims, demands, penalties, suits, fines, and actions of any kind and nature arising from the Project and caused by the actions and fault of STATE or its agents, employees, contractors, successors, assigns and transferees, including any court costs and reasonable and actual litigation expenses and attorneys' fees. However, nothing herein shall be construed as indemnifying or holding GRANTOR or any third person not a party hereto harmless against its own fault or negligence or that of its agents, employees, contractors, successors, assigns and transferees. Should work on said Lands be performed via contract, STATE shall ensure that the contractor lists GRANTOR as additional insured on any policies by the contractor, including completed operations coverage. The STATE acknowledges, declares and stipulates that GRANTOR has provided this Agreement at no cost to the STATE under the provisions of La. R.S. 49:214.6.10 C, as amended by 2010 Acts No. 734. This clause shall survive the term of this agreement.

IV. STATE shall be responsible for repair or replacement in like manner of any fences, bridges, roads, and other similar facilities and appurtenances located on said Lands which may be damaged or destroyed by STATE or its designees while on said Lands, such repairs shall to the extent practical be completed within one hundred and twenty (120) days after completion of STATE's activities that resulted in the damage and such repairs to be to that condition which existed immediately prior to STATE's activities. STATE shall remove or dispose of all debris associated with construction, operation and maintenance of the Project.

V. STATE acknowledges that La. R.S. 49:214.5.5 provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal, or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures from the Coastal Protection and Restoration Fund or expenditures of federal funds. The STATE further agrees that in the event legal proceedings are instituted by any person seeking recognition of a right of ownership, servitude, or use in, or over private property solely on the basis of the expenditure of funds from the Coastal Protection and Restoration Fund or expenditure of federal funds, that the STATE shall indemnify and hold harmless the owner of such property for any costs, expense, or loss related to such proceeding, including court costs and attorney's fees. To the extent permitted by La. R.S. 49:214.5.5, the servitude and right-of-way rights granted herein shall be considered real rights and covenants running with the land.

VI. Subject to the rights-of-way, servitude and easements afforded the STATE herein, it is understood and agreed that GRANTOR shall retain the limits of its title and all property rights in and to said Lands, and all minerals in, on and under said Lands are not affected in any way hereby. However, no structures or appurtenances constructed hereunder pursuant to the Project on the Lands shall be adjusted, removed, and/or interfered with by GRANTOR, or anyone holding rights by, through or under GRANTOR.

VII. Subject to the above, in its exercise of the rights herein granted, STATE agrees not to unreasonably interfere with (a) oil, gas, sulphur or other mineral operations (b) farming, grazing, and other agricultural operations (c) hunting, trapping and alligator egg operations, (d) fishing, crabbing, or shrimping operations, on said Lands. STATE specifically acknowledges the continuing rights of GRANTOR, its heirs, successors, assigns, transferees or lessees, to use, occupy and enjoy all of said Lands, for all purposes, in such manner at such times as they, or any of them, shall desire to use same, including, but without limitation, for the purpose of conducting oil, gas or other mineral operations on any of said Lands, for the exploration, discovery, production, storage, transportation and disposition of oil, gas, sulphur or other minerals, under

oil, gas and mineral leases or otherwise, and for the purpose of farming, grazing, and other agricultural operations, hunting and trapping fur-bearing animals, alligator egg operations, fishing, crabbing, or shrimping thereon, provided, however, that such use, occupation, and enjoyment shall not unreasonably interfere with the coastal protection activities of STATE with respect to the Project. Without limiting the foregoing, the STATE agrees to place no structures and/or appurtenances on the Lands in any manner without the express written consent of GRANTOR, which may not be unreasonably withheld by GRANTOR. Provided further that no structures and/or appurtenances specifically authorized by GRANTOR and constructed hereunder pursuant to the Project on the Lands shall be adjusted, removed and/or unreasonably interfered with by GRANTOR.

VIII. GRANTOR does not warrant title, and STATE acknowledges the existence of various rights of third parties in and to the lands. GRANTOR specifically does not warrant or represent the correctness of any survey, or any of the plats attached hereto which purport to show the location of said Lands. If at any time any questions or litigation should arise as to the ownership of any part of the property covered hereby, or as to any boundary or limit of any part of the separate and various Lands covered by this Agreement, this Agreement shall not be construed to be, or permitted to serve as, evidence or as a basis of waiver of any legal rights against any party hereto, or prevent any party hereto from establishing its ownership, or having the boundaries or limits of its property determined, in any lawful manner, anything herein contained to the contrary notwithstanding.

IX. STATE may assign or transfer, in whole or in part, any or all of its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the said Lands.

X. This Agreement shall become effective upon the date of the signature of STATE, and shall remain in effect in perpetuity until the Project is terminated or abandoned, unless sooner released by STATE.

XI. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

XII. This Agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon any of the parties executing same. To facilitate recordation of this agreement, the parties hereto agree that individual signature and acknowledgment pages from the various counterparts may be merged and combined with signature and acknowledgment pages from other counterparts.

XIII. This Agreement does not confer or waive any rights except as provided herein.

[remainder of the page left intentionally blank]

IN WITNESS WHEREOF, GRANTOR has executed this Agreement in the presence of the undersigned witnesses on the date below:

**WITNESSES:**

Ben Barnes

Print: Ben Barnes

Lucas Lilly

Print: Lucas Lilly

**GRANTOR:**

**WILDLIFE LANDS, LLC**

By: Shawn S. Killeen  
**SHAWN S. KILLEEN**

Title: Manager

Date: August 15<sup>th</sup>, 2012

IN WITNESS WHEREOF, STATE has executed this Agreement in the presence of the undersigned witnesses on the date below:

**WITNESSES:**

Patricia Porch

Print: Patricia Porch

Cindy D'Amico

Print: Cindy D'Amico

**COASTAL PROTECTION AND RESTORATION AUTHORITY**

By: Jerome Zeringue  
**JEROME ZERINGUE**

Title: Executive Director

Date: August 20, 2012

ACKNOWLEDGMENT

STATE OF LOUISIANA

PARISH OF Orleans

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this 15 day of August, 2012, before me personally appeared **SHAWN S. KILLEEN** to me known, who, being by me duly sworn, declared and acknowledged to me, Notary, that he is a Manager of **WILDLIFE LANDS, LLC**, that as such duly authorized officer, by and with authority of the Board of Directors of said corporation, he signed, and executed the foregoing instrument, as the free and voluntary act and deed of said corporation, for and on behalf of said corporation, and for the object and purposes therein set forth.

Jamie C Parker  
Print: Jamie C. Parker  
NOTARY PUBLIC

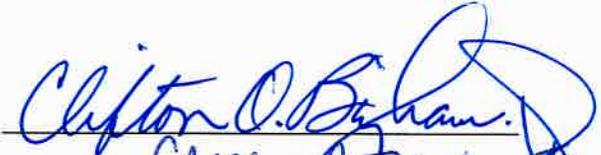
Bar/Notary # Notary # 85570  
My commission expires: for life  
(SEAL) JAMIE C. PARKER  
NOTARY PUBLIC  
STATE OF LOUISIANA  
NOTARY ID NO. 85570  
MY COMMISSION IS FOR LIFE

ACKNOWLEDGMENT

STATE OF LOUISIANA

PARISH OF EAST BATON ROUGE

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this 20<sup>th</sup> day of August, 2012, personally came and appeared **JEROME ZERINGUE**, me known, who declared that he is the **EXECUTIVE DIRECTOR**, of the COASTAL PROTECTION AND RESTORATION AUTHORITY, STATE OF LOUISIANA, that he executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him by said State Agency and that he acknowledged the instrument to be the free act and deed of said State Agency.

  
Print Name: Clifton O. Bingham, Jr.  
NOTARY PUBLIC

Notary or Bar # LA03052  
My commission expires: W/1/12  
(SEAL)



OFFICIAL SEAL  
Clifton O. Bingham, Jr.  
BAR ROLL # 03052  
STATE OF LOUISIANA  
My Commission is for Life

**EXHIBIT B TO WILDLIFE LANDS, LLC  
PERPETUAL EASEMENT, SERVITUDE AND RIGHT-OF-WAY AGREEMENT**

Attached to and made a part of the certain Perpetual Easement, Servitude and Right-of-Way Agreement by and between GRANTOR and the COASTAL PROTECTION AND RESTORATION, dated the 15<sup>th</sup> day of August, 2012.

Subject to the terms and conditions set forth in the Agreement and attachments and exhibits thereto, STATE shall have the right to enter said Lands to perform the following activities all at the sole expense of the STATE for "integrated coastal protection" purposes in accordance with the STATE's comprehensive master coastal protection plan (La. R.S. 49:214.1 et seq.) and/or coastal wetlands restoration projects authorized by 16 U.S.C. 3951 et seq.:

a. The right to deposit dredged sediment and/or fill material on, over and across said Lands by either natural or mechanical means, including the right to alter land and/or water contours and undertake management practices to enhance or extend the beneficial use of dredged sediment deposition for wetland/marsh creation, restoration and enhancement;

b. The right to plant or cause the growth of vegetation in, on, over and across said Lands, including the right to nourish, replenish and maintain said vegetation;

c. The right to relocate, alter, replace or remove appropriate pipelines, utility lines, facilities or other structures in, on, under, and across said Lands, as may be deemed necessary by STATE;

d. The right to construct, locate, maintain and service required monitoring devices and equipment on said Lands, as may be deemed necessary by STATE;

e. The right to post warning signs or notices on or near appropriate Project features on said Lands, as may be deemed necessary by STATE;

f. The right to construct and maintain and to alter or remove structures and/or appurtenances constructed on said Lands by STATE pursuant to the Project;

g. The right to enter said Lands for the purpose(s) of conducting surveys, inspections and investigations required by STATE to evaluate the effectiveness of the Project and Project features, including maintaining/improving wetland and/or restored land quantity and quality;

h. The right to enter and traverse said Lands to access Project features located on adjacent Lands;

i. The right to make modifications to the above, but only insofar as changes pertain to materials for Project features and minor changes to Project feature locations, as may be deemed necessary by STATE to fully and properly implement and maintain the Project;

j. The right to construct, operate, maintain and monitor channel improvements works on, over and across said Lands, including the right to enlarge, improve, deepen or realign existing channels, canals, ditches or other waterways;

k. The right to construct and maintain fencing material to encourage the deposition of sand/sediment;

l. The right to dredge a temporary floatation channel(s) for access and to build a containment dike(s) within portions of the Project area to retain deposited sediment;

m. The right to construct (including the necessary excavation and/or filling) a sediment conveyance channel for the delivery (via dredge pipe) of sand and/or sediment;

n. The right to borrow, excavate, grade, and remove soil, vegetation and associated materials from the said Lands;

o. The right to plug, close or fill selected channels, canals, ditches, streams or waterbodies located on said Lands;

p. The right to construct (including the necessary borrow areas), maintain and monitor overflow banks so as to preclude the exchange of channelized water on, over and across said Lands;

q. The right to construct (including the necessary excavation and/or filling), operate, maintain and monitor water control structures including all appurtenances thereto, in, over and across Lands;

r. The rights to construct, operate, maintain and monitor structures or improvements to enhance the deposition of sediment upon said Lands;

s. GRANTOR reserves the right to review, comment, and request changes to Project features, structures and appurtenances but only insofar as changes pertain to materials for Project features and changes to Project locations and only for so long as such changes do not interfere with the goals of the Project, provided such comments and requests are made in writing no later than 30 days after the Project is presented to GRANTOR for review, unless otherwise agreed by both parties. STATE agrees to consider in good faith any comment or requested change to the Project;

t. For purposes of the indemnity provided by the STATE pursuant to Section III of the Agreement, the term "GRANTOR" shall include not only Wildlife Lands, LLC, but also all its managers, members, agents and representatives (collectively called the "Representatives") of the entity except for actions by such Representatives that are beyond the course and scope of their duties to and/or engagement with GRANTOR or for which such Representatives have engaged in intentional or wrongful misconduct. However, nothing herein shall be construed as indemnifying or holding Grantor or any third person not a party hereto harmless against the fault or negligence of Grantor's Representatives; and

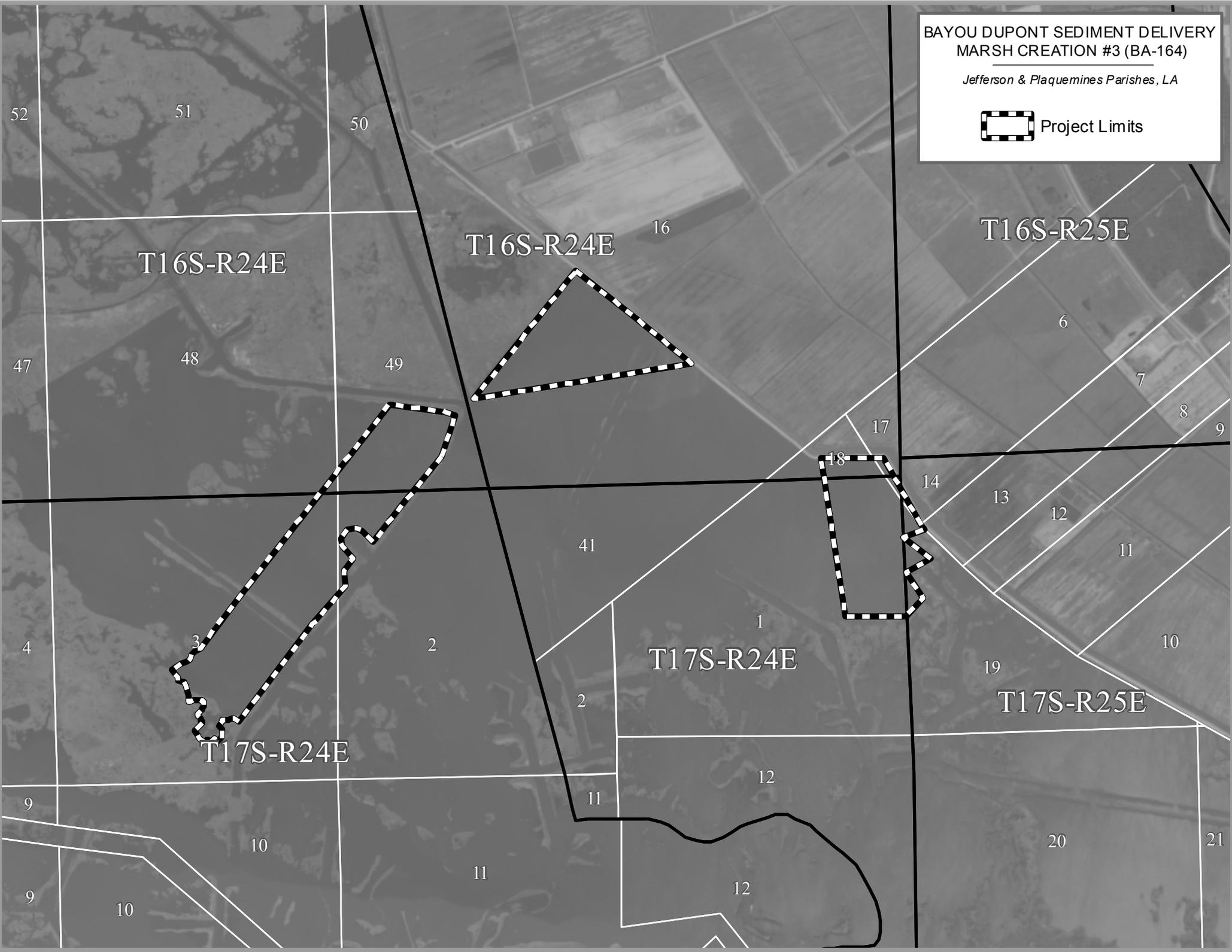
u. Should work on said Lands be performed via contract, STATE shall ensure that all policies of insurance provided by each contractor and subcontractor pursuant to Section III of the Agreement are primary and non-contributory and shall name Grantor as an additional insured using ISO Commercial General Liability Endorsement Forms CG 20 37 07 04 and CG 20 10 07 04.

## Map of Project Limits

Bayou Dupont Sediment Delivery – Marsh Creation #3 (BA-164)

**BAYOU DUPONT SEDIMENT DELIVERY  
MARSH CREATION #3 (BA-164)**  
*Jefferson & Plaquemines Parishes, LA*

 Project Limits



## **Enclosure VII – Overgrazing Determination**



United States Department of Agriculture

---

August 22, 2014

Mr. Brad Crawford  
Environmental Engineer, Marine and Coastal Section  
US EPA (6WQ-EC)  
1445 Ross Ave.  
Dallas, TX 75202

Dear Mr. Brad:

RE: Bayou Dupont Sediment Delivery Marsh Creation #3 (BA-164)

I am in receipt of your request for an overgrazing determination for the Bayou Dupont Sediment Delivery Marsh Creation #3 (BA-164). I contacted our local district conservationist and our state grazing land specialist to discuss the grazing in the project area. Currently, livestock are not grazing in the area, nor do we see a potential for grazing once the project is installed. Therefore, it is our opinion, overgrazing is not a problem in this project area. If you have any questions please let me know.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Britt Paul".

W. Britt Paul  
Assistant State Conservationist/Water Resources

Cc: (electronic distribution only)

Randolph Joseph, Assistant State Conservationist/Field Operations, Lafayette, Louisiana

John Boatman, District Conservationist, Donaldsonville, Louisiana

John Jurgensen, Civil Engineer, Alexandria, Louisiana

Johanna Pate, State Grazing Land Specialist, Alexandria, Louisiana

- Bathymetric and magnetometer surveys for the borrow areas have been previously evaluated for other marsh creation projects in the Barataria Basin. Geotechnical investigations for other marsh creation projects in the area, Marsh Creation areas BA-39 and BA-48, were used in the 30% design report.
- Topographic and magnetometer surveys have been completed for the marsh fill area and the terrace areas.
- A geotechnical investigation specific to Areas A, B and C was completed by GeoEngineers, Inc. and was used in the refinement of this design as discussed in this 95% report.
- The project team from EPA, CPRA, and Moffatt & Nichol (M&N) have met regularly to develop a plan to identify and address all of the project requirements.
- Detailed field investigations over the proposed project area, engineering, design, and permitting efforts have been completed to the 95% design level as required by the CWPPRA Standard Operating Procedures, November 2012.
- The project is scheduled to seek Phase 2 construction funding in December 2014.
- The 30% E&D review meeting was held on July 24, 2014. All comments based on the 30% report have been addressed and incorporated in the 95% design report.
- The 95% E&D review meeting was held on October 30, 2014.

The Plaquemines marsh creation cell was modified and split into 2 cells to avoid a conflict with the outfall area of the proposed Mid-Barataria Diversion. Further, based on the project specific settlement curves, the depth of water and the amount of fill required to meet project goals, the marsh creation areas in Plaquemines Parish were determined to be economically infeasible and revised to include terraces in place of the marsh creation. The formal change in scope request was submitted on November 19, 2014 and included as a decision item on the December 11, 2014 Technical Committee agenda.

The Draft EA is complete and ready for publication. EPA expects a finding of no significant impact to be issued shortly. CPRA and EPA investigated the potential for cultural resource areas and determined there are not any in the delineated borrow area or the project footprint. In June 2014, Coastal Environments, Inc. (CEI) conducted a Phase I cultural resources survey relative to the proposed BA-164 Marsh Creation Project. During a field investigation to the project site, CEI did not encounter any cultural resources. Therefore, the proposed BA-164 marsh creation and earthen terrace project will not affect any known cultural resources. As such, clearance is provided to proceed as planned. The clearance letter as well as the full cultural resources report included in Appendix G of the 95% E&D report.

The construction timing of BA-164 is envisioned such that the pipeline from LDSP/BA-48 will still be in place at the time BA-164 would be scheduled for construction. Due to this unique opportunity to take advantage of pre-existing pipeline, it is advantageous to consider the BA-164 project as an addition to the LDSP/BA-48 project as opposed to a stand-alone project. This approach will allow for the use of the nearly 5 miles of pipeline which would be in place and could be used for BA-164. This results in approximately \$6 million in mobilization cost savings for the BA-164 project. The revised Fact Sheet and map are included in Enclosure II.

**III. Description of Phase II Candidate project:** The primary goals of this project are to

- B. A cooperative agreement between EPA Region 6 and CPRA was executed on August 16, 2013. The agreement remains in full force and effect.
- C. An agreement between CPRA and the landowners for a majority of the restoration area already exists. Copies of those agreements were included in the 303(e) request sent to the USACE (dated September 17, 2014) and were posted along with the other 95% design review materials. Those documents include: A copy of the CPRA's Temporary Easement, Servitude and Right-of-Way Agreement, which will be used to acquire the necessary remaining landrights for the project; a copy of fully executed and recorded Perpetual Easement, Servitude and Right-of-Way Agreement with River Rest, LLC; a copy of fully executed and recorded Perpetual Easement, Servitude and Right-of-Way Agreement with Wildlife Lands, LLC, both of which are nonproject specific agreements that are applicable to the above-mentioned Project, and includes lands within the proposed Project areas; and a map depicting the Bayou Dupont Sediment Delivery — Marsh Creation #3 Project Limits. It is anticipated that the remainder of the landrights will be finalized once phase 2 approval and funding are obtained.
- D. A favorable 30% design review was held on July 24, 2014, in Baton Rouge. Attendees included representatives from state and federal CWPPRA agencies and other interested parties. All comments and questions were addressed in the 95% design report. In an email dated September 9, 2014, EPA and CPRA informed the Technical Committee and P&E of the results of the 30% E&D and our intent to move forward with this project. The email included responses to the 30% design comments which we also included in the 95% design documents. The 30% review comments and responses are included in Enclosure III.
- E. A favorable 95% design review was held on October 30, 2014. Attendees included representatives from state and federal CWPPRA agencies and other interested parties. All attendee comments and questions were addressed during the meeting. Draft project plans and specifications were included in the 95% documents. The 95% review comments and responses as well as the 95% concurrence letter from CPRA are included in Enclosure IV.
- F. The Draft NEPA documentation has been completed and a "Finding of No Significant Impact" is expected shortly. The draft Environmental Assessment is included in Enclosure V.
- G. An Ecological Review was not required by CPRA for this project.
- H. Application for public notices for permits. CPRA intends to submit a "Joint Use Permit" application to the Corps in December 2014. The supporting documentation for the permit application has been prepared and is ready for submittal upon Phase 2 funding approval.
- I. A hazardous, toxic and radiological waste assessment was not required for this project. See the NEPA documentation for more detail.

- J. The 303(e) approval request, along with the required documentation was submitted to USACE in a letter dated September 17, 2014 per the requirements of the CWPPRA SOP. Copies of that information was included in the 95% E&D documents. A copy of the transmittal letter is included in Enclosure VI.
- K. NRCS confirmed there is no potential for overgrazing in a letter dated August 22, 2014. A copy of this letter was included in the 303(e) request documentation and the 95% documentation and included in Enclosure VII.
- L. The project has a revised fully funded cost estimate of \$34,320,925 and has been reviewed and approved by the economic work group and the Request for Phase 2 Approval spreadsheet has been completed. See Enclosure VIII.
- M. A revised WVA was completed by EPA and reviewed by the Environmental Work Group. The revised project is projected to have 230 Net acres at the end of its 20-year life. The WVA is included in Enclosure IX.

# Letters of Support

KIRK QUINN  
PRESIDENT  
CURTIS FOUNTAIN  
VICE PRESIDENT  
RYAN BOURRIQUE  
ADMINISTRATOR  
DARRELL WILLIAMS  
SECRETARY-TREASURER

POLICE JURY  
**PARISH OF CAMERON**

P.O. BOX 1280  
**CAMERON, LOUISIANA 70631**

(337) 775-5718  
(337) 775-5567 Fax  
www.parishofcameron.net

DISTRICT 1  
CURTIS FOUNTAIN  
DISTRICT 2  
ANTHONY HICKS  
DISTRICT 3  
KIRK QUINN  
DISTRICT 4  
TERRY BEARD  
DISTRICT 5  
KIRK BURLEIGH  
DISTRICT 6  
JOE DUPONT  
DISTRICT 7  
DARRYL FARQUE

**RESOLUTION**

PARISH OF CAMERON  
STATE OF LOUISIANA

WHEREAS, freshwater introduction is needed in the Cameron Creole Watershed; and

WHEREAS, the Cameron-Creole Watershed marshes have experienced significant loss resulting from excessive salinities and damage exacerbated by Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from those losses without comprehensive restoration efforts, and

WHEREAS, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway, and

WHEREAS, this freshwater introduction project would restore the function, value, and sustainability to approximately 22,247 acres of marsh and open water by improving hydrologic conditions via freshwater input and increasing organic productivity.

NOW, THEREFORE BE IT RESOLVED, by the Cameron Parish Police Jury on this 7<sup>th</sup> day of May, 2014, that the Secretary is hereby authorized, empowered and directed to forward this Resolution of support for the "Cameron-Creole Freshwater Introduction Project" to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

BE IT FURTHER RESOLVED, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, is requested to support the "Cameron-Creole Freshwater Introduction Project" for Phase II Funding to construct this project during the 2014 calendar year.

ADOPTED AND APPROVED this 7<sup>TH</sup> day of May, 2014.

APPROVED:

  
KIRK QUINN, PRESIDENT  
CAMERON PARISH POLICE JURY

ATTEST:

  
DARRELL WILLIAMS, SECRETARY



LOUISIANA HOUSE OF REPRESENTATIVES



P. O. Box 287  
Jennings, LA 70546  
Email: [guinnj@legis.state.la.us](mailto:guinnj@legis.state.la.us)  
Phone: 337.824.0376  
Toll Free: 800.259.0376  
Fax: 337.824.4780

Agriculture, Forestry, Aquaculture,  
and Rural Development  
Natural Resources and Environment  
Transportation, Highways and  
Public Works

**JOHN E. "JOHNNY" GUINN**  
State Representative ~ District 37

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Fax: 504-862-2572

Email: [Brad.L.Inman@usace.army.mil](mailto:Brad.L.Inman@usace.army.mil)

Re: CWPPRA PPL-24  
Oyster Bayou Marsh Restoration CS-59

Dear Colonel Hansen,

This letter is to express support for the Oyster Bayou Marsh Restoration Project CS-59. This project is imperative to be implemented to create, save and protect the coastal marsh immediately west of Cameron. This area is adjacent to the beach restoration just completed along the barrier coastline of Cameron Parish. An explanation of the project is listed below:

This project is in Region 4, Calcasieu-Sabine Basin, located west of the Calcasieu Ship Channel and south of the west fork of the Calcasieu River.

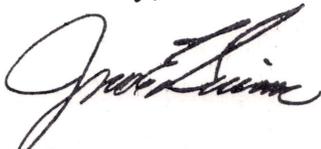
Altered hydrology, drought stress, saltwater intrusion and hurricane induced wetland losses have caused the area to undergo interior marsh breakup. Recent impacts from Hurricane Rita in 2005 and Hurricane Ike in 2008 have resulted in the coalescence of Oyster Lake with interior water bodies increasing wave/wake related erosion. Based on USGS hyper temporal data analysis (1984 to 2011), land loss for the area is -0.75% per year. The subsidence rate is estimated at 0.0 to 1.0 ft per century (Coast 2050, Mud Lake mapping unit).

The project boundary encompasses 809 acres. Specific goals of the project are: 1) create 510 acres of saline marsh in recently formed shallow open water; 2) nourish 90 acres of existing saline marsh; 3) create 17,500 linear feet of terraces; and, 4) reduce wave/wake erosion.

Approximately 510 acres of marsh would be created and 90 acres would be nourished. Sediment needed for the fill would be mined approximately one and a half miles offshore in the Gulf of Mexico. Half of the created acres would be planted. Tidal creeks and ponds would be constructed prior to placement of dredged material and retention levees would be gapped to support estuarine fisheries access to achieve a functional marsh. Approximately 17,500 linear feet of earthen terraces would be constructed and planted.

We would appreciate our support letter distributed to the other CWPPRA Task Force members for their perusal.

Sincerely,



John E. Guinn  
State Representative  
District 37



CALCASIEU PARISH POLICE JURY  
GOVERNING AUTHORITY OF CALCASIEU PARISH, LOUISIANA

DIVISION OF PLANNING AND DEVELOPMENT

P.O. Drawer 3287  
Lake Charles, Louisiana, 70602-3287  
337 / 721-3600  
800 / 826-6092  
Fax 337 / 437-4100  
www.cppj.net

November 13, 2014

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, LA

RE: PPL 24 Candidate Projects and Construction Projects

Dear Colonel Hansen:

Enclosed please find resolutions which were adopted for support of the Phase II construction funding on CS-49 - Cameron Creole Freshwater Introduction Project, CS-59 - Oyster Bayou Marsh Restoration, and CS-54 - Cameron Creole Watershed Grand Bayou Marsh Creation Project. There are resolutions from the Calcasieu Parish Police Jury, Chamber SW Louisiana, the City of Lake Charles, and the Chenier Plain Coastal Protection and Restoration Authority.

Your support of these projects would help to protect Lake Charles to the 500 year level of protection as deemed necessary by the Coastal Master Plan 2012 for Louisiana. Your consideration would be greatly appreciated.

Sincerely,

LAURIE T. CORMIER  
Program Director

Attachments

PARISH OF  CALCASIEU  
State of Louisiana  
RESOLUTION

WHEREAS, marsh creation is needed in the Cameron-Creole Watershed; and

WHEREAS, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricanes Rita and Ike, making it unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts; and

WHEREAS, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway; and

WHEREAS, this marsh creation project would restore and nourish hurricane-scoured marsh in the Cameron Prairie National Wildlife Refuge and adjacent brackish marshes of the Calcasieu Lake Estuary, whereby approximately 3 million cubic yards of material would be dredged from a borrow site proposed in Calcasieu Lake and placed into two marsh creation areas north of Grand Bayou to restore 609 acres and nourish approximately 7 acres of brackish marsh, resulting in approximately 534 net acres of brackish marsh over the 20-year project life.

NOW, THEREFORE,

BE IT RESOLVED BY THE POLICE JURY OF CALCASIEU PARISH, LOUISIANA, convened in Regular Session on the 18<sup>th</sup> day of September, 2014 that it does hereby support the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54) and does respectfully request that the Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) Task Force support said project for Phase II funding.

BE IT FURTHER AND FINALLY RESOLVED that a certified copy of this resolution be forwarded to the CWPPRA Task Force for consideration.

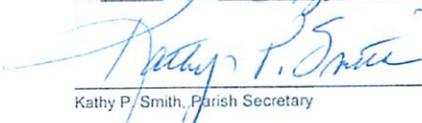
THUS DONE AND PASSED on the date above inscribed.

\*\*\*\*\*

STATE OF LOUISIANA  
PARISH OF CALCASIEU

I HEREBY CERTIFY that the foregoing is a true and correct copy of the original resolution as adopted by the Calcasieu Parish Police Jury in Regular Session convened on the 18<sup>th</sup> day of September, 2014.

IN TESTIMONY WHEREOF, witness my official signature and the seal of the Parish of Calcasieu, Louisiana, on this the 19<sup>th</sup> day of September, 2014.

  
Kathy P. Smith, Parish Secretary



# CHAMBER SOUTHWEST LOUISIANA

## RESOLUTION TO SUPPORT THE "CAMERON-CREOLE WATERSHED GRAND BAYOU MARSH CREATION PROJECT"

### THE CHAMBER SOUTHWEST LOUISIANA

PARISH OF CALCASIEU

STATE OF LOUISIANA

**WHEREAS**, marsh creation is needed in the Cameron Creole Watershed; and

**WHEREAS**, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

**WHEREAS**, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway, and

**WHEREAS**, this marsh creation project would restore and nourish hurricane-scoured marsh in the Cameron Prairie National Wildlife Refuge and adjacent brackish marshes of the Calcasieu Lake estuary. Approximately 3 million cubic yards of material would be dredged from a borrow site proposed in Calcasieu Lake and place into tow marsh creation areas north of Grand Bayou to restore 609 acres and nourish approximately 7 acres of brackish marsh. The project would result in approximately 534 net acres of brackish marsh over the 20-year project life; and

**NOW, THEREFORE BE IT RESOLVED**, by the Chenier Plain Committee of the Chamber Southwest Louisiana on this 6<sup>th</sup> of August 2014, that it is in support of the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

**BE IT FURTHER RESOLVED**, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, are requested to support the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54) for Phase II Funding to construct this project.

This is a true and correct copy of the resolution as adopted by the Executive Committee of the Chamber Southwest Louisiana.

ADOPTED AND APPROVED this 14<sup>th</sup> day of August, 2014.

George Swift, President and CEO  
The Chamber Southwest Louisiana



# CHAMBER SOUTHWEST LOUISIANA

## RESOLUTION TO SUPPORT THE "OYSTER BAYOU MARSH RESTORATION PROJECT"

### THE CHAMBER SOUTHWEST LOUISIANA

PARISH OF CALCASIEU

STATE OF LOUISIANA

**WHEREAS**, marsh restoration is needed in the Calcasieu-Sabine Basin; and

**WHEREAS**, the Calcasieu-Sabine Basin marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

**WHEREAS**, results of the hurricane-scoured area has resulted in the coalescence of Oyster Lake with interior water bodies increasing wave/wake related erosion. Land loss for the area is predicted at -0.75% per year with a subsidence rate estimated at 1.0ft per century, and

**WHEREAS**, this marsh restoration project would encompass 809 acres. Specific goals of the project are: create 510 acres of saline marsh in recently formed shallow open water; nourish 90 acres of existing saline marsh; create 14,140 linear feet of terraces; and, reduce wave/wake erosion. Approximately 510 acres of marsh would be created and 90 acres would be nourished; and

**NOW, THEREFORE BE IT RESOLVED**, by the Chenier Plain Committee of the Chamber Southwest Louisiana on this 6<sup>th</sup> day of August 2014, is in support of the "Oyster Bayou Marsh Restoration Project" (CS-59) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

**BE IT FURTHER RESOLVED**, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, are requested to support the "Oyster Bayou Marsh Restoration Project" (CS-59) for Phase II Funding to construct this project.

This is a true and correct copy of the resolution as adopted by the Executive Committee of the Chamber Southwest Louisiana.

ADOPTED AND APPROVED this 14<sup>th</sup> day of August, 2014.

  
\_\_\_\_\_  
George Swift, President and CEO  
The Chamber Southwest Louisiana



# City of Lake Charles

326 Pujo Street  
P.O. Box 1178  
Lake Charles, LA  
70602-1178

## Signature Copy

Resolution: 176-14

File Number: 443-14

Enactment Number: 176-14

**A resolution to the Coastal Wetland Planning, Protection and Restoration Act Task Force requesting their support of the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54)**

WHEREAS, marsh creation is needed in the Cameron Creole Watershed; and

WHEREAS, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

WHEREAS, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway, and

WHEREAS, this marsh creation project would restore and nourish hurricane-scoured marsh in the Cameron Prairie National Wildlife Refuge and adjacent brackish marshes of the Calcasieu Lake estuary. Approximately 3 million cubic yards of material would be dredged from a borrow site proposed in Calcasieu Lake and place into tow marsh creation areas north of Grand Bayou to restore 609 acres and nourish approximately 7 acres of brackish marsh. The project would result in approximately 534 net acres of brackish marsh over the 20-year project life; and

NOW, THEREFORE BE IT RESOLVED, by the Lake Charles City Council on this 3rd of September, 2014, that the Secretary is hereby authorized, empowered and directed to forward this Resolution of support for the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

BE IT FURTHER RESOLVED, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, are requested to support the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54) for Phase II Funding to construct this project.

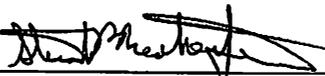
At a meeting of the City Council on 9/3/2014, this Resolution was adopted by the following vote.

For: 7 Stuart Weatherford, Mark Eckard, John Ieyoub, Rodney Geyen, Dana Carl Jackson, Luvertha August, and Mary Morris

Against: 0

Absent: 0

Passed and Adopted

  
Stuart Weatherford, President or Presiding Officer

Date 9-3-14

Attest

  
Lynn F. Thibodeaux, Clerk of the Council

Date 9-3-14



# City of Lake Charles

326 Pujo Street  
P.O. Box 1178  
Lake Charles, LA  
70602-1178

## Signature Copy

Resolution: 177-14

File Number: 444-14

Enactment Number: 177-14

**A resolution to the Coastal Wetland Planning, Protection and Restoration Act Task Force requesting their support of the "Oyster Bayou Marsh Restoration Project" (CS-59)**

WHEREAS, marsh restoration is needed in the Calcasieu-Sabine Basin; and

WHEREAS, the Calcasieu-Sabine Basin marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

WHEREAS, results of the hurricane-scoured area has resulted in the coalescence of Oyster Lake with interior water bodies increasing wave/wake related erosion. Land loss for the area is predicted at -0.75% per year with a subsidence rate estimated at 1.0ft per century, and

WHEREAS, this marsh restoration project would encompasses 809 acres. Specific goals of the project are: create 510 acres of saline marsh in recently formed shallow open water; nourish 90 acres of existing saline marsh; create 14,140 linear feet of terraces; and, reduce wave/wake erosion. Approximately 510 acres of marsh would be created and 90 acres would be nourished; and

NOW, THEREFORE BE IT RESOLVED, by the Lake Charles City Council on this 3rd day of September, 2014, that the Secretary is hereby authorized, empowered and directed to forward this Resolution of support for the "Oyster Bayou Marsh Restoration Project" (CS-59) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

BE IT FURTHER RESOLVED, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, are requested to support the "Oyster Bayou Marsh Restoration Project" (CS-59) for Phase II Funding to construct this project.

At a meeting of the City Council on 9/3/2014, this Resolution was adopted by the following vote.

For: 7 Stuart Weatherford, Mark Eckard, John Ieyoub, Rodney Geyen, Dana Carl Jackson, Luvertha August, and Mary Morris

Against: 0

Absent: 0

Passed and Adopted

Stuart Weatherford, President or Presiding Officer

Date

9-3-14

Attest

  
Lynn F. Thibodeaux, Clerk of the Council

Date

9-3-14



# City of Lake Charles

326 Pujio Street  
P.O. Box 1178  
Lake Charles, LA  
70602-1178

## Signature Copy

Resolution: 178-14

File Number: 445-14

Enactment Number: 178-14

**A resolution to the Coastal Wetland Planning, Protection and Restoration Act Task Force requesting their support of the "Cameron-Creole Freshwater Introduction Project" (CS-49)**

WHEREAS, freshwater introduction is needed in the Cameron Creole Watershed; and

WHEREAS, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

WHEREAS, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway, and

WHEREAS, this freshwater introduction project would restore the function, value, and sustainability to approximately 22,247 acres of marsh and open water by improving hydrologic conditions via freshwater input and increasing organic productivity.

NOW, THEREFORE BE IT RESOLVED, by the Lake Charles City Council on this 3rd of September, 2014, the Secretary is hereby authorized, empowered and directed to forward this Resolution of support for the "Cameron-Creole Freshwater Introduction Project" (CS-49) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

BE IT FURTHER RESOLVED, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, are requested to support the "Cameron-Creole Freshwater Introduction Project" (CS-49) for Phase II Funding to construct this project.

At a meeting of the City Council on 9/3/2014, this Resolution was adopted by the following vote.

For: 7 Stuart Weatherford, Mark Eckard, John Ieyoub, Rodney Geyen, Dana Carl Jackson, Luvertha August, and Mary Morris

Against: 0

Absent: 0

Passed and Adopted

Stuart Weatherford, President or Presiding Officer

Date

9-3-14

Attest

  
Lynn F. Thibodeaux, Clerk of the Council

Date

9-3-14

**RESOLUTION**

**CHENIER PLAIN COASTAL RESTORATION & PROTECTION AUTHORITY**

**WHEREAS**, the Chenier Plain Coastal Restoration & Protection Authority was created pursuant to the provisions of the Louisiana Constitution of 1974, Article VI, Sections 38, 38.1 and 44, and La. R.S. 38:329.5; and

**WHEREAS**, the Chenier Plain CRPA is a political subdivision of the State of Louisiana, and through its board of commissioners, is organized with the primary duty to establish, construct, operate, or maintain flood control works as they relate to hurricane protection, tidewater flooding, saltwater intrusion, and conservation, and a secondary duty to establish flood control, adequate drainage relating to tidal or riverine flooding, and water resources development including but not limited to construction of reservoirs, diversion canals, gravity and pump drainage systems, erosion control measures, and marsh management; and

**WHEREAS**, the Chenier Plain Authority is inclusive of the Parishes of Calcasieu, Cameron, & Vermilion and seeks to identify discretionary funds to implement projects included in the State Master Plan; and

**WHEREAS**, Rockefeller Wildlife Refuge gulf shoreline retreat that averages approximately 39 feet/year with a subsequent direct loss of emergent saline marsh; and

**WHEREAS**, the project entails construction of shoreline protection along the Gulf of Mexico. The proposed structure would be tied into the west bank of Joseph Harbor and the east bank of Beach Prong; and

**WHEREAS**, it would be designed to reduce shoreline retreat along this stretch of gulf shoreline, as well as promote shallowing, settling out, and natural vegetative colonization of the overwash material landward of the proposed structure; and

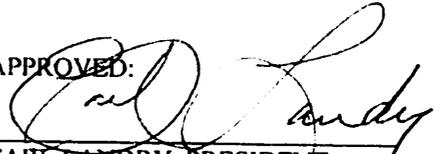
**WHEREAS**, this shoreline protection project would restore the function, value, and sustainability to approximately 1373 acres with a net benefit after 20 years of 920 acres along the the Rockefeller Wildlife Refuge Gulf of Mexico shoreline from Beach Prong to Joseph Harbor in Cameron Parish, Louisiana.

**NOW, THEREFORE BE IT RESOLVED**, by the Chenier Plain Coastal Restoration & Protection Authority on this 19th day of August 2014, that the Executive Director is hereby authorized, empowered and directed to forward this Resolution of support for the "Rockefeller Refuge Gulf Shoreline Stabilization" (ME-18) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

**BE IT FURTHER RESOLVED**, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, thru this Resolution, are requested to support the "Rockefeller Refuge Gulf Shoreline Stabilization" (ME-18) for Phase II Funding to construct this project.

ADOPTED AND APPROVED this 19th day of August 2014.

APPROVED:

  
EARL LANDRY, PRESIDENT  
CHENIER PLAIN CRPA

ATTEST:

  
PHILLIP TROSCLAIR, SECRETARY

**RESOLUTION**

**CHENIER PLAIN COASTAL RESTORATION & PROTECTION AUTHORITY**

**WHEREAS**, the Chenier Plain Coastal Restoration & Protection Authority was created pursuant to the provisions of the Louisiana Constitution of 1974, Article VI, Sections 38, 38.1 and 44, and La. R.S. 38:329.5; and

**WHEREAS**, the Chenier Plain CRPA is a political subdivision of the State of Louisiana, and through its board of commissioners, is organized with the primary duty to establish, construct, operate, or maintain flood control works as they relate to hurricane protection, tidewater flooding, saltwater intrusion, and conservation, and a secondary duty to establish flood control, adequate drainage relating to tidal or riverine flooding, and water resources development including but not limited to construction of reservoirs, diversion canals, gravity and pump drainage systems, erosion control measures, and marsh management; and

**WHEREAS**, the Chenier Plain Authority is inclusive of the Parishes of Calcasieu, Cameron, & Vermilion and seeks to identify discretionary funds to implement projects included in the State Master Plan; and

**WHEREAS**, freshwater introduction is needed in the Cameron Creole Watershed; and

**WHEREAS**, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

**WHEREAS**, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway, and

**WHEREAS**, this freshwater introduction project would restore the function, value, and sustainability to approximately 22,247 acres of marsh and open water by improving hydrologic conditions via freshwater input and increasing organic productivity.

**NOW, THEREFORE BE IT RESOLVED**, by the Chenier Plain Coastal Restoration & Protection Authority on this 19th day of August 2014, that the Executive Director is hereby authorized, empowered and directed to forward this Resolution of support for the "Cameron-Creole Freshwater Introduction Project" (CS-49) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

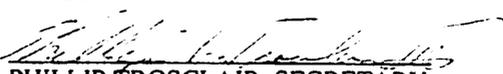
**BE IT FURTHER RESOLVED**, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, thru this Resolution, are requested to support the "Cameron-Creole Freshwater Introduction Project" (CS-49) for Phase II Funding to construct this project.

ADOPTED AND APPROVED this 19th day of August 2014.

APPROVED:

  
EARL LANDRY, PRESIDENT  
CHENIER PLAIN CRPA

ATTEST:

  
PHILLIP TROSCLAIR, SECRETARY

RESOLUTION

CHENIER PLAIN COASTAL RESTORATION & PROTECTION AUTHORITY

**WHEREAS**, the Chenier Plain Coastal Restoration & Protection Authority was created pursuant to the provisions of the Louisiana Constitution of 1974, Article VI, Sections 38, 38.1 and 44, and La. R.S. 38:329.5; and

**WHEREAS**, the Chenier Plain CRPA is a political subdivision of the State of Louisiana, and through its board of commissioners, is organized with the primary duty to establish, construct, operate, or maintain flood control works as they relate to hurricane protection, tidewater flooding, saltwater intrusion, and conservation, and a secondary duty to establish flood control, adequate drainage relating to tidal or riverine flooding, and water resources development including but not limited to construction of reservoirs, diversion canals, gravity and pump drainage systems, erosion control measures, and marsh management; and

**WHEREAS**, the Chenier Plain Authority is inclusive of the Parishes of Calcasieu, Cameron, & Vermilion and seeks to identify discretionary funds to implement projects included in the State Master Plan; and

**WHEREAS**, marsh restoration is needed in the Calcasieu-Sabine Basin; and

**WHEREAS**, the Calcasieu-Sabine Basin marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

**WHEREAS**, results of the hurricane-scoured area has resulted in the coalescence of Oyster Lake with interior water bodies increasing wave/wake related erosion. Land loss for the area is predicted at -0.75% per year with a subsidence rate estimated at 1.0ft per century, and

**WHEREAS**, this marsh restoration project would encompasses 809 acres. Specific goals of the project are: 1) create 510 acres of saline marsh in recently formed shallow open water; 2) nourish 90 acres of existing saline marsh; 3) create 14,140 linear feet of terraces; and, 4) reduce wave/wake erosion. Approximately 510 acres of marsh would be created and 90 acres would be nourished; and

**NOW, THEREFORE BE IT RESOLVED**, by the Chenier Plain Coastal Restoration & Protection Authority on this 19th day of August 2014, that the Executive Director is hereby authorized, empowered and directed to forward this Resolution of support for the "Oyster Bayou Marsh Restoration Project" (CS-59) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

**BE IT FURTHER RESOLVED**, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, thru this Resolution, are requested to support the "Oyster Bayou Marsh Restoration Project" (CS-59) for Phase II Funding to construct this project.

ADOPTED AND APPROVED this 19th day of August 2014.

APPROVED:

  
EARL LANDRY, PRESIDENT  
CHENIER PLAIN CRPA

ATTEST:

  
PHILLIP TROSCLAIR, SECRETARY

**RESOLUTION**

**CHENIER PLAIN COASTAL RESTORATION & PROTECTION AUTHORITY**

**WHEREAS**, the Chenier Plain Coastal Restoration & Protection Authority was created pursuant to the provisions of the Louisiana Constitution of 1974, Article VI, Sections 38, 38.1 and 44, and La. R.S. 38:329.5; and

**WHEREAS**, the Chenier Plain CRPA is a political subdivision of the State of Louisiana, and through its board of commissioners, is organized with the primary duty to establish, construct, operate, or maintain flood control works as they relate to hurricane protection, tidewater flooding, saltwater intrusion, and conservation, and a secondary duty to establish flood control, adequate drainage relating to tidal or riverine flooding, and water resources development including but not limited to construction of reservoirs, diversion canals, gravity and pump drainage systems, erosion control measures, and marsh management; and

**WHEREAS**, the Chenier Plain Authority is inclusive of the Parishes of Calcasieu, Cameron, & Vermilion and seeks to identify discretionary funds to implement projects included in the State Master Plan; and

**WHEREAS**, marsh creation is needed in the Cameron Creole Watershed; and

**WHEREAS**, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

**WHEREAS**, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway, and

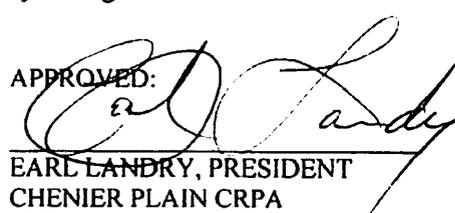
**WHEREAS**, this marsh creation project would restore and nourish hurricane-scoured marsh in the Cameron Prairie National Wildlife Refuge and adjacent brackish marshes of the Calcasieu Lake estuary. Approximately 3 million cubic yards of material would be dredged from a borrow site proposed in Calcasieu Lake and place into tow marsh creation areas north of Grand Bayou to restore 609 acres and nourish approximately 7 acres of brackish marsh. The project would result in approximately 534 net acres of brackish marsh over the 20-year project life; and

**NOW, THEREFORE BE IT RESOLVED**, by the Chenier Plain Coastal Restoration & Protection Authority on this 19th day of August 2014, that the Executive Director is hereby authorized, empowered and directed to forward this Resolution of support for the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

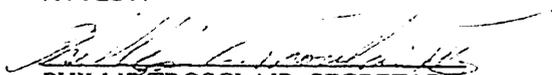
**BE IT FURTHER RESOLVED**, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, thru this Resolution, are requested to support the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54) for Phase II Funding to construct this project.

ADOPTED AND APPROVED this 19th day of August 2014.

APPROVED:

  
EARL LANDRY, PRESIDENT  
CHENIER PLAIN CRPA

ATTEST:

  
PHILLIP TROSCLAIR, SECRETARY



CALCASIEU PARISH POLICE JURY  
GOVERNING AUTHORITY OF CALCASIEU PARISH, LOUISIANA

DC  
DD  
DPM  
Brad  
Lma

P.O. Drawer 3287 • 1015 Pithon Street • Lake Charles, Louisiana 70602-3287  
337/721-3500 • Fax 337/437-3399  
www.cppj.net

Dennis Scott  
President

Tony Guillory  
Vice President

Bryan C. Beam  
Parish Administrator

MEMORANDUM

- Shannon Spell  
District 1
- James L. Mayo  
District 2
- Elizabeth Conway Griffin  
District 3
- Tony Guillory  
District 4
- Nic Hunter  
District 5
- Dennis Scott  
District 6
- Chris E. Landry  
District 7
- Guy Brame  
District 8
- Kevin Guidry  
District 9
- Tony Stelly  
District 10
- Sandy Treme  
District 11
- Ray Taylor  
District 12
- Francis Andrepont  
District 13
- Hal McMillin  
District 14
- Les Farnum  
District 15

TO: Members of CWPPRA Task Force

FROM: Dennis Scott, President *DS/KS*  
Calcasieu Parish Police Jury

DATE: September 19, 2014

RE: Support of Phase II Funding Projects

Enclosed are certified copies of resolutions which were adopted by the Calcasieu Parish Police Jury on September 18, 2014, wherein the Police Jury expresses its support of three (3) projects in the Calcasieu-Sabine Basin and the Cameron-Creole Watershed for Phase II funding by the Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) Task Force.

Your support of the Police Jury in this matter would be greatly appreciated.

ars/s

Enclosure

cc: Ms. Laurie Cormier, Division of Planning and Development

Received By  
CEMNV-EX  
US Army Corps of Engineers  
New Orleans District

SEP 22 2014

PARISH OF  CALCASIEU  
State of Louisiana  
RESOLUTION

**WHEREAS**, freshwater introduction is needed in the Cameron-Creole Watershed;  
and

**WHEREAS**, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricanes Rita and Ike, making it unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts; and

**WHEREAS**, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway; and

**WHEREAS**, this freshwater introduction project would restore the function, value, and sustainability to approximately 22,247 acres of marsh and open waters by improving hydrologic conditions via freshwater input and increasing organic productivity.

**NOW, THEREFORE,**

**BE IT RESOLVED BY THE POLICE JURY OF CALCASIEU PARISH, LOUISIANA**, convened in Regular Session on the 18<sup>th</sup> day of September, 2014, that it does hereby support the “Cameron-Creole Freshwater Introduction Project” (CS-49) and does respectfully request that the Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) Task Force support said project for Phase II funding.

**BE IT FURTHER AND FINALLY RESOLVED** that a certified copy of this resolution be forwarded to the CWPPRA Task Force for consideration.

**THUS DONE AND PASSED** on the date above inscribed.

\* \* \* \* \*

PARISH OF  CALCASIEU  
State of Louisiana  
RESOLUTION

WHEREAS, marsh creation is needed in the Cameron-Creole Watershed; and

WHEREAS, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricanes Rita and Ike, making it unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts; and

WHEREAS, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway; and

WHEREAS, this marsh creation project would restore and nourish hurricane-scoured marsh in the Cameron Prairie National Wildlife Refuge and adjacent brackish marshes of the Calcasieu Lake Estuary, whereby approximately 3 million cubic yards of material would be dredged from a borrow site proposed in Calcasieu Lake and placed into two marsh creation areas north of Grand Bayou to restore 609 acres and nourish approximately 7 acres of brackish marsh, resulting in approximately 534 net acres of brackish marsh over the 20-year project life.

**NOW, THEREFORE,**

**BE IT RESOLVED BY THE POLICE JURY OF CALCASIEU PARISH, LOUISIANA,** convened in Regular Session on the 18<sup>th</sup> day of September, 2014 that it does hereby support the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54) and does respectfully request that the Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) Task Force support said project for Phase II funding.

**BE IT FURTHER AND FINALLY RESOLVED** that a certified copy of this resolution be forwarded to the CWPPRA Task Force for consideration.

**THUS DONE AND PASSED** on the date above inscribed.

\*\*\*\*\*

STATE OF LOUISIANA  
PARISH OF CALCASIEU

HEREBY CERTIFY that the foregoing is a true and correct

PARISH OF  CALCASIEU  
State of Louisiana  
RESOLUTION

WHEREAS, marsh restoration is needed in the Calcasieu-Sabine Basin; and

WHEREAS, the Calcasieu-Sabine Basin marshes have experienced an increased inundation of saltwater due to Hurricanes Rita and Ike, making it unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts; and

WHEREAS, results of the hurricane-scoured area have resulted in the coalescence of Oyster Lake with interior water bodies increasing wave/wake-related erosion, land loss predicted at -0.75% per year with a subsidence rate estimated at 1.0 foot per century; and

WHEREAS, this marsh restoration project would encompass 809 acres, with approximately 510 acres of saline marsh being created in recently formed shallow open water, 90 acres of existing saline marsh being nourished, creation of 14,140 linear feet of terraces, and reduction of wave/wake erosion.

**NOW, THEREFORE,**

**BE IT RESOLVED BY THE POLICE JURY OF CALCASIEU PARISH, LOUISIANA,** convened in Regular Session on the 18<sup>th</sup> day of September, 2014 that it does hereby support the “Oyster Bayou Marsh Restoration Project” (CS-59) and does respectfully request that the Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) Task Force support said project for Phase II funding.

**BE IT FURTHER AND FINALLY RESOLVED** that a certified copy of this resolution be forwarded to the CWPPRA Task Force for consideration.

**THUS DONE AND PASSED** on the date above inscribed.

\* \* \* \* \*



7211 DL  
PM -  
Brad  
Claw

**CITY OF LAKE CHARLES  
OFFICE OF THE CITY COUNCIL**

P.O. Box 1178  
Lake Charles, LA 70602-1178  
337-491-1290 • FAX 337-491-1463

September 9, 2014

**COUNCIL MEMBERS**

Mary Morris  
District A

Colonel Richard L. Hansen  
District Commander  
U.S. Army Corps of Engineers, New Orleans District  
P. O. Box 60267  
New Orleans, LA 70160-0267

Luvertha W. August  
District B

Dear Colonel Hansen:

Rodney Geyen  
District C

Enclosed please find a copy of resolution numbers 176-14, 177-14 and 178-14 which were unanimously adopted by the Lake Charles City Council at its regular meeting on September 3, 2014. The resolutions request the support of the Coastal Wetland Planning, Protection and Restoration Act Task Force of the Cameron-Creole Watershed Grand Bayou Marsh Creation Project (CS-54), the Oyster Bayou Marsh Restoration Project (CS-59) and the Cameron-Creole Freshwater Introduction Project (CS-40).

John Ieyoub  
District D

Stuart Weatherford  
District E

Dana Carl Jackson  
District F

Your support of the City Council in this matter is greatly appreciated.

Mark Eckard  
District G

Sincerely,

Lynn F. Thibodeaux  
Clerk of the Council

Enclosures

Received By  
CEMVN-EX  
US Army Corps of Engineers  
New Orleans District

SEP 11 2014



# City of Lake Charles

326 Pujoe Street  
P.O. Box 1178  
Lake Charles, LA  
70602-1178

## Signature Copy

Resolution: 176-14

File Number: 443-14

Enactment Number: 176-14

**A resolution to the Coastal Wetland Planning, Protection and Restoration Act Task Force requesting their support of the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54)**

WHEREAS, marsh creation is needed in the Cameron Creole Watershed; and

WHEREAS, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

WHEREAS, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway, and

WHEREAS, this marsh creation project would restore and nourish hurricane-scoured marsh in the Cameron Prairie National Wildlife Refuge and adjacent brackish marshes of the Calcasieu Lake estuary. Approximately 3 million cubic yards of material would be dredged from a borrow site proposed in Calcasieu Lake and place into tow marsh creation areas north of Grand Bayou to restore 609 acres and nourish approximately 7 acres of brackish marsh. The project would result in approximately 534 net acres of brackish marsh over the 20-year project life; and

NOW, THEREFORE BE IT RESOLVED, by the Lake Charles City Council on this 3rd of September, 2014, that the Secretary is hereby authorized, empowered and directed to forward this Resolution of support for the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

BE IT FURTHER RESOLVED, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, are requested to support the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54) for Phase II Funding to construct this project.

At a meeting of the City Council on 9/3/2014, this Resolution was adopted by the following vote.

**For:** 7 Stuart Weatherford, Mark Eckard, John Ieyoub, Rodney Geyen, Dana Carl Jackson, Luvertha August, and Mary Morris

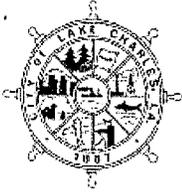
**Against:** 0

**Absent:** 0

Passed and Adopted

Date

9-3-14



# City of Lake Charles

326 Pujo Street  
P.O. Box 1178  
Lake Charles, LA  
70602-1178

## Signature Copy

Resolution: 177-14

File Number: 444-14

Enactment Number: 177-14

**A resolution to the Coastal Wetland Planning, Protection and Restoration Act Task Force requesting their support of the "Oyster Bayou Marsh Restoration Project" (CS-59)**

WHEREAS, marsh restoration is needed in the Calcasieu-Sabine Basin; and

WHEREAS, the Calcasieu-Sabine Basin marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

WHEREAS, results of the hurricane-scoured area has resulted in the coalescence of Oyster Lake with interior water bodies increasing wave/wake related erosion. Land loss for the area is predicted at -0.75% per year with a subsidence rate estimated at 1.0ft per century, and

WHEREAS, this marsh restoration project would encompass 809 acres. Specific goals of the project are: create 510 acres of saline marsh in recently formed shallow open water; nourish 90 acres of existing saline marsh; create 14,140 linear feet of terraces; and, reduce wave/wake erosion. Approximately 510 acres of marsh would be created and 90 acres would be nourished; and

NOW, THEREFORE BE IT RESOLVED, by the Lake Charles City Council on this 3rd day of September, 2014, that the Secretary is hereby authorized, empowered and directed to forward this Resolution of support for the "Oyster Bayou Marsh Restoration Project" (CS-59) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

BE IT FURTHER RESOLVED, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, are requested to support the "Oyster Bayou Marsh Restoration Project" (CS-59) for Phase II Funding to construct this project.

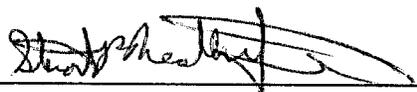
At a meeting of the City Council on 9/3/2014, this Resolution was adopted by the following vote.

**For:** 7 Stuart Weatherford, Mark Eckard, John Ieyoub, Rodney Geyen, Dana Carl Jackson, Luvertha August, and Mary Morris

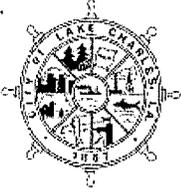
**Against:** 0

**Absent:** 0

Passed and Adopted

  
Stuart Weatherford, President or  
Presiding Officer

Date 9-3-14



# City of Lake Charles

326 Pujo Street  
P.O. Box 1178  
Lake Charles, LA  
70602-1178

## Signature Copy

Resolution: 178-14

File Number: 445-14

Enactment Number: 178-14

**A resolution to the Coastal Wetland Planning, Protection and Restoration Act Task Force requesting their support of the "Cameron-Creole Freshwater Introduction Project" (CS-49)**

WHEREAS, freshwater introduction is needed in the Cameron Creole Watershed; and

WHEREAS, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

WHEREAS, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway, and

WHEREAS, this freshwater introduction project would restore the function, value, and sustainability to approximately 22,247 acres of marsh and open water by improving hydrologic conditions via freshwater input and increasing organic productivity.

NOW, THEREFORE BE IT RESOLVED, by the Lake Charles City Council on this 3rd of September, 2014, the Secretary is hereby authorized, empowered and directed to forward this Resolution of support for the "Cameron-Creole Freshwater Introduction Project" (CS-49) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

BE IT FURTHER RESOLVED, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, are requested to support the "Cameron-Creole Freshwater Introduction Project" (CS-49) for Phase II Funding to construct this project.

At a meeting of the City Council on 9/3/2014, this Resolution was adopted by the following vote.

**For:** 7 Stuart Weatherford, Mark Eckard, John Ieyoub, Rodney Geyen, Dana Carl Jackson, Luvertha August, and Mary Morris

**Against:** 0

**Absent:** 0

Passed and Adopted

Stuart Weatherford, President or Presiding Officer

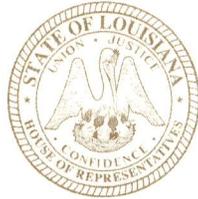
Date

9-3-14

0 0 111

# LOUISIANA HOUSE OF REPRESENTATIVES

407 Charity Street, Suite 102  
Abbeville, LA 70510  
Email: [hensgensb@legis.state.la.us](mailto:hensgensb@legis.state.la.us)  
Phone: 337.893.5035  
Toll Free: 800.259.5035  
Fax: 337.898.1160



Agriculture, Forestry, Aquaculture,  
and Rural Development  
Commerce  
Health and Welfare

## **BOB HENSGENS** State Representative ~ District 47

November 26, 2014

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Fax: 504-862-2572  
Email: [Brad.L.Inman@usace.army.mil](mailto:Brad.L.Inman@usace.army.mil)

Re: CWPPRA PPL-24  
Oyster Bayou Marsh Restoration CS-59

Dear Colonel Hansen,

This letter is to express support for the Oyster Bayou Marsh Restoration Project CS-59. This project is imperative to be implemented to create, save and protect the coastal marsh immediately west of Cameron. This area is adjacent to the beach restoration just completed along the barrier coastline of Cameron Parish. An explanation of the project is listed below:

This project is in Region 4, Calcasieu-Sabine Basin, located west of the Calcasieu Ship Channel and south of the west fork of the Calcasieu River.

Altered hydrology, drought stress, saltwater intrusion and hurricane induced wetland losses have caused the area to undergo interior marsh breakup. Recent impacts from Hurricane Rita in 2005 and Hurricane Ike in 2008 have resulted in the coalescence of Oyster Lake with interior water bodies increasing wave/wake related erosion. Based on USGS hyper temporal data analysis (1984 to 2011), land loss for the area is -0.75% per year. The subsidence rate is estimated at 0.0 to 1.0 ft per century (Coast 2050, Mud Lake mapping unit).

The project boundary encompasses 809 acres. Specific goals of the project are: 1) create 510 acres of saline marsh in recently formed shallow open water; 2) nourish 90 acres of existing saline marsh; 3) create 17,500 linear feet of terraces; and, 4) reduce wave/wake erosion.

Approximately 510 acres of marsh would be created and 90 acres would be nourished. Sediment needed for the fill would be mined approximately one and a half miles offshore in the Gulf of Mexico. Half of the created acres would be planted. Tidal creeks and ponds would be constructed prior to placement of dredged material and retention levees would be gapped to support estuarine fisheries access to achieve a functional marsh. Approximately 17,500 linear feet of earthen terraces would be constructed and planted.

We would appreciate our support letter distributed to the other CWPPRA Task Force members for their perusal.

Sincerely,



Bob Hensgens  
Louisiana State Representative

KIRK QUINN  
PRESIDENT  
CURTIS FOUNTAIN  
VICE PRESIDENT  
RYAN BOURRIAQUE  
ADMINISTRATOR  
DARRELL WILLIAMS  
SECRETARY-TREASURER

POLICE JURY  
**PARISH OF CAMERON**

P.O. BOX 1280  
CAMERON, LOUISIANA 70631

(337) 775-5718  
(337) 775-5567 Fax  
www.parishofcameron.net

DISTRICT 1  
CURTIS FOUNTAIN  
DISTRICT 2  
ANTHONY HICKS  
DISTRICT 3  
KIRK QUINN  
DISTRICT 4  
TERRY BEARD  
DISTRICT 5  
KIRK BURLEIGH  
DISTRICT 6  
JOE DUPONT  
DISTRICT 7  
DARRYL FARQUE

November 24, 2014

To: Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Fax: 504-862-2572

Email: Brad.L.Inman@usace.army.mil

Re: CWPPRA PPL-24  
Oyster Bayou Marsh Restoration CS-59

Dear Colonel Hansen,

This letter is to express support for the Oyster Bayou Marsh Restoration Project CS-59. This project is imperative to be implemented to create, save and protect the coastal marsh immediately west of Cameron. This area is adjacent to the beach restoration just completed along the barrier coastline of Cameron Parish. An explanation of the project is listed below:

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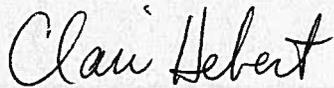
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We would appreciate our support letter distributed to the other CWPPRA Task Force members for their perusal.

Sincerely,

A handwritten signature in black ink that reads "Clair Hebert". The signature is written in a cursive style with a large initial 'C' and a distinct 'H'.

---

CLAIR HEBERT, PCED

DIRECTOR OF ECONOMIC DEVELOPMENT

CAMERON PARISH POLICE JURY



RONNIE JOHNS  
STATE SENATOR  
DISTRICT 27

SENATE  
STATE OF LOUISIANA

October 14, 2014

COMMITTEES  
Judiciary B, Vice-Chair  
Finance  
Insurance  
Labor and Industrial Relations

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Fax: 504-862-2572  
Email: [Brad.L.Inman@usace.army.mil](mailto:Brad.L.Inman@usace.army.mil)

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Sincerely,

A handwritten signature in black ink, appearing to read "R. Johns", with a long horizontal flourish extending to the right.

Ronnie Johns  
State Senator

## LOUISIANA HOUSE OF REPRESENTATIVES



529 Tramel Road  
Dry Creek, LA 70637  
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Toll Free: 800.259.2118  
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Health and Welfare  
Agriculture, Forestry, Aquaculture  
and Rural Development  
Transportation, Highways, and  
Public Works

**DOROTHY SUE HILL**  
State Representative ~ District 32

November 25, 2014

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Fax: 504-862-2572  
Email: [Brad.L.Inman@usace.army.mil](mailto:Brad.L.Inman@usace.army.mil)

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Sincerely,



Dorothy Sue Hill  
State Representative, District 32



STATE OF LOUISIANA  
HOUSE OF REPRESENTATIVES

CHUCK KLECKLEY  
SPEAKER

POST OFFICE BOX 94062  
BATON ROUGE, LOUISIANA 70804  
PHONE 225-342-7263  
FAX 225-342-8336

November 21, 2014

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Re: CWPPRA PPL-24  
Oyster Bayou Marsh Restoration CS-59

Dear Colonel Hansen,

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November 21, 2014

Page 2

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We would appreciate our support letter being distributed to the other CWPPRA Task Force members for their perusal.

Sincerely



Chuck Kleckley

CK/gg



SENATE  
STATE OF LOUISIANA

R2A DC  
DD  
KPM  
PM  
C/M

**DAN "BLADE" MORRISH**

State Senator  
District 25  
119 W. Nezpique Street  
Jennings, LA 70546  
Phone: (337) 824-3979  
Fax: (337) 824-5898

COMMITTEES:  
Insurance, Chairman  
Environmental Quality  
Natural Resources  
Finance, Interim Member  
Select Committee on Coastal Restoration  
and Flood Control  
Select Committee on Hurricane Recovery

November 24, 2014

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, LA 70160

Re: CWPPRA PPL-24  
Oyster Bayou Marsh Restoration CS-59

Dear Colonel Hansen:

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I would appreciate my support letter distributed to the other CWPPRA Task Force members for their perusal.

Sincerely,

Dan "Blade" Morrish  
State Senator  
District 25

Received By  
CEMNVN-EX  
US Army Corps of Engineers  
New Orleans District

NOV 26 2014

## LOUISIANA HOUSE OF REPRESENTATIVES

1625 Beglis Pkwy.  
Sulphur, LA 70663  
Email: danahaym@legis.la.gov  
Phone: 337.527.5581  
Toll Free: 866.925.2806  
Fax: 337.527.5803



House and Governmental Affairs  
Joint Legislative Committee on  
Capital Outlay  
Municipal, Parochial, and Cultural Affairs  
Ways and Means

**MIKE DANAHAY**  
State Representative ~ District 33

November 25, 2014

Colonel Richard Hansen  
US Corps of Engineers District Engineer, New Orleans  
c/o Brand Inman  
P O Box 60267  
New Orleans, LA

Dear Colonel Hansen:

Please accept this letter as my support for the Oyster Bayou Marsh Restoration Project CS-59. The project is in Region 4, Calcasieu-Sabine Basin, located west of Calcasieu Ship Channel and south of the west fork of the Calcasieu River.

This project is imperative to be implemented to create and protect the coastal marsh immediately west of Cameron. This area is adjacent to the beach restoration just completed along the barrier coastline of Cameron Parish.

Thank you for your support of this project, and if you need to speak to me directly, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Mike Danahay". The signature is fluid and cursive.

Mike Danahay  
State Representative

MD/kg

**THE GRAY LAW FIRM**  
A PROFESSIONAL LAW CORPORATION

CAPITAL ONE TOWER  
ONE LAKESHORE DRIVE, SUITE 1700  
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LAKE CHARLES, LOUISIANA 70602-1467  
graylaw@graylawfirm.com

FACSIMILE  
(337) 494-0697

TELEPHONE  
(337) 494-0694

December 5, 2014

By Telecopier  
(504) 862-2572

And

Email: [Brad.L.Inman@usace.army.mil](mailto:Brad.L.Inman@usace.army.mil)

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

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Colonel Richard Hansen  
Page 2  
December 5, 2014

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Sincerely,



BART R. YAKUPZACK

BRY/ch

Estate of J. G. GRAY  
P. O. Box 40  
Lake Charles, Louisiana 70602

*Handwritten notes:*  
TC  
DPI  
PM BRAD  
INMAN

November 26, 2014

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Fax: 504-862-2572  
Email: [Brad.L.Inman@usace.army.mil](mailto:Brad.L.Inman@usace.army.mil)

Re: CWPPRA PPL-24  
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Sincerely,

A handwritten signature in black ink, appearing to read 'DR', written over the word 'Sincerely,'.

David Richard  
Land Manager

Received By  
CEMVA-EX  
US Army Corps of Engineers  
New Orleans District

DEC 01 2014

Estate of J. G. GRAY  
P. O. Box 40  
Lake Charles, Louisiana 70602

November 26, 2014

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District Engineer, New Orleans  
c/o: Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, Louisiana

Fax: 504-862-2572  
Email: [Brad.L.Inman@usace.army.mil](mailto:Brad.L.Inman@usace.army.mil)

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Sincerely,

A handwritten signature in blue ink, appearing to read 'D. Richard', written over the word 'Sincerely,'.

David Richard  
Land Manager



**Gulf Coast** Joint Venture  
Bird Habitat Conservation Partnership

GCJV Office  
US Geological Survey  
National Wetlands Research Center  
700 Cajundome Blvd.  
Lafayette, LA 70506  
Ph: 337-266-8801  
Fax: 337-266-8800

---

3 November 2014

Mr. Troy G. Constance, CWPPRA Technical Committee Chairman  
Deputy District Engineer  
U.S. Army Engineer District, New Orleans  
Office of the Chief  
P.O. Box 60267  
New Orleans, Louisiana 70160

Mr. Constance,

I am writing to express Gulf Coast Joint Venture (GCJV) Management Board support for the Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) project **ME-18 - Rockefeller Refuge Gulf Shoreline Stabilization**. The GCJV is a partnership of state, federal, and private organizations dedicated to bird habitat conservation in the coastal portions of Texas, Louisiana, Mississippi, and Alabama. Through many years of collaborative effort, this partnership has developed objectives and priorities for habitats intended to sustain desired populations of birds that reside within, or migrate through, the region. The proposed shoreline stabilization addresses protection of important coastal wetlands that contribute to GCJV foraging habitats for waterfowl, which we estimate to be in short supply relative to what is needed for current population targets. Protected habitats also contribute to GCJV habitat objectives for some priority landbirds that require large blocks of emergent brackish/saline marsh. Inland from the planned shoreline protection are several currently jeopardized wetland improvement investments by GCJV partners, including those through the North American Wetlands Conservation Act and by several specific GCJV partner organizations.

This GCJV recognizes and values the individuality of our partner organizations, and our support here is offered independently from, and does not supersede, any role or opinion that any GCJV member organization might have in review or selection of projects under this program.

I hope you will favorably consider this proposal that has potential to protect important bird habitats, and related GCJV investments, of the Louisiana Chenier Plain.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff Raasch", with a long horizontal flourish extending to the right.

Jeff Raasch  
GCJV Chairperson

cc: CWPPRA Technical Committee members  
Phillip Trosclair, La Department of Wildlife and Fisheries  
GCJV Management Board members  
GCJV Staff

DAVID VITTER  
LOUISIANA

DEPUTY WHIP

Environment and Public Works  
Top-Ranking Republican

Armed Services

Banking, Housing, and Urban Affairs

Small Business and Entrepreneurship

# United States Senate

WASHINGTON, DC 20510

October 22, 2014

14-034

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Website with E-Mail Access:  
vitter.senate.gov

Mr. Troy G. Constance  
Acting Chairman/Deputy District Engineer  
U. S. Army Engineer District, New Orleans  
Office of the Chief  
P. O. Box 60267  
New Orleans, LA 70160-0267

Dear Mr. Constance,

I understand *ME-18* is the CWPPRA *Shoreline Protection Project* located along the coastline of Rockefeller Wildlife Refuge from Joseph Harbor west to Beach Prong. A demonstration project was funded by CIAP in 2009 comparing several shoreline protection alternatives for this area. Valuable information was obtained and a lightweight aggregate core alternative was recommended for implementation of the full project. The full length of the project is 9.2 miles. It is my understanding that in December of 2014, the completed design for *ME-18* will be proposed to CWPPRA requesting consideration for funding of three miles of shoreline protection.

I am told the coast along Rockefeller Wildlife Refuge is losing approximately 40 feet per year. Rockefeller Wildlife Refuge's erosion problem is accelerating. Areas have now eroded inland into fragile marsh areas, with estimates of current annual land loss now at 57 feet per year from over the last ten years. The main problem is the movement of existing shell hash on Rockefeller's coastline. With the direct impacts from each wave, the shell hash is suspended and carried inland. Vegetation is covered and dies, exposing the soils to the Gulf. The high organic soils then erode at an increasing rate. The breakwater design will diminish waves from the Gulf and stabilize the shoreline. Data collected from the demonstration project documents the success of this methodology.

The *ME-20* project, which is a marsh creation project just to the northwest of the Rockefeller Wildlife Refuge Shoreline project is a \$22.6 million project. I am told this project will be jeopardized at some time in the near future if the shoreline protection project is not implemented. Also, multiple Ducks Unlimited projects have been in place and are functioning to benefit wetlands and wildlife located north of the shoreline. Another CWPPRA project that was authorized for design is *ME-32*. *ME-32* is another marsh creation project that has an estimated cost of \$25 million. This project is also located northwest of the shoreline project.

I commend the above referenced proposal for its efforts to restore, enhance and protect wetlands benefiting from the *ME-18 Shoreline Protection Project* and ask that you give it your full consideration. A report of the final decision would be helpful and appreciated. Please contact me through Ms. Brenda Moore in my Metairie Office with any questions. Thank you for your time and attention.

Sincerely,

David Vitter  
United States Senate

Brenda Moore  
CEM-VN-EX  
US Army Corps of Engineers  
New Orleans District

OCT 30 2014



**APACHE LOUISIANA MINERALS LLC**  
(985) 879-3528 TEL · (985) 876-5267 FAX

Mailing Address:  
Post Office Box 206, Houma, LA 70361-0206

Deliveries Only:  
1913 LaTerre Court, Houma, LA 70363-7525

November 26, 2014

Colonel Richard Hansen  
District Engineer, New Orleans  
c/o Brad Inman  
U.S. Army Corps of Engineers  
P.O. Box 60267  
New Orleans, LA

- sent via e-mail to: Brad.L.Inman@usace.army.mil

Re: CS-59; Oyster Bayou Marsh Restoration

Dear Colonel Hansen:

I am writing to express support for the above referenced project which is coming before the CWPPRA Task Force for possible funding at your December meeting. This project is much needed in a part of the state that has been decimated by two major hurricanes in recent times.

Apache owns approximately 26,000 acres of wetlands near this proposed project. Although our property is not within the foot print of the proposed improvements, our land stands to be benefitted and protected by the marsh creation cells and earthen terraces which will be constructed. This project also serves to restore the hydrology of the area to historic levels. We know firsthand that the soil types in the project area are conducive to the work which is proposed, as we have ourselves constructed earthen terraces on our property and observed the success of other dedicated dredging projects in the vicinity.

Please distribute this letter of support to other members of the Task Force and I urge your favorable consideration of the funding needed to construct this important project for coastal Cameron Parish.

Sincerely,

**APACHE LOUISIANA MINERALS LLC**

Timothy J. Allen, PLS  
General Manager

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**COASTWIDE REFERENCE MONITORING SYSTEM (CRMS) REPORT**

**For Report:**

Ms. Dona Weifenbach will present a report on CRMS.



# Coastwide Reference Monitoring System



**Dona Weifenbach  
And  
Leigh Anne Sharp**  
Coastal Protection and Restoration Authority  
December 11, 2014



## CRMS Implementation Status

### Milestones

- 15 OM&M Reports in 2014
- Report to Congress project synopses
- Coast-wide Elevation Survey of all 390 CRMS sites April – August 2014. All sites surveyed to NAVD88 Geoid 12a. Deliverables due in December.
- CRMS 2015 Coastwide Aerial Photography scheduled
- Present CRMS contract expires July 31, 2015. Preparations for next contract are in progress.
- CIMS database replacing SONRIS in January 2015



## Coastal Information Management System (CIMS)

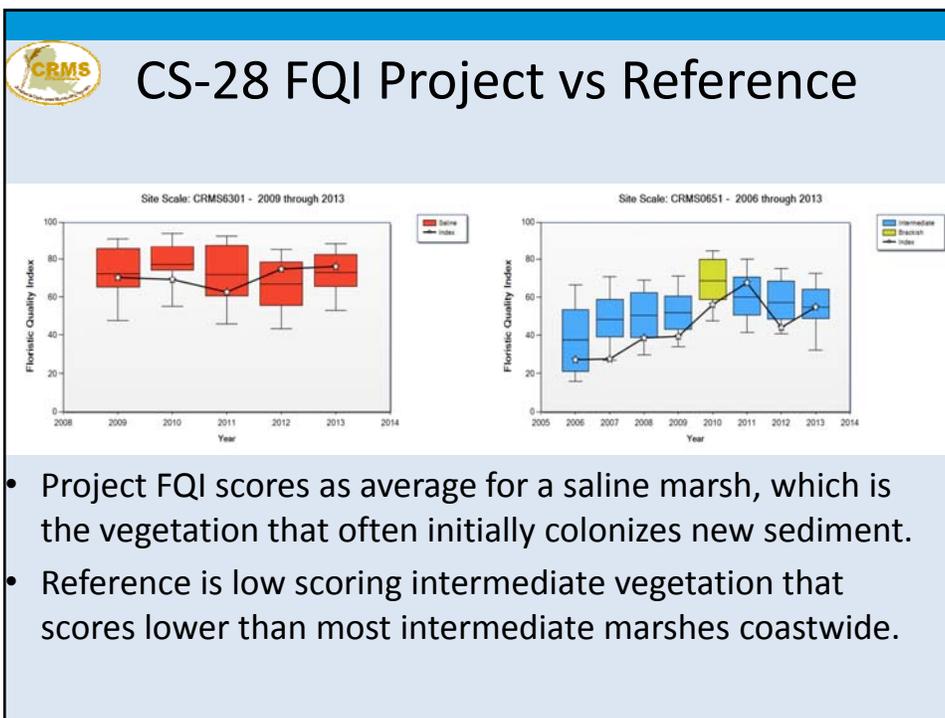
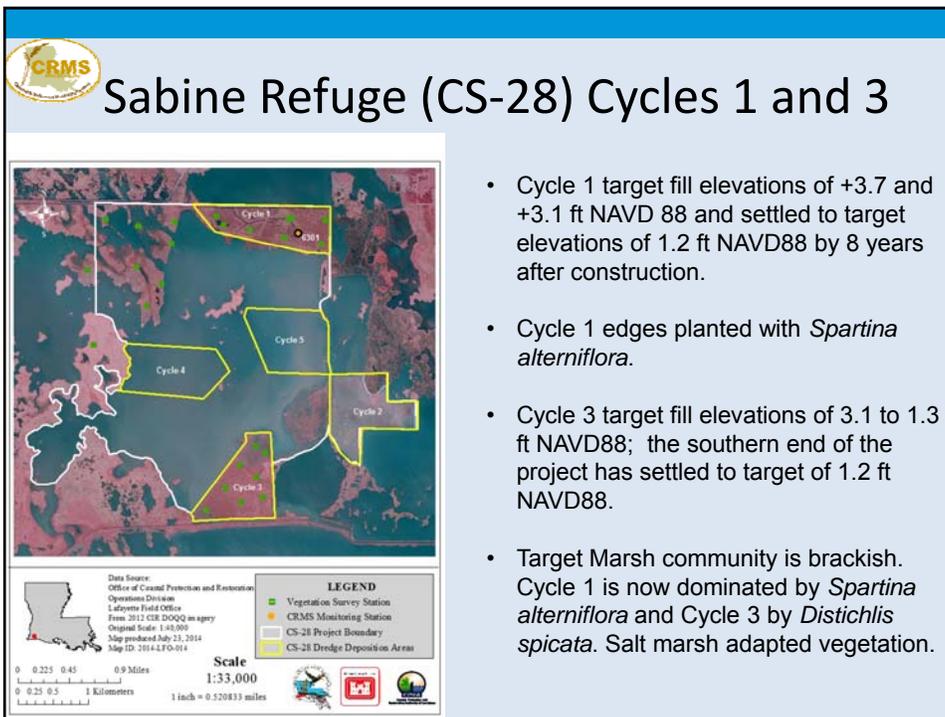


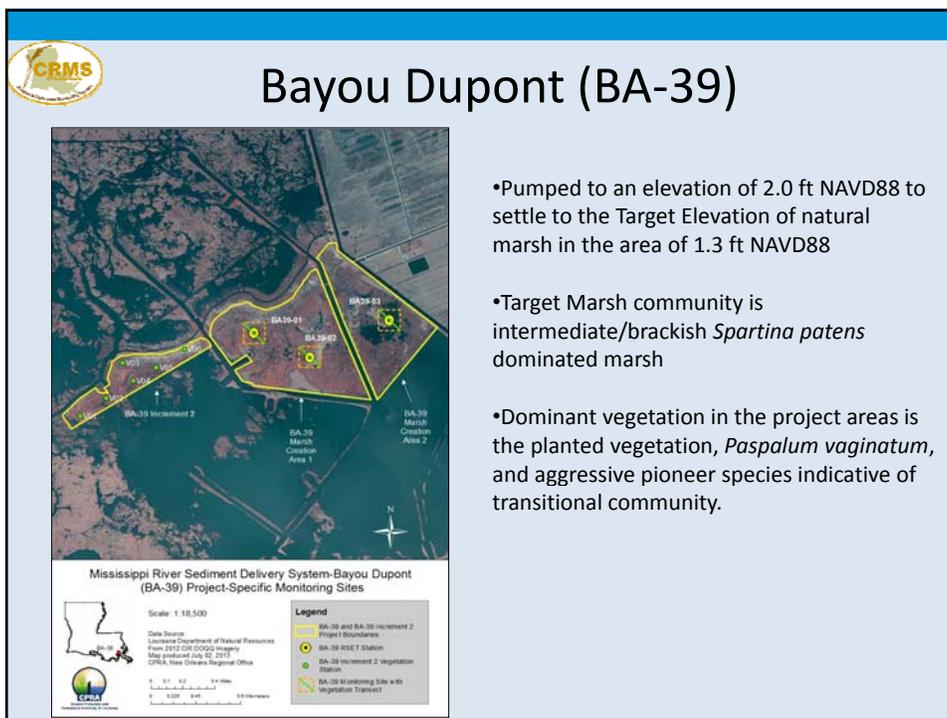
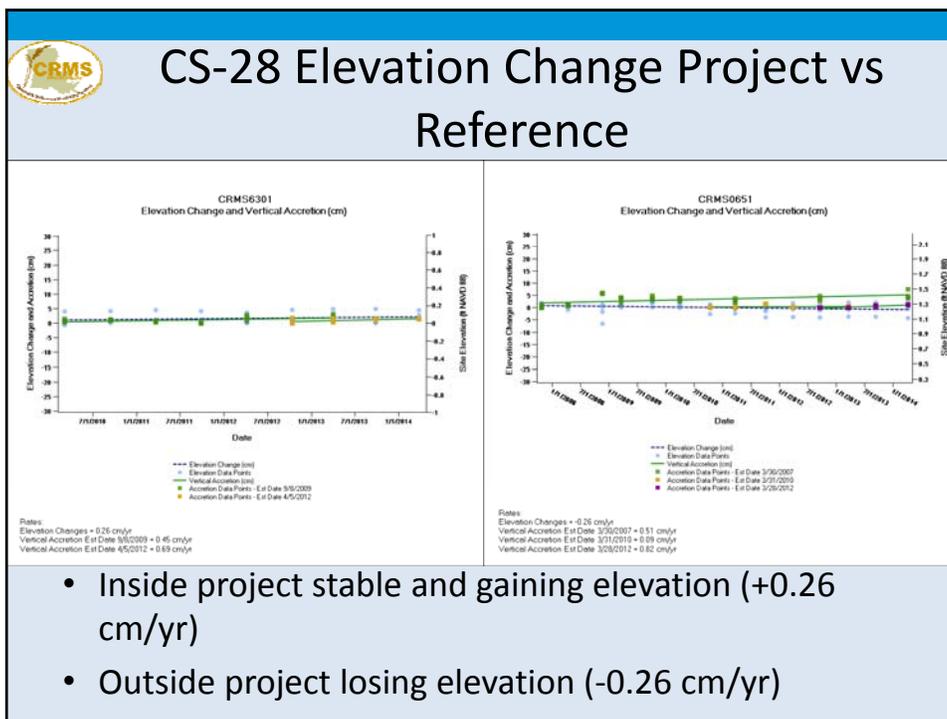
- New database and spatial viewer will replace SONRIS and house CPRA data and documents
- Links will be updated on CPRA website – seamless transition for users
- USGS partner
- Public release in February - training in Spring 2015
- Contact:  
CPRA Ed Haywood: [ed.haywood@la.gov](mailto:ed.haywood@la.gov)  
USGS Craig Conzelmann: [conzelmannc@usgs.gov](mailto:conzelmannc@usgs.gov)

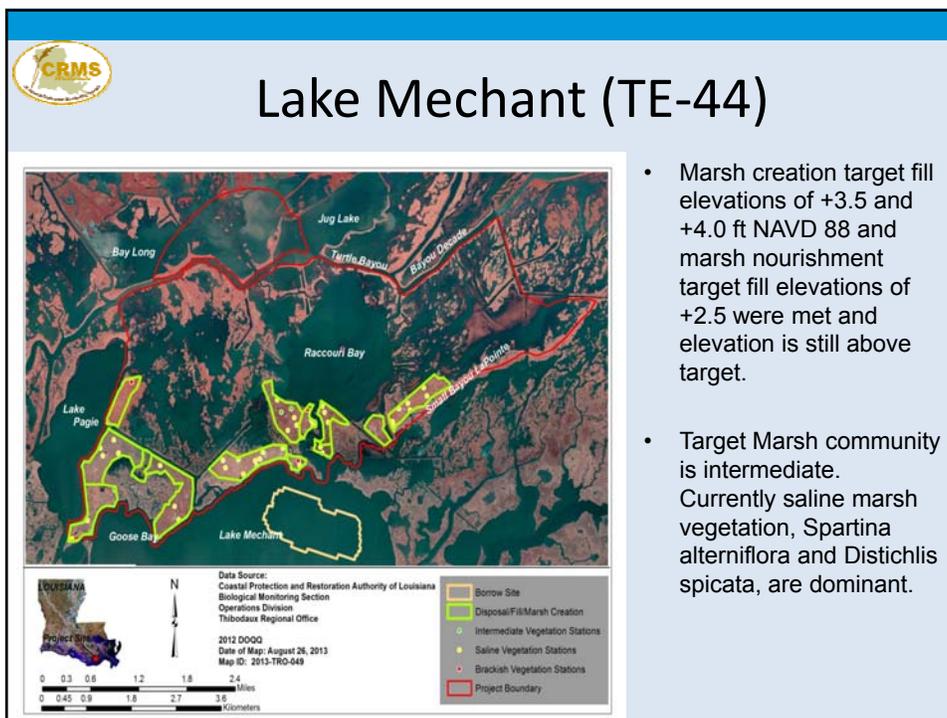
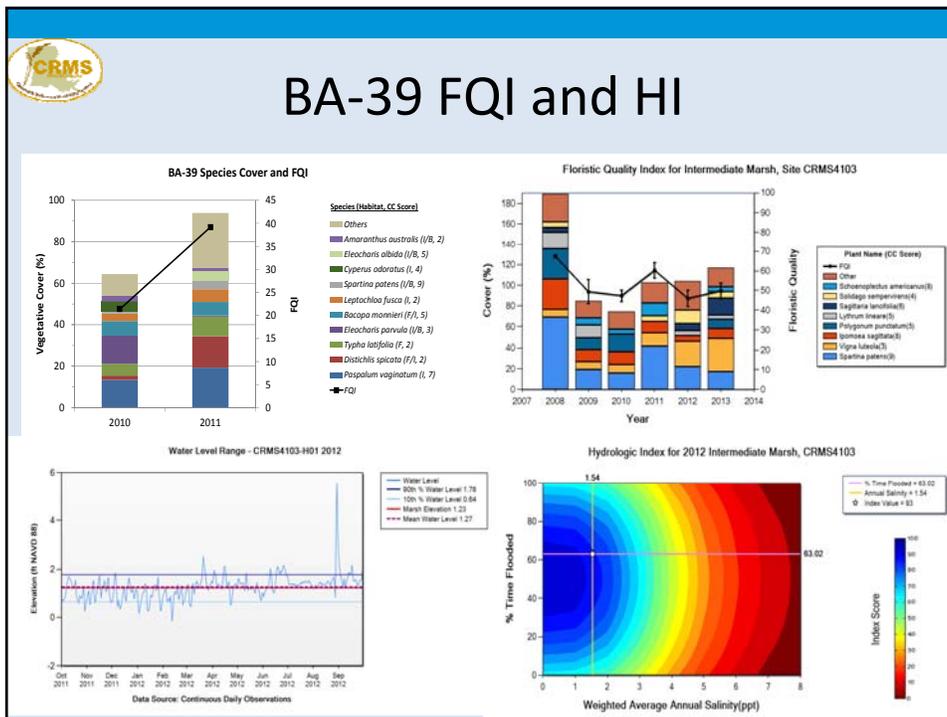


## Constructed Marsh Creation Projects

- BA-39: Mississippi River; EPA constructed in 2009, NOAA sponsored Increment 2
- CS-28: Calcasieu Ship Channel via a permanent pipeline; COE - Cycles 1 (2001) and 3 (2007), now sponsored by USFWS – Cycle 2 (2010) is sponsored by the state
- TE-44: Lake Mechant; USFWS constructed in 2010

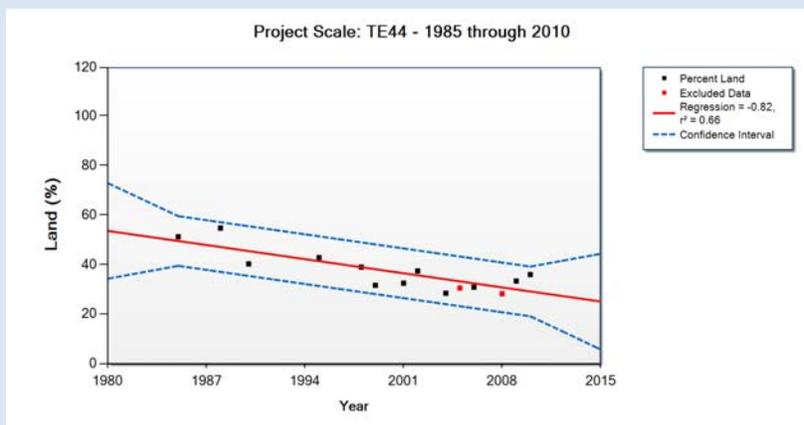








## TE-44 Percent Land Change



Note the land loss from the mid 1980's to 2007 and the increase in % Land at the last time increment from the project.



## Recommended Improvements and Lessons Learned

**BA-39** – *Paspalum vaginatum* plantings were successful and should be considered for future plantings with similar conditions. It is early in project life, but if need for greater hydrologic connectivity continues, may increase gaps and channels.

**CS-28** - Dredge cells will vegetate without the addition of plantings on the edge. Cycle 3 vegetated as quickly as the Cycle 1 from seed bank alone.

It is not necessary to pre-dig trenasses for tidal ingress and egress. Rather, the track hoe/marsh buggy can be driven over the area where tidal channels are desired approximately one year after pumping to create channels.



COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**STATUS OF 2015 REPORT TO CONGRESS**

**For Report/Decision:**

The U.S. Fish and Wildlife Service (FWS) is leading the development of the 2015 Report to Congress (RTC) and will present a status of the report's progress and request Technical Committee concurrence of the report outline and schedule. The draft plan for the 2015 RTC development would be to proceed with an outline similar to the 2012 RTC, including new restoration information, such as the RESTORE Act, and updated project information from 2012 to 2015. The schedule would be to complete the first draft by May 2015, the second draft by July 2015, and the semi-final draft by August 2015 in time for Technical Committee and Task Force approval in September and October 2015. Publishing and distributing the report will be in January 2016.

The Technical Committee will consider and vote to make a recommendation to the Task Force concerning the draft Report to Congress development proposal.

## **Draft 2015 Report to Congress Outline and Schedule**

(Based on the 2012 Report to Congress)

12-1-2014

The draft plan for 2015 RTC development would be to proceed with an outline similar to the 2012 RTC, including new restoration information, such as the RESTORE Act, and updated project information from 2012 to 2015. The schedule would be to complete the first draft by May 2015, the semi-final draft by July 2015, and the final draft by August 2015 in time for Technical Committee and Task Force approval in September and October 2015, and finally publishing and distributing the report by January 2016. The draft outline and schedule is presented below.

As with the 2012 RTC, Scott Wilson and his USGS staff and Dona Weifenbach and her CPRA monitoring staff will also work to develop the 2015 RTC. Dona Weifenbach (CPRA) and her staff prepared the a list of 12 projects with her recommendation for 5 or 6 to be included in the 2015 report which we recommend to be in the same format as the 2012 RTC report. Agencies are requested to examine this project list and provide comments by the December 11th Technical Committee so that CPRA can begin preparing that portion of the draft 2015 RTC.

The 2012 CWPPRA Report to Congress can be found on the [www.la.coast.gov](http://www.la.coast.gov) website under "reports" - <http://lacoast.gov/new/Pubs/Reports/program.aspx>

### **Draft 2015 Report to Congress TC Outline and Schedule (30 to 35 pages long).**

1. Executive Summary (2 pp) – Coastal ecosystem and wetland loss, CWPPRA, BP Early Restoration, BP Deepwater Oil Spill, RESTORE Act, CWPPRA Program restoration expertise, 2012-2015 projects approved.
2. Introduction (2 pp) - Coastal LA land loss and other coastal issues (update current Deepwater Horizon issues, BP Early Restoration progress, Criminal Penalties, RESTORE Act, wetland loss, estuarine habitat loss, imperiled fisheries, hypoxia, climate change, community vulnerability), Report to Congress CWPPRA Act 3-year report mandate.
3. CWPPRA Overview (4 pp) - Program Overview, CWPPRA Act (funding, Task Force, PPL process), LA Coastal Restoration Techniques (project types)
4. CWPPRA Project Planning and Implementation (4 pp) - Briefly highlights projects constructed during period (2012-2015), tables of projects approved from 2012 to 2015 for E&D and construction.
5. Monitoring Program – CRMS (2 pp)
6. Project Monitoring Highlights (2 pp/project) - Monitoring summaries of 6 selected projects.

7. Current Program Developments (1 page) - 2012 State Master Plan, 20-year Life, Trust Fund reauthorization, 2019 CWPPRA Act reauthorization, others.
8. Conclusions (1 page) - Emphasize major Program accomplishments especially from 2012 to 2015.
9. References/ Abbreviations (1 page)
10. Appendices (3 pp) – (2012 RTC project types, website link to authorized CWPPRA projects, and list of CWPPRA Outreach materials/videos)

### **Proposed 2015 CWPPRA Report to Congress Schedule**

First Draft – May 15, 2015

Semi-final Draft – July 15, 2015

Final Draft – August 15, 2015

Technical Committee Approval – September 2015

Task Force Approval – October 2015

Printing and Publishing – January 2016 (60 to 70 days are needed for printing)

dc 11-28-2014

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## **PROPOSED PROJECTS FOR THE 2015 REPORT TO CONGRESS**

### ***CS-20***

The East Mud Lake Marsh Management (CS-20) project is a long-lived, hydrologic management, CWPPRA project from Project Priority List 2; the project is located in Cameron Parish, LA, and federally sponsored by USDA-NRCS. The CS-20 project has been achieving the objective to prevent wetland vegetation degradation in the project area through hydrologic structural management designed to reduce water levels and salinities; adaptive management has allowed for hydrologic flushing after major climatic events such as droughts and storm surge despite salinities being above the project target. The CS-20 project has been effective at increasing emergent vegetation into shallow open-water areas as the dominant species composition changes over time to more salt tolerant plants.

### ***LA-08***

The Bioengineered Oyster Reef Demonstration Project (LA-08) is a shoreline protection project along the Gulf of Mexico in Cameron Parish, LA, constructed in the 2012; the project is located on the LDWF Rockefeller Wildlife Refuge and federally sponsored by the NOAA. The LA-08 project consists of two breakwater features utilizing the Oysterbreak™ method of construction composed of stacked, concrete rings to provide structural stability and potential habitat for oyster colonization; the rings of each Oysterbreak were constructed with different cement to test the effectiveness of OysterKrete against standard concrete for oyster habitat in a Gulf shoreline environment. The LA-08 demo project has been effective at reaching its goal to reduce shoreline erosion behind the Oysterbreaks as they have reduced wave transmission reaching the shoreline by at least 50%. Twenty months into the project, both Oysterbreaks are providing habitat for oyster settlement with no significant difference between construction materials.

### ***TV-21***

The primary purpose of the East Marsh Island Marsh Creation Project (TV-21) sponsored by NRCS is to restore areas that were previously lost due to lateral marsh erosion and was designed to target the areas of the island exhibiting the most land loss due to Hurricane Lili. The marsh nourishment component of the project was designed to deposit new sediments into uncontained marsh areas in the project and provide an influx of nutrients, as well as the benefits of increased elevation. The project has met the objectives of creating 362 acres of emergent marsh and creating/nourishing 797 acres of brackish marsh based on analysis on 2012 photography.

### ***TE-44***

The North Lake Mechant Landbridge Restoration (TE-44) project was designed to restore the North Lake Mechant Landbridge and Small Bayou la Pointe ridge through the use of dredging/filling the marsh within the project area. Construction of CU1 which consisted of shoreline plantings along the northern shoreline of Lake Mechant and the eastern shoreline of Lake Pagie started in April 2003 and was completed summer of 2003. The plantings were not successful. Construction of CU2 consisting of the creation of 790 acres using dredge material began in June 2008 and was completed in December 2009. Although the creation of 705 acres inside the fill areas is a little short of the project goal, another 141 acres were produced outside of the fill area and may be attributed to CU2. Since this project is only at the beginning of its life

it is hard to determine if the project has been a success. But we can suggest that the project is starting out well and should meet with success with future vegetation samplings and land/water analysis providing more details. Next samplings are scheduled for 2021 and 2027.

### ***PO-17***

The Bayou LaBranche Wetland Creation project (PO-17) was the first restoration project constructed through CWPPRA (1994) and was consequently the first project to complete its 20-year monitoring lifespan (2014). The United States Army Corps of Engineers was the federal sponsor and the Coastal Protection and Restoration Authority was the state sponsor. The PO-17 project involved hydraulically dredging sediment from the bottom of Lake Pontchartrain to construct a neighboring 436-acre marsh platform south of the lake in St. Charles Parish, Louisiana. The aim of the project was to create marsh habitat in an area that had largely converted to open water and had also become increasingly susceptible to shoreline breaching and the effects of increased wave energy and higher salinity water from Lake Pontchartrain. The objectives of the PO-17 project were to 1) create approximately 305 acres (123 ha) of shallow-water habitat conducive to the natural establishment of emergent wetland vegetation and 2) increase the marsh to open-water ratio in the project area to a minimum of 70% emergent marsh to 30% open water after five years following project completion. As of November 2012, there were 408 acres of land in the project area, of which 356 acres (83%) were classified as emergent marsh. Both objectives for the project were met and sustained through the end of the project's life; however, the attainment of a minimum of 70% emergent marsh to 30% open water may have taken longer than five years. The higher elevation in the northern area of the project fostered the development of scrub-shrub habitat during the early project years, but as the sediment settled and the land received greater inundation, the scrub-shrub habitat transitioned into emergent marsh. The PO-17 project demonstrated that marsh creation using dredged sediment is an effective restoration strategy to use in coastal Louisiana that can provide benefits beyond the 20-year CWPPRA project lifespan.

### ***BA-39***

The Mississippi River Sediment Delivery System–Bayou Dupont (BA-39) project was the first restoration project constructed through CWPPRA that utilized sediment hydraulically dredged from the Mississippi River to create marsh. Construction of BA-39 began in April 2009 and was completed in May 2010 and is sponsored by EPA. The project area is located on the west bank of the Mississippi River in Jefferson and Plaquemines Parishes within a rapidly eroding and subsiding section of the Barataria Landbridge that has been disconnected from riverine sediment input and has been hydrologically altered by the dredging of oil and gas canals. The goals of BA-39 are to restore/create approximately 372 acres (151 ha) and nourish approximately 99 acres (40 ha) of emergent marsh in an area that had converted to primarily open water.

The 2012 land-water analysis for BA-39 classified 458 acres (185 ha) as land and 37 acres (15 ha) as water. Vegetation surveys have shown that the marsh platform has increased in average total vegetative cover from 42% in 2010 to 60% in 2011. A topographic survey of the project area between October 2011 and January 2012 indicated that the majority of the project area had settled to an elevation between +1.5' and +2.0' NAVD88. As the marsh elevation continues to settle, it is expected that hydrologic exchange will increase and the vegetation will transition to a marsh community that more closely resembles the local, natural vegetative community.

#### *TE-45*

The Terrebonne Bay Shore Protection Demonstration (TE-45) project is currently in year 7 of its 8 year project-life. The project evaluates three dissimilar fabricated structures (Gabion Mat, ReefBlk, and A-Jack) for their effectiveness in reducing shoreline erosion rates and for their ability to develop and sustain oyster reef habitat. TE-45 is distributed along three shoreline reaches (Reach A, Reach B, and Reach E) and is located along the rapidly eroding northwest shore of Lake Barre. The TE-45 project is currently achieving its goals and has produced interesting results throughout its project-life.

#### *TE-46*

The West Lake Boudreaux Shoreline Protection and Marsh Creation Project (TE-46) was constructed in 2009 and consists of 12,447 ft. (3,794 m) of foreshore rock dike divided into three reaches (North, Central, and South) along the western shoreline of Lake Boudreaux. Marsh creation areas were constructed behind each reach. Three years post-construction (2012), the TE-46 project was achieving its goal in reducing shoreline erosion, and in the creation of close to 220 ac (89 ha) of intertidal marsh.

#### *TE-48*

The Raccoon Island Shoreline Protection/Marsh Creation (TE-48) project was divided into two phases to facilitate the construction of the shoreline protection part of the project. Phase A (constructed in 2007) extended an existing breakwater field 4,000 ft. the west by constructing eight additional rock breakwaters and constructed a rock groin on the eastern edge of Raccoon Island while Phase B (constructed in 2013) created 63 acres (26 ha) of back barrier marsh. The singular TE-48 goal to reduce shoreline erosion to protect habitats sustaining the Raccoon Island rookery and sea bird colonies was achieved because all TE-48 structures gained sediment volume and advanced their shoreline positions.

#### *BA-27*

The Barataria Landbridge Shoreline Protection Project (BA-27a, b, c, d) aims to preserve a critical landmass connecting the upper and lower Barataria basin through the use of shoreline protection features along Bayous Perot and Rigolettes. Once completed, this project will provide a total of 119,290 ft (36,360 m) to an area with historically high erosion rates. Because of the large size of this project, construction was broken down into several units with the first unit being completed in 2002 and the final unit to be completed in 2015. Shoreline position data indicate that all constructed units are achieving the goal of decreasing rates of shoreline erosion. Not only was shoreline erosion reduced, but positive shoreline change rates were observed due to new marsh growth between the original shoreline and the protection structure. Two nearby reference areas, however, continue to experience high rates of shoreline erosion with one reference area losing over 50 ft/yr of shoreline from 2005 to 2012.

#### *BA-20*

The objectives of the Jonathan Davis Wetland Restoration (BA-20) project were to: 1) use structural measures (plugs and weirs) to restore hydrologic conditions that reduce water level and salinity fluctuations and allow freshwater retention within the project area, and 2) reduce wetland loss through shoreline protection. Rock armored plugs and weirs were installed in 1998 and 2001

and shoreline protection features were installed in three phases in 2001, 2003, and 2011. The shoreline protection component has been highly successful in meeting project goals. There was no shoreline loss behind the shoreline structures from 2004 to 2010, while an adjacent reference area lost approximately 45 ft/yr of shoreline. The success of the plugs and weirs has been inconclusive. These features were found to have some effect on salinity within the project area but the ecological significance of these changes would be minimal.

DRAFT

<b>Project #</b>	<b>Federal Sponsor</b>	<b>Project Type</b>	<b>Construction Date</b>
<b>CS-20</b>	<b>NRCS</b>	<b>Marsh Management</b>	<b>1996</b>
<b>LA-08</b>	<b>NMFS 5 year Demo</b>	<b>Shoreline Protection, Oyster</b>	<b>2012</b>
<b>TV-21</b>	<b>NRCS</b>	<b>Marsh Creation (Vermilion Bay)</b>	<b>2010</b>
CS-24	NRCS	Shoreline Projection (rock)	1999
<b>TE-44</b>	<b>USFWS</b>	<b>Marsh Creation and Shoreline Protection</b>	<b>2008</b>
TE-45	USFWS 8 year Demo	Shoreline Protection, Oyster	2007
TE-46	USFWS	Marsh Creation and Shoreline Protection	2009
TE-48	NRCS	Marsh Creation and Shoreline Protection	2005
<b>PO-17</b>	<b>USACE</b>	<b>Marsh Creation (Lake)</b>	<b>1994</b>
BA-27	NRCS	Shoreline Protection	2002
BA-20	NRCS	Shoreline Protection	98, 01, 03, 12
<b>BA-39</b>	<b>EPA</b>	<b>Marsh Creation (Miss. River)</b>	<b>2009</b>

The reason I chose LA-08 over TE-45 is that this was NMFS only proposed project. There is more data for TE-45.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**REQUEST FOR APPROVAL FOR FINAL DEAUTHORIZATION OF THE PPL 3 –  
WEST POINTE A LA HACHE OUTFALL MANAGEMENT (BA-04C)**

**For Decision:**

CPRA is requesting approval for final deauthorization of the West Pointe a la Hache Outfall Management (BA-04c) project. The project team determined that many of the proposed benefits of BA-04c were being met by the current operation of the structure, and the marginal benefits could be achieved through this project could be achieved more cost-effectively by improving existing operations.

The Technical Committee will consider and vote to make a recommendation to the Task Force to approval the final deauthorization of BA-04c.



# State of Louisiana

BOBBY JINDAL  
GOVERNOR

September 4, 2014

Troy Constance  
Chairman, CWPPRA Technical Committee  
US Army Corps of Engineers  
New Orleans District  
PO Box 60267  
New Orleans, LA 70160-0267

Subject: Initiation of Deauthorization Procedures

Dear Mr. Constance:

Please accept this correspondence as the Coastal Protection and Restoration Authority's (CPRA) official request to initiate deauthorization procedures for the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) project West Pointe a la Hache Siphon Improvement project (BA-04c).

The existing siphon at West Pointe a la Hache was constructed in 1991. It is comprised of eight 72 inch diameter concrete coated steel tubes. Water is drawn from the Mississippi River, conveyed over the levee and discharged into the adjacent wetlands. Flow capacity is dependent upon the difference in water level between the river and the receiving basin. Maximum flow is generally considered to be approximately 2,700 cubic feet per second.

The siphon is operated by Plaquemines Parish Government (PPG) under an agreement amended and executed in February, 2007. The operations plan is as follows:

1. PPG shall prime the siphon when the Mississippi River reaches a stage of 4.0 feet and on the rise at the Carrollton gauge in New Orleans and
2. PPG shall let the siphon flow at its maximum.

In 1993, the West Pointe a la Hache Outfall Management project was authorized to improve hydrologic flow conditions in the outfall area. The project features included various fixed crested rock weirs with barge and boat bays, earthen plugs and spoil bank maintenance. Modelling completed in 2004 and revised in 2005 showed that siphon operation, more so than the proposed outfall management, creates favorable conditions in the outfall area.

In 2007, the revised operations agreement (mentioned above) was negotiated and executed.

In 2009, the CWPPRA Task Force formally approved a scope change to the BA-04c project that featured mechanical improvements to the siphon intended to improve operational efficiency. The proposed mechanical upgrades include:

1. Onsite vacuum priming system, including vacuum pump, compressor and pneumatic valve
2. Vacuum storage tank
3. Secured control building
4. Instrumentation for monitoring flow and sediment loads
5. Supervisory Control and Data Acquisition (SCADA) system for remote monitoring and control

Total project expenditures from inception to date are approaching \$1,000,000. It is estimated that between completion of the design, Landrights, Construction, Monitoring and Operations and Maintenance, that an additional \$4,840,000 would be required over the next 20 years to implement the project. As this is a pre-cashflow project, the majority of these funds are already allocated to the project by CWPPRA.

The siphon operation, if the proposed improvements are implemented, would likely require a mechanical, instrumentation and electrical contractor to maintain the mechanical system, and a programmer and SCADA technician to maintain the controls and communications system. CPRA contends that operational awareness, through inspections and supervision, is a more cost effective way to maximize the flow of fresh water into the project area. To wit, CPRA's New Orleans Field office commits to improved communication with PPG concerning the operation of the siphon. Therefore, CPRA recommends that this project be deauthorized and the remaining funds committed to the project be returned to CWPPRA.

Thank you for your assistance in this effort. Please direct questions regarding this matter to Stuart Brown (225-342-4596) or Garvin Pittman (225-342-4744).

Sincerely,



Bren Haase  
Deputy Chief – Studies and Environmental Branch  
Coastal Protection and Restoration Authority

Cc: Britt Paul, Assistant State Conservationist, Natural Resources Conservation Service  
Darryl Clark, Senior Field Biologist, US Fish and Wildlife Service  
Richard Hartman, Fishery Biologist, NOAA  
Karen McCormick, Section Chief, EPA Region 6



# West Pointe a la Hache Outfall Management (BA-04c)

## Project Status

**Approved Date:** 1994      **Project Area:** 15,755 acres

**Approved Funds:** \$4.26 M      **Total Est. Cost:** \$5.37 M

**Net Benefit After 20 Years:** 646 acres

**Status:** Engineering and Design

**Project Type:** Outfall Management (Siphon Improvements)

**PPL #:** 3

## Location

This project is located along the west bank of the Mississippi River within the Barataria Basin in Plaquemines Parish, Louisiana.

## Problems

Construction of the Mississippi River levee system halted the river's seasonal over-bank flooding, effectively terminating the principal mechanism that naturally counteracted subsidence within the Barataria Basin. The marshes within the project area were no longer nourished with sediment, nutrients, and fresh water. In addition, the dredging of major navigation canals has provided avenues for salt water from the Gulf of Mexico to intrude into the area.

## Restoration Strategy

In 1991 the West Pointe a la Hache siphon (state project BA-04) was constructed to draw water from the Mississippi River into nearby marshes. The siphon has a maximum capacity of approximately 2,700 cubic feet per second through eight 72-inch diameter tubes. The objective of the siphon is to restore the marshes to a fresher state by reintroducing fresh water, sediment, and nutrients to the area.

The objective of the project is to reduce wetland loss by increasing the duration and dependability of operation of all siphon pipes each year, thereby increasing the net annual delivery of freshwater and sediment to the project area.

Proposed siphon improvements include: on-site and remote instrumentation to provide continuous monitoring and measurement of actual flow rates; remote instrumentation to provide instant notification when any pipes lose their prime, and thereby initiate immediate response to re-establish the vacuum; on-site vacuum pump, control equipment, and instrumentation to immediately re-establish flow when any pipes lose their prime; and an air release system to allow escape of accumulated gases to maintain the siphon vacuum.



West Pointe a la Hache siphon's levee crossing and intake on the west bank of the Mississippi River.

## Progress to Date

During the original engineering and design phase of this project, hydrodynamic modeling showed that the siphon flow plays a major role in ameliorating project area salinities. As a result, a scope change was approved by the CWPPRA Task Force in 2008. The project is currently in the engineering and design phase. The 30% design meeting was conducted on October 3, 2012.

This project is on Priority Project List 3.

*For more project information, please contact:*



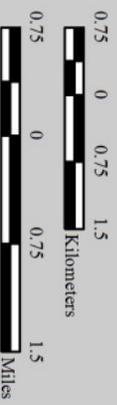
**Federal Sponsor:**  
Natural Resources Conservation Service  
Alexandria, LA  
(318) 473-7756



**Local Sponsor:**  
Coastal Protection and Restoration Authority  
Baton Rouge, LA  
(225) 342-4736

# West Pointe a la Hache Outfall Management (BA-04c)

 Siphon  
 Project Boundary



Map Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Assessment Branch  
 Baton Rouge, La.

Background Imagery:  
 2008 Digital Orthophoto Quarter Quadrangle

Map Date: November 07, 2012  
 Map ID: USGS-NWRC 2012-11-0004  
 Data accurate as of: November 07, 2012



COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**REQUEST FOR APPROVAL FOR FINAL DEAUTHORIZATION OF THE PPL 16 –  
SOUTHWEST LOUISIANA GULF SHORELINE NOURISHMENT AND PROTECTION  
(ME-24)**

**For Decision:**

USACE and CPRA are requesting approval for final deauthorization of the Southwest Louisiana Gulf Shoreline Nourishment and Protection (ME-24) project. During the annual review of unconstructed projects in 2013, the P&E Committee recommended transferring lead federal sponsor from USACE to EPA. After reviewing the updated cost estimates, EPA did not accept transfer and the P&E Committee recommended deauthorization.

The Technical Committee will consider and vote to make a recommendation to the Task Force to approval the final deauthorization of ME-24.

## Projects Recommended for Deauthorization

Project Name	Project No.	Agency	PL	Issues	Reason(s) for Potential De-authorization
Southwest LA Gulf Shoreline Nourishment and Protection	ME-24	COE	16	CSA	All work is on hold pending approval of a new Cost Share Agreement. Late July 2012 the CG met with the head of CPRA to discuss this issue; however, the CSA issues are still unresolved. As a result of SOUP 2013, the P&E recommended transferring lead federal sponsor from USACE to EPA. After reviewing updated cost estimates, EPA does not accept transfer. Deauthorization is recommended.



# Southwest Louisiana Gulf Shoreline Nourishment and Protection (ME-24)

## Project Status

**Approved Date:** 2006      **Project Area:** 1,244 acres  
**Approved Funds:** \$1.26 M      **Total Est. Cost:** \$36.9 M  
**Net Benefit After 20 Years:** 888 acres  
**Status:** Engineering and Design  
**Project Type:** Shoreline Protection  
**PPL #:** 16

## Location

The project is located along the Mermentau Basin in Cameron and Vermilion Parishes, Louisiana.

## Problems

The Gulf of Mexico's shoreline, in the vicinity of Rockefeller Refuge, is reportedly eroding at an estimated rate of 35 to 39 feet per year.

## Restoration Strategy

Approximately 4.9 million cubic yards of sediment will be deposited along 47,900 linear feet of gulf shoreline between Dewitt Canal and Constance Lake. The result will be to create approximately 421 acres of marsh platform, mud flat and shallow water that extend into the gulf.

## Progress to Date

The Louisiana Coastal Wetlands Conservation and Restoration Task Force approved engineering and design funding in January, 2006. The project delivery team has been assembled and, pending development and acceptance of a cost share agreement, a kickoff meeting and site visit will be planned.

This project is listed on Priority Project List 16.



Southwest Louisiana Gulf Shoreline



Southwest Louisiana Gulf Shoreline

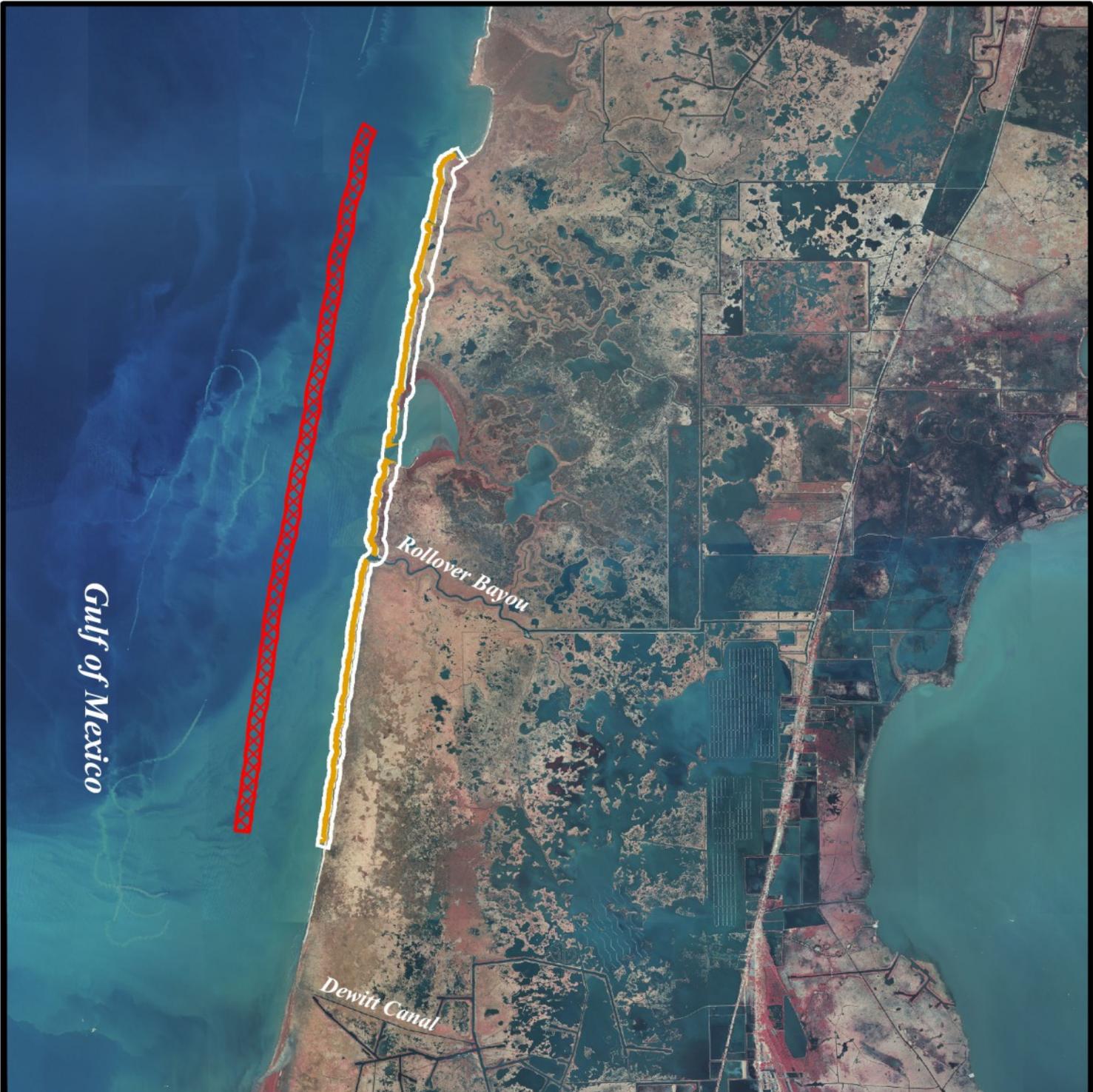
*For more project information, please contact:*



**Federal Sponsor:**  
U.S. Army Corps of Engineers  
New Orleans, LA  
(504) 862-1597



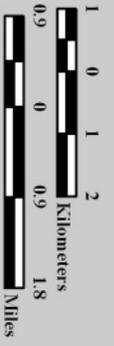
**Local Sponsor:**  
Coastal Protection and Restoration Authority  
Baton Rouge, LA  
(225) 342-4736



# Southwest Louisiana Gulf Shoreline Nourishment and Protection (ME-24)

	Supra-Tidal Dredge Material *
	Borrow Site *
	Project Boundary

\*denotes proposed features



Map Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Field Station  
 Baton Rouge, La.

Background Imagery:  
 2005 Digital Orthophoto Quarter Quadrangle  
 Map Date: November 15, 2006  
 Map ID: USGS-NWRC 2007-11-0075  
 Data accurate as of: November 14, 2006

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**REQUEST FOR APPROVAL TO INITIATE DEAUTHORIZATION OF THE PPL 19 –  
CHENIER RONQUILLE BARRIER ISLAND RESTORATION PROJECT (BA-76)**

**For Decision:**

NMFS and CPRA are requesting approval to initiate deauthorization procedures on the Chenier Ronquille Barrier Island Restoration Project (BA-76) due to securing of construction funds for this project from the Deepwater Horizon Oil Spill Phase III Early Restoration Plan in October 2014. This project had a favorable 95% design review through the CWPPRA process but did not secure phase 2 funding approval in 2012 and 2013.

The Technical Committee will consider and vote to make a recommendation to the Task Force to approve to initiate deauthorization of the Chenier Ronquille Barrier Island Restoration Project.



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, MD 20910

November 19, 2014

Mr. Troy G. Constance  
Acting Deputy District Engineer  
US Army Corps of Engineers  
New Orleans District  
P.O. Box 60267  
New Orleans, LA 70160-0267

RE: Initiation of Deauthorization for Chenier Ronquille Barrier Island Restoration (BA-76)

Dear Mr. Constance:

In accordance with the CWPPRA Standard Operating Procedures (SOP) Section (6)(q)(1), this letter serves as the National Oceanic and Atmospheric Administration's request to initiate deauthorization procedures for the Chenier Ronquille Barrier Island Restoration project (BA-76). This Project Priority List 19 project completed its 95% design review in October 2011 and was unsuccessful in receiving phase 2 approval in January of 2012 and 2013.

The conceptual plan for Chenier Ronquille was included as a project for construction under the final Phase III early restoration plan for the Deepwater Horizon Oil Spill. The restoration plan and Environmental Impact Statement was released by the Federal and State natural resource trustee agencies in June 2014. Following the signing of the Record of Decision for the Plan, stipulation agreements were signed in the first week of October 2014 that funded construction of this project. As there is now an alternate source of funds to cover the construction of this project, NOAA and CPRA wish to proceed with deauthorization of the CWPPRA project and return of any unused funds from phase 1.

Please direct questions regarding this matter to the NOAA Project Manager, Cecelia Linder (301-427-8675) or the CPRA Project Manager, Kenneth Bahlinger (225-342-7362).

Sincerely,

Cecelia Linder  
NOAA CWPPRA Program Manager

cc: Richard Hartman, NMFS, Baton Rouge, LA  
Britt Paul, NRCS, Alexandria, LA  
Karen McCormick, EPA, Dallas, TX  
Darryl Clark, USFWS, Lafayette, LA  
Bren Haase, CPRA, Baton Rouge, LA  
Kenneth Bahlinger, CPRA, Baton Rouge, LA





# Cheniere Ronquille Barrier Island Restoration (BA-76)

## Project Status

**Approved Date:** 2010      **Project Area:** 463 acres  
**Approved Funds:** \$3.41 M      **Total Est. Cost:** \$43.8 M  
**Net Benefit After 20 Years:** 308 acres  
**Status:** Engineering and Design  
**Project Type:** Barrier Island Restoration  
**PPL #:** 19

## Location

The project is located in Region 2, within the Barataria Basin portion of Plaquemines Parish.

## Problems

This area is undergoing shoreline erosion, interior wetland loss, overwash, and breakup. The Gulf shoreline erosion rate has doubled from 1988 to 2006. Project area marshes also are being eroded at -11.8 ft/yr between 2003 to 2006 as well as being converted to open water from internal breakup.

## Restoration Strategy

Restoration would expand the Gulf shoreline structural integrity and associated protection by tying into two recently constructed projects to the east and address one of the remaining reaches of the Barataria/Plaquemines shoreline. The design includes fill for a beach and dune plus 20-years of advanced maintenance fill, as well as fill for marsh creation/nourishment. The location of the type and amount of sediment needed to construct this project already has been identified under the East Grand Terre Project that is presently under construction. Approximately 127 acres of beach/dune fill would be constructed and approximately 259 acres of marsh creation/nourishment would be constructed. Intensive dune plantings would be conducted by seeding and installing approved nursery stock. About half of the marsh platform would be planted with cordgrass and portions of the dune, swale, and marsh would be planted with appropriate woody species. Containment dikes would be breached no later than year three to allow tidal exchange with the created marsh.

## Progress to Date

This project is on Priority Project List 19.



This photo shows the current condition of the Chenier Ronquille shoreline, which is in a deteriorated state after being subjected to years of storms, subsidence, and sediment deprivation. Once restored, this island will provide critical habitat, and help reconnect the barrier island chain that provides a first line of defense to inland communities.

*For more project information, please contact:*



**Federal Sponsor:**  
National Marine Fisheries Service  
Baton Rouge, LA  
(225) 389-0508



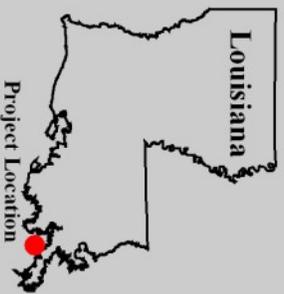
**Local Sponsor:**  
Coastal Protection and Restoration Authority  
Baton Rouge, LA  
(225) 342-4736

# Cheniere Ronquille Barrier Island Restoration (BA-76)

	Dune/Beach *
	Marsh Creation *
	Project Boundary

\*denotes proposed features

**USGS**  
science for a changing world

Louisiana

Project Location

0.25 0 0.25 0.5  
Kilometers

0.25 0 0.25 0.5  
Miles

Map Produced by:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Field Station  
Baton Rouge, La.

Background Imagery:  
2008 Digital Orthophoto Quarter Quadrangle  
Map Date: February 9, 2010  
Map ID: USGS-NWRC 2010-11-0022  
Data accurate as of: February 9, 2010



COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**REQUEST FOR APPROVAL TO INITIATE DEAUTHORIZATION OF THE PPL 17 --  
WEST POINTE A LA HACHE MARSH CREATION PROJECT (BA-47)**

**For Decision:**

CPRA and NRCS are requesting formal deauthorization procedures be initiated for the West Pointe a la Hache Marsh Creation (BA-47) Project. This project is currently being constructed utilizing remaining CWPPRA funds from the Lake Hermitage Marsh Creation project (BA-42).

The Technical Committee will consider and vote to make a recommendation to the Task Force to approve initiating deauthorization of West Pointe a la Hache Marsh Creation (BA-47).



# State of Louisiana

**BOBBY JINDAL**  
GOVERNOR

December 1, 2014

Mr. Troy G. Constance  
Acting Deputy District Engineer  
US Army Corps of Engineers  
New Orleans District  
P.O. Box 60267  
New Orleans, LA 70160-0267

RE: Initiation of Deauthorization for West Pointe a la Hache Marsh Creation Project (BA-47)

Dear Mr. Constance:

In accordance with the CWPPRA Standard Operating Procedures (SOP) the Louisiana Coastal Protection and Restoration Authority (CPRA) and the USDA Natural Resources Conservation Service (NRCS) request that the Technical Committee initiate deauthorization procedures for the West Pointe a la Hache Marsh Creation Project (BA-47).

West Pointe a la Hache Marsh Creation (BA-47) is a PPL 17 project that has been engineered and designed by NRCS. This project is currently being constructed utilizing remaining CWPPRA funds from the Lake Hermitage Marsh Creation project (BA-42). As of November 24, 2014, approximately 25% of the BA-47 project area has been filled, and construction is projected to be completed by the end of January, 2015.

NRCS and CPRA wish to proceed with deauthorization of the BA-47 CWPPRA project and the return of any unused funds from Phase 1.

Please direct questions regarding this matter to the CPRA Project Manager, Devyani Kar (225-342-6412).

Sincerely,

Bren Haase  
Deputy Chief, Planning and Research Division  
Coastal Protection and Restoration Authority

cc: Richard Hartman, NMFS, Baton Rouge, LA  
Britt Paul, NRCS, Alexandria, LA  
Karen McCormick, EPA, Dallas, TX  
Darryl Clark, USFWS, Lafayette, LA  
Bren Haase, CPRA, Baton Rouge, LA  
Devyani Kar, CPRA, Baton Rouge, LA



# West Pointe a la Hache Marsh Creation (BA-47)

## Project Status

**Approved Date:** 2007      **Project Area:** 352 acres  
**Approved Funds:** \$1.62 M      **Total Est. Cost:** \$16.1 M  
**Net Benefit After 20 Years:** 203 acres  
**Status:** Engineering and Design  
**Project Type:** Marsh Creation  
**PPL #:** 17

## Location

The project area is located in Plaquemines Parish in the Barataria Basin. The site is located near Hwy 23 at West Pointe a la Hache.

## Problems

As a result of leveeing the Mississippi River for navigation and flood control, the West Pointe a la Hache wetlands were cut off from the historic overbank flooding of the river. Without continued sediment input, marshes couldn't maintain viable elevations due to ongoing subsidence. In addition, oil and gas canals disrupted hydrology and facilitated saltwater intrusion further degrading the marsh. Beginning in 1993, the siphons at West Pointe a la Hache were operated to re-introduce Mississippi River water, fine sediments, and nutrients into this area. However, land loss rates have continued to be high. An opportunity exists to create marshes directly in the influence area of the siphons using sediment from the nearby Mississippi River. The created marshes should benefit from the effects of the re-introduced Mississippi River water from the siphons.



Open water area being restored to emergent marsh.

## Restoration Strategy

This project will recreate marsh habitat in the area just west of the Jefferson Lake Canal by harvesting sediment from the Mississippi River and pumping it via pipeline to the proposed site. The goals of this project include converting approximately 250 acres of open water habitat to intermediate marsh, nourishing approximately 102 acres of existing intermediate marsh with dredged material, and maintaining 203 acres of created/nourished marsh over the 20-year project life.

## Progress to Date

Project is currently in the Planning and Design Phase. A 30% review meeting is anticipated for June 2010. Project is scheduled to request Phase II funding at the January 2011 Task Force meeting. Construction is anticipated to begin September 2011 with a completion date of September 2012.

This project is on Priority Project List 17.

*For more project information, please contact:*



**Federal Sponsor:**  
 Natural Resources Conservation Service  
 Alexandria, LA  
 (318) 473-7756

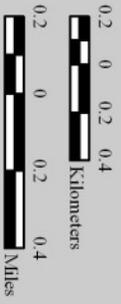


**Local Sponsor:**  
 Coastal Protection and Restoration Authority  
 Baton Rouge, LA  
 (225) 342-4736



# West Pointe a la Hache Marsh Creation (BA-47)

-  Marsh Creation \*
-  Project Boundary
- \*denotes proposed features



Map Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Field Station  
 Baton Rouge, La.

Background Imagery:  
 2005 Digital Orthophoto Quarter Quadrangle  
 Map Date: November 08, 2007  
 Map ID: USGS-NWRC 2008-11-0058  
 Data accurate as of: August 23, 2007

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**ADDITIONAL AGENDA ITEMS**

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**REQUEST FOR PUBLIC COMMENTS**

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**PRIORITY PROJECT LIST 25 REGIONAL PLANNING TEAM MEETINGS**

**For Announcement:**

January 27, 2015	11:00 a.m.	Region IV Planning Team Meeting	Lafayette
January 28, 2015	9:00 a.m.	Region III Planning Team Meeting	Houma
January 29, 2015	8:00 a.m.	Region I & II Planning Team Meeting	Lacombe
February 24, 2015	10:30 a.m.	Coastwide Electronic Voting	<i>(via email, no meeting)</i>

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**DATE OF UPCOMING CWPPRA PROGRAM MEETING**

**For Announcement:**

The Task Force meeting will be held January 22, 2015 at 9:30 a.m. at the USFWS Southeast Louisiana Refuges Complex (Big Branch), 61389 Highway 434, Lacombe, LA.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

DECEMBER 11, 2014

**SCHEDULED DATES OF FUTURE PROGRAM MEETINGS**

**For Announcement:**

January 22, 2015	9:30 a.m.	Task Force	Lacombe
January 27, 2015	11:00 a.m.	Region IV Planning Team Meeting	Lafayette
January 28, 2015	9:00 a.m.	Region III Planning Team Meeting	Houma
January 29, 2015	8:00 a.m.	Region I & II Planning Team Meeting	Lacombe
April 16, 2015	9:30 a.m.	Technical Committee	New Orleans
May 14, 2015	9:30 a.m.	Task Force	Lafayette
September 10, 2015	9:30 a.m.	Technical Committee	Baton Rouge
October 15, 2015	9:30 a.m.	Task Force	New Orleans
December 10, 2015	9:30 a.m.	Technical Committee	Baton Rouge