

CWPPRA

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT TECHNICAL COMMITTEE MEETING

AGENDA

April 27, 2017, 9:30 a.m.

Location:

US Army Corps of Engineers
District Assembly Room (DARM)
7400 Leake Avenue
New Orleans, LA

Documentation of Technical Committee meetings 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.**
 - 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
- 2. Report: Status of CWPPRA Program Funds and Projects (Jernice Cheavis, USACE) 9:40 a.m. to 9:50 a.m.** Ms. Jernice Cheavis will provide an overview of the status of CWPPRA accounts and available funding in the Planning and Construction Programs.
- 3. Report: Electronic Votes and Approvals (Brad Inman, USACE) 9:50 a.m. to 10:00 a.m.** Mr. Brad Inman will report out on recent requests approved via electronic vote.
- 4. Report/Decision: Selection of Ten Candidate Projects and up to Three Demonstration Projects to Evaluate for PPL 27 (John Petitbon, USACE) 10:00 a.m. to 10:45 a.m.** The Technical Committee will consider preliminary costs and benefits of the 27th Priority Project List (PPL) project and demonstration project nominees listed below. The Technical Committee will select 10 projects and may select up to 3 demonstration projects as PPL 27 candidates to be evaluated for Phase 0 analysis, which will be considered later for final selection of projects that will be approved for Phase I (Planning and Engineering and Design).

Region	Basin	PPL 27 Nominees	Agency
4	Calcasieu-Sabine	Sabine Marsh Creation Cycles 6&7	FWS
4	Calcasieu-Sabine	East Holly Beach Shoreline Protection	NRCS
4	Calcasieu-Sabine	North Mud Lake Marsh Creation	NMFS
4	Mermentau	Highway 82 South Marsh Creation and Terracing	NMFS

4	Mermentau	Deep Lake Spillway Modification/Mermentau Sub-Basin Hydrologic Restoration	NRCS
3	Teche-Vermilion	Lake Sand Marsh Creation and Shoreline Protection	NRCS
3	Teche-Vermilion	West Vermilion Marsh Creation and Shoreline Protection	EPA
3	Terrebonne	North Bayou DeCade Ridge and Marsh Creation	NRCS
3	Terrebonne	West LA Hwy 1 Marsh Creation	NMFS
3	Terrebonne	Bayou Terrebonne Freshwater Diversion	NRCS
3	Terrebonne	North Terrebonne Marsh Creation	EPA
3	Terrebonne	East Catfish Lake Marsh Creation and Terracing	FWS
2	Barataria	Northeast Turtle Bay Marsh Creation and Critical Area Shoreline Protection	NRCS
2	Barataria	East Bayou Lafourche Marsh Creation	FWS
2	Barataria	Grand Bayou Ridge and Marsh Creation	FWS
2	Barataria	Elmer's Island Backbarrier Marsh Creation	NMFS
2	Breton Sound	Breton Landbridge Marsh Creation	NMFS
2	Breton Sound	East Delacroix Marsh Creation and Terracing	NMFS
2	Breton Sound	Mid Breton Land Bridge Marsh Creation and Terracing	FWS
1	Pontchartrain	Point aux Marchettes Shoreline Protection and Terracing	FWS
1	Pontchartrain	Cane Bayou Marsh Creation	FWS
1	Pontchartrain	Bayou Bienvenue Marsh Creation Increment 1	EPA
Coastwide		Feral Swine Control	FWS

	PPL 27 Demonstration Project Nominees	Agency
DEMO	Living Blanket	NRCS
DEMO	Shoreline Protection Utilizing Engineered In-Situ Native Material	NRCS
DEMO	Crescent Stabilization System	CPRA
DEMO	Marine Gardens/Marsh Armor	COE

5. Report/Decision: Upcoming 20-Year Life Projects (Brad Inman, USACE) 10:45

a.m. to 11:00 a.m. The project sponsors will present recommended paths forward for projects nearing the end of their 20 year lives (includes demonstration projects which have an 8 year life). The Technical Committee will vote on a recommendation to the Task Force on the path forward for the following projects.

- a. Projects requesting approval for project closeout with no additional cost increase:

CS-28-1	Sabine Refuge Marsh Creation Cycle 1	COE	2022
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- b. Projects requesting approval for project closeout, feature removal, and cost increase:

TE-45	Terrebonne Bay Shoreline DEMO	FWS	2016
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6. Decision: FY18 Planning Budget Approval, including the PPL 28 Process, and Presentation of FY18 Outreach Budget (Process, Size, Funding, etc.) (Brad Inman, USACE) 11:00 a.m. to 11:10 a.m. The P&E Subcommittee will present their recommended FY18 Planning Program Budget development, including the PPL 28 Process.

- a. The Technical Committee will vote on a recommendation to the Task Force to approve that the PPL 28 Process include selecting four nominees in the Barataria and Terrebonne Basins; three projects in the Breton Sound and Pontchartrain Basins; two nominees in the Mermentau, Calcasieu/Sabine, and Tech/Vermilion Basins; and one nominee will be selected in the Atchafalaya Basin.

- b. The Technical Committee will vote on a recommendation to the Task Force to approve the FY18 Outreach Committee Budget, in the amount of \$452,113.
 - c. The Technical Committee will vote on a recommendation to the Task Force to approve the FY18 Planning Budget (includes Outreach Committee Budget), in the amount of \$5,118,132.
- 7. Decision: Request for Project Expansion (Garvin Pittman, CPRA) 11:10 a.m. to 11:20 a.m.** Due to favorable bids, the USFWS and CPRA would like to request expansion of the TE-72 project. The project expansion would create an additional 245 acres of marsh at a cost of \$7,057,247.
- 8. Additional Agenda Items (Mark Wingate, USACE) 11:20 a.m. to 11:25 a.m.**
- 9. Request for Public Comments (Mark Wingate, USACE) 11:25 a.m. to 11:30 a.m.**
- 10. Announcement: Date of Upcoming CWPPRA Program Meeting (Brad Inman, USACE) 11:30 a.m. to 11:35 a.m.** The Task Force meeting will be held May 11, 2017 at 9:30 a.m. at the Estuarine Habitats and Fisheries Center, 646 Cajundome Blvd., Lafayette, Louisiana.
- 11. Announcement: Scheduled Dates of Future Program Meetings (Brad Inman, USACE) 11:35 a.m. to 11:40 a.m.**

May 11, 2017	9:30 a.m.	Task Force	Lafayette
September 14, 2017	9:30 a.m.	Technical Committee	Baton Rouge
October 12, 2017	9:30 a.m.	Task Force	New Orleans
December 7, 2017	9:30 a.m.	Technical Committee	Baton Rouge
- 12. Decision: Adjourn**

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 27, 2017

MEETING INITIATION

- a. Introduction of Technical Committee or Alternates
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COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
TECHNICAL COMMITTEE MEETING

APRIL 27, 2017

STATUS OF CWPPRA PROGRAM FUNDS AND PROJECTS

For Report:

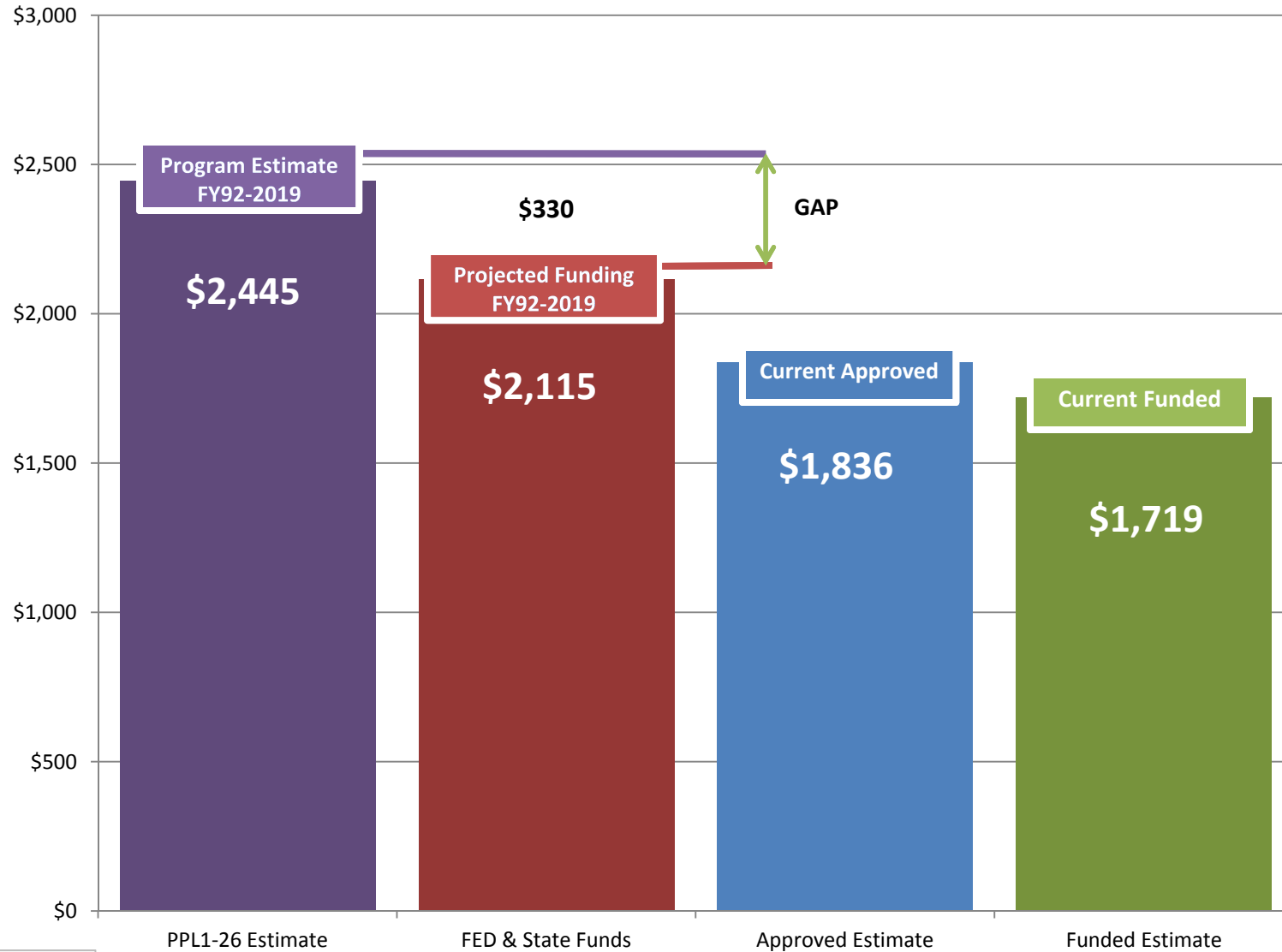
Ms. Jernice Cheavis will provide an overview of the status of CWPPRA accounts and available funding in the Planning and Construction Programs.

Status of CWPPRA Program Funds & Projects

Jernice P. Cheavis

27 April 2017

CWPPRA CONSTRUCTION PROGRAM



Construction Program Funding Requests: Tech Committee Meeting, 27 April 2017

	PROGRAM ESTIMATE	TC	FUNDING	TC	Fed	Non-Fed
1. Funds Available:						
Approved Funded Estimate PPL 1-26	\$2,391,396,254					
Available Funds carried forward from January 2017			\$9,432,685			
Total Program / Funds Available:	\$2,391,396,254		\$9,432,685		\$0	\$0
2. Agenda Item 5: Upcoming 20YL Projects						
Terrebonne Bay Shoreline DEMO (TE-45)	\$400,000		\$400,000			
Total	\$400,000		\$400,000		\$0	
2. Agenda Item 7: Request for Project Expansion						
Lost Lake Marsh Creation and Hydrologic Restoration (TE-72)	\$7,057,247		\$7,057,247			
Total	\$7,057,247		\$7,057,247		\$0	
Program Amount / Funds Available for April 2017 Recommendations	\$2,391,396,254		\$9,432,685			
No Changes in Program Estimate/Funding	\$7,457,247		\$7,457,247			
Program Amount/Available Funds Surplus/Shortage	\$2,398,853,501		\$1,975,438			

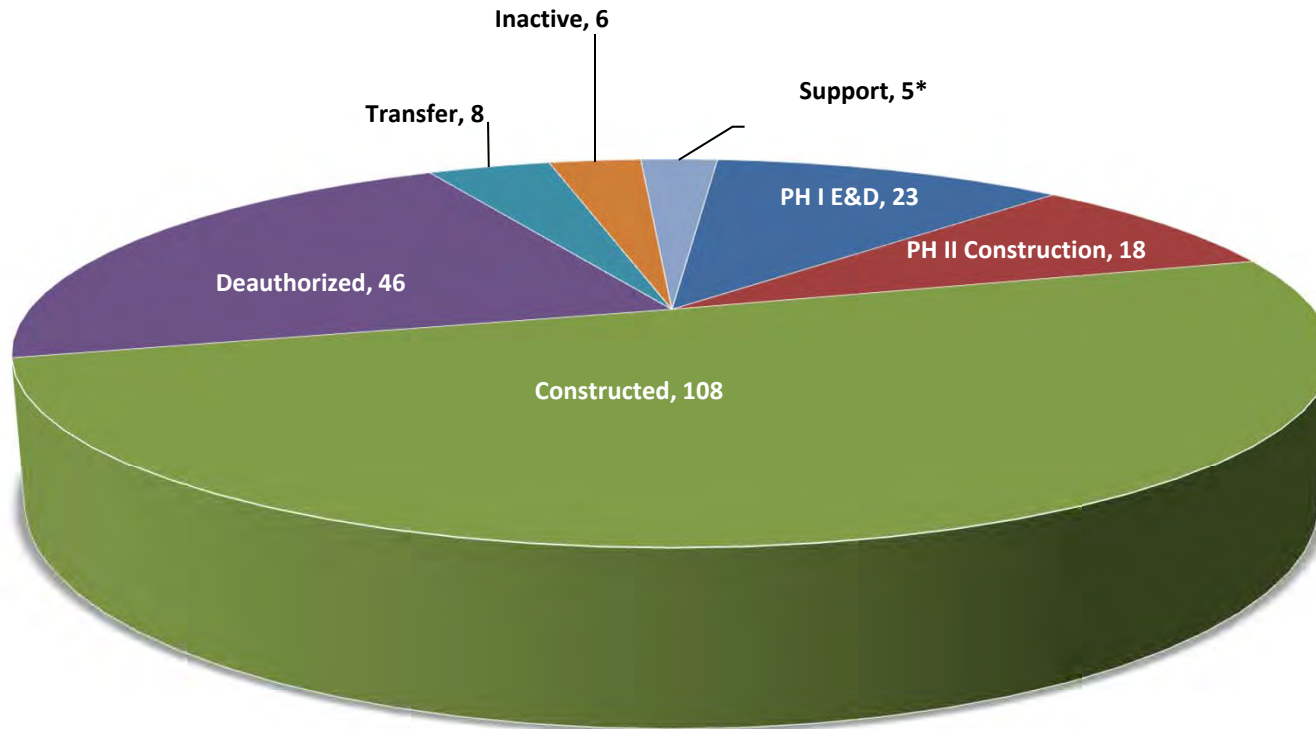
FY18 Planning Program Budget Recommendation for May 2017 Task Force Approval

	Total Request
Funds Available:	
Funds Available January 2017:	\$238,124
FY18 Planning Program Funding	\$5,000,000
Funds Available:	\$5,238,124
Agenda Item 6: FY18 - Planning Budget & Outreach Budget Request:	
Technical Committee Recommended FY18 Planning Budget	\$4,666,019
Outreach Committee Recommended FY18 Budget	\$452,113
Total	\$5,118,132
Total Remaining Funds in CWPPRA Planning Program	\$119,992

CWPPRA PROJECT STATUS

TOTAL CWPPRA PROJECTS: 214

ACTIVE PROJECTS: 154



***(1) CRMS (2) Monitoring Contingency Fund (3) Storm Recovery Procedures (4) Construction Program Technical Support (5) Wetland Conservation Plan**

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
TECHNICAL COMMITTEE MEETING

APRIL 27, 2017

ELECTRONIC VOTES AND APPROVALS

For Report:

Mr. Brad Inman will report out on recent requests approved via electronic vote.

**EXPANSION REQUEST:
OYSTER BAYOU MARSH
RESTORATION
(CS-59)**

Carriere, Kaitlyn M CIV USARMY CEMVN (US)

From: Bradley, Sarah C CIV USARMY CEMVN (US)
Sent: Tuesday, March 28, 2017 9:42 AM
To: Honker, William; Chris Doley; Clancy, Michael N COL USARMY CEMVN (US); Jeff Weller; Kevin Norton; Michael Ellis
Cc: Britt Paul; Darryl Clark; Karen McCormick; Rick Hartman; Wingate, Mark R CIV USARMY CEMVN (US); Bren Haase; Inman, Brad L CIV USARMY CEMVN (US); Carriere, Kaitlyn M CIV USARMY CEMVN (US); Cheavis, Jernice P CIV USARMY CEMVN (US); Stuart Brown; donna.rogers@noaa.gov
Subject: RE: [EXTERNAL] Oyster Bayou (CS-59) Marsh Creation Project Expansion

Good morning,

We received a majority of approvals on the proposed expansion of the Oyster Bayou Marsh Restoration (CS-59) project. We will report out on this electronic vote at the next Technical Committee and Task Force meetings for public awareness.

Thanks for the quick turnaround,
Sarah

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

From: Bradley, Sarah C CIV USARMY CEMVN (US)
Sent: Thursday, March 23, 2017 3:46 PM
To: Honker, William <honker.william@epa.gov>; 'Chris Doley' <chris.doley@noaa.gov>; Clancy, Michael N COL USARMY CEMVN (US) <Michael.N.Clancy@usace.army.mil>; 'Jeff Weller' <jeff_weller@fws.gov>; 'Kevin Norton' <kevin.norton@la.usda.gov>; 'Michael Ellis' <Michael.Ellis@la.gov>
Cc: 'Britt Paul' <britt.paul@la.usda.gov>; 'Darryl Clark' <darryl_clark@fws.gov>; 'Karen McCormick' <mccormick.karen@epamail.epa.gov>; 'Rick Hartman' <richard.hartman@noaa.gov>; Wingate, Mark R CIV USARMY CEMVN (US) <Mark.R.Wingate@usace.army.mil>; 'Bren Haase' <bren.haase@la.gov>; Inman, Brad L CIV USARMY CEMVN (US) <Brad.L.Inman@usace.army.mil>; Carriere, Kaitlyn M CIV USARMY CEMVN (US) <Kaitlyn.M.Carriere@usace.army.mil>; Cheavis, Jernice P CIV USARMY CEMVN (US) <jernice.p.cheavis@usace.army.mil>; Stuart Brown <Stuart.Brown@LA.GOV>
Subject: FW: [EXTERNAL] Oyster Bayou (CS-59) Marsh Creation Project Expansion

Task Force Members:

NMFS and CPRA are requesting to expand the Oyster Bayou Marsh Restoration (CS-59) project. The bids came in low and there is enough funding left to potentially expand the project by 132 acres.

Please review the below request as you make your decision. We respectfully request your response by 30 March 2017. Feel free to ask questions and provide comments, but ultimately please respond with a YES/NO vote on the request.

Thanks for your attention to this matter,

Sarah

Sarah C. Bradley, PMP, CFM

Project Manager

CAP Program Manager

U.S. Army Corps of Engineers

7400 Leake Avenue

New Orleans, LA 70118

504-862-1723 (office)

504-862-2572 (fax)

Sarah.C.Bradley@usace.army.mil

The Oyster Bayou Marsh Restoration (CS-59) project was approved for E&D (Phase 1) in January 2012 and for construction (Phase 2) in January 2015. Approved project features include: 1) 605 acres of marsh creation/nourishment; and 2) 17,550 linear feet of earthen terraces.

Project construction bids were opened August 9, 2016. The highest bid exceeded the engineer's estimate by \$3.5M, and the lowest acceptable bid, from Weeks Marine, was 25% below the grant dollars for construction and contingency. After a \$19,108,688 contract award to Weeks Marine, Inc., the remaining consumable budget for civil construction is approximately \$6.25M. Construction of the project began in December 2016.

Expansion Project Description and Map

The project team has developed a plan to apply most of the remaining balance to additional marsh creation. This will include replacing a portion of the terrace field and a planned area of open water with an additional 132 acres of confined marsh creation. We propose executing the expansion plan in two stages through separate change orders. This staggered approach will allow us to move forward quickly with Change Order A, extending containment and expanding a confined fill area, while reserving a comfortable level of contingency. Once more risk opportunities have passed, we can then apply unused contingency to marsh nourishment in a roughly 25-acre semi-confined area through Change Order B. The amount of funds applied to Change Order B is likely to be under \$1M, but the exact amount will depend on the amount of contingency remaining after the highway crossing and significant dredging are complete. We have coordinated with the Oyster Lake (CS-79) project, which has recently begun E&D, to minimize impacts to that project footprint. The permit modification and land rights agreement amendment necessary for these additions will be in place by mid-April.

Figure 1. This figure shows the original CS-59 plans overlaid with the planned additional elements in color. The red line outlines the proposed confined marsh creation area for Change Order A, which would be filled to the same elevation as the other CS-59 MCAs. No containment will be built between the red expansion MCA and MCA 1 to its south. The blue hatching highlights the area where additional funds could be used (Change Order B) for semi-confined marsh creation bordered by healthy marsh to the west and an oil field road to the east.

Estimated Costs and Benefits

The changes described above are estimated to cost up to approximately \$5M. The 137-acre confined fill area is estimated to cost \$4.1M. At a cost per acre constructed of \$31,400, the added confined marsh creation area would improve the original fully-funded cost per acre constructed of \$51,600 to \$42,400 for the overall project.

This is a valuable opportunity to increase the ecological benefits of the investment in completed E&D work and current construction contract for the CS-59 project in a cost-effective way.

Time Sensitive Nature of Expansion Request

Project construction of the earthen containment dikes began in December 2016 and construction of the remaining containment dikes and eastern terraces is expected to continue until approximately April 24, 2017. Hydraulic dredging is expected to begin in May 2017. Weeks Marine has asked us to confirm whether we are moving forward with the expansion by mid-April so they can determine which features to construct and avoid idle time. Although we would have preferred to have this on the April TC agenda, due to the time sensitive nature of our expansion proposal, we respectfully request an electronic vote by April 5th, preferably sooner.

If you have any questions or comments, please contact Donna Rogers, donna.rogers@noaa.gov <<mailto:donna.rogers@noaa.gov>> , (225) 636-2095.

Thanks,

Donna

--

Donna Rogers, Ph.D.

NOAA Restoration Center

5304 Flanders Dr. Suite B

Carriere, Kaitlyn M CIV USARMY CEMVN (US)

From: Honker, William <honker.william@epa.gov>
Sent: Monday, March 27, 2017 12:38 PM
To: Bradley, Sarah C CIV USARMY CEMVN (US); Chris Doley; Clancy, Michael N COL USARMY CEMVN (US); Jeff Weller; Kevin Norton; Michael Ellis
Cc: Britt Paul; Darryl Clark; McCormick, Karen; Rick Hartman; Wingate, Mark R CIV USARMY CEMVN (US); bren.haase@la.gov; Inman, Brad L CIV USARMY CEMVN (US); Carriere, Kaitlyn M CIV USARMY CEMVN (US); Cheavis, Jernice P CIV USARMY CEMVN (US); Stuart Brown
Subject: [Non-DoD Source] RE: [EXTERNAL] Oyster Bayou (CS-59) Marsh Creation Project Expansion

Sarah,

EPA votes yes on this proposal.

Bill

William K. Honker, P.E.

Director, Water Division

EPA Region 6

1445 Ross Ave., Suite 1200

Dallas, TX 75202

214-665-3187

From: Bradley, Sarah C CIV USARMY CEMVN (US) [mailto:Sarah.C.Bradley@usace.army.mil]
Sent: Thursday, March 23, 2017 3:46 PM
To: Honker, William <honker.william@epa.gov>; Chris Doley <chris.doley@noaa.gov>; Clancy, Michael N COL USARMY CEMVN (US) <Michael.N.Clancy@usace.army.mil>; Jeff Weller <jeff_weller@fws.gov>; Kevin Norton <kevin.norton@la.usda.gov>; Michael Ellis <Michael.Ellis@la.gov>
Cc: Britt Paul <britt.paul@la.usda.gov>; Darryl Clark <darryl_clark@fws.gov>; McCormick, Karen <McCormick.Karen@epa.gov>; Rick Hartman <richard.hartman@noaa.gov>; Wingate, Mark R CIV USARMY CEMVN (US) <Mark.R.Wingate@usace.army.mil>; bren.haase@la.gov; Inman, Brad L CIV USARMY CEMVN (US) <Brad.L.Inman@usace.army.mil>; Carriere, Kaitlyn M CIV USARMY CEMVN (US) <Kaitlyn.M.Carriere@usace.army.mil>; Cheavis, Jernice P CIV USARMY CEMVN (US) <jernice.p.cheavis@usace.army.mil>; Stuart Brown <Stuart.Brown@LA.GOV>
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Task Force Members:

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Thanks for your attention to this matter,

Sarah

Sarah C. Bradley, PMP, CFM

Project Manager

CAP Program Manager

U.S. Army Corps of Engineers

7400 Leake Avenue

New Orleans, LA 70118

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504-862-2572 (fax)

Sarah.C.Bradley@usace.army.mil <mailto:Sarah.C.Bradley@usace.army.mil>

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The project team has developed a plan to apply most of the remaining balance to additional marsh creation. This will include replacing a portion of the terrace field and a planned area of open water with an additional 132 acres of confined marsh creation. We propose executing the expansion plan in two stages through separate change orders. This staggered approach will allow us to move forward quickly with Change Order A, extending containment and expanding a confined fill area, while reserving a comfortable level of contingency. Once more risk opportunities have passed, we can then apply unused contingency to marsh nourishment in a roughly 25-acre semi-confined area through Change Order B. The amount of funds applied to Change Order B is likely to be under \$1M, but the exact amount will depend on the amount of contingency remaining after the highway crossing and significant dredging are complete. We have coordinated with the Oyster Lake (CS-79) project, which has recently begun E&D, to minimize impacts to that project footprint. The permit modification and land rights agreement amendment necessary for these additions will be in place by mid-April.

Figure 1. This figure shows the original CS-59 plans overlaid with the planned additional elements in color. The red line outlines the proposed confined marsh creation area for Change Order A, which would be filled to the same elevation as the other CS-59 MCAs. No containment will be built between the red expansion MCA and MCA 1 to its south. The blue hatching highlights the area where additional funds could be used (Change Order B) for semi-confined marsh creation bordered by healthy marsh to the west and an oil field road to the east.

Estimated Costs and Benefits

The changes described above are estimated to cost up to approximately \$5M. The 137-acre confined fill area is estimated to cost \$4.1M. At a cost per acre constructed of \$31,400, the added confined marsh creation area would improve the original fully-funded cost per acre constructed of \$51,600 to \$42,400 for the overall project.

This is a valuable opportunity to increase the ecological benefits of the investment in completed E&D work and current construction contract for the CS-59 project in a cost-effective way.

Time Sensitive Nature of Expansion Request

Project construction of the earthen containment dikes began in December 2016 and construction of the remaining containment dikes and eastern terraces is expected to continue until approximately April 24, 2017. Hydraulic dredging is expected to begin in May 2017. Weeks Marine has asked us to confirm whether we are moving forward with the expansion by mid-April so they can determine which features to construct and avoid idle time. Although we would have preferred to have this on the April TC agenda, due to the time sensitive nature of our expansion proposal, we respectfully request an electronic vote by April 5th, preferably sooner.

If you have any questions or comments, please contact Donna Rogers, donna.rogers@noaa.gov <<mailto:donna.rogers@noaa.gov>> , (225) 636-2095.

Thanks,

Donna

--

Donna Rogers, Ph.D.

NOAA Restoration Center

5304 Flanders Dr. Suite B

Baton Rouge, LA 70808-7206

225.636.2095 (o)

225.316-8958 (c)

225.778.7367 (f)

Carriere, Kaitlyn M CIV USARMY CEMVN (US)

From: Bradley, Sarah C CIV USARMY CEMVN (US)
Sent: Tuesday, March 28, 2017 7:49 AM
To: Carriere, Kaitlyn M CIV USARMY CEMVN (US); Cheavis, Jernice P CIV USARMY CEMVN (US)
Subject: FW: [Non-DoD Source] Re: FW: [EXTERNAL] Oyster Bayou (CS-59) Marsh Creation Project Expansion

For your records...

Sarah C. Bradley, PMP, CFM
Project Manager
CAP Program Manager
U.S. Army Corps of Engineers
7400 Leake Avenue
New Orleans, LA 70118
504-862-1723 (office)
504-862-2572 (fax)
Sarah.C.Bradley@usace.army.mil

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

From: Weller, Jeff [mailto:jeff_weller@fws.gov]
Sent: Monday, March 27, 2017 11:58 AM
To: Bradley, Sarah C CIV USARMY CEMVN (US) <Sarah.C.Bradley@usace.army.mil>; Darryl Clark <Darryl_Clark@fws.gov>
Subject: [Non-DoD Source] Re: FW: [EXTERNAL] Oyster Bayou (CS-59) Marsh Creation Project Expansion

FWS votes "yes" on the proposed expansion.

Have a great day.

Jeffrey D. Weller
Program Supervisor
Arkansas, Louisiana, Mississippi, and Alabama

U.S. Department of the Interior / Fish and Wildlife Service
stationed at: Louisiana Ecological Services Field Office
646 Cajundome Blvd., Suite 400 / Lafayette, LA 70506
337-291-3115 (office) / 337-322-9670 (cell)

NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

On Thu, Mar 23, 2017 at 3:46 PM, Bradley, Sarah C CIV USARMY CEMVN (US) <Sarah.C.Bradley@usace.army.mil> <mailto:Sarah.C.Bradley@usace.army.mil> > wrote:

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Project Manager

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New Orleans, LA 70118

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Sarah.C.Bradley@usace.army.mil <mailto:Sarah.C.Bradley@usace.army.mil>

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Estimated Costs and Benefits

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If you have any questions or comments, please contact Donna Rogers, donna.rogers@noaa.gov <<mailto:donna.rogers@noaa.gov>> , (225) 636-2095.

Thanks,

Donna

--

Donna Rogers, Ph.D.

NOAA Restoration Center

5304 Flanders Dr. Suite B

Baton Rouge, LA 70808-7206

225.636.2095 (o)

225.316-8958 (c)

225.778.7367 (f)

Carriere, Kaitlyn M CIV USARMY CEMVN (US)

From: Chris Doley - NOAA Federal <chris.doley@noaa.gov>
Sent: Monday, March 27, 2017 12:21 PM
To: Bradley, Sarah C CIV USARMY CEMVN (US)
Cc: Honker, William; Clancy, Michael N COL USARMY CEMVN (US); Jeff Weller; Kevin Norton; Michael Ellis; Britt Paul; Darryl Clark; Karen McCormick; Rick Hartman; Wingate, Mark R CIV USARMY CEMVN (US); Bren Haase; Inman, Brad L CIV USARMY CEMVN (US); Carriere, Kaitlyn M CIV USARMY CEMVN (US); Cheavis, Jernice P CIV USARMY CEMVN (US); Stuart Brown
Subject: [Non-DoD Source] Re: [EXTERNAL] Oyster Bayou (CS-59) Marsh Creation Project Expansion

Sarah - NOAA/NMFS votes yes on the request to expand the CS-59 project.
Chris

Sent from my iPhone

On Mar 23, 2017, at 4:46 PM, Bradley, Sarah C CIV USARMY CEMVN (US) <Sarah.C.Bradley@usace.army.milmailto:Sarah.C.Bradley@usace.army.mil> > wrote:

Task Force Members:

NMFS and CPRA are requesting to expand the Oyster Bayou Marsh Restoration (CS-59) project. The bids came in low and there is enough funding left to potentially expand the project by 132 acres.

Please review the below request as you make your decision. We respectfully request your response by 30 March 2017. Feel free to ask questions and provide comments, but ultimately please respond with a YES/NO vote on the request.

Thanks for your attention to this matter,

Sarah

Sarah C. Bradley, PMP, CFM

Project Manager

CAP Program Manager

U.S. Army Corps of Engineers

7400 Leake Avenue

New Orleans, LA 70118

504-862-1723 (office)

504-862-2572 (fax)

Sarah.C.Bradley@usace.army.mil <mailto:Sarah.C.Bradley@usace.army.mil>

The Oyster Bayou Marsh Restoration (CS-59) project was approved for E&D (Phase 1) in January 2012 and for construction (Phase 2) in January 2015. Approved project features include: 1) 605 acres of marsh creation/nourishment; and 2) 17,550 linear feet of earthen terraces.

Project construction bids were opened August 9, 2016. The highest bid exceeded the engineer's estimate by \$3.5M, and the lowest acceptable bid, from Weeks Marine, was 25% below the grant dollars for construction and contingency. After a \$19,108,688 contract award to Weeks Marine, Inc., the remaining consumable budget for civil construction is approximately \$6.25M. Construction of the project began in December 2016.

Expansion Project Description and Map

The project team has developed a plan to apply most of the remaining balance to additional marsh creation. This will include replacing a portion of the terrace field and a planned area of open water with an additional 132 acres of confined marsh creation. We propose executing the expansion plan in two stages through separate change orders. This staggered approach will allow us to move forward quickly with Change Order A, extending containment and expanding a confined fill area, while reserving a comfortable level of contingency. Once more risk opportunities have passed, we can then apply unused contingency to marsh nourishment in a roughly 25-acre semi-confined area through Change Order B. The amount of funds applied to Change Order B is likely to be under \$1M, but the exact amount will depend on the amount of contingency remaining after the highway crossing and significant dredging are complete. We have coordinated with the Oyster Lake (CS-79) project, which has recently begun E&D, to minimize impacts to that project footprint. The permit modification and land rights agreement amendment necessary for these additions will be in place by mid-April.

<image001.png>

Figure 1. This figure shows the original CS-59 plans overlaid with the planned additional elements in color. The red line outlines the proposed confined marsh creation area for Change Order A, which would be filled to the same elevation as the other CS-59 MCAs. No containment will be built between the red expansion MCA and MCA 1 to its south. The blue hatching highlights the area where additional funds could be used (Change Order B) for semi-confined marsh creation bordered by healthy marsh to the west and an oil field road to the east.

Estimated Costs and Benefits

The changes described above are estimated to cost up to approximately \$5M. The 137-acre confined fill area is estimated to cost \$4.1M. At a cost per acre constructed of \$31,400, the added confined marsh creation area would improve the original fully-funded cost per acre constructed of \$51,600 to \$42,400 for the overall project.

This is a valuable opportunity to increase the ecological benefits of the investment in completed E&D work and current construction contract for the CS-59 project in a cost-effective way.

Time Sensitive Nature of Expansion Request

Project construction of the earthen containment dikes began in December 2016 and construction of the remaining containment dikes and eastern terraces is expected to continue until approximately April 24, 2017. Hydraulic dredging is expected to begin in May 2017. Weeks Marine has asked us to confirm whether we are moving forward with the expansion by mid-April so they can determine which features to construct and avoid idle time. Although we would have preferred to have this on the April TC agenda, due to the time sensitive nature of our expansion proposal, we respectfully request an electronic vote by April 5th, preferably sooner.

If you have any questions or comments, please contact Donna Rogers, donna.rogers@noaa.gov <<mailto:donna.rogers@noaa.gov>> , (225) 636-2095.

Thanks,

Donna

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Donna Rogers, Ph.D.

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225.316-8958 (c)

225.778.7367 (f)

Carriere, Kaitlyn M CIV USARMY CEMVN (US)

From: Norton, Kevin - NRCS, Alexandria, LA <Kevin.Norton@la.usda.gov>
Sent: Monday, March 27, 2017 10:47 AM
To: Bradley, Sarah C CIV USARMY CEMVN (US); Honker, William; Chris Doley; Clancy, Michael N COL USARMY CEMVN (US); Jeff Weller; Michael Ellis
Cc: Paul, Britt - NRCS, Alexandria, LA; Darryl Clark; Karen McCormick; Rick Hartman; Wingate, Mark R CIV USARMY CEMVN (US); Bren Haase; Inman, Brad L CIV USARMY CEMVN (US); Carriere, Kaitlyn M CIV USARMY CEMVN (US); Cheavis, Jernice P CIV USARMY CEMVN (US); Stuart Brown
Subject: [Non-DoD Source] RE: [EXTERNAL] Oyster Bayou (CS-59) Marsh Creation Project Expansion

Sarah,

NRCS votes yes on the NMFS and CPRA request.

Kevin

Kevin D. Norton

State Conservationist – Louisiana

USDA - Natural Resources Conservation Service

P. (318) 473-7751

F. (844) 325-6947

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<Blocked<https://public.govdelivery.com/accounts/USDANRCS/subscriber/new>> <Blocked<http://flickr.com/usdagov>>

From: Bradley, Sarah C CIV USARMY CEMVN (US) [mailto:Sarah.C.Bradley@usace.army.mil]
Sent: Thursday, March 23, 2017 3:46 PM
To: Honker, William <honker.william@epa.gov>; Chris Doley <chris.doley@noaa.gov>; Clancy, Michael N COL USARMY CEMVN (US) <Michael.N.Clancy@usace.army.mil>; Jeff Weller <jeff_weller@fws.gov>; Norton, Kevin - NRCS, Alexandria, LA <Kevin.Norton@la.usda.gov>; Michael Ellis <Michael.Ellis@la.gov>
Cc: Paul, Britt - NRCS, Alexandria, LA <britt.paul@la.usda.gov>; Darryl Clark <darryl_clark@fws.gov>; Karen McCormick <mccormick.karen@epamail.epa.gov>; Rick Hartman <richard.hartman@noaa.gov>; Wingate, Mark R CIV USARMY CEMVN (US) <Mark.R.Wingate@usace.army.mil>; Bren Haase <bren.haase@la.gov>; Inman, Brad L CIV USARMY CEMVN (US) <Brad.L.Inman@usace.army.mil>; Carriere, Kaitlyn M CIV USARMY CEMVN (US) <Kaitlyn.M.Carriere@usace.army.mil>; Cheavis, Jernice P CIV USARMY CEMVN (US) <jernice.p.cheavis@usace.army.mil>; Stuart Brown <Stuart.Brown@LA.GOV>

Subject: FW: [EXTERNAL] Oyster Bayou (CS-59) Marsh Creation Project Expansion

Task Force Members:

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Thanks for your attention to this matter,

Sarah

Sarah C. Bradley, PMP, CFM

Project Manager

CAP Program Manager

U.S. Army Corps of Engineers

7400 Leake Avenue

New Orleans, LA 70118

504-862-1723 (office)

504-862-2572 (fax)

Sarah.C.Bradley@usace.army.mil <mailto:Sarah.C.Bradley@usace.army.mil>

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<mailto:donna.rogers@noaa.gov> , (225) 636-2095.

Thanks,

Donna

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Donna Rogers, Ph.D.

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Baton Rouge, LA 70808-7206

225.636.2095 (o)

225.316-8958 (c)

225.778.7367 (f)

**ENVIRONMENTAL BANK
TASK FORCE ELECTRONIC VOTE**



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVENUE
NEW ORLEANS, LOUISIANA 70118

CEMVN-PM-B

22 Mar 17

MEMORANDUM FOR Louisiana Coastal Wetlands Conservation and Restoration Task Force

SUBJECT: Environmental Bank Task Force Electronic Vote

1. Section 5014 of The Water Infrastructure Improvements for the Nation (WIIN) Act, requires the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) Task Force to issue guidelines for the use, maintenance, and oversight of environmental banks in Louisiana by 3 January 2018. Several CWPPRA agencies have met with Congressman Graves, who authored the bill, to request guidance. A framework for the guidelines and the potential costs associated with this effort are needed to develop a path forward which satisfies this new legislation. The Coastal Protection and Restoration Authority's (CPRA) efforts in developing mitigation banking guidelines in response to National Resource Damage Assessment (NRDA) regulations presents an opportunity to share lessons learned and discuss a path forward.

2. I request an electronic vote to authorize the use of CWPPRA planning funds to meet with CPRA and discuss their efforts and experiences with mitigation banking legislation. Please consider the following motion:

- The Task Force approves each agency's use of \$10,000 from their current planning budget to meet with CPRA and discuss NRDA mitigation bank efforts so as to develop associated potential costs and a framework for guidance that satisfies Section 5014 of the WIIN Act.

3. Please use the enclosed form to submit your vote and email a scanned copy to Brad.L.Inman@usace.army.mil as soon as possible, but no later than close of business Friday, 24 March 2017.

4. If you have any questions concerning this request, please contact Mr. Brad Inman, CWPPRA Program Manager, at (504) 862-2124.

Encl
as


MICHAEL N. CLANCY
Colonel, EN
Commanding

Carriere, Kaitlyn M CIV USARMY CEMVN (US)

From: Bradley, Sarah C CIV USARMY CEMVN (US)
Sent: Tuesday, March 28, 2017 7:48 AM
To: Honker, William; Chris Doley; Clancy, Michael N COL USARMY CEMVN (US); Jeff Weller; Kevin Norton; Michael Ellis
Cc: Britt Paul; Darryl Clark; Karen McCormick; Rick Hartman; Wingate, Mark R CIV USARMY CEMVN (US); Bren Haase; Inman, Brad L CIV USARMY CEMVN (US); Carriere, Kaitlyn M CIV USARMY CEMVN (US); Cheavis, Jernice P CIV USARMY CEMVN (US)
Subject: RE: CWPPRA - Environmental Bank Task Force Electronic Vote

Good morning,

The subject vote has passed unanimously. Thank you for your quick responses. We are working to schedule the meeting with CPRA in the very near future and will reach out to your POCs for their availability. Jernice will also be contacting your financial leads to create a new line item for this task out of your existing planning budget, so that we can track it as a separate effort.

Thanks,
Sarah

Sarah C. Bradley, PMP, CFM
Project Manager
CAP Program Manager
U.S. Army Corps of Engineers
7400 Leake Avenue
New Orleans, LA 70118
504-862-1723 (office)
504-862-2572 (fax)
Sarah.C.Bradley@usace.army.mil

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

From: Bradley, Sarah C CIV USARMY CEMVN (US)
Sent: Wednesday, March 22, 2017 12:21 PM
To: Honker, William <honker.william@epa.gov>; Chris Doley <chris.doley@noaa.gov>; Clancy, Michael N COL USARMY CEMVN (US) <Michael.N.Clancy@usace.army.mil>; Jeff Weller <jeff_weller@fws.gov>; Kevin Norton <kevin.norton@la.usda.gov>; Michael Ellis <Michael.Ellis@la.gov>
Cc: Britt Paul <britt.paul@la.usda.gov>; Darryl Clark <darryl_clark@fws.gov>; Karen McCormick <mccormick.karen@epamail.epa.gov>; Rick Hartman <richard.hartman@noaa.gov>; Wingate, Mark R CIV USARMY CEMVN (US) <Mark.R.Wingate@usace.army.mil>; Bren Haase <bren.haase@la.gov>; Inman, Brad L CIV USARMY CEMVN (US) <Brad.L.Inman@usace.army.mil>; Carriere, Kaitlyn M CIV USARMY CEMVN (US) <Kaitlyn.M.Carriere@usace.army.mil>; Cheavis, Jernice P CIV USARMY CEMVN (US) <jernice.p.cheavis@usace.army.mil>
Subject: CWPPRA - Environmental Bank Task Force Electronic Vote

Task Force members,

Please reference attached memo and separate voting sheet. We are requesting an electronic vote to authorize the use of CWPPRA planning funds (\$10,000 from each agency's current planning budget) to meet with CPRA and discuss their NRDA mitigation bank efforts to inform the development of a framework for guidance that satisfies Section 5014 of the

WIIN Act. Please mark your selection on the attached voting sheet, sign, and return at your earliest convenience. If the vote passes, Jernice Cheavis will reach out to your financial folks to transfer funds, as required.

Thank you for your attention to this matter,
Sarah

Sarah C. Bradley, PMP, CFM
Project Manager
CAP Program Manager
U.S. Army Corps of Engineers
7400 Leake Avenue
New Orleans, LA 70118
504-862-1723 (office)
504-862-2572 (fax)
Sarah.C.Bradley@usace.army.mil

CWPPRA TASK FORCE ELECTRONIC VOTE March 2016

Please place a check or an "X" in the box underneath the appropriate response. Then please provide your signature, agency, and date at the bottom of this form. Scan and email back to Brad.L.Inman@usace.army.mil.

Motion:

I approve the motion as stated to the left.

I do NOT approve the motion as stated to the left.

The Task Force approves each agency's use of \$10,000 from their current planning budget to meet with CPRA and discuss NRDA mitigation bank efforts so as to develop associated potential costs and a framework for guidance that satisfies Section 5014 of the WIIN Act.



Signed,

Task Force Member Signature, Agency

Date

CWPPRA TASK FORCE ELECTRONIC VOTE March 2016

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Signed,

FWS/DOI

Task Force Member Signature, Agency

Date

3/22/17

Jeffrey D. Weller

Program Supervisor, Ecological Services

CWPPRA TASK FORCE ELECTRONIC VOTE March 2016

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Signed:


Task Force Member Signature, Agency
NRCS

3-22-17
Date

CWPPRA TASK FORCE ELECTRONIC VOTE March 2016

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MNC



Signed,

CLANCY.MICHAEL.N
EVILLE.1017404209

Digitally signed by
CLANCY.MICHAEL.NEVILLE.1017404209
DN: c=US, o=U.S. Government, ou=DoD,
ou=PKI, ou=USA,
cn=CLANCY.MICHAEL.NEVILLE.1017404209
Date: 2017.03.23 07:51:19 -05'00'

23 MAR 17

Task Force Member Signature, Agency

Date

CWPPRA TASK FORCE ELECTRONIC VOTE March 2016

Please place a check or an "X" in the box underneath the appropriate response. Then please provide your signature, agency, and date at the bottom of this form. Scan and email back to Brad.L.Inman@usace.army.mil.

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I **approve** the motion as stated to the left.

I do **NOT** approve the motion as stated to the left.

The Task Force approves each agency's use of \$10,000 from their current planning budget to meet with CPRA and discuss NRDA mitigation bank efforts so as to develop associated potential costs and a framework for guidance that satisfies Section 5014 of the WIIN Act.



Signed,

Task Force Member Signature, Agency

3-24-17

Date

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 27, 2017

SELECTION OF TEN CANDIDATE PROJECTS AND UP TO THREE DEMONSTRATION PROJECTS TO EVALUATE FOR PPL 27

For Report/Decision:

The Technical Committee will consider preliminary costs and benefits of the 27th Priority Project List (PPL) project and demonstration project nominees listed below. The Technical Committee will select 10 projects and may select up to 3 demonstration projects as PPL 27 candidates to be evaluated for Phase 0 analysis, which will be considered later for final selection of projects that will be approved for Phase I (Planning and Engineering and Design).

Region	Basin	PPL 27 Nominees	Agency
4	Calcasieu-Sabine	Sabine Marsh Creation Cycles 6&7	FWS
4	Calcasieu-Sabine	East Holly Beach Shoreline Protection	NRCS
4	Calcasieu-Sabine	North Mud Lake Marsh Creation	NMFS
4	Mermentau	Highway 82 South Marsh Creation and Terracing	NMFS
4	Mermentau	Deep Lake Spillway Modification/Mermentau Sub-Basin Hydrologic Restoration	NRCS
3	Teche-Vermilion	Lake Sand Marsh Creation and Shoreline Protection	NRCS
3	Teche-Vermilion	West Vermilion Marsh Creation and Shoreline Protection	EPA
3	Terrebonne	North Bayou DeCade Ridge and Marsh Creation	NRCS
3	Terrebonne	West LA Hwy 1 Marsh Creation	NMFS
3	Terrebonne	Bayou Terrebonne Freshwater Diversion	NRCS
3	Terrebonne	North Terrebonne Marsh Creation	EPA
3	Terrebonne	East Catfish Lake Marsh Creation and Terracing	FWS
2	Barataria	Northeast Turtle Bay Marsh Creation and Critical Area Shoreline Protection	NRCS
2	Barataria	East Bayou Lafourche Marsh Creation	FWS
2	Barataria	Grand Bayou Ridge and Marsh Creation	FWS
2	Barataria	Elmer's Island Backbarrier Marsh Creation	NMFS
2	Breton Sound	Breton Landbridge Marsh Creation	NMFS
2	Breton Sound	East Delacroix Marsh Creation and Terracing	NMFS
2	Breton Sound	Mid Breton Land Bridge Marsh Creation and Terracing	FWS
1	Pontchartrain	Point aux Marchettes Shoreline Protection and Terracing	FWS
1	Pontchartrain	Cane Bayou Marsh Creation	FWS
1	Pontchartrain	Bayou Bienvenue Marsh Creation Increment 1	EPA
	Coastwide	Feral Swine Control	FWS
	PPL 27 Demonstration Project Nominees		Agency
DEMO	Living Blanket		NRCS
DEMO	Shoreline Protection Utilizing Engineered In-Situ Native Material		NRCS
DEMO	Crescent Stabilization System		CPRA
DEMO	Marine Gardens/Marsh Armor		COE

PPL27 PROJECT NOMINEE FACT SHEET
April 12, 2017

Project Name

Sabine Marsh Creation Cycles 6&7

Project Location

Region 4, Cameron Parish, The project is located on the Sabine National Wildlife Refuge, west of Highway 27, in large open waters areas north and northwest of Brown's Lake.

Problem

The project area is experiencing marsh degradation due to saltwater intrusion and freshwater loss. This has resulted in the conversion of vegetated intermediate marsh to large shallow open water areas. Salinity is believed to migrate into the region from the Calcasieu River Ship Channel. Southeast winds push saline waters into the project area through canals and bayous. Wind driven waves cause further loss of the surrounding marsh fringe.

Goals

To use beneficially use material dredged from the Calcasieu River Ship Channel maintenance events to create 960 acres of marsh in the large open-water project areas in a strategic manner to block wind-induced saltwater introduction, to lessen freshwater loss, and to reduce open water fetch and erosion of marsh.

Service goals include the creation of habitat or improvement of habitat for rare species, species of concern, and threatened and endangered species. The creation of brackish intertidal marsh habitat would be beneficial to several species that are currently on the lists of rare species and species of concern. These include, but are not limited to Least Bittern, Black Rail, Mottled Duck, King Rail, Louisiana Eyed Silkmoth and Saltwater topminnow.

Proposed Solution

This project consists of the creation of 960 acres of marsh using material dredged (approximately 5 million cubic yards) from the Calcasieu River Ship Channel in 2 cycles. Each cycle would be coordinated with the Corps maintenance events and be a minimum of two years apart. The marsh creation would utilize the 3.57 mile permanent pipeline that extends from the Calcasieu River Ship Channel to the Sabine NWR. The dredged material will be contained by earthen dikes. Lower level earthen overflow weirs will be constructed to assist in the dewatering of each marsh creation disposal area and to create fringe marsh. The dredged slurry will be placed between elevations +4.0' and +4.5' MLG (consistent with the completed CS-28 Cycles 1-5).

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 960 ac.
- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 800-900 net acres would result after the 20-year project life (cycle 6a&b 438 ac + cycles 7a&b 420 ac).

- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?*

The anticipated land loss rate reduction throughout the area of direct benefits is approximately 50-74% over the project life.

- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*

No

- 5) *What is the net impact of the project on critical and non-critical infrastructure?*

None

- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*

This project would work synergistically with the existing CWPPRA CS-28 Sabine Refuge Marsh Creation Cycles 1-5, Unit 1A (north) and Unit 1A (south).

Considerations

None.

Preliminary Cost

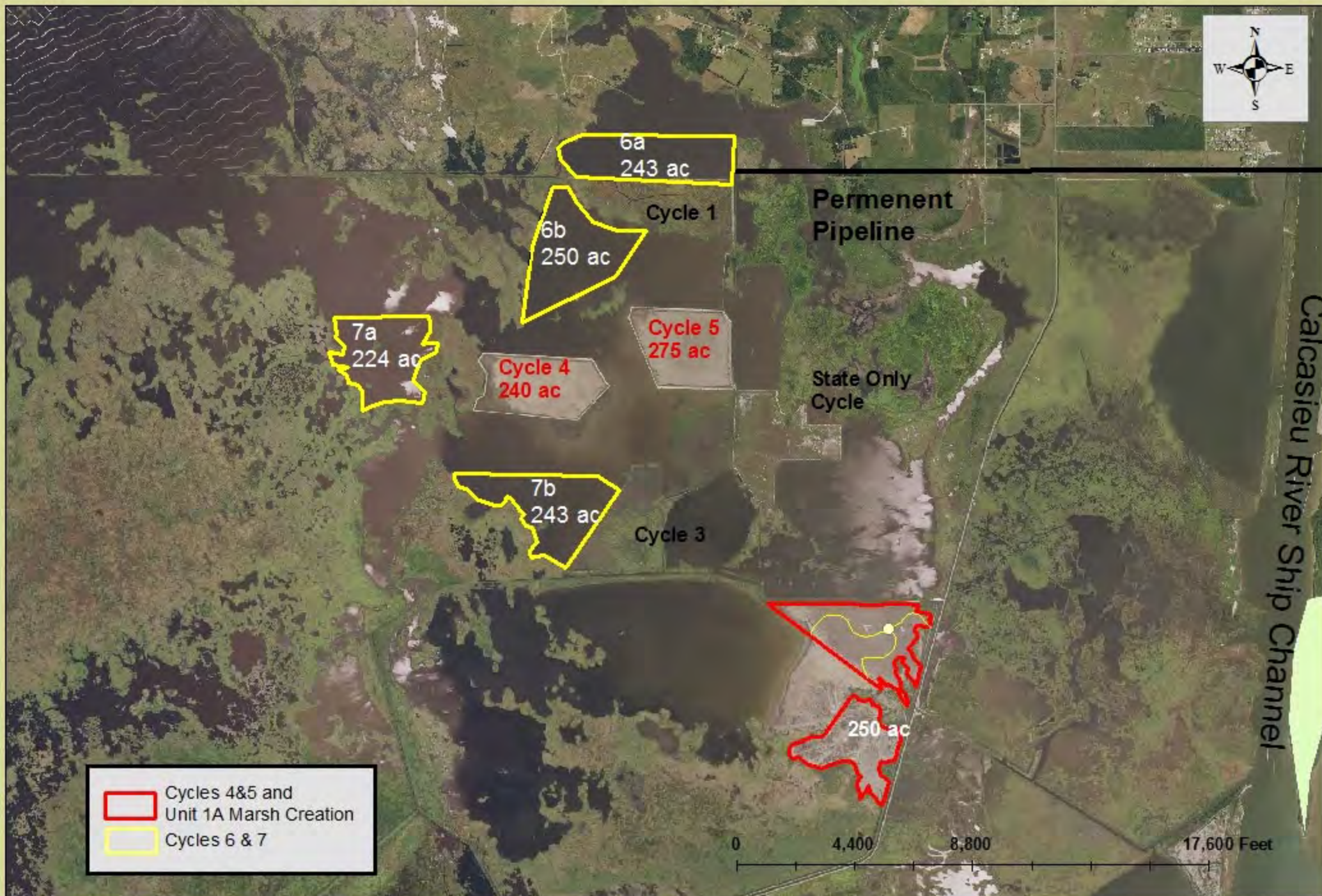
The fully-funded cost range is \$30M - \$35M.

Preparer(s) of Fact Sheet:

Robert Dubois (337) 257-4345 robert_dubois@fws.gov



PPL 27 Sabine Marsh Creation Cycles 6 and 7



PPL27 PROJECT NOMINEE FACT SHEET
April 14, 2017

Project Name

East Holly Beach Gulf Shoreline Protection

Project Location

Region 4, Calcasieu-Sabine Basin, Cameron Parish, South of State Highway 82, west of the Calcasieu Ship Channel.

Problem

The project will be designed to reduce erosion of the Gulf Shoreline and protect the State's Beach Nourishment project (CS-33 SF). Recent loss rates (1998-2008) were calculated from aerial photography at 26.5 ft/yr.

Goals

The project is designed to reduce wave energies on the gulf shoreline west of the Calcasieu Ship Channel and trap sediment between the breakwaters and shoreline. The total area benefited is approximately 179 acres of beach, dune, supratidal, and subtidal habitat created by the (CS-33 SF) state surplus project. The proposed project maintains a beach rim component of the coastal ecosystem and has a positive net impact on critical infrastructure (Highway 82). The project would also protect and restore critical habitat for the piping plover, a threatened/endangered species.

Proposed Solution

The project proposes approximately 15,454 linear feet (2.9 miles) of breakwaters similar to the Raccoon Island (TE-29) and the Chenier Au Tigre Demonstration (TV-16) projects. Breakwaters will be designed to protect the most critical shoreline area along Highway 82 using all the lessons learned from the Holly Beach Breakwater Enhancement and Sand Management Project (CS-31). Approximately 26 round rubble breakwaters (300 ft length with 300 ft gaps), placed 250 feet offshore and built to 3.8 ft NGVD will be created. This project will protect approximately 179 acres of headland habitat created by the CS-33SF project using approximately 2 million cubic yards of sand from an offshore borrow site.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?* The total area benefitted is estimated at 179 acres.

2) *How many acres of wetlands will be protected/created over the project life?* The project would protect approximately 132 net acres (179 acres – ((26.5*0.25*15454)/43560)*20 years). Therefore the total net acres protected/created over the project life is approximately 100-150 acres.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%).* The anticipated loss rate reduction throughout the area of direct benefit is estimated to be >75%.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.*

The proposed project would maintain a beach rim component of the coastal ecosystem. This area has also been designated as critical habitat for the threatened piping plover by the Fish and Wildlife Service.

5) *What is the net impact of the project on critical and non-critical infrastructure?* The proposed project would provide protection to Louisiana Highway 82 and the Gulf shoreline.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* The proposed project is synergistic with the state surplus project (CS-33 SF) that recently created beach and dune habitat in this area using sand from offshore borrow sites.

Considerations

Pipelines and utilities; Operation and maintenance and piping plover and red knot consultation.

Preliminary Costs

The fully-funded cost range is \$30M-\$35M.

Preparers of Fact Sheet

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Map Produced By:
United States Department of Agriculture
Natural Resources Conservation Service
Alexandria, LA

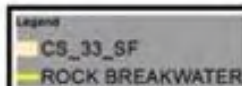
Data Source: NRP 2012

Map Date: MARCH 15, 2015



PPL 27 East Holly Beach Gulf Shoreline Protection

0 4,000 8,000
Feet



PPL27 PROJECT NOMINEE FACT SHEET
April 14, 2017

Project Name

North Mud Lake Marsh Creation

Project Location

Region 4, Calcasieu-Sabine Basin, Cameron Parish

Problem

The wetlands in this portion of Cameron Parish have been significantly altered by hydrologic modifications, saltwater intrusion, and conversion of marsh to open water. Anthropogenic factors, including the construction of the Calcasieu Ship Channel and LA Highway 27 have caused significant hydrologic changes to this system. In addition, rapid fluid extraction may have contributed to the surface downwarping within this area. These factors contributed to the weakening of the wetland plant community, reducing its ability to respond to increasing salinities and flood duration. Wetlands also converted to open water during increased tidal action (i.e. tropical events), leaving open water areas. Hurricane Rita in 2005 and Hurricane Ike in 2008 resulted in marsh loss in the area. Salinity levels and flood duration have improved with time; however, water depths are not conducive to reestablish emergent vegetation. In addition, submerged aquatic vegetation development in the project area is limited by wave action and turbidities within the large, open water areas. The wetland loss rate for the project area is -0.76% per year based on USGS hyper temporal data from 1984 to 2016.

Goals

The project goal is to create and/or nourish approximately 330 acres of emergent brackish.

Proposed Solution

The proposed project would create and/or nourish approximately 330 acres (305 acres created and 25 acres nourished) in a marsh area north of Mud Lake. Sediment would be hydraulically dredged and pumped from a nearshore Gulf borrow area into the shallow marsh creation area. Containment dikes would be constructed around the marsh creation area to retain material on-site during pumping. Tidal creeks and ponds may be incorporated into the design process, where applicable. The containment dikes will be degraded and/or gapped no later than three years post construction. Marsh creation and nourishment in adjacent areas may be investigated during the engineering and design process.

Preliminary Project Benefits

1) What is the total acreage benefited both directly and indirectly?

The project area comprised of marsh creation and nourishment is 330 acres (305 acres created and 25 acres nourished in the placement area).

2) How many acres of wetlands will be protected/created over the project life?

The total net acres protected/created over the project life is approximately 250-300 acres.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*

A 50% loss rate reduction is assumed for the marsh creation and nourishment area over the project life.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*

No.

5) *What is the net impact of the project on critical and non-critical infrastructure?*

The project would provide positive impacts to critical (i.e., LA Highway 27) infrastructure. The loss of wetlands in this area increases the vulnerability of infrastructure to wave energy.

Protecting/creating wetlands in this area may also assist in reducing storm damages to oil and gas infrastructure.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*

N/A

Considerations

Pipelines, roads, and other infrastructure, and protection of the Gulf shoreline, piping plover and piping plover critical habitat, and red knot are considerations in the project design.

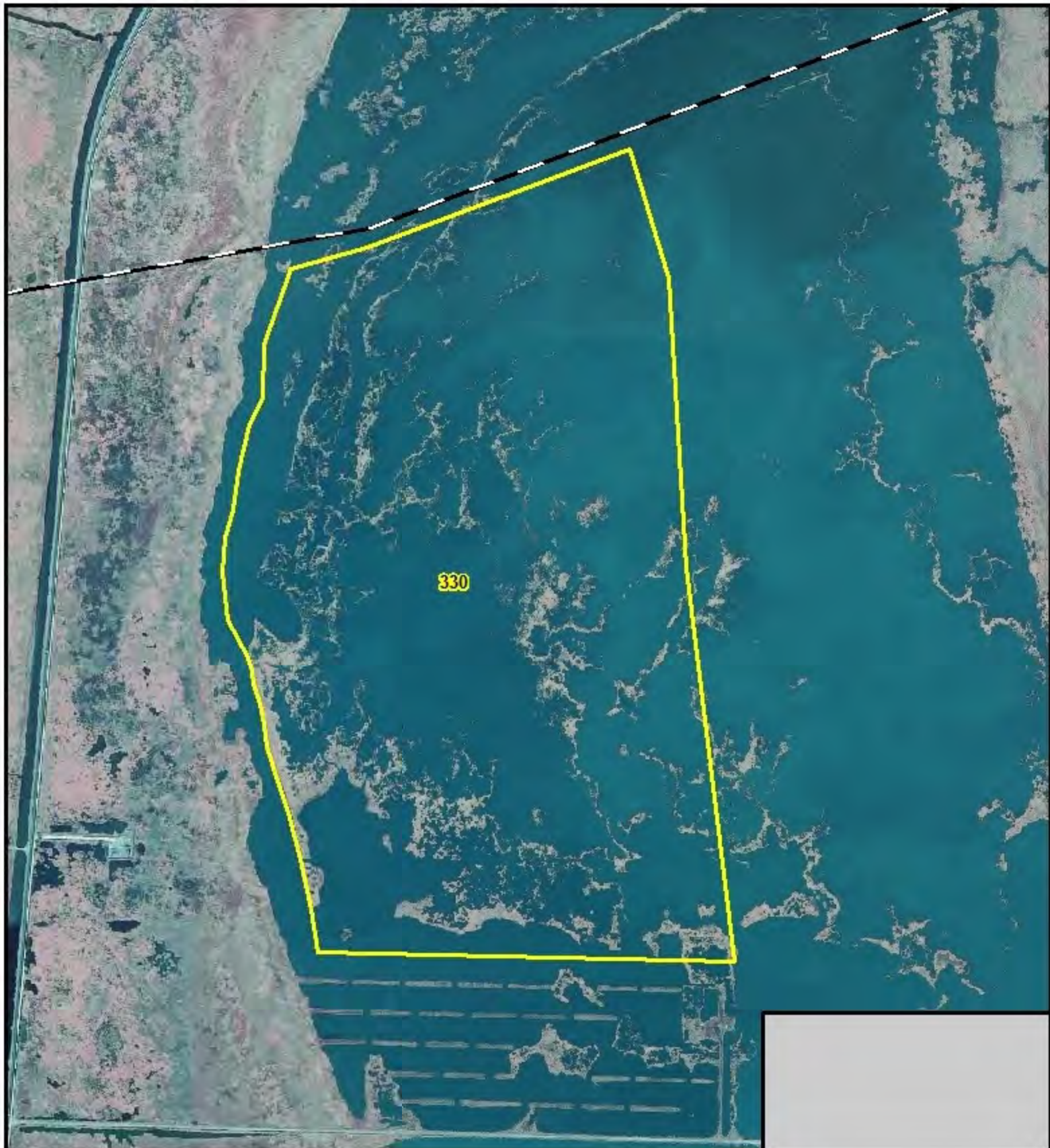
Preliminary Cost

The fully funded cost range is \$35M - \$40M.

Preparer(s) of Fact Sheet:

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PPL27 North Mud Lake Marsh Creation Project

0 500 1,000
Feet



305 Acres of Marsh Creation
25 Acres of Marsh Nourishment

Federal Sponsor: NOAA Fisheries
2008 aerial imagery
Map Date 03-13-2017

Legend

- Approximate_Natural_Gas_Pipeline
- NMLBoundaryWest

PPL27 PROJECT NOMINEE FACT SHEET
April 14, 2017

Project Name

Highway 82 South Marsh Creation and Terracing

Project Location

Region 4, Mermentau Basin, Cameron Parish

Problem

The marshes south of Louisiana Highway 82 between the Mermentau Ship Channel and Freshwater Bayou have been hydrologically impacted by the construction of oil and gas access roads, spoil banks from canals for petroleum exploration, and the construction of levees for hydrologic management. Such activities have led to major loss of wetlands south of the highway and conversion of the project area to shallow open water. The 1984 to 2014 USGS loss rate from an overlapping PPL25 project is -1.5%/yr.

Goals

The project goal is to create/nourish approximately 320 acres of marsh and 21,000 linear feet of marsh terraces. Approximately 289 acres would be marsh creation and 31 acres is marsh nourishment.

Proposed Solution

Sediment for marsh creation/nourishment would be mined offshore of the project area at a distance and design to avoid inducing shoreline erosion. Containment dikes would be constructed around the project area, including the marshes in the north to ensure dredged sediment does not plug existing drainage along the highway and within the project area. Marsh buggy backhoes would be used to construct the containment dikes and the marsh terraces. A hydraulic cutterhead dredge would be used to mine and pump sediments to the project area. Currently 100% of the newly created marsh acreage will be planted with appropriate plant species. The terraces will also include vegetative plantings.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
The total project area is approximately 436 ac.
- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 320 acres of marsh (31 of those acres are nourishment) will be initially constructed in the marsh creation area, and approximately 20.5 acres of marsh terraces (21,000 linear feet with a 15 ft. crest width) would initially be constructed. The net acres for the 20 year project life are 250-300 acres.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*
The anticipated land loss rate reduction throughout the area of direct benefits will be 50% over the project's life.

- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*

By constructing marshes to the south of highway 82, the project will help to protect and maintain the critical chenier, Grand Chenier, to the north which is a vital part of the structural coastal ecosystem in Cameron Parish, LA.

- 5) *What is the net impact of the project on critical and non-critical infrastructure?*

The project would have moderate net positive impact to critical infrastructures which consists of LA82, a hurricane evacuation route, and residence of Grand Chenier due to reducing the flooding risk to the state highway by reestablishing a land mass in place of open water.

- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*

The project will have a synergistic effect with two other CWPPRA projects. The ME-20 South Grand Cheniere Marsh Creation project, sponsored by USFWS, is located southeast of the project area, has construction funding, and is scheduled to go to construction during the summer of 2017. The project will create marsh southeast of this project area which may help reduce erosion caused by fetch. The ME-32 South Grand Cheniere - Baker Tract Marsh Creation project, sponsored by NRCS, is located southeast of the project area and is presently funded for Phase 1 engineering and design.

Considerations

The project has pipelines/utilities and land rights considerations.

Preliminary Cost

The fully funded cost range is \$25M - \$30M.

Preparer(s) of Fact Sheet:

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PPL27 Highway 82 South Marsh Creation and Terracing

0 1,000 2,000
Feet



288 Acres of Marsh Creation
32 Acres of Marsh Nourishment
21,000 Linear Feet of Terraces

Federal Sponsor: NOAA Fisheries
2008 aerial imagery
Map Date 03-31-2017

Legend

- SHWY82_Terraces_21000
- SHWY82terracesfield21000
- HWY 82S_Marsh_Creation

PPL27 PROJECT NOMINEE FACT SHEET

April 13, 2017

Project Name

Deep Lake Spillway Modification/Mermentau sub-basin hydrologic restoration project

Project Location

Region 4, Mermentau Basin, Cameron Parish, Rockefeller Wildlife Refuge

Problem

Construction of La. Highway 82 restricts drainage of local communities and marshes north of the highway to outlets located on Rockefeller Wildlife Refuge. That restriction can result in prolonged periods of inundation during high rainfalls and flooding events. A new East End Lock system will aid with the increase volume flow to the 8 outlets at the Gulf of Mexico. This will prevent long periods of ponding and impacting thousands of acres of wetlands.

Goals

The proposed project will reduce prolong periods of inundation to relieve flooding stress and restore the function, value, and sustainability to thousands of acres of marsh. The proposed project will also allow Rockefeller Wildlife Refuge to accommodate additional water flow during flooding events to relieve flooding of local communities.

Proposed Solution

The proposed project would construct an additional new lock system that would be approximately 60 feet wide. The current lock system is over 40 years old, is in desperate need of replacement, and cannot adequately relieve flooding in much of the Mermentau Basin. In addition to the locks, modifications at Hwy 82 with cleaning of drainage laterals and connecting flow through outlets to main canals will enhance the project by creating/nourishing 106 acres of marsh. Reduced inundation of marsh is predicted to increase marsh production over the 50,000 acres area providing an estimated 532 net acres (SIProd Model preliminary run at 3.93% reduction in inundation).

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?* The total project area is approximately 50,000 acres.
- 2) *How many acres of wetlands will be protected/created over the project life?* Approximately 600 to 700 net acres would result after the 20 year project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%).* The anticipated loss rate reduction throughout the area of direct benefit is estimated to be 50% for the marsh creation area and increase land gain north of highway 82.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.* Proposed project improves drainage across La. Highway 82.

5) *What is the net impact of the project on critical and non-critical infrastructure?* The project would restore some of the historical hydrology that once existed prior to construction of Hwy 82.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* The proposal will compliment ME-16 and is consistent with the Deep Lake spillway project in the State Master Plan.

Considerations

Operation and maintenance

Preliminary Costs

The fully funded cost range is \$35M – \$40M

Preparer(s) of Fact Sheet

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PPL27 Deep Lake Spillway Modification



PPL27 PROJECT NOMINEE FACT SHEET

April 12, 2017

Project Name

Lake Sand Marsh Creation and Shoreline Protection Project

Project Location

Region 3, Teche-Vermilion Basin, Iberia Parish

Problem

Marsh Island Refuge serves as the crucial geomorphic structure in maintaining the estuarine character of the Vermilion-Cote Blanche Bays system and provides vital support to important fish and wildlife species. Located at the conjunction of wave & tidal energy impacts generated across the Gulf of Mexico and East & West Cote Blanche Bays, Marsh Island's eastern area is being severely impacted. Wave energy and storm overwash battering the area drive shoreline retreat and elevational loss, resulting in narrowing and breaching of perimeter marshes that shield large interior lakes from bay encroachment. The 1998-2015 erosion rate along the project area's bay shoreline averaged 14ft/yr, and Lake Sand shoreline erosion averaged 4ft/yr. Multiple recent storm impacts also accelerated fragmentation of interior marsh that maintains separation between Lake Sand and other lakes. Capture of this interconnected shallow lake-marsh system by West Cote Blanche Bay will significantly disrupt interior hydrology and expand open water area. Increased waves and tidal exchange would penetrate more deeply into the refuge interior, and intensify degradation and loss of fragile wetland habitat. The 1985-2016 USGS rate of land change for the entire E. Marsh Island mapping unit is -0.04% per year.

Goals

The project goals are 1) to create a total of 104 acres and nourish 162 acres of interior brackish marsh to counter fragmentation and loss on eastern Marsh Island, and 2) to protect 120 acres marsh to prevent West Cote Blanche Bay from capturing a shallow lake-marsh system by halting shoreline erosion and avert breaching of narrow bands of marsh between Lake Sand and the Bay.

Proposed Solutions

- 1) A total of 17,820 LF of rock breakwater protection will be constructed along critical reaches of the West Cote Blanche Bay shoreline on Marsh Island Refuge to halt shoreline erosion and protect a total of 103 marsh acres.
- 2) A total of 91 acres of marsh will be created and 162 acres will be nourished utilizing semi-confined sediment hydraulically dredged from West Cote Blanche Bay (66 acres created), as well as the beneficial use of material dredged for access (25 acres created).
- 3) A total of 12,989 LF of lake rim will be restored along critical reaches of the Lake Sand shoreline to create a total of 13 acres of marsh, and protect an additional 17 marsh acres.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
The direct benefits are composed of 120 acres of emergent marsh protected from bay and lake shoreline erosion, and 104 acres of emergent marsh created and 162 acres nourished via sediment dredged from W Cote Blanche Bay, beneficial use of material dredged for access and lake rim restoration. These acres would be combined with those acres indirectly benefitted by preventing West Cote Blanche Bay from breaching through marsh surrounding Lake Sand & the Hawkins Bayou lake in multiple locations, escalating the

lakes' interior shoreline erosion and marsh breakup, and causing irretrievable loss of valuable wetland. The total acreage expected to be benefitted both directly and indirectly is approximately 1,650 acres.

- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 200-250 net acres would be protected/created over the 20-yr project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?*
Construction of the proposed project features is expected to reduce the erosion rate of the protected shoreline by 100%, and in the areas directly benefitted from marsh creation and nourishment the loss rate is anticipated to be reduced by 50% over the project's life.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
This project would protect the West Cote Blanche Bay shoreline and prevent the Bay from capturing substantial acreage of interior shallow-water lakes and surrounding marsh over the project life. In addition, this project area is situated in the eastern end of the Marsh Island Refuge which serves as the principal geomorphic structure that maintains the tidal prism of the Vermilion-Cote Blanche Bays estuary system and buffers it from direct marine influence of the Gulf of Mexico.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project would have a small positive impact to non-critical infrastructure such as recreational camps and oilfield infrastructure by maintaining the width, breadth and elevation of Marsh Island and continue to buffer influence of the Gulf of Mexico on the Bays' wave environment, tidal exchange and storm impacts.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
This project will have significant synergistic effects with existing restoration and protection projects on the refuge including the adjacent TV-14 Hydrologic Restoration Project, TV-21 Marsh Creation Project, and other restoration actions.

Considerations

The proposed project will have potential oilfield pipeline and state oyster seed grounds considerations for design and construction, however they are nearly the same as the successfully constructed TV-21 project. There will be O&M considerations related to the rock breakwater. The LA Department of Wildlife and Fisheries owns and manages the refuge.

Preliminary Cost

The fully funded cost range is \$30-35M.

Preparer(s) of Fact Sheet

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WEST COTE BLANCHE BAY

LAKE SAND

HAWKINS LAKE

SHORELINE_PROTECTION
USE_ACCESS_CHANNEL
RESTORATION
CREATION_AND_NOURISHMENT
CLOSURE
SHORELINE_PROTECTION
USE_OF_DREDGE_MATERIAL

0,000 2,000
Feet

PPL27 PROJECT NOMINEE FACT SHEET
April 12, 2017

Project Name

West Vermilion Marsh Creation and Shoreline Protection

Project Location

Region 3, Teche-Vermilion Basin, Vermilion Parish, east of Hog Lake and along the southeastern shore of North Lake.

Problem

Over the past decades, the project area has experienced altered geomorphologic and hydrologic conditions, shoreline erosion and wetland loss due to damage from storms; dredging of navigation and petroleum access canals, construction of spoil banks and levees, and natural wave energy. Wave energy in the Bay has gradually increased over the centuries because the bay is naturally getting deeper due to a slight yet constant subsidence and global sea-level rise. Recent loss rates (2003-2013) were calculated from aerial photography at 6.0 ft/yr.

Goals

The goals of this project are to: 1) Create and/or nourish 677 acres of marsh, by pumping sediment from Vermilion Bay; 2) Protect/armor approximately 18,352 ft (92 acres) of the western shoreline of Vermilion Bay between Bayou Prien and Hog Bayou and the Vermilion Bay shoreline adjacent to the proposed marsh creation cell near North Lake. Assuming some natural vegetative recruitment, vegetative plantings are planned at a 50% density at project year one. Containment dikes will be degraded or gapped by year three to allow access for estuarine organisms.

Proposed Solution

The project proposes to create/nourish 651 acres of marsh in an area east of Hog Lake between Bayou Prien and Hog Bayou. The project would restore marsh along the remnant shoreline between North Lake and Vermilion Bay (26 acres) and stabilize the shoreline in three areas: between North Lake and Vermilion Bay, between the small lake near Redfish Point and Vermilion Bay, and along the western shoreline of Vermilion Bay between Bayou Prien and Hog Bayou (92 acres, 18,352 ft). The project proposes to dredge sediment from Vermilion Bay. Assuming some natural vegetative recruitment, vegetative plantings are planned at a 50% density at project year one. Containment dikes will be degraded or gapped by year three to allow access for estuarine organisms.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
 - 769 acres would be benefitted directly
 - 26 acres on N Lake (fully contained)
 - 23 acres marsh creation, 3 acres marsh nourishment
 - 651 acres in the large marsh creation cell between Hog Bayou and Bayou Prien (semi-contained)
 - 280 acres marsh creation, 371 acres of marsh nourishment
 - 92 acres in shoreline protection

- 18,352 LF of shoreline stabilization (2,474 LF of shoreline protection plus 15,878 LF of gabion mats or similar)

- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 300-350 net acres would result after the 20-year project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?*
The loss rate in the area of direct benefits would be reduced by 50%.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
The project would restore marsh along the remnant shoreline between North Lake and Vermilion Bay and, stabilize the shoreline in three areas; between North Lake and Vermilion Bay, between the small lake near Redfish Point and Vermilion Bay, and along the western shoreline of Vermilion Bay between Bayou Prien and Hog Bayou.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
There is no critical/non-critical infrastructure in the immediate project area.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
None at this time.

Considerations

Utility pipelines, oysters and O & M are considerations in the project area. However, LDWF has stated that it will assume ownership of structures at the end of the project life.

Preliminary Cost

The fully-funded cost range is \$25M - \$30M.

Preparer(s) of Fact Sheet:

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West Vermilion Bay Marsh Creation and Shoreline Protection

- South Marsh Creation
- North Lake/Redfish Pt Lake Shoreline Protection
- North Lake Marsh Creation
- South Shoreline Protection



Basemap: 2015 NAIP DOQQ - Vermilion Parish
Produced by: EPA Region 6, Dallas, TX



0 0.325 0.65 1.3 1.95 Miles

PPL27 PROJECT NOMINEE FACT SHEET
April 15, 2017

Project Name

North Bayou Decade Ridge and Marsh Creation

Project Location

Region 3, Terrebonne Basin, Terrebonne Parish, North Bayou Decade

Problem

The marshes along Bayou Decade have deteriorated dramatically over the past few decades. Coastal restoration actions have focused on improving hydrologic conditions in the area to reduce salinities and improved freshwater flows from the Atchafalaya River. Significant improvements have been made yet there are some areas of large open water that are slow to improve. Land loss in the project area is estimated to be -0.79%/y. Marsh creation would rapidly recover marshes along with protection afforded by elevation of ridge features on the north bank of the bayou.

Goals

The goal of the project is to create a ridge feature on the north bank of Bayou Decade and create adjacent marsh in a vast expanse of open water where marsh used to exist.

Proposed Solution

Sediments will be hydraulically dredged from Lake Mechant and pumped via pipeline to create approximately 318 acres of marsh habitat and in situ material will be excavated to create an 18,736 liner foot ridge feature along the north bank of Bayou Decade.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
The project would create and nourish approximately 318 acres of marsh and 18,736 linear feet of ridge habitat.
- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 200-250 net acres of marsh would result after the 20-year project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?*
The anticipated land loss rate reduction throughout the area of direct benefits is approximately 50% over the project life.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
The project would create forested ridge along the north bank of Bayou Decade.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
None identified.

- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*

The project would create marsh within the TE-28 Brady Canal Hydrologic Restoration project and the TE-29 Penchant Basin Plan projects.

Considerations

The proposed project has potential utility/pipeline and oyster lease considerations for design and construction.

Preliminary Cost

The fully-funded cost range is \$35M - \$40M.

Preparer(s) of Fact Sheet:

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NORTH BAYOU DECADE ACRES AND LENGTHS



	MC ACRES	MC WATER	MC NOURISHMENT	DIKE LENGTH	OPEN WATER DIKE	DIKE REMNANT	RIDGE LENGTH
CELL 1	102 AC	70 AC	32 AC	13,689 LF	3106 LF	7751 LF	10,857 LF
CELL 2	76 AC	64 AC	12 AC	10,451 LF	5028 LF	5423 LF	
CELL3	52 AC	43 AC	9 AC	7778 LF	3550 LF	4228 LF	3621 LF
CELL 4	88 AC	73 AC	15 AC	10,625 LF	3256 LF	7369 LF	4509 LF

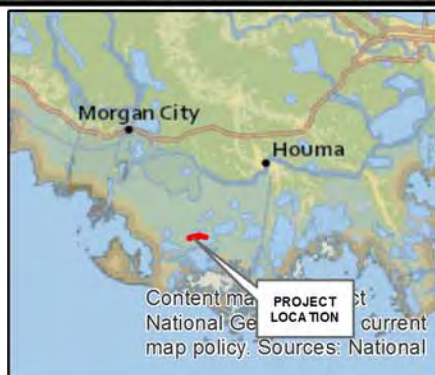


USDA-NRCS-NGCE and FSA



Map Produced By:
United States Department of Agriculture
Natural Resources Conservation Service
Alexandria, LA

Data Source: NAIP 2015
Map Date: MARCH 20, 2017



PPL 27 NORTH BAYOU DECADE RIDGE RESTORATION AND MARSH CREATION TERREBONNE PARISH, LA

0 1,500 3,000
Feet

Legend

- MARSH CREATION
- RIDGE RESTORATION

PPL27 PROJECT NOMINEE FACT SHEET
April 14, 2017

Project Name

West Louisiana Highway 1 Marsh Creation

Project Location

Region 3, Terrebonne Basin, Lafourche Parish

Problem

The Terrebonne Basin is an abandoned delta complex, characterized by a thick section of unconsolidated sediments that are undergoing dewatering and compaction, contributing to high subsidence, and a network of old distributary ridges extending southward from Houma. Historically, subsidence and numerous oil and gas canals and pipelines in the area have contributed significantly to wetland losses. Since 1932, the Terrebonne Basin has lost approximately 20% of its wetlands. Current loss rates range from approximately 4,500 to 6,500 acres/year. This loss amounts to up to 130,000 acres during the next 20 years. One-third of the Terrebonne Basin's remaining wetlands would be lost to open water by the year 2040. The wetland loss rate for the project area is -1.05%/year based on USGS hyper temporal data from 1984 to 2016.

Goals

The project goals are to create and/or nourish up to 346 acres of emergent brackish marsh.

Proposed Solution

The proposed project's primary feature is to create and/or nourish approximately 346 acres of emergent brackish marsh (292 marsh creation and 54 marsh nourishment). In order to achieve this, sediment will be hydraulically pumped from a borrow source in Catfish Lake. Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. The containment dikes will be degraded and/or gapped no later than three years post construction. The project will include planting smooth cordgrass plugs installed in strategic locations based on 10% of the acreage. A robust engineering and design cost is included to investigate additive or alternate marsh creation features to the west and possibly north of the proposed project.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
This total project area is approximately 346 acres (292 acres of marsh creation and 54 acres of marsh nourishment).
- 2) *How many acres of wetlands will be protected/created over the project life?*
The net acre benefit range is 250-300 acres after 20 years.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*
A 50% loss rate reduction is assumed for the marsh creation and nourishment.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.?*

The project will help restore the backside of the natural Bayou Lafourche bank.

- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project will provide additional protection to LA 1 south of Golden Meadow. The project would also provide positive impacts to non-critical (i.e., minor oil and gas facilities) infrastructure. Minor oil and gas facilities and pipelines in the area would benefit from an increase in marsh acreage.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
This is an area of need due to the lack of previous restoration efforts.

Considerations

The proposed project has potential utility/pipeline issues along with oyster leases along the dredge pipeline path.

Preliminary Cost

The fully-funded cost range is \$30M - \$35M.

Preparer(s) of Fact Sheet:

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West Louisiana Highway 1 Marsh Creation PPL 27 Candidate



Marsh Creation *



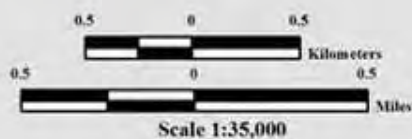
Project Boundary

* denotes proposed features



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

Image Source:
2012 DOQQ



Map ID: USGS-NWRC 2016-11-0032
Map Date: July 01, 2016

PPL27 PROJECT NOMINEE FACT SHEET
April 14, 2017

Project Name

Bayou Terrebonne Freshwater Diversion Project

Project Location

Region 3, Terrebonne Basin, Terrebonne Parish between the towns of Montegut and Pointe aux Chenes.

Problem

The Central and Eastern Terrebonne marshes are greatly deprived of freshwater, nutrients and sediments from riverine sources. Consequently, subsidence and saltwater intrusion have resulted in high rates of land loss. More recently, efforts have been underway to try to optimize freshwater flows to some of these areas where possible; however, the sources of freshwater are greatly limited. The Gulf Intracoastal Waterway (GIWW) has been recognized as a lateral source of freshwater from the Atchafalaya River extending from west to east across the entire Terrebonne Basin. This resource provides the potential to reroute freshwater through the bayous to the Central and East Terrebonne marshes.

Goals

To convey freshwater, nutrients and sediments from the Atchafalaya River east via the GIWW and Bayou Terrebonne into the Central and Eastern Terrebonne marshes.

Proposed Solution

The project will construct a freshwater diversion to move freshwater, nutrients and sediments originating largely from the Atchafalaya River via the GIWW and Bayou Terrebonne into the Montegut Unit and Pointe aux Chenes marshes in Central and Eastern Terrebonne Parish. The project will include rerouting water from Bayou Terrebonne through an existing canal system where a series of forced drainage pumps will be used to move freshwater into two adjacent marsh complexes. Approximately 26,300 linear feet of terraces will be constructed in the Montegut Unit to offset losses to the area. The project is expected to create/restore 156 net acres from freshwater diversion benefits and 19 net acres from terraces for a total of 175 acres.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
The benefits from this project will be generated from the positive effects of additional freshwater, nutrients and sediment introduced to a highly deprived marsh area and concurrently reduce salinities to promote more vigorous plant production. Approximately 5,979 acres of marsh would indirectly benefit from the project.
- 2) *How many acres of wetlands will be protected/created over the project life?*
The net acres protected/created over the project life is in the range of 150 to 200 acres.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*

Preliminary model estimates are that the project would reduce land loss by approximately 49.3%. The terrace loss rate reduction would be 50%.

- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
None identified.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
The target restoration area is adjacent to the protection levee system.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
None identified

Considerations

Operation and maintenance.

Preliminary Cost

The fully-funded cost range is \$20M - \$25M.

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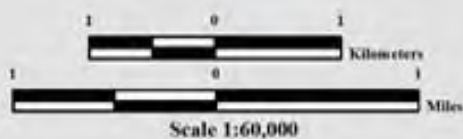


Bayou Terrebonne Freshwater Diversion (PPL27 Candidate)



- | | | | |
|--|----------------------|--|---|
| | Freshwater Diversion | | Channel Cleanout * |
| | Pump | | Terrace Field * |
| | Freshwater Flow * | | Freshwater Influence/
Project Boundary |

* denotes proposed features



Map ID: USGS-NWRC 2016-11-0028
Map Date: September 09, 2016

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U.S. Geological Survey
Wetland and Aquatic Research Center
Coastal Restoration Assessment Branch
Baton Rouge, La
Image Source:
2012 DOQQ

PPL27 PROJECT NOMINEE FACT SHEET
April 13, 2017

Project Name

North Terrebonne Marsh Creation

Project Location

Region 3, Terrebonne Basin, Terrebonne Parish

Problem

The Terrebonne Basin has experienced rapid interior wetland loss over the years. Between 1956 and 2004, Terrebonne Basin lost 321 square miles of land and an additional 17 square miles of coastal land was lost in 2005 due to the effects of Hurricanes Katrina and Rita. Wetland loss has also been attributed to sediment deficit, high subsidence, sea level rise, saltwater intrusion, historic oil and gas activity, and natural deterioration of barrier islands, which contributes to the inland invasion of marine tidal processes (including erosion, scour, and saltwater intrusion). Since 1978 Terrebonne Parish has suffered over 10 percent of its area converting to open water. Projections indicate it is likely to lose another 11 percent by 2050.

Goals

The project goals are to create/nourish approximately 726 acres of marsh in areas of open water and restore coastal marsh habitat.

Proposed Solution

This project will create and/or nourish 726 acres of marsh utilizing approximately 2.7 million cubic yards of dredged fill material from a borrow site located in Lake Chien. Material would be pumped to a healthy marsh elevation as deemed by healthy marsh survey. Once material is in place and adequately dewatered, containment dikes will be adequately gapped to allow tidal exchange of nutrients and aquatic organisms with the marsh. Additionally, the project site would be planted at a 50% density at project year one in order to reestablish the plant productivity within the marsh.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
The total acreage protected/created is approximately 726 acres. Direct benefits include 470 acres of marsh creation and 256 acres of marsh nourishment.
- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 400-450 net acres would result after the 20-year project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?*
The loss rate in the area of direct benefits would be reduced by 50%.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?* No

- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project would have a net positive impact on the oil and gas infrastructure in the immediate area.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The project may have a net positive synergy with the Island Road Marsh Creation & Nourishment (TE-117).

Considerations

Utility pipelines and oyster seed grounds are considerations in the project area.

Preliminary Cost

The fully-funded cost range is \$45M - \$50M.

Preparer(s) of Fact Sheet:

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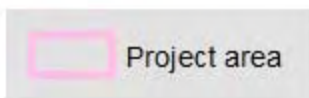
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Esri, HERE, DeLorme, Mapbox, and the OpenStreetMap contributors, and the GIS user community

North Terrebonne Marsh Creation



Basemap: 2015 NAIP DOQQ
Produced by: EPA Region 6, Dallas, TX

0 0.075 0.15 0.3 0.45 0.6 Miles



PPL27 PROJECT NOMINEE FACT SHEET

April 12, 2017

Project Name

East Catfish Lake Marsh Creation and Terracing

Project Location

Region 3, Terrebonne Basin, Lafourche Parish, east of Catfish Lake

Problem

Examination of historical aerial photography clearly indicates significant marsh loss around Catfish Lake. Subsidence, canal dredging, a lack of freshwater input, saltwater intrusion, and altered hydrology are all important factors contributing to this loss. Of particular note, is the area between Catfish Lake and Golden Meadow. Canal dredging, associated with oil and gas activities, has resulted in the rapid deterioration of this area. USGS calculated a 1985-2010 loss rate of -0.79% per year for the PPL22 North Catfish Lake Marsh Creation Project. Shoreline erosion rates along the southeastern Catfish Lake shoreline averaged 29 ft/yr from 1990-2015.

Goals

Goals are to restore the eastern and southeastern shorelines of Catfish Lake via marsh creation and to create habitat via terracing in areas of deteriorated marsh.

Service goals include restoration/protection of habitat for threatened and endangered species and other at-risk species. This project would restore habitat potentially utilized by the black rail, saltmarsh topminnow, and Louisiana eyed silkmoth, which are petitioned for listing as threatened/endangered species.

Proposed Solution

1. Sediments will be hydraulically dredged in Catfish Lake and pumped via pipeline to create 382 acres and nourish 67 acres of marsh.
2. Containment dikes will be constructed as necessary and gapped upon project completion.
3. Terraces (12,950 linear ft-9 ac) will be constructed in deteriorated marsh areas to reduce fetch, promote SAV production, and provide marsh edge habitat.
4. Gabion mattresses (7,720 ft) will be placed along the eastern shoreline of Catfish Lake (on the western side of the three marsh creation cells).

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?* Approximately 686 acres would be benefited directly and indirectly. Direct benefits include 449 acres of marsh creation/nourishment and 13 acres of terraces. Indirect benefits would occur to surrounding marshes and within the 237-acre terrace field.

2) *How many acres of wetlands will be protected/created over the project life?* The total net acres protected/created over the project life is approximately 350-400 acres.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%).* The anticipated loss rate reduction throughout the area of direct benefit is estimated to be 50%.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.*
Yes. The project would protect and restore marsh along the eastern Catfish Lake shoreline.

5) *What is the net impact of the project on critical and non-critical infrastructure?* The project would afford protection to the Golden Meadow Hurricane Protection Levee.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* The project would complement other restoration projects in the area including the PPL22 North Catfish Lake Marsh Creation Project and CIAP/Parish marsh creation projects in the Catfish Lake area.

Considerations

Considerations for this project include oyster leases, oil and gas infrastructure, and maintenance.

Preliminary Cost

The fully-funded cost range is \$35M - \$40M.

Preparer of Fact Sheet

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U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

East Catfish Lake Marsh Creation and Terracing



PPL27 PROJECT NOMINEE FACT SHEET
April 14, 2017

Project Name

Northeast Turtle Bay Marsh Creation and Critical Area Shoreline Protection

Project Location

Region 2, Barataria Basin, Jefferson Parish, northeast of Turtle Bay

Problem

Historic wetland loss in the area occurs in the form of shoreline erosion along Turtle Bay and interior marsh loss. The interior loss is caused by subsidence, sediment deprivation, and construction of access and pipeline canals. Based on the nearby BA-125 CWPPRA Project, the land loss rate for the area is estimated to be -0.83% per year. Shoreline erosion along the northeast shore of Turtle Bay, in the area proposed to be addressed by this project, is approximately 3 to 4 feet per year. While this rate may not seem excessive, this reach of shoreline is very narrow and loss of this shoreline would connect Turtle Bay to a large lagoon, greatly altering the hydrology of the marsh.

Goals

The goals of the project are to 1) create approximately 334 acres of marsh and nourish approximately 203 acres of marsh (537 acres total) with dredged material from Turtle Bay, 2) protect approximately 2,335 feet of critical shoreline, and 3) prevent further enlargement of two primary water exchange points.

Proposed Solution

The proposed project would create approximately 334 acres and nourish approximately 203 acres of marsh using sediment dredged from Turtle Bay. Two types of containment will be utilized for this project: semi-contained and fully contained. For the semi-contained portion, there will be approximately 53 acres of marsh creation and 104 acres of marsh nourishment. For the fully contained portion, there will be approximately 281 acres of marsh creation and 99 acres of marsh nourishment. Containment dikes will be degraded as necessary to reestablish hydrologic connectivity with adjacent wetlands. Approximately 2,335 feet of critical shoreline would be protected and two channel liners would be installed to prevent further enlargement of two primary water exchange points. Maintenance of the shoreline protection feature and channel liners would be included. In case the area does not re-vegetate on its own, the maintenance cost estimate includes funds to plant 25% of the created marsh at Year 3.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly? 537 directly benefitted; indirect benefit not yet determined.*
- 2) *How many acres of wetlands will be protected/created over the project life? Approximately 300-350 net acres would result after the 20-year project life.*

- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?* The anticipated land loss rate reduction throughout the area of direct benefits is approximately 50% over the project life.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?* This project would contribute to protection of the Central Barataria Basin Landbridge.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?* The communities of Lafitte and Barataria lie to the north of this important landmass which serves to buffer the effect of tropical weather events. Numerous pipelines would benefit from reducing land loss in the area.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* This project would work in sync with BA-2, BA-27, BA-20, BA-23, BA-03a, BA-26, BA-36 (and associated CIAP project), and BA-41, contributing to protection of the Central Barataria Basin Landbridge.

Considerations

Considerations for this project include oyster and pipelines/utilities.

Preliminary Cost

The fully-funded cost range is \$30-\$35M.

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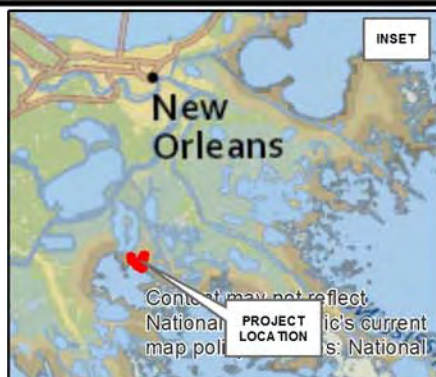
USDA-NRCS-NCCE and FSA



Map Produced By:
United States Department of Agriculture
Natural Resources Conservation Service
Alexandria, LA

Data Source: NAIP 2015

Map Date: MARCH 21, 2017



PPL 27 NE TURTLE BAY MARSH CREATION AND CRITICAL SHORELINE PROTECTION JEFFERSON PARISH, LA

0 750 1,500
Feet

Legend

- CHANNEL LINER
- PROJECT BOUNDARY
- SHORELINE_PROTECTION
- MARSH CREATION
- MARSH NOURISHMENT

PPL27 PROJECT NOMINEE FACT SHEET

April 12, 2017

Project Name

East Bayou Lafourche Marsh Creation

Project Location

Region 2, Barataria Basin, Lafourche Parish, south of Golden Meadow adjacent to Bayou Lafourche

Problem

The Leeville area has experienced extensive loss of emergent wetlands from subsidence, storms, canal dredging, and altered hydrology. Wetland loss has increased the vulnerability of Leeville and Louisiana Highway 1 to damage from tropical storms. Based on the hyper-temporal analysis conducted by USGS for the PPL26 candidate, the project area loss rate is estimated to be -1.42% per year for the period 1984 to 2016.

Goals

The primary goal of this project is to restore marsh along the Highway 1-Bayou Lafourche corridor via marsh creation. The specific goal of the project is to create approximately 417 acres (368 acres of marsh creation and 49 acres of marsh nourishment) of marsh with dredged material.

Service goals include restoration/protection of habitat for threatened and endangered species and other at-risk species. This project would restore habitat potentially utilized by the black rail, saltmarsh topminnow, and Louisiana eyed silkmoth, which are petitioned for listing as threatened/endangered species.

Proposed Solution

Sediments from a Little Lake borrow site will be hydraulically dredged and pumped via pipeline to create/nourish approximately 417 acres of marsh. Dewatering and compaction of dredged sediments should produce elevations conducive to the establishment of emergent marsh and within the intertidal range. Perimeter containment dikes will be constructed. Containment dikes exposed to open water will be planted with appropriate vegetation. Containment dikes will be gapped at the end of construction or by target year 3.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
Approximately 417 acres would be benefited directly. Direct benefits include 368 acres of marsh creation and 49 acres of marsh nourishment. Indirect benefits would occur to marsh surrounding the project area.
- 2) *How many acres of wetlands will be protected/created over the project life?*
The total net acres protected/created over the project life is approximately 300-350 acres.

- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*
The anticipated loss rate reduction throughout the area of direct benefit is estimated to be 50%.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
The project would restore marsh along what remains of the historical natural levee ridge along Bayou Lafourche.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
Some protection could be afforded to Highway 1, which is not elevated along this reach.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The project is complementary to the BA-194 East Leeville Marsh Creation Project. Both projects would restore marsh along the Bayou Lafourche/Hwy 1 corridor.

Considerations

Oil and gas infrastructure (i.e., pipelines), landrights, and oyster leases would have to be considered in the project design.

Preliminary Cost

The fully-funded cost range is \$35M - \$40M.

Preparer of Fact Sheet

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U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

East Bayou Lafourche Marsh Creation



PPL27 PROJECT NOMINEE FACT SHEET

April 12, 2017

Project Name

Grand Bayou Ridge and Marsh Restoration

Project Location

Region 2, Barataria Basin, Plaquemines Parish, Grand Bayou near West Pointe a la Hache

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 (1984-2011) conducted by USGS for the PPL24 candidate project, loss rates in the area are estimated to be -1.49% per year.

Goals

The primary goals of this project are; 1) create forested, coastal ridge habitat along the western bank of Grand Bayou, 2) restore marsh habitat in the open water areas via marsh creation and terracing, and 3) reduce fetch and wave energy in open water areas via the construction of terraces. Specific goals of the project are: 1) Create approximately 11,200 feet (20 acres) of forested ridge; 2) create/nourish approximately 366 acres of marsh with dredged material from the Mississippi River; and 3) create 21,700 linear feet (15 acres) of terraces.

Service goals include restoration/protection of habitat for threatened and endangered species and other at-risk species. This project would restore habitat potentially utilized by the black rail, saltmarsh topminnow, and Louisiana eyed silkmoth, which are petitioned for listing as threatened/endangered species. The project could also benefit other species of concern including the seaside sparrow and neotropical migrants.

Proposed Solution

1. Riverine sediments will be hydraulically dredged and pumped via pipeline to create 11,200 linear feet (20 acres) of ridge habitat, create 351 acres of marsh, and nourish 15 acres of marsh.
2. Approximately 21,700 linear feet (15 acres) of terraces will be constructed.
3. Containment dikes will be gapped and the ridge and terraces will be planted.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?* Approximately 800 acres would be benefited directly and indirectly. Direct benefits include 20 acres of forested, coastal ridge habitat, 366 acres of marsh creation/nourishment, and 15 acres of terraces. Indirect benefits would occur to surrounding marshes and within the terrace field.

2) *How many acres of wetlands will be protected/created over the project life?* The total net acres protected/created over the project life is approximately 300-350 acres.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%).* The anticipated loss rate reduction throughout the area of direct benefit is estimated to be 50%.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.*
Yes. Forested coastal ridge habitat would be created.

5) *What is the net impact of the project on critical and non-critical infrastructure?* The project would afford some protection to flood protection levees east of the project area along Hwy. 23.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* The project would provide a synergistic effect with the BA-173 Bayou Grande Cheniere Marsh and Ridge Restoration Project (Phase 1), the BA-42 Lake Hermitage Marsh Creation Project (Completed; PPL15) and the West Pointe a la Hache Siphons.

Considerations

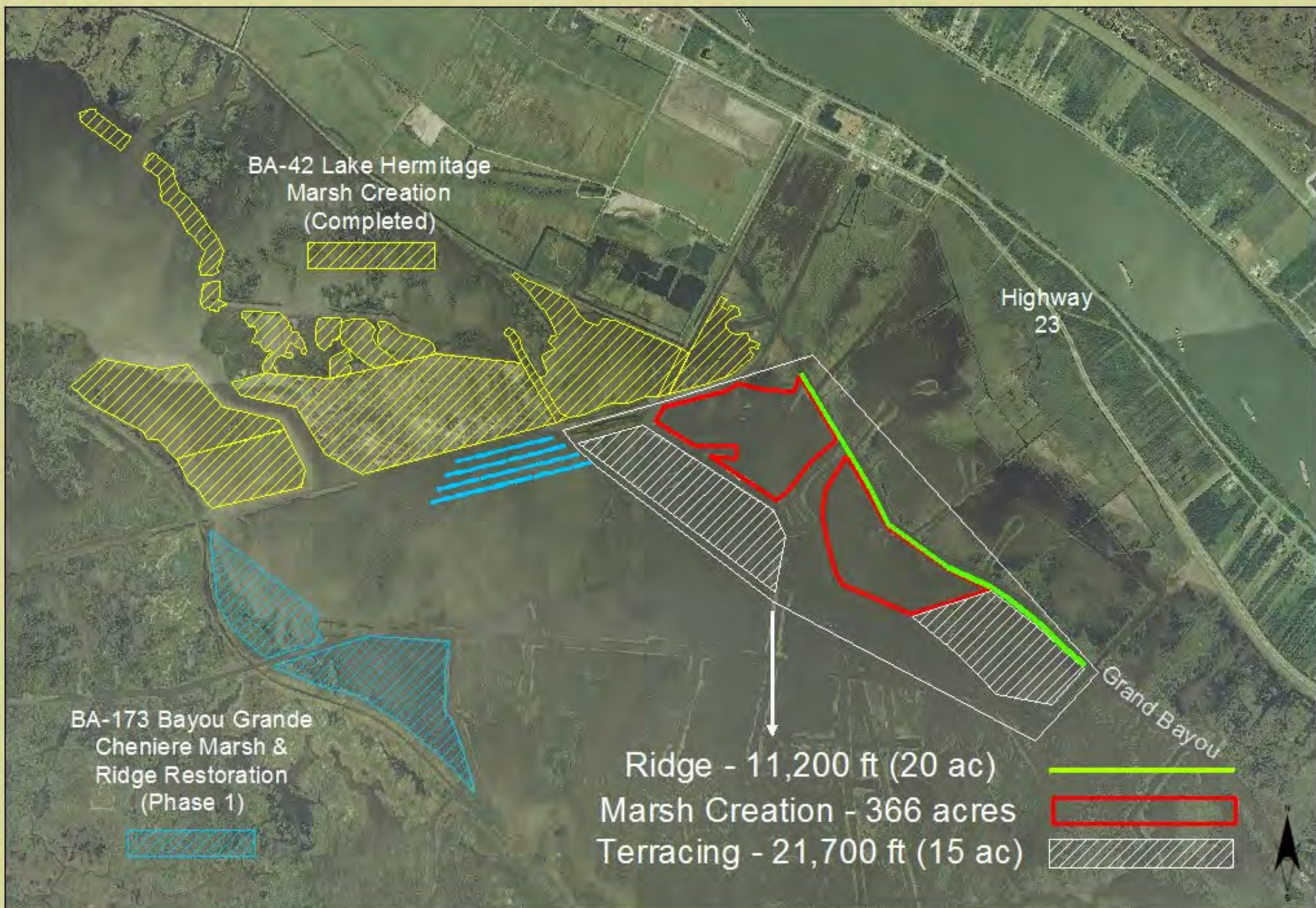
Landrights and oil and gas infrastructure are considerations for this project.

Preliminary Cost

The fully-funded cost range is \$40M - \$45M.

Preparer of Fact Sheet

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PPL27 PROJECT NOMINEE FACT SHEET
April 14, 2017

Project Name

Elmer's Island Restoration

Project Location

Region 2, Barataria Basin, Jefferson Parish

Problem

As part of an erosional headland, Elmer's Island is dominated by marine processes including over wash. The island narrowed and decreased in elevation escalating the rate of over wash and breaching near the confluence with the headland as well as along Caminada Pass. The spit along the pass is breached. Resiliency to over wash and breaching is related to both island height and width. Construction of beach and dune under Caminada Beach and Dune Restoration Increment 2 Project (BA-143) is addressing sand and dune height needs. Residual vulnerability from breaching may remain due to island width. The loss rate in the project area is estimated to be -0.79%/year based on USGS hyper temporal data from 1984 to 2016.

Goals

The project goal is to create/nourish approximately 265 acres (ac) of back-barrier marsh and maintain or improve hydrology by connecting the lagoon to the Bayou Thunder Von Tranc and Moreau watershed west of Elmer's Road.

Proposed Solution

Marsh creation via dedicated dredging of sediment is the primary technique along with culvert placement to restore hydrologic connectivity to marsh located west of the project area. Sediment would be mined from an offshore borrow site and placed in the project area to create approximately 228 acres and nourish approximately 37 acres of saline marsh. The borrow site would be located to avoid inducing wave refraction/diffraction impacts on the shoreline. Material would be placed to achieve a settled target elevation of +0.87 feet NAVD 88, GEOID 12A based on CRMS station 0167. The marsh creation would be confined disposal with the dike along the lagoon gapped no later than three years after construction at a rate of 25 ft wide every 250 ft. Half of the created elevations (228 acres) would be planted with smooth cordgrass plugs. Two 36 inch culverts would be installed in four locations under Elmer's Road (total of eight culverts) to improve connection of marsh with the lagoon and vice versa.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 265 ac.
- 2) *How many acres of wetlands will be protected/created over the project life?*
The project would result in approximately 200 to 250 net acres over the 20-year project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*

The anticipated land loss rate reduction throughout the area of direct benefits will be 50-75% over the project life.

- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*

The project will help maintain barrier headland and Gulf beach rim.

- 5) *What is the net impact of the project on critical and non-critical infrastructure?*

The project would have moderate net positive impact to critical infrastructures which consists of LA1, a hurricane evacuation route, and residence of Chenier Caminada due to reducing the rate or frequency of flooding from south/southeast wind.

- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*

The project will have a synergistic effect with sand fencing efforts and existing rock. The project will also have synergy with portions of the Caminada Beach and Dune Restoration Increment 2 Project (BA-143).

Considerations

The proposed project has potential oyster, piping plover, red knot, and utility/pipeline considerations.

Preliminary Cost

The fully funded cost range is \$25M-\$30M.

Preparer(s) of Fact Sheet:

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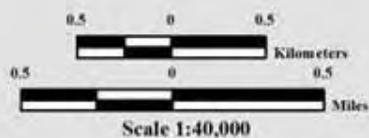


Elmer's Island Back Barrier Marsh Creation PPL 27 Candidate



-  Culverts *
-  Marsh Creation *
-  Project Boundary

* denotes proposed features



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

Image Source:
2012 DOQQ

Map ID: USGS-NWRC 2016-11-0036
Map Date: August 01, 2016

PPL27 PROJECT NOMINEE FACT SHEET

April 14, 2017

Project Name

Breton Landbridge Marsh Creation (West), River aux Chenes to Grand Lake

Project Location

Region 2, Breton Basin, Plaquemines Parish

Problem

The wetlands within this area have a unique history. Historically this area was nourished by the fresh water, sediment and nutrients delivered by the Mississippi River. Following the creation of levees along the lower river, these inputs ceased, with exception of levee breaches in 1923 and 1927. In 1991, the Caernarvon Freshwater Diversion Structure became operational with capabilities to divert up to 8,000 cubic feet/sec. As a result of these freshwater influences, the marshes in the area have fluctuated between fresh/intermediate and brackish/saline habitat types over time. The major cause of wetland loss for this area has been attributed to storm activity (i.e. Hurricanes Betsy and Katrina), causing both storm-induced scour and forcing salt water into the lower salinity marshes. Altered hydrology and oil/gas development have exacerbated storm-related loss. Subsidence, high in this area, ranges from 2.1-3.5 ft/century. Natural lakes and bays continue to increase in size due to coalescence with marsh lost to water and increased wave fetch. The 1985 to 2016 USGS loss rate is -1.39%/yr for the Caernarvon Outfall mapping subunit.

Goals

The overall, long-range, restoration goal would be to create/nourish approximately 1,000 to 2,000 acres of intermediate marsh across 7 miles of the Breton Basin from River aux Chenes to Bayou Terre aux Boeufs. A conceptual alignment of this nominee is to restore marshes and bank lines along the south side of Grand Lake.

Proposed Solution

The marsh and shoreline restoration would be an increment constructed in a west-to-east configuration, across basin, re-establishing a more robust landmass between River aux Chenes and Bayou Terre aux Boeufs. It is envisioned that this restoration effort could be completed in two to four phases, approximately 500 acres each, and once restored would reduce the potential for coalescence of Lake Lery with Grand Lake and Lake Petit to its south. The proposed first phase would address the critical reach of the landbridge by restoring the structural integrity of the Grand Lake shoreline and Orange Bayou. An alternative alignment along the north shore of Grand Lake would be investigated if restoring the south shore of the lake is problematic. Sediment would be hydraulically pumped from a borrow source for marsh creation. Regional sediment management preliminarily has been considered to determine which borrow sources may be most suitable for reaches of the overall landbridge. Internal and external borrow sources have been identified. Internal borrow from Grand Lake or Lake Lery is the most cost effective for the eastern two thirds of the landbridge. Internal borrow sources south of the landbridge alignment will be investigated to avoid increasing the tidal prism by borrowing north of the proposed land bridge. However, the cost estimate for this nominee assumes dredging from Grand Lake because of potential existing infrastructure and water depth constraints in the near proximity south of proposed land bridge. Robust dike sections would be constructed where reaches of the Grand Lake shoreline already have converted to open water. Temporary

containment dikes will be constructed and gapped within three years of construction to allow greater tidal exchange and estuarine organism access.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
The total project area of this phase is approximately 538 acres.
- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 300-350 acres of intermediate marsh would be protected/created over the project life for this phase.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*
The anticipated land loss rate reduction throughout the area of direct benefits will be 50-74% over the projects life.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
The project will help restore portions of Orange Bayou and Grand Lake shorelines.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project may have moderate net positive impact to non-critical infrastructure comprised of pipelines and oil and gas wells.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The project will have synergistic effects with: 1) BS-16 South Lake Lery Shoreline and Marsh Restoration, 2) BS-24 Terracing and Marsh Creation South of Big Mar, 3) CIAP project constructed west of Delacroix, and 4) the Caernarvon Freshwater Diversion.

Considerations

The proposed project has land rights considerations.

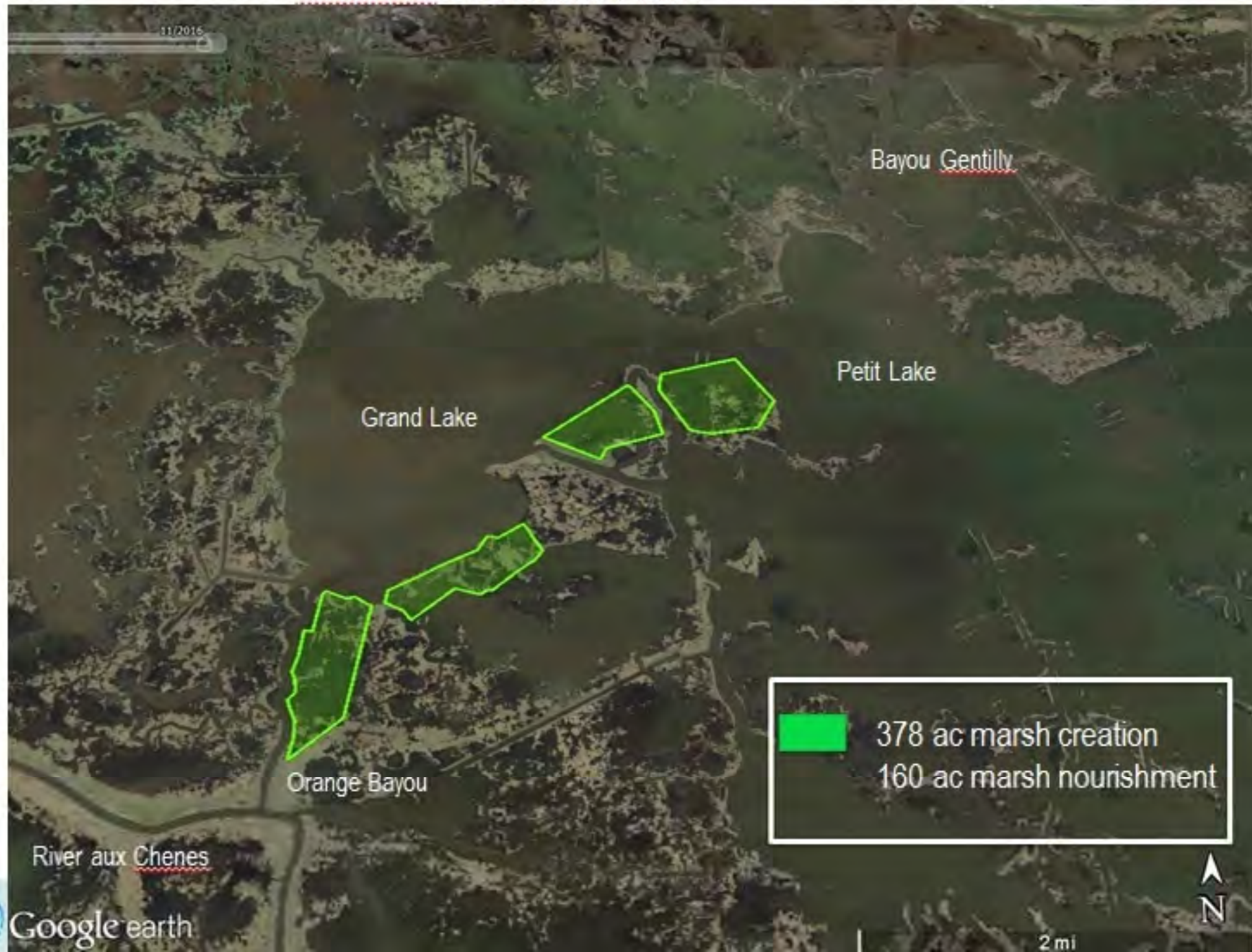
Preliminary Cost

The fully funded cost range is \$35M-\$40M.

Preparer(s) of Fact Sheet:

Patrick Williams, NOAA Fisheries, 225-389-0508, ext 208, patrick.williams@noaa.gov

PPL27 Breton Landbridge Marsh Creation (West): River aux Chenes to Grand Lake



PPL27 PROJECT NOMINEE FACT SHEET

April 11, 2017

Project Name

East Delacroix Marsh Creation and Terracing

Project Location

Region 2, Breton Basin, St. Bernard Parish

Problem

Hurricanes Katrina and Rita caused the majority of wetland loss in the project area. Wind erosion and saltwater intrusion have resulted in loss of marsh vegetation and wetland soils. Marsh loss has increased exposure of Delacroix to flooding from the east/southeast. The 1985 to 2016 Tanasia Lagoon subunit loss rate is -0.61%/yr.

Goals

The project goals are to create and nourish approximately 375 acres of marsh (300 acres creation 75 acres nourishment) and construct approximately 13,860 linear feet of terraces (approximately 7 emergent acres) utilizing a layout to help protect the community of Delacroix.

Proposed Solution

The proposed project's primary feature is to create and/or nourish approximately 375 acres of marsh (300 acres of marsh creation and 75 acres of marsh nourishment). Sediment will be mined from Lake Lery and placed east of Delacroix via pipeline. The borrow area will be designed to avoid adverse impacts to the existing shorelines of Lake Lery. In addition to marsh creation approximately 13,860 linear feet of terraces (approximately 7 acres) will be constructed. The terraces slopes and crown will be planted with appropriate marsh vegetation. During both Phase 0 and Phase 1, opportunities will be explored to increase the amount of marsh creation.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 573 acres (300 marsh creation, 75 acres nourishment, 198 acres terrace field; 7 acres of terraces).
- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 250 – 300 acres of marsh will be protected/created over the project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*
The anticipated land loss rate reduction throughout the area of direct benefits will be 50-74% over the projects life.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
The project will help protect the Bayou Terre aux Boeuf Ridge.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*

The project will have moderate net positive impact to critical infrastructure which consists of Delacroix Highway, a hurricane evacuation route, and residences of Delacroix. Net positive impact would result from providing synergistic flood protection with the back levee and help protect the highway.

- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*

The project will have a synergistic effect with the CIAP project constructed west of Delacroix helping to protecting Delacroix from wave fetch.

Considerations

The proposed project has land rights and pipeline/utility considerations.

Preliminary Cost

The fully funded cost range is \$25M-\$30M.

Preparer(s) of Fact Sheet:

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East Delacroix Marsh Creation and Terracing

NOAA Fisheries/NMFS

Legend

- Delacroix
- East Delacroix Marsh Creation, 375 ac
- East Delacroix Terraces, 198 ac



PPL27 PROJECT NOMINEE FACT SHEET

April 14, 2017

Project Name

Mid Breton Land Bridge (Marsh Creation and Terracing)

Project Location

Region 2, Breton Basin, Plaquemines Parish, South of Lake Lery, West of Delacroix Island

Problem

The landfall of Hurricane Katrina in southeast Louisiana destroyed thousands of acres of marsh and other coastal habitats east of the Mississippi River. One of the most severely impacted areas was the Breton Sound Basin where it is estimated that 40.9 square miles of marsh were converted to open water. Since 2005, the operation of Caernarvon Freshwater Diversion has not adequately addressed hurricane impacts. It seems that the Caernarvon Diversion will not be able to rebuild the marshes in the project area. Without restoration this region will continue to see the coalescence of water bodies such as Grand Lake, Lost Lake, Lake Petit, and the surrounding marsh areas resulting in more direct connection between interior intermediate marshes and the open brackish Black Bay system. This will have a snowball effect with increased marsh loss due to wind induced erosion.

Goals

The goal of this project is to maintain/restore the land bridge between the Bayou Terre aux Boeufs and River aux Chenes ridges by restoring critical wetlands destroyed by Hurricane Katrina. Specific Goals: 1) create approximately 385 acres of intertidal marsh and nourish an additional 19 acres with material dredged from Lake Lery, and 2) create approximately 32,900 LF of terraces (17 acres of marsh) in strategic areas to reduce erosion due to wind induced waves.

Service goals include the creation of habitat or improvement of habitat for rare species, species of concern, and threatened and endangered species. The creation of brackish intertidal marsh habitat would be beneficial to several species that are currently on the lists of rare species and species of concern. These include, but are not limited to Least Bittern, Black Rail, Mottled Duck, Brown Pelican, King Rail, and Saltwater topminnow.

Proposed Solution

The currently proposed project would create approximately 385 acres of marsh and nourish an additional 19 acres using sediment hydraulically dredged from Lake Lery. Lake Lery is currently filling with sediment from the Caernarvon Diversion structure. Existing canal spoil banks, emergent marsh, and segments of containment dikes will be used to contain the dredge material. Containment dikes will be degraded/gapped as necessary to reestablish hydrologic connectivity with adjacent wetlands. The current proposal would also create approximately 32,900 LF of terraces (17 acres of marsh) in strategic areas to reduce erosion due to wind induced waves and help trap sediments that flow through Lake Lery and Lost Lake.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 855 ac.
- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 350-400 net acres would result after the 20-year project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?*
The anticipated land loss rate reduction throughout the area of direct benefits is approximately 50% to 74% over the project life.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
This project would contribute to the restoration of a land bridge between Bayou Terre aux Boeuf ridge and River aux Chenes ridge. It would also reestablish a large section of Bayou Gently's shoreline.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
The community of Delacroix would be protected with this project along with numerous camps and at least one oil and gas facility.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
This project would work in sync with BS-03, BS-16, BS- 24, the recently constructed St. Bernard Parish CIAP marsh creation project.

Considerations

The proposed project has potential landrights and pipeline considerations for design and construction.

Preliminary Cost

The fully-funded cost range is \$35M - \$40M.

Preparer(s) of Fact Sheet:

Robert Dubois (337) 291-3127 robert_dubois@fws.gov



PPL 27 Mid Breton Land Bridge (Marsh Creation and Terracing)



PPL27 PROJECT NOMINEE FACT SHEET
April 14, 2017

Project Name

Point aux Marchette Shoreline Protection and Terracing

Project Location

Region 1, Pontchartrain Basin, St. Bernard Parish, Lake Borgne and Biloxi Marshes

Problem

Historic wetland loss in the area was caused mainly by shoreline erosion. Based on the hyper-temporal analysis conducted by USGS to detect land change trends from 1985 to 2016, the interior loss rate for the Biloxi Marsh area was calculated to be 0.53 %/yr. Using maps from 1998 and 2013, Lake Borgne shoreline erosion rates were calculated along the Biloxi Marshes Wildlife Management Area (specifically in the vicinity of Point aux Marchettes). Shoreline erosion rates in that area ranged from 10 ft./yr. to 90 ft./yr. A 30,000 LF section of shoreline was estimated to have an average erosion rate of 26 ft./yr. It is estimated that without the project there would be over 383 acres lost due to shoreline erosion.

Goals

The project goals are to 1) protect approximately 30,000 feet of critical shoreline, 2) protect approximately 314 acres of highly productive brackish and saline marsh habitat, and 3) create 7,000 LF of terraces (3 acres of marsh/7 total acres).

Service goals include the creation of habitat or improvement of habitat for rare species, species of concern, and threatened and endangered species. The creation of brackish intertidal marsh habitat would be beneficial to several species that are currently on the lists of rare species and species of concern. These include, but are not limited to Least Bittern, Black Rail, Mottled Duck, Brown Pelican, King Rail, Louisiana Eyed Silkmoth, and Saltmarsh Topminnow.

Proposed Solution

The proposed project would: 1) Construct approximately 30,000 LF of rock revetment along a portion of the southern Lake Borgne shoreline. Rock would be placed on geotextile cloth and stacked to a settled height of +2.5. In critical interior areas, 7,000 LF of terraces would be constructed to help slow the erosion along the marsh ponds due to wind induced waves. Hopefully this would also slow the scouring action of the increasing tidal pulses.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 386 ac.
- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 250-300 net acres would result after the 20-year project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?*

The anticipated land loss rate reduction throughout the area of direct benefits is approximately >75% over the project life.

- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*

Installing shoreline protection would protect much of the southern Lake Borgne shoreline abutting the Biloxi Marshes Wildlife Management Area. The shoreline protection would also protect the natural ridges along a portion of Lake Shore Bayou, Bayou Grande as well as other smaller bayou ridges in the area.

- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
None

- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*

This project would work synergistically with the existing CIAP project and CWPPRA PO-30 project.

Considerations

Considerations for this project include Atlantic Sturgeon critical habitat, oysters, and maintenance.

Preliminary Cost

The fully-funded cost range is \$30M - \$35M.

Preparer(s) of Fact Sheet:

Robert Dubois (337) 291-3127 robert_dubois@fws.gov



- Rock Revetment (SP)
- Terraces
- 1998 Shoreline
- Marsh Lost 20yr.

0 2,500 5,000 10,000 Feet

PPL27 PROJECT NOMINEE FACT SHEET

April 14, 2017

Project Name

Bayou Cane Marsh Creation Project

Project Location

This project is located in Region 1, Upper Pontchartrain Basin, St. Tammany Parish, between Mandeville and Lacombe. The majority of the project would be located property owned by either the State of Louisiana (Fontainebleau State Park) or the Big Branch National Wildlife Refuge.

Problem

In 2005, the marshes in the North Shore Mapping Unit sustained severe damage due to Hurricane Katrina. Hundreds of acres of emergent marsh within this mapping unit lost the top 12-15 inches of material and the result was hundreds of acres of shallow open water. USGS calculated a 1985 – 2016 area loss rate of -0.46 % per year. Currently there is one area along the shoreline that looks as if a breach is forming. This area also has a small pond immediately behind the critical shoreline. If there were a breach in this area it would allow direct connection between the fresher interior marshes and higher salinity waters of Lake Pontchartrain.

Goals

The overall goal of this project is to restore marshes that were lost and/or damaged due to the effects of Hurricane Katrina. Restoring the marshes should reduce salinity effects on interior emergent marshes.

Specific Project Goals: 1) Create 430 acres of intertidal emergent marsh in shallow open water and nourish and additional 110 acres of fragmented and/or low marsh within the project area.

Proposed Solution

The proposed features of this project consists of filling approximately 430 acres of shallow open water and nourish an additional 110 acres with material hydraulically dredged from Lake Pontchartrain. Target settled marsh elevation would be +1.2 NAVD 88 (from PO-104), but will ultimately correspond to surrounding healthy marsh.

Temporary containment dikes would be constructed around each marsh creation/nourishment site to retain the dredged slurry. Containment dikes located adjacent to naturally occurring marshes or small interior ponds would be sufficiently gapped within 3 years of construction to allow for greater tidal and estuarine organism access. This project will work synergistically with the PO-33 Goose Point Marsh Creation project and the PO-104 Bayou Bonfouca Marsh Creation project which is currently under construction.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 540 ac.
- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 400-450 net acres would result after the 20-year project life.

- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?*

The anticipated land loss rate reduction throughout the area of direct benefits is approximately 50% to 74% over the project life.

- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*

This project would help maintain portions of the northern Lake Pontchartrain shoreline.

- 5) *What is the net impact of the project on critical and non-critical infrastructure?*

This project would have a net positive impact on critical infrastructure through the protection of numerous homes and businesses north of the project area.

- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*

This project would work synergistically with the Goose Point project (PO-33) and the Bayou Bonfouca Marsh Creation project (PO-104) currently under construction.

Considerations

Considerations for this proposed project include a borrow area located in Atlantic sturgeon critical habitat, landrights, and pipelines/utilities.

Preliminary Cost

The fully-funded cost range is \$25M - \$30M.

Preparer(s) of Fact Sheet:

Robert Dubois, Fish and Wildlife Service, 337-291-3127 Robert_Dubois@fws.gov



PPL 27 Bayou Cane Marsh Creation



PPL27 PROJECT NOMINEE FACT SHEET
April 12, 2017

Project Name

Bayou Bienvenue Marsh Creation Increment 1

Project Location

Region 1, Pontchartrain Basin, Orleans Parish, in the area east of the Inner Harbor Navigation Canal, adjacent to St. Bernard Parish and north of the Lower 9th Ward area of New Orleans.

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.

Goals

The goal of this project is to create/nourish marsh in one of several cells adjacent to Bayou Bienvenue using sediment mined from the Mississippi River. Specific goals include: 1) restoration of approximately 351 acres of open water into emergent marsh; 2) restoration of the historic bankline along Bayou Bienvenue; and 3) planning for the next phase(s) of marsh creation. The preferred initial increment for this project, depending on borrow source, is cell 1 on the attached map, with other increments envisioned for later PPLs.

Proposed Solution

Mississippi River sediment will be used to create/nourish emergent marsh in the triangular-shaped area adjacent to the headwaters of Bayou Bienvenue. The project would benefit 351 acres of wetlands by converting open water into marsh and nourishing existing marsh remnants. A total of 276 net acres of wetlands would be protected and created over the 20-year project life. The visibility of the project, due to its location, lends itself to educational and outreach opportunities. Florida Avenue in the Lower Ninth Ward is south of the project area. A community coalition, restorethebayou.org, is very interested in the area. Restoration in this area would build the area's defenses against hurricanes and flooding and offer opportunities for public recreation and wildlife habitat.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 351 acres. Direct benefits include 337 acres of marsh creation and 14 acres of marsh nourishment.
- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 250-300 net acres would result after the 20-year project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?*
The loss rate in the area of direct benefits would be reduced by 50%.

- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*

This project would help protect and restore a portion of the Bayou Bienvenue Marsh and restore the historic ridge along Bayou Bienvenue..

- 5) *What is the net impact of the project on critical and non-critical infrastructure?*

The project would have net positive impact to critical infrastructure by providing addition marsh buffer between Lake Borgne and the City of New Orleans and help protect the New Orleans East Hurricane protection levee.

- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*

This project would work synergistically with the approved CIAP Central Wetlands Assimilation Project with the Sewerage & Water Board of New Orleans (East Bank Plant) and St. Bernard Parish.

Considerations

Utility pipelines and numerous landowners are considerations in the project area.

Preliminary Cost

The fully-funded cost range is \$30M - \$35M.

Preparer(s) of Fact Sheet:

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Bayou Bienvenue Marsh Creation



Basemap: 2015 NAIP DOQQ
Produced by: EPA Region 6, Dallas, TX

0 0.125 0.25 0.5 0.75 Miles



PPL27 PROJECT NOMINEE FACT SHEET
April 12, 2017

Project Name

Feral Swine Control

Project Location

Coastwide Project

Problem

Feral swine are found throughout the southern U.S., and in all parishes of the State. In the last 5 to 10 years, hog populations in coastal marshes have increased, resulting in increasing rooting/foraging and wallowing damage to marshes. The hogs eat tubers of common marsh vegetation such as cattails, 3-corner grass, duck potato, elephant ear, plus other vegetation such as alligator weed (USFWS and LDWF 2015). Hog rooting has also been reported along the Gulf shoreline at Chenier au Tigre, the north shore of Lake Pontchartrain, and west shores of Little Lake. Hogs may also root up saltmarsh substrate and Gulf beaches to consume fiddler crabs and ghost crabs that have retreated into borrows. Hog related shoreline and marsh damage may be magnified by tropical storm events and normal winter storms. Hogs also may prey heavily on alligator nests, and eggs of ground-nesting birds, eggs of endangered sea turtles, and virtually any other wildlife that they can catch.

Goals

The project goal is to reduce marsh damage and wildlife depredation by working with coastal landowners to reduce hog populations in impacted marshes.

Proposed Solution

Make \$200,000 available annually (\$4M over 20 years) to cooperating marsh landowners to initiate annual or biannual helicopter gunning on their properties. Gunning would be conducted using USDA APHIS (Animal and Plant Health Inspection Service) personnel and equipment. In the event that APHIS resources are insufficient, private helicopter services may be used. Given the annual funding amount, approximately 239,000 acres could be treated annually (one shoot per year). Based on a study from Pass a Loutre Wildlife Management Area (USFWS and LDWF 2015), these efforts may reduce hog damaged marsh acreage by 66% to 86% per year.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
Approximately 14,744 acres would be benefitted directly by preventing hog damage. Indirect benefits have not been determined.
- 2) *How many acres of wetlands will be protected/created over the project life?*
If 2% of damaged marshes convert to open water annually, the project would save 250 to 300 acres over the 20 year project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%).* The anticipated loss rate reduction in marshes saved from conversion to open water would be > 75% (loss rate reduced from 100% to background loss rate).

- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
Hogs are rooting along Chenier Plain beaches, the rim of Little Lake, and the edges of other large water bodies. If those area are targeted under this project, the project will likely help to maintain these structural components of the coastal ecosystem.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
Based on preliminary landowner responses, no protection of critical infrastructure is foreseen at this time. Non-critical infrastructure may be afforded some protection however.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* The project is anticipated to have some synergistic effects with some marsh creation projects that have created high firm marsh which is being used and damaged by hogs (such as BA-37, and others).

Considerations

Helicopter availability/scheduling

Preliminary Cost

The fully funded cost range is \$5M - \$10M.

Preparer(s) of Fact Sheet:

Ronny Paille: U.S. Fish and Wildlife Service; 337-291-3117; Ronald.Paille@fws.gov

LITRATURE CITED

USFWS and LDWF 2015. Hog Removal to Reduce Hog Marsh Damage and Restore Freshwater Habitat for Nesting Mottled Ducks and Secretive Marsh Birds in the Mississippi River Bird-foot Delta. Cooperative Endeavor Project, Project Report, March 17, 2015.

Region	Basin	Type	Project			Considerations					Comments / Other
				Preliminary Fully Funded Cost Range	Preliminary Benefits (Net Acres Range)	Oysters	Land Rights	Pipelines/Utilities	O&M	Other ---->	
1	Pontchartrain	SP/TR	Point aux Marchettes Shoreline Protection and Terracing	\$30M - \$35M	250-300	X			X	X	Atlantic Sturgeon consultation
1	Pontchartrain	MC	Bayou Cane Marsh Creation	\$25M - \$30M	400-450		X	X		X	Atlantic Sturgeon consultation
1	Pontchartrain	MC	Bayou Bienvenue Marsh Creation - Increment 1	\$30M - \$35M	250-300		X	X			
2	Breton Sound	MC	Breton Landbridge Marsh Creation (West)	\$35M - \$40M	300-350		X				
2	Breton Sound	MC/TR	East Delacroix Marsh Creation and Terracing	\$25M - \$30M	250-300		X	X			
2	Breton Sound	MC/TR	Mid Breton Landbridge Marsh Creation and Terracing	\$35M - \$40M	350-400		X	X			
2	Barataria	MC/SP	Northeast Turtle Bay MC and Critical Area SP	\$30M - \$35M	300-350	X		X			
2	Barataria	MC	East Bayou Lafourche Marsh Creation	\$35M - \$40M	300-350	X	X	X			
2	Barataria	MC/TR	Grand Bayou Ridge and Marsh Restoration	\$40M - \$45M	300-350		X	X			
2	Barataria	MC	Elmer's Island Backbarrier Marsh Creation	\$25M - \$30M	200-250	X		X		X	Piping Plover and Red Knot Consultation
3	Terrebonne	MC	North Bayou Decade Ridge and Marsh Creation	\$35M - \$40M	200-250	X		X			
3	Terrebonne	MC	West LA Hwy 1 Marsh Creation	\$30M - \$35M	250-300	X		X			
3	Terrebonne	FD	Bayou Terrebonne Freshwater Diversion	\$20M - \$25M	150-200				X		
3	Terrebonne	MC	North Terrebonne Marsh Creation	\$45M - \$50M	400-450	X		X			
3	Terrebonne	MC/SP	East Catfish Lake Marsh Creation and Terracing	\$35M - \$40M	350-400	X		X	X		
3	Teche-Vermilion	MC/SP	Lake Sand Marsh Creation and Shoreline Protection	\$30M - \$35M	200-250	X		X	X		
3	Teche-Vermilion	MC/SP	West Vermilion Marsh Creation and Shoreline Protection	\$25M - \$30M	300-350	X		X	X		
4	Mermentau	MC/TR	Hwy 82 South Marsh Creation and Terracing	\$25M - \$30M	250-300		X	X			
4	Mermentau	HR/MC	Deep Lake Spillway Modification	\$35M - \$40M	600-700				X		
4	Calcasieu-Sabine	MC	Sabine Marsh Creation Cycles 6 & 7	\$30M - \$35M	800-900						
4	Calcasieu-Sabine	SP	East Holly Beach Shoreline Protection	\$30M - \$35M	100-150			X	X	X	Piping Plover and Red Knot Consultation
4	Calcasieu-Sabine	MC	North Mud Lake Marsh Creation	\$35M - \$40M	250-300			X		X	Piping Plover and Red Knot Consultation; Hwy. 27 corridor
	CoastWide		Feral Swine Control	\$5M - \$10M	250-300					X	Helicopter availability

** Project construction could affect critical habitat for that species.
Consultation with appropriate agency required.

PPL27 DEMONSTRATION PROJECT NOMINEE FACT SHEET

April 12, 2017

Demonstration Project Name: Living Blanket

Potential Demonstration Project Location(s): Coastwide

Problem:

Shoreline protection features of restoration projects can be effective at attenuating wave energy and protecting nearby shorelines from erosive forces. Over time and under the right environmental circumstances, oysters may recruit naturally to these structures and are desirable for improvements in water quality, aquatic organism habitat, and add to the shoreline protection potential of the structures. However, with traditional shoreline protection methods, oyster reef development can only occur after construction, delaying possible oyster community establishment. Additionally, oyster recruitment is not guaranteed due to predation, high energy environments not allowing spat set, or other environmental factors limiting spawning events or spat survival. Living Blanket is a shoreline protection technique that can eliminate the lag time between project construction and natural oyster recruitment of shoreline protection features in restoration projects and has the potential to guarantee the formation of oyster communities on shoreline protection features where natural recruitment may be limited or non-existent.

Goals:

Living Blanket seeks to improve upon existing shoreline protection methods, specifically articulated concrete blocks (ACB), by seeding with oysters prior to construction. The development of the oyster community will also encourage a vertical accumulation of oyster reef to counteract the continual Sea Level Rise.

Proposed Solution:

Living Blanket eliminates the lag time between construction of shoreline protection features and natural oyster recruitment. Living Blanket establishes an early age oyster community instantaneously at the project site by seeding ACB with oyster spat pre-construction, transporting the blocks seeded with oysters to the construction site, and installing the blocks seeded with oysters directly. Additionally, fossilized oyster shell is used as a primary material in Living Blanket concrete. Compared with standard concrete oyster larvae will preferentially settle to Living Blanket concrete blocks, which give the blocks a continued advantage as the oyster reef establishes. The demonstration project will install three reaches including one replicate of each ACB treatments (oyster seeded Living Blanket ACB, unseeded Fossilized Shell ACB, and industry standard Control ACB) laid widthwise along the shore.

Specific project features include:

1. 864 LF shoreline protection consisting of three equal 288 LF reaches
2. Each 288 LF reach consists of one replicate of each treatment
 - a. 20 Living Blanket ACB mats x 8 LF wide totaling 160 LF
 - b. 8 Fossilized Shell ACB mats x 8 LF wide totaling 64 LF
 - c. 8 Control ACB mats x 8 LF wide totaling 64 LF

Preliminary Project Benefits:

Project benefits include:

1. Instantaneously establish an oyster community. Each square foot of the Living Blanket will be seeded with approximately 1000 oyster larvae. With a 30% survival ratio, this results in a minimum of 300 spat per square foot.
2. Reduce marsh loss caused by erosive forces on 864 LF of shoreline;
3. Reduce wave energy
4. Collect sediment by reducing wave energy;
5. Protect and enhance shoreline vegetation;

Preliminary Construction Costs:

The estimated construction cost including 25% contingency is \$1,894,200.

Preparer(s) of Fact Sheet:

Chris Cannon, Living Blanket, LLC., chris@livingblanket.com

Cody Colvin, USDA/NRCS, (225) 665-4253 ext. 112, Cody.Colvin@la.usda.gov

Kent Bollfrass, CPRA, (225) 342-4733, kent.bollfrass@la.gov



Figure 1: Not-to-scale example of Living Blanket demonstration layout. Each of three articulated concrete block (ACB) mat treatments (Living Blanket ACB, Fossilized Shell ACB, and Control ACB) has three replicates.

PPL27 DEMONSTRATION PROJECT NOMINEE FACT SHEET

April 14, 2017

Demonstration Project Name: Shoreline Protection Utilizing Engineered In-situ Native Material

Potential Demonstration Project Location(s):

Coastwide; Proposing Rockefeller Wildlife Refuge, Cameron Parish

Problem:

Excessive erosion and subsidence to Louisiana's barrier islands, Gulf beachfront, bay and lake shorelines cause loss of thousands of acres of wetlands. At the proposed demonstration project location shoreline erosion rates at the Rockefeller Wildlife Refuge have been recently measured in excess of 311 feet per year (2015-2016 Survey), which is 253 feet more than the 16-year average from 1998 to 2014 (Google Imagery). A large portion of the coastline contains soils that will support rip-rap and requires nonconventional armament. The need for stabilization in critical areas was noted by both CWPPRA and CPRA.

Goals:

To minimize and/or prevent continued erosion of the shoreline; hence, protecting the interior marsh and estuarine systems from the forces of the Gulf of Mexico.

Proposed Solution:

Stabilization will take place in-situ by blending in a combination of patented Low Solids Stabilization (LSS) reagents/amendments with existing shell hash and clay to create mineral growth that gains in strength and is not susceptible to rehydration. The LSS stabilized materials will not rehydrate and not revert to an unstable, low-strength state. A small dimension of un-amended shoreline between the stabilized native material and open water will eventually erode, exposing the native stabilized material that would serve to protect the remaining coastline. Shell hash will potentially begin to collect along the slope of native material, but will be contained so it doesn't continue rolling over into the marsh.

To simulate real conditions, a total of three (3) 500 foot long by 75 foot wide segments of beach will be stabilized in-situ. All three (3) segments will be stabilized via land access. Marooka LGP tracked dump trucks will be used to haul materials to each segment. The LSS reagent will be spread evenly by the LGP tracked dozer over each grid. Preliminary treatability testing suggests LSS reagent be applied at 7.5% of the combined weight of shell hash and clay mixture. A marsh excavator will primarily be used to stabilize grids 6 feet deep running parallel and adjacent to the Gulf of Mexico. A 300-size conventional excavator will be used to stabilize grids 5 feet deep that eventually interface with the marsh, working from the stabilized grids prepared by the marsh excavator. A low ground pressure (LGP) D6-size dozer will be used to grade the slopes; 5:1 on the Gulf side and 10:1 on the marsh side.

The resultant stabilized native material is designed to withstand the constant wave action forces and periodic storm surge much like the stabilized dikes that surround and protect a multi-billion dollar LNG facility. The characteristics of Louisiana's coastline vary, which is why representative samples must be collected and tested with various reagent dosages to determine optimum strength conditions.

Preliminary Project Benefits:

The proposed project would:

1. Be environmentally safe;
2. Provide immediate shoreline protection;
3. Appear like natural existing shorelines but less dense;
4. Cost less than riprap placement and man-made non-rock solutions;
5. Absorb and deflect wave energy and storm surges;
6. Protect and enhance existing marsh and future marsh creation projects;
7. Trap sediment behind the shoreline to build up marsh during storm surge events, without eroding away; and
8. Reduce interior marsh loss.

Preliminary Construction Costs:

The estimated construction cost including 25% contingency is \$1,117,938.

Preparer(s) of Fact Sheet:

Ron Boustany, NRCS, 337-291-3067; ron.boustany@la.usda.gov

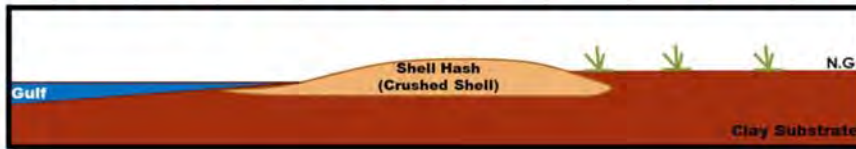
Cody Colvin, NRCS, 225-665-4253 x112; cody.colvin@la.usda.gov

Terry Dugas, Project Consulting Services, Inc., 337-456-9084;

tdugas@projectconsulting.com



Conceptual Design: LSS Reagent Implementation



Current Site Conditions



Blending of LSS Reagent



Post Stabilization Efforts

PPL27 DEMONSTRATION PROJECT NOMINEE FACT SHEET

April 12, 2017

Demonstration Project Name: Crescent Stabilization System™

Potential Demonstration Project Location(s): Coastwide

Problem:

The problem statement is twofold. First, marsh creation investments sited along canals or large open water bodies are subject to erosion from waves, tidal currents and vessel wakes. Armoring of earthen containment dikes is often confounded by poor geotechnical conditions, made worse by the excavation of containment dike material. Second, dedicated shoreline protection projects perform poorly in the CWPPRA scoring process due to high cost to benefit ratios. Yet, shoreline protection still remains a critical tool for maintaining existing landforms and hydrologic patterns.

Goals:

The specific goal of this proposal is to equip the CWPPRA program with a new tool for stabilized marsh fill containment and shoreline protection. Our proposed demonstration project will validate the efficacy of the Crescent Shoreline System™ for retaining dredged material in challenging environments and reducing shoreline erosion.

Proposed Solutions:

The Crescent Stabilization System™ is a modular precast concrete armor unit designed to contain dredged material and break waves in the most economical way possible. The Crescent™ units are simple to fabricate, simple to install and use the least concrete per length of shoreline for the given design conditions. The articulating crescent shape allows the Crescent Stabilization System™ to follow shorelines or bottom contours while maintain continuous contact, which gives it a unique attribute of containment of dredged material and an advantage over other precast shoreline protection structures currently on the market. The Crescent Stabilization System™ could be filled and planted to provide additional stability. Openings could be formed in the face of the structure to transform it into a reef structure.

The specific demonstration project proposal consists of the following features:

- 1) 1,800 LF of 5 ft tall x 11 ft wide Crescent Stabilization System:
 - o Three 300 LF sections on canal side to test the product's ability to reduce shoreline erosion.
 - o Three 300 LF sections tied into earthen containment dikes forming a 10-acre marsh creation cell.
- 2) 1,800 LF of earthen containment dikes, which tie into the test-sections of the Crescent Stabilization System to form containment for a marsh creation cell.
- 3) Approx. 10 acres of marsh creation within the containment cell created by the Crescent and earthen containment dike.

Preliminary Project Benefits:

Project benefits include:

- 1) 10 acres of created marsh habitat and reduced shoreline erosion

- 2) a cost competitive method for containing dredged material in erosive conditions
- 3) a cost effective alternative for shoreline protection

Preliminary Construction Costs:

The estimated construction cost including 25% contingency is \$2,381,824.

Preparer(s) of Fact Sheet:

Tyler Ortego, Coastal Resilience Group, LLC, 225-372-5570, tyler@coastalrg.com

Matthew Campbell, Coastal Resilience Group, LLC, 225-372-5570, matt@coastalrg.com

Kent Bollfrass, CPRA, 225-342-4733, kent.bollfrass@la.gov

Travis Byland, CPRA, 225-342-6750, travis.byland@la.gov



PPL27 DEMONSTRATION PROJECT NOMINEE FACT SHEET

April 12, 2017

Demonstration Project Name: Marine Gardens/Marsh Armor

Potential Demonstration Project Location(s): Coastwide

Problem:

Louisiana has the largest expanse of coastal wetlands in the United States, but the state's 3 million acres of marsh and wetlands – a critical storm buffer – are lost at a rate of about 12,300 acres each year. Nearly 2,000 square miles of the Louisiana coast has been lost due to coastal erosion, subsidence, and human activities since the 1930s. Breaches are commonplace in the coastal marshes and are known to cause and exacerbate land loss. This demonstration would address this specific type of shoreline erosion.

Goals:

1. Construct three cost effective coastal erosion hard armor structures that would restore and protect coastal marsh areas by closing shallow breaches.
2. Demonstrate the use of geopolymers as a superior, significantly cheaper construction material for coastal erosion structures.
3. Demonstrate benefits of a trapezoid tube modular design.
4. Effectively monitor and document the ability of the project to meet stated goals.

Proposed Solution:

The proposal is to design, build, and install three trapezoidal erosion control structures using reinforced marine geopolymer concrete/Kenaf fiber matrix. These structures would be 300 feet long and would be installed at three different locations where there are breaches in coastal marsh or where needed. A portable 36 foot long shotcrete Robotic arm manufactured by Shotcrete Technologies Inc. would be installed on a Marsh Master II lightweight marsh buggy and used to form/print/extrude and install the coastal erosion structure. The project would mix a low-cost geopolymer concrete formula using local minerals and local soils at ambient conditions. These are stable structures that would produce a solid protection barrier. This is a permanent hardened armor structure for a shallow breach or wherever hardened stable protection is needed.

To 3D construct on-site would require relatively calm conditions during construction. The proposed project would be composed of a foundation mat 20 ft. wide from ½ to 1 inch thick. It would be installed and allowed to set for 6 hours. Additional fill to level the foundation beforehand would be made using 2/3 sand and 1/3 geopolymer concrete. Then the construction of the trapezoid structure can begin. It is designed as a continuous structure with a 9-ft. wide base, 7-ft. wide top, with a 3-ft. height. Its low wide design adds stability. The structure walls, top, bottom, center bulkhead and mat are all made from a Marine stone fiber matrix consisting of geopolymers, kenaf, steel and mineral fiber reinforcement. The materials are Marine Grade, and would undergo independent testing and certification by a qualified lab for compression, Young's modulus, tensile, TCLP, TNORM and XRD. The Geopolymer Institute located in Saint-Quentin, France

would certify these materials to insure they meet the standards of the Institute. Two built-in culverts as per drawing can be used to divert fresh water or may be used for ballast or settling. Each end would have an additional 5 ft. of foundation mat and properly tapered or contoured for the location.

Geopolymer materials are common soils including sand from the river or Gulf (55-60%) and waste mineral streams (25-38%) from local industrial plants. Binding agents/polymerizing agents compose the remaining 2-6% of the elements in the geopolymer concrete composite and when all the materials are properly mixed and cured, the geopolymer forms a new mineral specie or stone.

See Appendix for design drawing.

Preliminary Project Benefits:

1. Rapid construction, effective low cost breach repair for the program.
2. Access to areas that other methods may need deep water access.
3. Less sinking than limestone, less maintenance, uses substantially less material.
4. Absorbs and deflects wave energy.
5. Protect and enhance existing or planted shoreline vegetation.
6. Collect sediment by reducing wave energy and design features.
7. Reduces interior marsh erosion.
8. Protect and enhance aquatic life

Preliminary Construction Costs:

The estimated construction cost including 25% contingency is \$2,080,035.

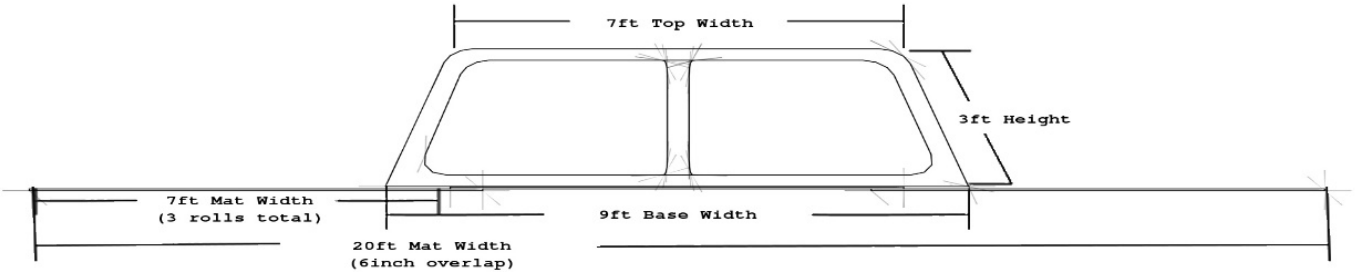
Preparer(s) of Fact Sheet:

Susan M. Hennington, USACE, (504) 862-2504, susan.m.hennington@usace.army.mil.
Michael Boatright, Marine Gardens LLC, (504) 430-8900, michaelboatright@ecorigs.org

PPL 27 Marine Gardens/Marsh Armor DEMO Fact Sheet
Appendix
(12 Apr 2017)

Figures 1 and 2. Marsh Armor trapezoidal coastal erosion structure end view and top view.

**Marsh Armor End View
(cross section)**



Marsh Armor Top View

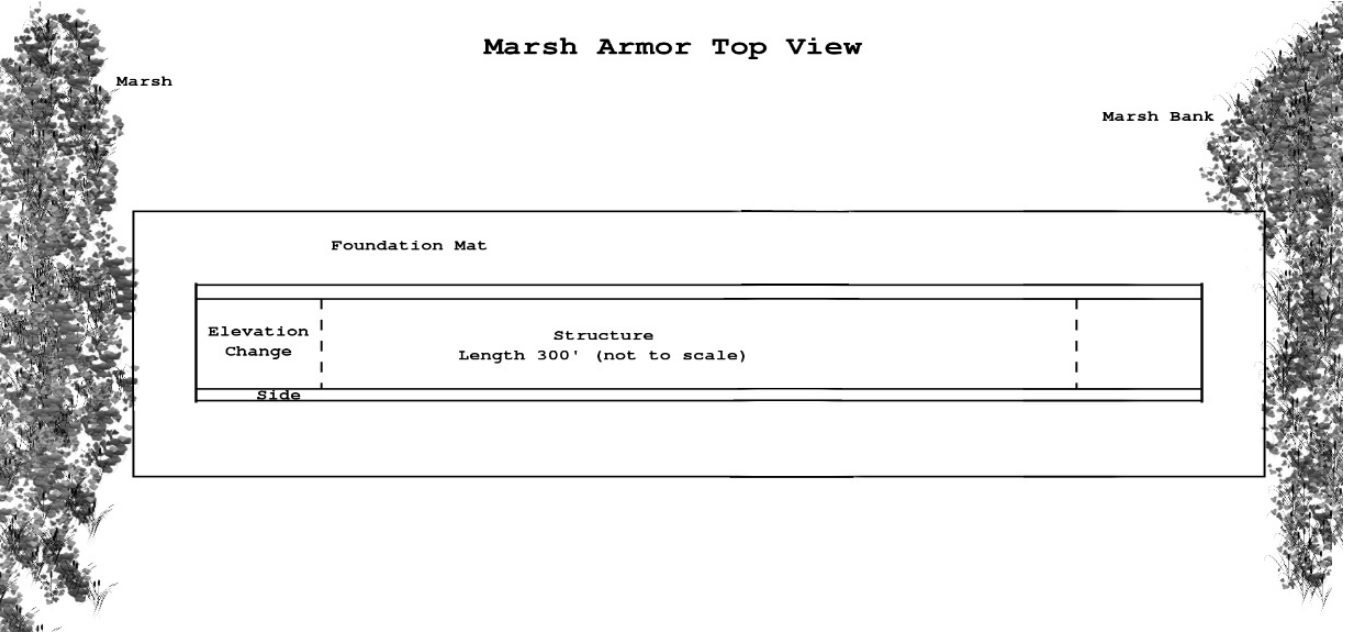


Figure 3. Marsh Armor trapezoidal coastal erosion structure side view.

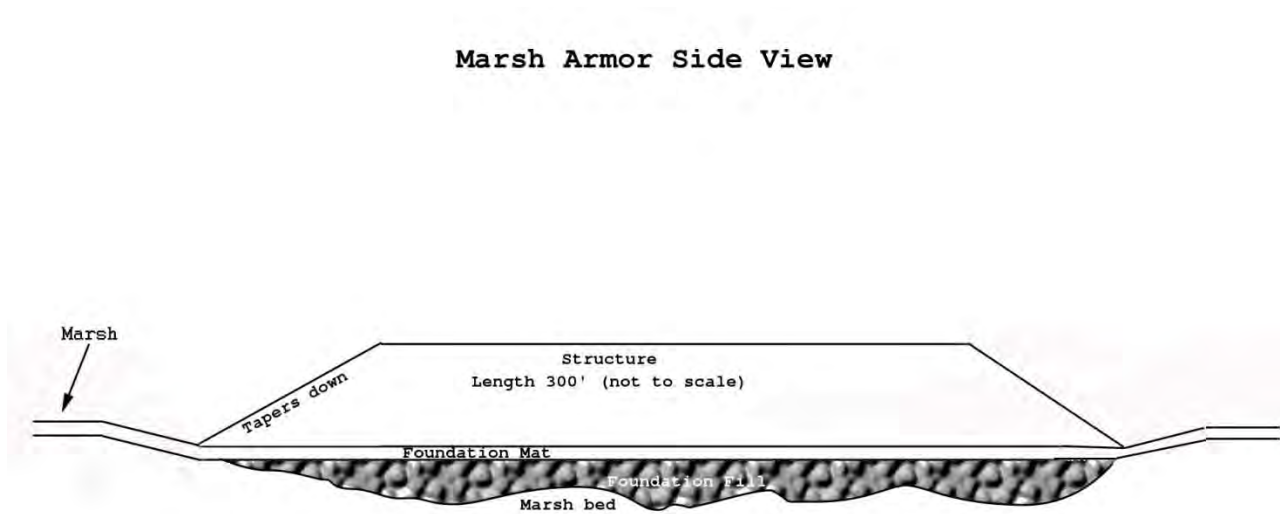


Table 1. Approximate weight of the geopolymer structures per linier foot, cubic yard, and total weight.

Approximate wt.	Per linier ft.	Per cubic yard	Per structure	Total lbs.	Tons
Trapezoid	534	4,000	160,200	480,600	240
Foundation	240	4,000	72,000	216,000	108
Total	774		232,200	696,600	3,483

CWPPRA PPL 27 Nominee Demonstration Projects

Demonstration Project Name	Estimated Cost plus 25% contingency **	Technique Demonstrated
Living Blanket	\$1,894,200	The Living Blanket project is to demonstrate the effectiveness and efficiency of installing articulated concrete block (ACB) with live oysters incorporated with fossilized shell and producing the only living shoreline upon placement that will enhance and promote faster shoreline protection and reef establishment than the standard ACB. This product seeks to provide an instantaneous oyster reef in a high-energy area where shoreline erosion is high and oyster production is minimal and to combat Sea Level Rise with vertical accumulation of oysters for long-term shoreline protection.
Shoreline Protection Utilizing Engineered In-Situ Native Material	\$1,117,938	This product will demonstrate the use of Low Solids Stabilization (LSS) reagents/amendments to existing in-situ material to form a stabilized native material designed to withstand the constant wave action and periodic storm surge along vulnerable shorelines that are experiencing significant erosion. The product will introduce an innovative and cost-effective approach to shoreline protection.
Crescent Stabilization System	\$2,381,824	The project would demonstrate an innovative solution for shoreline protection and dredge containment in high energy environments. The crescent shaped design allows the product to contour to shorelines.
Marine Gardens/Marsh Armor	\$2,080,035	This demo would evaluate the effectiveness of using a different kind of erosion control structure composed of geopolymer materials in a trapezoid shape (future uses not limited to this shape) to restore and protect coastal marsh areas by closing shoreline breaches or gaps to deter further erosion of the existing shorelines and vicinity marshes.

04/17/17

** Costs do NOT include a monitoring program and are NOT fully funded.

Letters of Support

CURTIS FOUNTAIN
PRESIDENT

JOE DUPONT
VICE PRESIDENT

RYAN BOURRIAQUE
PARISH ADMINISTRATOR

DARRELL WILLIAMS
SECRETARY/ASSISTANT ADMINISTRATOR

KATIE ARMENTOR
TREASURER



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DISTRICT 2
ANTHONY HICKS
DISTRICT 3
KIRK QUINN
DISTRICT 4
TERRY BEARD
DISTRICT 5
DAVY L. DOXEY
DISTRICT 6
JOE DUPONT
DISTRICT 7
DARRYL FARQUE
DISTRICT 8
LAWRENCE FAULK, JR.

RESOLUTION

RESOLUTION NO. 1055

STATE OF LOUISIANA PARISH OF CAMERON

WHEREAS, Cameron Parish is participating in the Coastal Wetland Planning, Protection and Restoration Act Project Priority List 27 process, and

WHEREAS, the Cameron Parish Police Jury has reviewed all submitted projects according to the goals and objectives of the Cameron Parish Comprehensive Plan for Coastal Restoration & Protection, and

WHEREAS, each of the prioritized projects are vital to the recovery, protection, and sustainability of our coastal wetlands in Cameron Parish, and

WHEREAS, the Cameron Parish Police Jury hereby acknowledges the proposed Sabine Marsh Creation Cycles 6 & 7, East Holly Beach Shoreline Protection, North Mud Lake Marsh Creation, Highway 82 South Marsh Creation and Terracing, and Deep Lake Spillway Modification/Mermentau Sub-Basin Hydrologic Restoration projects are of great importance to our residents and landowners and hereby requests these projects to be moved forward toward engineering & design, and

NOW, THEREFORE BE IT RESOLVED, by the Cameron Parish Police Jury on this 6th day of April 2017, that the Secretary is hereby authorized, empowered and directed to forward this Resolution of support to the Coastal Wetland Planning, Protection and Restoration Act Technical Committee and Task Force for the following projects:

- Sabine Marsh Creation Cycles 6 & 7
- East Holly Beach Shoreline Protection
- North Mud Lake Marsh Creation
- Highway 82 South Marsh Creation and Terracing
- Deep Lake Spillway Modification/Mermentau Sub-Basin Hydrologic Restoration

BE IT FURTHER RESOLVED, that the Coastal Wetland Planning, Protection and Restoration Act Technical Committee, through this Resolution, are requested to support the engineering and design funding for this project.

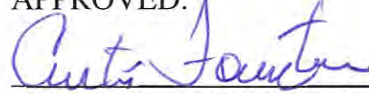
THUS DONE AND ADOPTED by a the following votes of the Cameron Parish Police Jury, in regular session convened on this April 6, 2017.

YEAS: Mr. Darryl Farque, Mr. Curtis Fountain, Mr. Joe Dupont, Mr. Anthony Hicks, Mr. Davey Doxey, Mr. Kirk Quinn, Mr. Lawrence Faulk

NAYS: None

ABSENT: Mr. Terry Beard

APPROVED:



CURTIS FOUNTAIN, PRESIDENT

ATTEST:



DARRELL WILLIAMS, SECRETARY

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 27, 2017

UPCOMING 20-YEAR LIFE PROJECTS

For Report/Decision:

The project sponsors will present recommended paths forward for projects nearing the end of their 20 year lives (includes demonstration projects which have an 8 year life). The Technical Committee will vote on a recommendation to the Task Force on the path forward for the following projects.

- a. Projects requesting approval for project closeout with no additional cost increase:

CS-28-1	Sabine Refuge Marsh Creation Cycle 1	COE	2022
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- b. Projects requesting approval for project closeout, feature removal, and cost increase:

TE-45	Terrebonne Bay Shoreline DEMO	FWS	2016
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bbill \ All CWPPRA 20YL Expiration Dates Feb 2017 after call.xlsx

Terrebonne Bay Shoreline Demonstration Project (TE-45)
Close-out with Removal of Features

The Fish and Wildlife Service and Coastal Protection and Restoration Authority (CPRA) request to proceed to close the Terrebonne Bay Demonstration project (TE-45) and remove its features.

The project was approved in 2001 (PPL 10) for a cost of \$2.74 M. It was constructed in November 2007 with an 8-year life ending in 2015. The project was extended to complete the final operations, maintenance and monitoring (OM&M) report in 2016, and extended for a possible Nichols State University RESTORE Act study, which was not funded.

Some of the Reach E revetment has experienced erosion from the marsh side and is currently in open water. The other two features (Reef Blocks and Ajax) are submerged much of the time, which poses problems to public safety.

The Reach A and B revetment feature may not pose as high a threat to public safety as features in open water; however, the landowners are not willing to accept responsibility of project features.

Recommendation: Close the project and remove the features. A budget increase of at least \$400,000 is needed to remove the features, and balance the budget if needed.



Terrebonne Bay Shore Protection Demonstration (TE-45)

Project Status

Approved Date: 2001 **Project Area:** N/A
Approved Funds: \$2.74 M **Total Est. Cost:** \$2.74 M
Net Benefit After 20 Years: N/A
Status: Construction
Project Type: Demonstration: Shoreline Protection
PPL #: 10

Location

The project is located along the northern shore of Lake Barre in Terrebonne Parish, Louisiana.

Problems

Erosion of bay shore marshes results in substantial losses of saline marsh allowing higher salinities and increased wave action to intrude northward, ultimately threatening low-salinity habitats at the northern ends of the area's intertributary basins.

Restoration Strategy

Maintenance of shoreline integrity along Terrebonne Bay is a regional strategy in the Coast 2050 plan. Given the great linear distances involved in implementing this strategy, techniques less costly than traditional rip-rap armoring will likely be needed to effectively address this problem. This demonstration project would seek to demonstrate the cost and effectiveness of alternative shore protection methods including artificial oyster reefs. Each protection measure would be installed near or on marsh shorelines to provide wave-protection.

Three techniques have been chosen based on anticipated effectiveness and cost (gabion mats, concrete onshore armor units, and foreshore triangle units). Three replicates of each technique will be installed in random order as per Louisiana Department of Natural Resources monitoring personnel. To better assess the effect of the oyster reef techniques, monitoring will be conducted over an 8-year period, rather than the usual 5 years.

Progress to Date

The Feasibility and Preliminary Design Report was completed in November 2002. Techniques to be tested and final site selections were made at that time and were based on the surveys, geotechnical investigations and preliminary engineering and design presented in that report. Construction approval was granted in August 2003 with a notice to proceed dated August 22, 2007 and an actual start date of September 13, 2007. Completion of this project should be mid November 2007.

This project is on Priority Project List 10.



Installation of Gabion Mats (one of the three techniques being used on this project) along the north shore of Lake Barre.



Installed Gabion Mats along the north shore of Lake Barre.

For more project information, please contact:



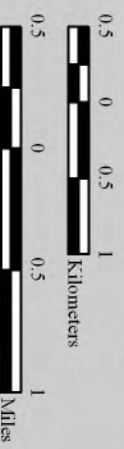
Federal Sponsor:
U.S. Fish and Wildlife Service
Lafayette, LA
(337) 291-3100



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

Terrebonne Bay Shore Protection Demonstration (TE-45)

-  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 Field Station
Baton Rouge, La.

Background Imagery:
2005 Digital Orthophoto Quarter Quadrangle

Map Date: September 24, 2007
Map ID: USGS-NWRC 2007-11-0367
Data accurate as of: September 24, 2007



COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 27, 2017

**FY18 PLANNING BUDGET APPROVAL, INCLUDING THE PPL 28 PROCESS, AND
PRESENTATION OF FY17 OUTREACH BUDGET (PROCESS, SIZE, FUNDING, ETC.)**

For Decision:

The P&E Subcommittee will present their recommended FY18 Planning Program Budget development, including the PPL 28 Process.

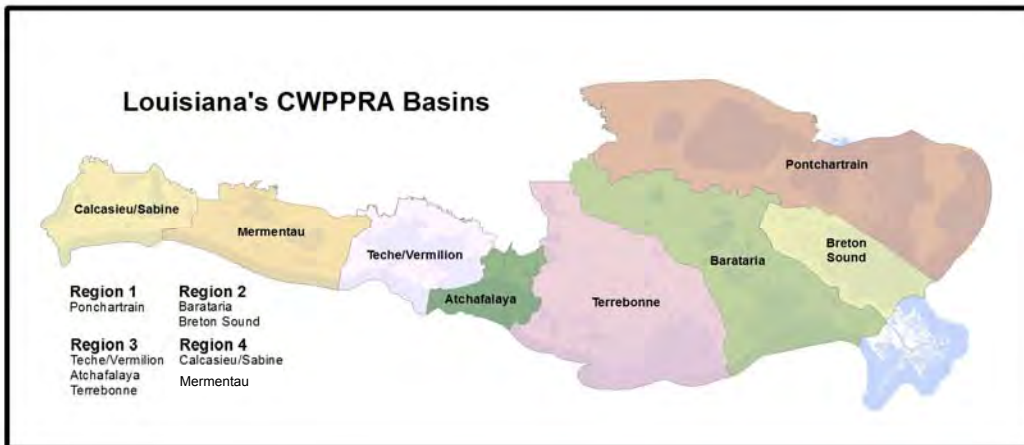
- a. The Technical Committee will vote on a recommendation to the Task Force to approve that the PPL 28 Process include selecting four nominees in the Barataria and Terrebonne Basins; three projects in the Breton Sound and Pontchartrain Basins; two nominees in the Mermentau, Calcasieu/Sabine, and Tech/Vermilion Basins; and one nominee will be selected in the Atchafalaya Basin.
- b. The Technical Committee will vote on a recommendation to the Task Force to approve the FY18 Outreach Committee Budget, in the amount of \$452,113.
- c. The Technical Committee will vote on a recommendation to the Task Force to approve the FY18 Planning Budget (includes Outreach Committee Budget), in the amount of \$5,118,132.



Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Priority Project List (PPL) Selection Process

Project Nominations

The 4 Regional Planning Teams (RPTs), consisting of representatives from the CWPPRA agencies and the coastal parishes located in those regions, will meet to propose projects to be included on the new PPL. Project nominations will be accepted in all the hydrologic basins below. *All proposals must be consistent with the 2012 State Master Plan to be considered as possible nominees; therefore, those wishing to propose projects are encouraged to work with representatives of the Louisiana Coastal Protection and Restoration Authority prior to the RPT meetings to develop projects that are consistent.* A lead agency will be assigned to each nominated project to prepare preliminary project support information (factsheet, maps, and potential designs, and benefits).



- 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.
- Multi-basin projects can be broken into multiple projects to be considered individually in the basins which they occur.
- Project nominations that are legitimate coastwide applications will be accepted separate from the 8 basins at any of the 4 RPT meetings.

If similar projects are proposed within the same area, the RPT representatives, including the CWPPRA agencies and *only* the parishes located within the project's basin, 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, and the federal sponsor of the project will be determined prior to the coastwide electronic vote. This decision to either combine similar projects or allow each to move forward will be made at the RPT meeting where the similar projects are proposed.

Prior to voting on project nominees, the Environmental Work Group (EnvWG) and Engineering Work Group (EngWG) will screen coastwide project and demonstration project nominations to ensure that each qualifies for its respective category as set forth in the CWPPRA Standard Operating Procedures (SOP).

Nominees	Basin
4	Barataria
4	Terrebonne
3	Breton Sound
3	Pontchartrain
2	Mermentau
2	Calcasieu/Sabine
2	Teche/Vermilion
1	Atchafalaya
1	Coastwide
22	TOTAL

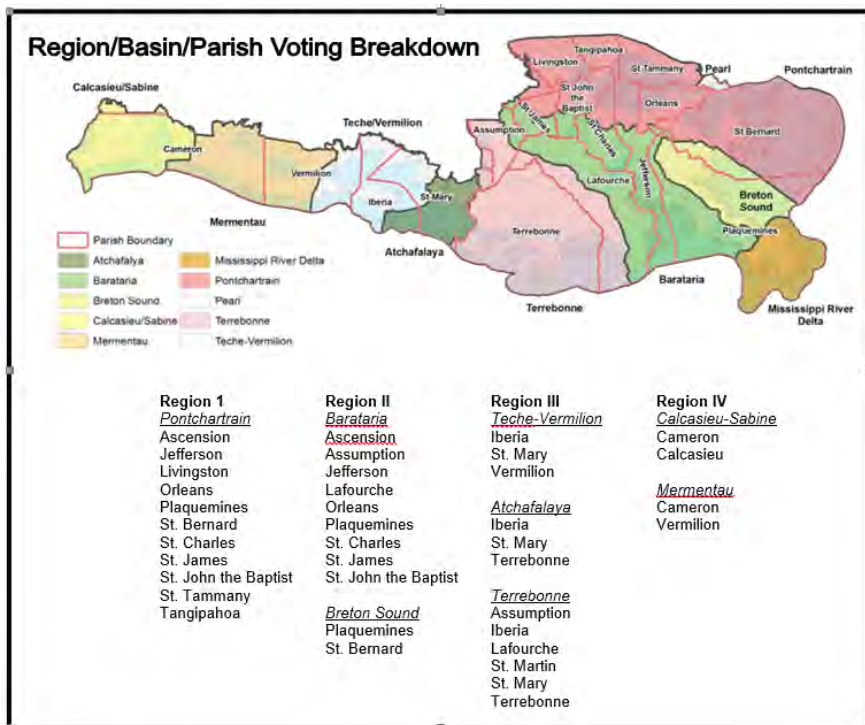
Coastwide Electronic Vote

The RPTs will vote after the individual RPT meetings via email to select nominee projects. The RPTs will select projects per basin based on land loss rates (see table on left) and up to 6 demonstration projects.

If a tie occurs, each tied project will be ranked according to the number of voting entities, both agencies and parishes, which voted one project higher over the other. The project with the most support will move forward. If this still results in a tie, the agencies and parish representatives will receive another voting sheet to break the tie to select which project will advance through the CWPPRA process. These voting sheets will be due no later than the following day.

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During the RPT meetings, all CWPPRA agencies and parishes will be required to provide the name and contact information for the official representative who will vote to select nominee projects. Each officially designated parish representative in the basin will have one vote and each federal agency and the State will have one vote.



Preliminary Assessment of Nominated Projects

Agencies, parishes, landowners, and other individuals will informally confer to further develop projects. The lead agency designated for each nominated project will prepare a brief project description that discusses possible features. Factsheets will also be prepared for demonstration project nominees.

During this preliminary assessment, the EngWG and EnvWG meet to review project features, discuss potential benefits, and estimate preliminary fully funded cost ranges for each project. The Work Groups also review the nominated demonstration projects. If it is determined that a demonstration project is unlikely to be utilized in restoration or has been evaluated previously, the Work Groups may recommend to the Technical Committee that these projects not move forward.

The P&E Subcommittee prepares a matrix of cost estimates and other pertinent information for nominees and demonstration project nominees.

Selection of Phase 0 Candidate Projects

The selection of the Phase 0 candidate projects occurs at the spring Technical Committee meeting. The Technical Committee meets to consider the project costs and potential wetland benefits of the nominees. They will select 10 candidate projects regardless of basin and may select up to 3 demonstration project candidates for detailed assessment by the EngWG, EnvWG, and Economic Work Group (EcoWG).

Phase 0 Analysis of Candidate Projects

During Phase 0 analysis, the EngWG, EnvWG and Academic Advisory Group meet to refine project features and develop boundaries for the project and extended boundaries for estimating land loss.

The sponsoring agencies coordinate site visits for each project to observe the conditions in the project area. There will be no site visits conducted for demonstration projects. The sponsoring agencies develop draft WVAs and prepare Phase 1 engineering and design cost estimates and Phase 2 construction cost estimates, using formats approved by the applicable work group. Demonstration project candidates will be evaluated as outlined in Appendix E of the SOP.

The EngWG reviews and approves Phase 1 and 2 cost estimates, the EcoWG reviews cost estimates and develops annualized (fully funded) costs, and the EnvWG reviews and approves all draft WVAs.

The Corps of Engineers staff prepares an information package for Technical Committee review and public distribution consisting of:

- 1) Updated project factsheets;
- 2) A matrix that lists projects, fully funded cost, average annual cost, WVA results in net acres and Average Annual Habitat Units (AAHUs), and cost effectiveness (average annual cost/AAHU);
- 3) A qualitative discussion of supporting partnerships and public support.

Selection of the PPL

The selection of the PPL will occur at the winter Technical Committee and Task Force meetings. The Technical Committee meets and considers matrix, project factsheets, and public comments, then recommends up to 4 projects and up to one demonstration project for selection to the PPL. The Task Force will review the Technical Committee recommendations and determine which projects will receive Phase 1 (design) funding for the PPL.

Once a project completes Phase I, Phase II (construction) funding must be requested from the Task Force and much of the evaluation is updated using additional information gained since original analysis.

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Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) PPL 28 Schedule

January 2018	Region IV Planning Team Meeting (Abbeville)
February 2018	Region III Planning Team Meeting (Morgan City)
February 2018	Regions I and II Planning Team Meetings (Lacombe)
March	Coastwide RPT Electronic Vote
March/April 2018	Agencies prepare factsheets for RPT-nominated projects
March/April 2018	Engineering/Environmental Work Groups review project features, benefits, & prepare preliminary cost estimates for nominated projects (Baton Rouge)
April 2018	P&E Subcommittee prepares matrix of nominated projects showing initial cost estimates and benefits
April 2018	Spring Technical Committee Meeting, select PPL 28 candidate projects (New Orleans)
May/June 2018	Candidate project site visits
May 2018	Spring Task Force Meeting (Lafayette)
July/August/ September 2018	Eng/Eng/Econ Work Group project evaluations
September 2018	Fall Technical Committee Meeting, O&M and Monitoring funding recommendations (Baton Rouge)
October 2018	Fall Task Force Meeting, O&M and Monitoring approvals (New Orleans)
October 2018	Economic, Engineering, and Environmental analyses completed for PPL 28 candidates
December 2018	Winter Technical Committee Meeting, recommend PPL 28 and Phase I and II approvals (Baton Rouge)
January 2019	Winter Task Force Meeting, select PPL 28 and approve Phase II requests (New Orleans)

****DATES SUBJECT TO CHANGE****

Visit www.lacoast.gov/calendar for up-to-date information regarding meetings dates, times, & locations.

CWPPRA FY 2018 Public Outreach Budget



COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

RESTORING COASTAL LOUISIANA SINCE 1990

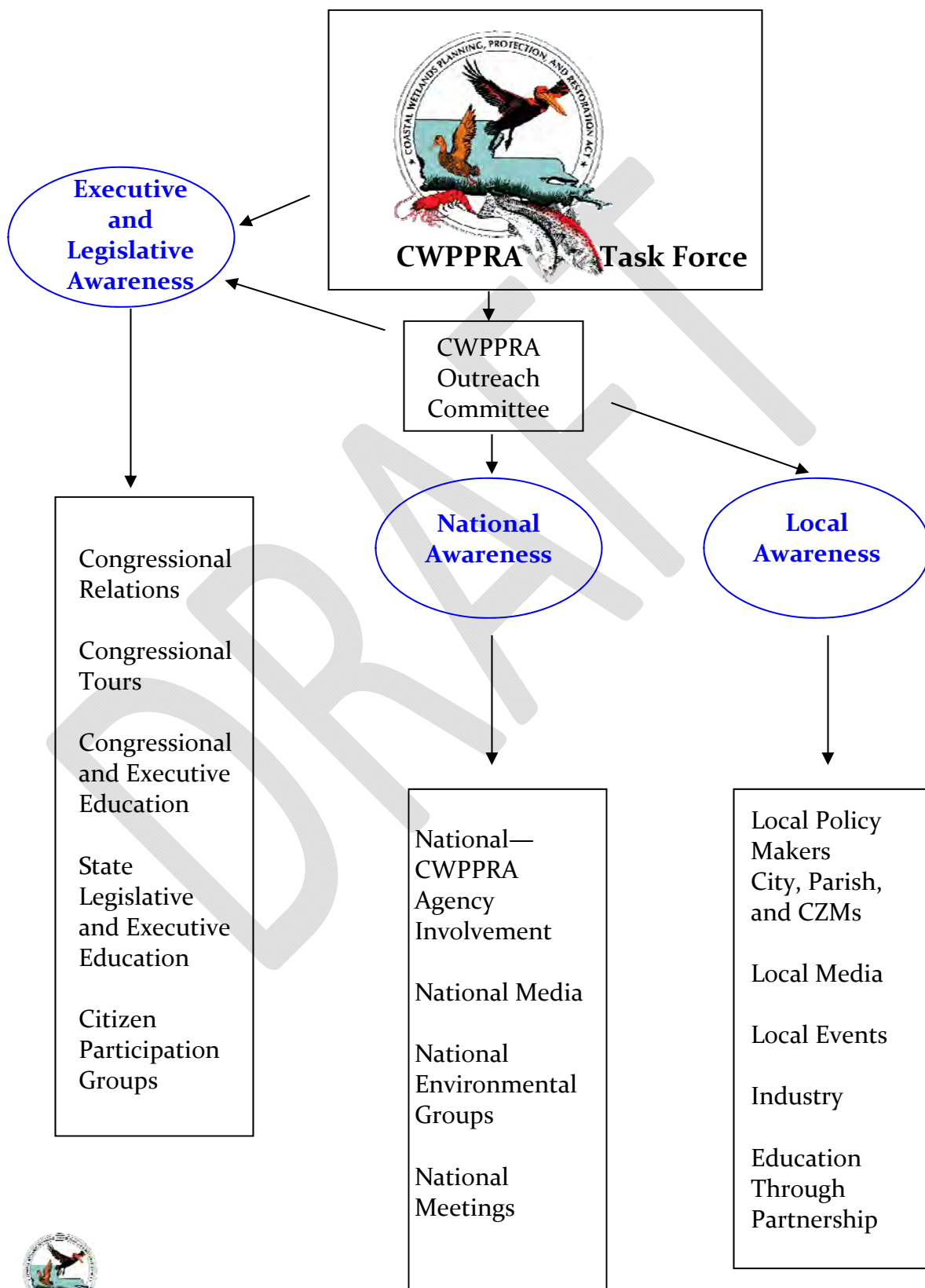
MANAGING
AGENCIES :



Includes:
CWPPRA Audience Chart
Line Items of Budget – One per page
CWPPRA 2018 Public Outreach Budget Summary Sheet



CWPPRA Audiences



Line Item: CWPPRA Web site –www.LACoast.gov

CWPPRA Funding Request: \$0 requested from Outreach budget-funding from construction budget (Identical to last year) Web Application Developer / Applications Security Services and Web Server Hardware and Software Maintenance

Time Line: October 1, 2017 – September 30, 2018

Brief Description:

This includes the web server hardware and software, system management, backup and recovery maintenance, and ongoing programming efforts for the www.LaCoast.gov web site. This site currently provides a continuous online presence for federal/state partners and the general public to access the latest information on CWPPRA, its projects, partners, and other pertinent information related to Louisiana's coastal wetlands conservation and restoration. This funding also includes the cost related to storing and distributing WaterMarks, fact sheets, videos, legislative links, educational materials, social media, and CWPPRA Newsflash via the web. It includes daily maintenance and update of text and links. The LaCoast.gov web site is an interface between the public and the program.

Goal:

- Maintain the LaCoast.gov web site on CWPPRA projects and activities

Objectives:

- Provide the public with research-based information about CWPPRA and CWPPRA projects.
- Provide a digital copy of information that highlights the programs successes and activities
- Provide a tool to share information with others about CWPPRA activities
- Provide a resource for a variety of audiences including media, federal agencies, legislative audiences, educators, and general public
- Provide current and historic information related to CWPPRA and wetland loss and restoration

Deliverables:

- Summary of CWPPRA Web site activities (Three times per year-at Task Force Meetings)



Line Item: CWPPRA Dedication Ceremony

CWPPRA Funding Request: \$ 3,000 (agency TBA)

Time Line: *October 1, 2017 – September 30, 2018*

Brief Description:

This amount includes costs associated with the planning and coordination of one CWPPRA Dedication Ceremony. It includes amounts related to the printing of invitations, posters, programs and the production of photographs that record the event.

Goal:

- Annually host one CWPPRA dedication to provide a variety of audiences a chance to have a hands-on experience with CWPPRA.

Objectives:

- Provide the public, media, legislative delegates, federal agency staff, and CWPPRA agency staff with an opportunity to visit a CWPPRA project, meet CWPPRA project managers and scientists, and learn more about CWPPRA activities

Deliverables:

- Digital and hard copy of invitations
- Digital and hard copy of posters related to CWPPRA projects being highlighted
- Digital and hard copy of the programs for the dedication
- Digital photographs that record the event



Line Item: Federal and State Legislative Education

CWPPRA Funding Request: \$o CWPPRA Outreach Staff Time and Local Travel Only
Time Line: October 1, 2017 – September 30, 2018

Brief Description:

This includes preparing an organized approach to meeting and educating several of the Nation's and Louisiana's legislative delegates in their home offices outside of the annual session or during session upon request.

Targeted delegates include those working on one or more of the following committees:

Natural Resource Committee – Senate
Select Committee on Coastal Restoration and Flood Control – Senate
Environment Quality-Senate
Natural Resources and the Environment – House
Joint Legislative Committee on the Budget

Materials that will be prepared for the federal legislative audience will also be used with Louisiana state delegates.

Goals:

- To reach the legislative audience in a concentrated and targeted approach to education on land loss, the restoration and preservation of Louisiana wetlands, and CWPPRA's role in restoration for the last 20 years
- To explain the organizational and fiscal structure of CWPPRA
- To explain the citizen involvement role in coastal restoration

Objectives:

- To provide contemporary delegates with current up to date information about CWPPRA and the CWPPRA program activities and projects
- To create effective CWPPRA briefing packets
- Create appropriate digital and hard copies of materials
- To deliver materials to state legislative delegates in a face to face meeting
- Create a resource for legislative delegates

Deliverables:

- Digital copy of materials created
- Digital copy of briefing packets
- Digital copy of list of meeting that CWPPRA outreach staff and agency partners participate in



Line Item: Meeting Attendance, Exhibits, and Travel

CWPPRA Funding Request: \$ 25,000 (Example: USGS or NOAA)

Time Line: October 1, 2017 – September 30, 2018

Brief Description:

This amount includes costs associated with support of at least one national discussion and up to two state symposia to be identified by the CWPPRA Task Force in conjunction with the CWPPRA Public Outreach Committee. These funds support all of the CWPPRA agencies and the appropriate agency will facilitate transfer. (Example: NOAA has used funds to help with RAE and CNREP) Exhibits and presentations provide excellent venues for CWPPRA public outreach efforts to reach a concentrated, target audience that is highly involved in the preservation and restoration of America's coastal lands as well as to provide CWPPRA with an opportunity to reach out to other people inside the CWPPRA managing federal agencies in attendance. Support from CWPPRA for past sessions have led to many partnerships with entities that have helped with collaborative outreach efforts. This amount includes all cost associated with meetings, exhibition, and symposium participation. It includes the cost for registration, exhibit space, display shipping and handling, and any other fees associated with regional events.

Goals:

- To reach a concentrated and target audience that specific interest in the restoration and preservation of Louisiana wetlands
- To reach a audiences including partner agency personnel that are unaware of CWPPRA and the restoration and preservation of Louisiana wetlands
- Provide hard copies of materials to various audiences including industry, the general public, NGOs, and CWPPRA partnering agency staff unfamiliar with the CWPPRA program

Objectives:

- Provide the scientifically accurate information about CWPPRA in a meeting setting preferably one national and one state meeting
- Exhibit and present where appropriate in order to provide accurate information about CWPPRA

Deliverable:

- Digital and hard copy of list of meetings, exhibits, and presentations



Line Item: CWPPRA Product Creation and Reproduction

CWPPRA Funding Request: \$18,000 (USDA NRCS)

Time Line: October 1, 2017 – September 30, 2018

Brief Description:

This includes all cost associated with production, or reproduction, of materials and products used for CWPPRA education and public outreach efforts. The amount is used to produce: Videos, CD-ROMS, Fact Sheets, Slide Shows, PowerPoint Presentations, Posters, Brochures, etc. These funds go through USDA NRCS to a GPO contractor

Goals:

- To reach a concentrated and target audience that specific interest in the restoration and preservation of Louisiana wetlands
- To reach a audiences that are unaware of CWPPRA and the restoration and preservation of Louisiana wetlands

Objective:

- Provide hard copies of materials to various audiences

Deliverables:

- Digital and hard copy of list of Meeting, exhibits, and presentations etc.
- Digital and hard copy of list of materials printed

Examples of possible materials to be printed:

Children's Activity Booklet

CWPPRA Fact Sheets

CRMS Beginner's Guide

Turning the Tide Curriculum document

I Remember... Louisiana Reflections and Stories of the Past materials



Line Item: Special Projects (such as photo, video, writing)

CWPPRA Funding Request: \$5,000 (LUMCON)

Time Line: *October 1, 2017 – September 30, 2018*

Brief Description:

Work with professional photographer or writer to create new outreach products of interest for publications. Also, provides funding for the annual outdoor writers awards event.

Goal:

- To provide the public with a lay person's view of coastal restoration activities performed by CWPPRA and their value to the nation.

Objective:

- Provide digital copies of photos, videos, or writing for various audiences

Deliverables:

- Digital copy of list of articles
- Digital and hard copy of the articles



Line Item: CWPPRA Fact Sheets

CWPPRA Funding Request: \$0 Part of printing budget and CWPPRA Staff salaries
Time Line: October 1, 2017– September 30, 2018

Brief Description:

This includes: the creation and update of the CWPPRA fact sheet, posting fact sheets to the Web and printing fact sheets.

Goals:

- To reach a concentrated and target audience that specific interest in the restoration and preservation of Louisiana wetlands
- To reach a audiences that are unaware of CWPPRA and the restoration and preservation of Louisiana wetlands

Objective:

- Provide digital and hard copies of fact sheets to various audiences

Deliverable:

- Digital and hard copy of fact sheets



Line Item: Print Communications, Development, Printing, Mailing and Distribution

CWPPRA Funding Request: \$ 68,000
 (\$66,000 –USDA NRCS - Development and Printing)
 (\$2,000 - USACE - Mailing and Distribution)

Time Line: October 1, 2017 – September 30, 2018

Brief Description:

This includes all costs associated with the current approved contract for the production of CWPPRA's print communications. The cost includes writing, layout and design, printing and mailing. The publishing is managed by USDA NRCS, and the amount includes all fees associated with the printing of the publication through the US Government Printing Office and the current contract - currently responsible for the: planning, information gathering and research, detailed content outline, writing, editing, submission of material, graphic design services, editorial and graphics standards, and pre-flight file. All costs associated with the mail-out preparation and distribution of the print communications publication are currently managed by the USACE with the database of over 7,500 addresses that receive each published newsletter by mail.

Goal:

- Create informational print communications that can be used in a variety of venues and for a variety of audiences.

Objectives:

- Provide the public with research-based information about CWPPRA and CWPPRA projects.
- Provide a hard copy of information that highlights the programs successes
- Provide a tool to share information with others

Example Deliverables:

- **2 issues of WaterMarks per calendar year**
- **13,500 copies or a total of 27,000 copies per year distributed to various users**

That works out to \$2.52 per issue.

Print communications are distributed as follows: USACE receives 8,500 directly. Of those 8,000, about 7,000 are mailed out directly by the USACE to members of the public who are on the mailing list. CPRA receives 1,000 copies. USDA NRCS receives 1,000 copies



CWPPRA Outreach Staff receives 3,000 copies and they are mailed out or brought to various partners including: NOAA, USFWS, CRCL, LSU Ag Center, EPA, BTNEP, LA Sea Grant, LSU Ed. Theory Dept., UNO PIES, CCA, Audubon Zoo, USGS NWRC, LDWF, and Lafourche Parish Tourist Commission.

Line Item: CWPPRA Student Worker

CWPPRA Funding Request: \$19,900 (USGS)

Time Line: October 1, 2017 – September 30, 2018

Brief Description:

This amount includes all cost associated with the salary, and management over-head rates for one part-time student worker; and the mailing of materials requested through CWPPRA's public outreach office. The student worker provides support and assistance to the Outreach Coordinator and Media Specialist by monitoring media clips, responding to material requests, and conducting any other administrative tasks that may help improve outreach efforts. The amount also includes costs allocated to mail materials to the public, managing agencies, partners and anyone else who requests information on CWPPRA.

Goal:

- To provide support to CWPPRA program for outreach activities

Objectives:

- Provide quick responses to requests for materials
- Provide support for preparation of outreach activities

Deliverables:

- List of mail outs organized by student worker
- Digital and hard copy of timesheet for student worker
- Quarterly report of student activities



Line Item: CWPPRA Public Outreach Staff

CWPPRA Funding Request: \$ 262,413 (USGS)

Time Line: October 1, 2017 – September 30, 2018

Brief Description:

Organizes outreach activities through the CWPPRA Public Outreach Committee and CWPPRA Task Force. Position is housed at the National Wetlands Research Center (NWRC) in Lafayette, LA. Responsible for the management of all day-to-day public outreach committee efforts, and acts as the liaison between the public, parish governments, and the various Federal agencies and partners associated with CWPPRA. Provides support for creating outreach/education materials that are distributed and used by a variety of audiences. Providing guidance, expertise, and support in communicating CWPPRA strategies and progress with the public

Works to reach three target audiences: 1) executive and legislative; 2) national leaders and partners; and 3) local leaders, partners and individuals. Audiences include policy-makers, environmental managers, or opinion-leaders, coastal zone environmental managers, civic leaders, educators, state legislators, statewide and national media, our national congressional delegation, CWPPRA committees, national environmental managers, environmental scientists, and energy, navigation, agriculture and tourism leaders.

Provides support for conducting educational and information workshops for teachers and the public. Participate and present at regional and national environmental workshops. Update CWPPRA outreach materials in order to reach target audience. Develop curricula and new outreach material. Update CWPPRA on-line calendar, develop and deliver the Breaux Act Newsflash. Respond to information requests. Work with microcomputer specialist to update current website and electronic educational material. Perform duties associated with outreach coordinator and media specialist.

This includes one full time outreach coordinator, one full time outreach assistant/media specialist, and part time for support of fact sheet development and activities related to text updates and changes.

Deliverables:

- Summary of CWPPRA Web site activities (Three times per year-at Task Force Meetings)
- CWPPRA Newsflash activity
- WaterMarks activities
- Requests for information
- List of media that mentions CWPPRA press releases and other publicity
- Major accomplishments, list of activities, and list of meetings
- Lists of exhibits, presentations, field trips and Meeting
- Active and updated CWPPRA Web site, CWPPRA Newsflash, CWPPRA Calendar, CWPPRA Facebook page, and YouTube site maintained daily or as needed.



Line Item: CWPPRA Public Outreach Committee Personnel by Agency

CWPPRA Funding Request: \$50,800

NMFS \$6,600

USDA NRCS \$6,600

EPA \$6,600

CPRA \$6,600

USFWS \$3,300

USACE \$6,600

USGS \$14,500

Time Line: *October 1, 2017 – September 30, 2018*

Brief Description:

Each agency of the CWPPRA team is represented on the CWPPRA Public Outreach Committee by a member of each of the agencies' staff. The funds identified are used by outreach committee members to attend meetings and review CWPPRA materials. Many CWPPRA Public Outreach Committee members also participate in a variety of outreach events.

Deliverables:

- Minutes from CWPPRA Public Outreach Committee Meetings
- List of deliverables that have been reviewed by the committee members



CWPPRA 2018 Public Outreach Budget Summary

Recommendation to the CWPPRA Task Force

Operations

<u>Description</u>	<u>Agency</u>	<u>FY2018</u>	
CWPPRA Annual Dedication Ceremony	USACE	3,000	
Meeting Attendance, Exhibits, and Related Travel	Ex: USGS or NOAA	25,000	
CWPPRA Product Creation and Reproduction	USDA NRCS	18,000	
Special Projects (such as photo, video, or writing)	LUMCON	5,000	
Print Communications, Development, Printing, Mailing and Distribution	USDA NRCS/USACE	68,000	
CWPPRA Student Worker and Mail Out Support	USGS/ ULL	19,900	
CWPPRA Public Outreach Staff	USGS	<u>262,413</u>	
CWPPRA Federal Public Outreach Committee Members			401,313
NFMS		6,600	
USDA NRCS		6,600	
EPA		6,600	
CPRA		6,600	
USFWS		3,300	
USACE		6,600	
USGS		<u>14,500</u>	
			+ <u><u>50,800</u></u>
Total Budget			452,113



**Coastal Wetlands Planning, Protection, and Restoration Act
Fiscal Year 2018 Planning Schedule and Budget
P&E Committee Recommendation,
Tech Committee Recommendation,
Task Force Approval,**

4/17/2017

Carry Over Funds	\$119,992
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CWPPRA COSTS														
TASK			Duration		Dept of Defense	Department of Interior		State of Louisiana		EPA	Department of Agriculture	Department of Commerce		
Task Category	Task No.	Description	Start Date	End Date	USACE	USFWS	NWRC	CPRA/GO	LDWF	EPA	NRCS	NMFS	Other	Total
PPL 27 TASKS														
PL	27500	TC Recommendation for Project Selection and Funding	12/1/17	12/11/17	2,879	6,717	0	1,829	2,253	2,952	4,159	3,225	0	24,013
PL	27600	TF Selection and Funding of the 27th PPL	1/17/18	1/27/18	5,583	9,679	0	3,702	1,502	4,632	5,218	10,402	0	40,718
PL	27700	PPL 27 Report Development	2/17/18	7/29/18	50,225	2,687	0	1,862	0	0	383	608	0	55,766
FY18 Subtotal PPL 27 Tasks					58,688	19,083	0	7,393	3,755	7,584	9,760	14,235	0	120,497
PPL 28 TASKS														
PL	28200	Development and Nomination of Projects												
PL	28210	CPRA/USGS prepares base maps of project areas, location of completed projects and projected loss by 2050. Develop a comprehensive coastal LA map showing all water resource and restoration projects	10/12/17	10/31/18	1,038	0	0	4,067	0	0	383	0	0	5,488
PL	28220	Sponsoring agencies prepare fact sheets (for projects and demos) and maps prior to and following RPT nomination meetings.	10/13/17	9/3/18	65,118	33,584	0	9,652	0	36,520	95,340	23,749	0	263,963
PL	28230	RPT's meet to formulate and combine projects.	1/26/18	1/31/18	21,068	14,926	0	10,548	4,506	8,928	12,743	12,800	0	85,519
PL	28300	Ranking of Nominated Projects												
PL	28320	Engr Work Group prepares preliminary fully funded cost ranges for nominees.	3/4/18	3/21/18	1,217	2,687	0	4,437	0	4,928	7,108	5,310	0	25,687
PL	28330	WGs develop and P&E distributes project matrix	3/31/18	3/31/18	1,427	3,188	0	2,658	0	3,520	209	3,256	0	14,258
PL	28340	Environ/Engr Work Groups review nominees	4/1/18	4/1/18	1,376	8,359	0	4,212	2,253	3,952	5,882	5,310	0	31,344
PL	28350	TC selection of new PPL candidates and demo candidates	4/14/18	4/14/18	2,491	3,687	0	2,847	2,253	3,916	3,589	7,964	0	26,747

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Task Force Approval,**

4/17/2017

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CWPPRA COSTS														
TASK			Duration		Dept of Defense	Department of Interior		State of Louisiana		EPA	Department of Agriculture	Department of Commerce		
Task Category	Task No.	Description	Start Date	End Date	USACE	USFWS	NWRC	CPRA/GO	LDWF	EPA	NRCS	NMFS	Other	Total
PL	28400	Analysis of Candidates												
PL	28410	Sponsoring agencies coordinate site visits for all projects	5/2/18	7/14/18	38,057	28,437	0	17,391	15,019	35,244	41,287	32,340	0	207,774
PL	28420	Engr/Environ Work Group refine project features and determine boundaries	5/2/18	9/29/18	8,902	16,792	0	9,321	15,019	5,904	8,052	12,800	0	76,790
PL	28430	Sponsoring agencies develop project information for WVA; develop designs and cost estimates (projects and demos)	5/2/18	9/29/18	39,683	42,149	0	37,992		40,684	61,943	56,804	0	279,255
PL	28440	Environ/Engr Work Groups project-wetland benefits (with WVA)	5/2/18	9/29/18	28,655	26,867	0	15,402	6,759	18,464	10,282	39,798	0	146,227
PL	28450	Engr Work Group reviews/approves cost estimates from sponsoring agencies, incl cost estimates for demos	5/2/18	10/14/18	15,560	6,427	0	8,179	0	11,408	4,282	15,929	0	61,785
PL	28460	Economic Work Group reviews cost estimates, adds monitoring, O&M, etc., and develops annualized costs	5/2/18	10/14/18	17,264	1,717	0	1,630	0		7,963	5,310	0	33,884
PL	28470	Prepare project information packages for P&E.	5/2/18	11/9/18	8,298	7,836	0	2,483	0	1,968	189	5,310	0	26,085
FY18 Subtotal PPL 27 Tasks					250,154	196,656	0	130,819	45,809	175,436	259,253	226,679	0	1,284,807
Project and Program Management Tasks														
PM	28100	Program Management Coordination, Budget Development and Oversight	10/1/17	9/30/18	633,959	129,233	39,568	113,105	12,767	235,710	198,000	188,670	0	1,551,012
PM	28150	Program Management - Training, Conferences, Workshops in support of CWPPRA Program Management	10/1/17	9/30/18	0	5,000	0	0	0	5,000	5,000	5,000	0	20,000
PM	28200	Program and Project Management--Financial Management of Non-Cash Flow Projects	10/1/17	9/30/18	66,767	10,821	0	17,718	0	0	19,182	24,750	0	139,238
PM	28300	P&E Meetings (meetings preparation and attendance)	10/1/17	9/30/18	23,427	9,679	2,895	5,291	4,506	11,616	13,836	15,057	0	86,308
PM	28400	Tech Com Mtngs (meetings including public and off-site; preparation and attendance)	10/1/17	9/30/18	140,318	29,852	4,825	17,303	11,265	12,352	17,719	26,840	0	260,475
PM	28500	Task Force mtngs (meetings, including public and executive session; preparation and attendance)	10/1/17	9/30/18	154,073	33,584	8,619	24,151	9,012	20,528	31,715	43,218	0	324,900
PM	28600	Agency Participation, Review 30% and 95% Design for Projects	10/1/17	9/30/18	59,982	11,941	0	10,347	0	14,784	6,172	12,800	0	116,026
PM	28700	Engineering & Environmental Work Groups review	10/1/17	9/30/18	12,761	11,941	0	5,956	10,512	3,937	6,769	12,800	0	64,676
PM	28800	Miscellaneous Technical Support	10/1/17	9/30/18	52,953	10,075	0	81,406	0	35,000	50,107	40,000	0	269,541
PM	28900	2016 WIIN Act Environmental Banking	10/1/17	9/30/18	10,000	10,000	0	10,000	0	10,000	10,000	10,000	0	60,000
FY18 Subtotal Project Management Tasks					1,154,240	262,126	55,907	285,277	48,062	348,927	358,501	379,136	0	2,892,175
FY18 Total for PPL Tasks					1,463,082	477,865	55,907	423,489	97,626	531,947	627,514	620,049	0	4,297,479

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Task Force Approval,**

4/17/2017

Carry Over Funds	\$119,992
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CWPPRA COSTS														
TASK			Duration		Dept of Defense	Department of Interior		State of Louisiana		EPA	Department of Agriculture	Department of Commerce		
Task Category	Task No.	Description	Start Date	End Date	USACE	USFWS	NWRC	CPRA/GO	LDWF	EPA	NRCS	NMFS	Other	Total
SUPPLEMENTAL PLANNING AND EVALUATION TASKS														
SPE	28100	Academic Advisory Group. [NOTE: New MOA between USGS and LUMCON] [Prospectus, pg 5-7]	10/1/17	9/30/18	0	0	0	0	0	0	0	0	112,200	112,200
SPE	28200	Core GIS Support for CWPPRA Task Force Planning Activities. [NWRC Prospectus]	10/1/17	9/30/18	0	0	146,340	0	0	0	0	0	0	146,340
SPE	25300	Prepare 2018 Evaluation Report (Report to Congress)	10/1/17	9/30/18	6,540	6,540	81,750	3,270	0	3,270	3,725	3,725	1,180	110,000
FY18 Total Supplemental Planning & Evaluation Tasks					6,540	6,540	228,090	3,270	0	3,270	3,725	3,725	113,380	368,540
FY18 Agency Tasks Grand Total					1,469,622	484,405	283,997	426,759	97,626	535,217	631,239	623,774	113,380	4,666,019
OUTREACH														
Otrch	28100	Outreach - Committee Funding	10/1/17	9/30/18	0	0	0	0	0	0	0	0	401,313	401,313
Otrch	28200	Outreach - Agency	10/1/17	9/30/18	6,600	3,300	14,500	6,600	0	6,600	6,600	6,600	0	50,800
FY18 Total Outreach					6,600	3,300	14,500	6,600	0	6,600	6,600	6,600	401,313	452,113
Grand Total FY18					1,476,222	487,705	298,497	433,359	97,626	541,817	637,839	630,374	514,693	5,118,132

NOTE: Transfer of funds between tasks is allowed as long the total budgeted amount per agency is not exceeded. Federal and State agencies shall abide by their fiscal accounting policies.
MIPRs for Planning and Outreach will be Combined into one transaction

Coastal Wetlands Planning, Protection and Restoration Act

Fiscal Year 2018 Budget Summary

P&E Committee Recommendation,
Technical Committee Recommendation,
Task Force Approval,

	FY2010 Amount (\$)	FY2011 Amount (\$)	FY2012 Amount (\$)	FY2013 Amount (\$)	FY2014 Amount (\$)	FY2015 Amount (\$)	FY2016 Amount (\$)	FY2017 Amount (\$)	FY2018 Amount (\$)
General Planning & Program Participation [Supplemental Tasks Not Included]									
State of Louisiana									
CPRA	406,866	405,866	405,866	405,866	403,489	423,489	423,489	423,489	423,489
LDWF	96,879	99,879	99,879	99,879	97,626	97,626	97,626	97,626	97,626
Gov's Ofc	94,800	54,000	54,000	54,000	54,000	0	0	0	0
Total State	598,545	559,745	559,745	559,745	555,115	521,115	521,115	521,115	521,115
EPA	505,297	505,297	505,297	533,495	531,947	531,947	531,947	531,947	531,947
Dept of the Interior									
USFWS	496,918	479,918	479,918	479,918	477,865	477,865	477,865	477,865	477,865
NWRRC	63,656	55,907	55,907	55,907	55,907	55,907	55,907	55,907	55,907
USGS Reston									
USGS Baton Rouge						0	0	0	0
USGS Woods Hole						0	0	0	0
Natl Park Service									
Total Interior	560,574	535,825	535,825	535,825	533,772	533,772	533,772	533,772	533,772
Dept of Agriculture	630,302	630,302	630,302	630,301	627,514	627,514	627,514	627,514	627,514
Dept of Commerce	621,080	621,081	621,081	621,080	620,049	620,049	620,049	620,049	620,049
Dept of the Army	1,471,688	1,468,497	1,468,497	1,468,497	1,463,082	1,463,082	1,463,082	1,463,082	1,463,082
Agencies Total	\$4,387,486	\$4,320,746	\$4,320,747	\$4,348,943	\$4,331,479	\$4,297,479	\$4,297,479	\$4,297,479	\$4,297,479
Outreach									
Outreach	487,148	452,400	452,400	452,400	445,800	445,800	446,113	446,113	452,113
Supplemental Tasks									
Academic Advisory Group	133,650	112,200	112,200	112,200	112,200	112,200	112,200	112,200	112,200
Database & Web Page Link Maintenance	64,153								
Linkage of CWPPRA & LCA									
Core GIS Support for Planning Activities	307,249	167,327	157,295	157,295	146,340	146,340	146,340	146,340	146,340
Evaluation Report to Congress			110,000			110,000			110,000
Total Supplemental	\$505,052	\$279,527	\$379,495	\$269,495	\$258,540	\$368,540	\$258,540	\$258,540	\$368,540
Total Allocated	\$5,379,686	\$5,052,672	\$5,152,642	\$5,070,838	\$5,035,819	\$5,111,819	\$5,002,132	\$5,002,132	\$5,118,132

					17-Apr-17						
		Coastal Wetlands Planning, Protection and Restoration Act									
			CUM thru FY10	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
		Total	Amount (\$)	Amount (\$)	Amount (\$)	Amount (\$)	Amount (\$)	Amount (\$)	Amount (\$)	Amount (\$)	Amount (\$)
General Planning & Program Participation											
State of Louisiana											
	CPRA	11,678,856	8,363,813.29	405,866.00	405,866.00	405,866.00	403,489.00	423,489.00	423,489.00	423,489.00	423,489.00
	LDWF	2,010,361	1,314,352.28	54,000.00	54,000.00	99,879.00	97,626.00	97,626.00	97,626.00	97,626.00	97,626.00
	GOCA	1,120,357	812,599.00	99,879.00	99,879.00	54,000.00	54,000.00	0.00	0.00	0.00	0.00
Total State		14,809,575	10,490,764.57	559,745.00	559,745.00	559,745.00	555,115.00	521,115.00	521,115.00	521,115.00	521,115.00
EPA		12,532,163	8,328,340.86	505,297.00	505,297.00	533,494.54	531,947	531,947	531,947	531,947	531,947
Dept of the Interior											
	USFWS	11,145,936	7,316,856.92	479,918.00	479,918.00	479,918.00	477,865.00	477,865.00	477,865.00	477,865.00	477,865.00
	NWRC	2,368,410	1,921,154.45	55,907.00	55,907.00	55,907.00	55,907.00	55,907.00	55,907.00	55,907.00	55,907.00
	USGS Rest	165,706	165,705.56								
	USGS Woc	25,785	25,785.00								
	USGS Batc	348,889	348,888.63								
	Natl Park S	3,643	3,643.40								
	MMS	60,700	60,700.00								
Total Interior		14,119,069	9,842,733.96	535,825.00	535,825.00	535,825.00	533,772.00	533,772.00	533,772.00	533,772.00	533,772.00
Dept of Agriculture		16,319,686	11,291,208.89	630,302.00	630,302.00	630,302.00	627,514	627,514	627,514	627,514	627,514
Dept of Commerce		14,241,285	9,277,796.34	621,081.00	621,081.00	621,081.00	620,049	620,049	620,049	620,049	620,049
Dept of the Army		33,155,002	21,434,102.00	1,468,497.00	1,468,497.00	1,468,497.00	1,463,082	1,463,082	1,463,082	1,463,082	1,463,082
Agency Total		105,176,779	70,664,946.62	4,320,746.00	4,320,746.00	4,348,944	4,331,479	4,297,479	4,297,479	4,297,479	4,297,479
Supplemental Tasks											
Academic Advisory Group		2,441,687	1,544,086.78	112,200.00	112,200.00	112,200.00	112,200.00	112,200.00	112,200.00	112,200.00	112,200.00
Report to Congress		423,402	93,402.20	0.00	110,000.00	0.00	0.00	110,000.00	0.00	0.00	110,000.00
Core GIS Support for Planning Activities (NWRC)		3,489,621	2,308,868.99	156,372.00	146,340.00	146,340.00	146,340.00	146,340.00	146,340.00	146,340.00	146,340.00
Core GIS Support for Planning Activities (DNR)		114,183	81,318.00	10,955.00	10,955.00	10,955.00	0.00	0.00	0.00	0.00	0.00
Outreach Tasks											
Gen Program		180,089	180,089.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coordinator		2,782,413	999,473.65	216,000.00	216,000.00	216,000.00	216,000.00	216,000.00	234,313.00	234,313.00	234,313.00
Outreach Assistant / Educational Specialist		560,017	560,016.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NWRC Administration		362,016	246,015.98	14,500.00	14,500.00	14,500.00	14,500.00	14,500.00	14,500.00	14,500.00	14,500.00
Agency Assistance - COE		111,170	58,369.99	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00
Agency Assistance - EPA		104,400	51,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00
Agency Assistance - FWS		47,455	21,054.96	3,300.00	3,300.00	3,300.00	3,300.00	3,300.00	3,300.00	3,300.00	3,300.00
Agency Assistance - NMFS		109,172	56,372.40	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00
Agency Assistance - NRCS		112,382	59,581.88	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00
Agency Assistance - NWRC		27,800	27,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agency Assistance - DNR		92,009	39,209.33	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00	6,600.00
Agency Assistance - Ofc of Gov		27,073	7,272.72	6,600.00	6,600.00	6,600.00	0.00	0.00	0.00	0.00	0.00
Contractual Support Student worker		333,495	165,494.77	21,000.00	21,000.00	21,000.00	21,000.00	21,000.00	21,000.00	21,000.00	21,000.00
Watermarks (Development & Printing)		1,416,658	936,658.20	60,000.00	60,000.00	60,000.00	60,000.00	60,000.00	60,000.00	60,000.00	60,000.00
Watermarks (Distribution)		137,258	31,257.79	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00	2,000.00	2,000.00	2,000.00
Articles for Print-Writing & Public Pubs		18,900	0.00	0.00	2,700.00	2,700.00	2,700.00	2,700.00	2,700.00	2,700.00	2,700.00
Dedication Support		70,730	38,729.61	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00
Video & Photo Acquisition (USGS/BTNEP)		101,100	0.00	15,000.00	12,300.00	12,300.00	12,300.00	12,300.00	12,300.00	12,300.00	12,300.00
Product Reproduction		299,668	93,668.26	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00	31,000.00
Conference / Exhibits		259,627	77,626.72	14,000.00	24,000.00	24,000.00	24,000.00	24,000.00	24,000.00	24,000.00	24,000.00
Legislative Education (USGS/NOAA)		80,000	0.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00
Conference - RAE & CNREP (NMFS)		25,000	15,000.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Outreach Tasks		2,517,585	2,517,584.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Tasks											
Storm Recovery Procedures		233,248	233,248.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Miscellaneous Tasks		5,780,049	5,780,049.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Allocated		134,880,008	94,333,823	5,052,673	5,152,641	5,070,839	5,035,819	5,111,819	5,002,132	5,002,132	5,118,132
Over/Under Balance		119,992	666,177	(52,673)	(152,641)	(70,839)	(35,819)	(111,819)	(2,132)	(2,132)	(118,132)
Total Unallocated (Cumulative)				613,504	460,863	390,025	354,206	242,387	240,255	238,124	119,992
Funds Allocated		135,000,000	95,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Total Funds Allocated (Cumulative)				100,000,000	105,000,000	110,000,000	115,000,000	120,000,000	125,000,000	130,000,000	135,000,000

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 27, 2017

REQUEST FOR PROJECT EXPANSION

For Decision:

Due to unfavorable bids, the USFWS and CPRA would like to request expansion of the TE-72 project. The project expansion would create an additional 245 acres of marsh at a cost of \$7,057,247.

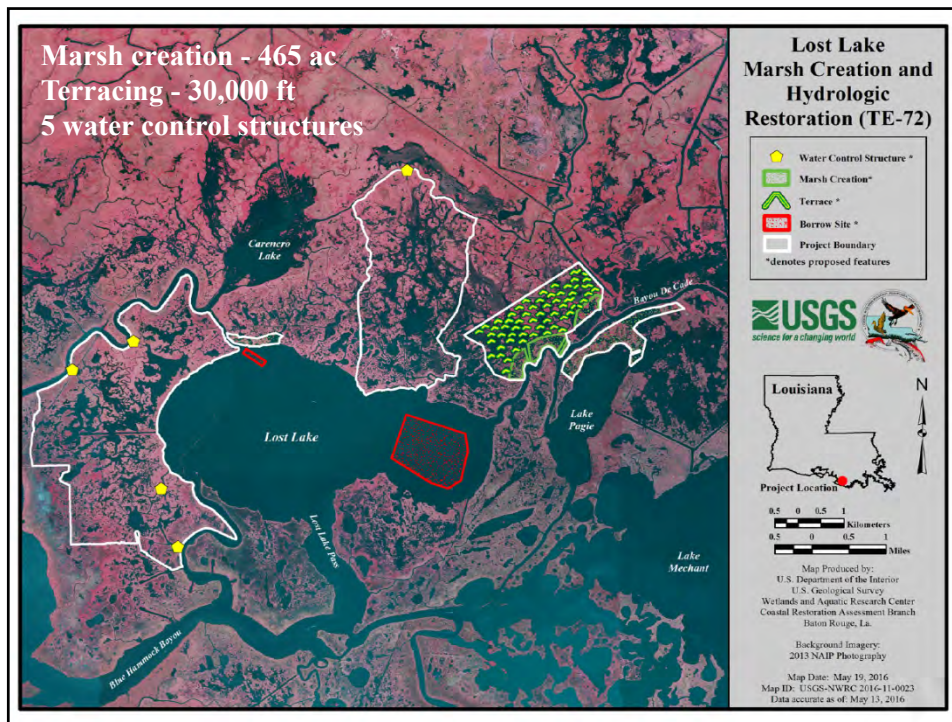


Technical Committee Meeting

April 27, 2017

New Orleans, LA





Expansion Request Details

- Base Bid - \$19,328,007 – Weeks Marine
- Total authorized funding
 - Construction - \$22,273,576
 - Contingency - \$5,568,394
- Additional funding for S&I - \$152,568 (from contingency)
- Total Available - \$8,361,395
- Marsh Creation Area 1A – 245 acres - \$7,057,247
 - Additional Containment - \$74,280
 - Additional Surveys - \$50,000
 - Pipeline Removal - \$200,000
 - Dredging (1.8 MCY) - \$6,732,967
- Base Project Marsh Creation - \$35,723 per acre
- Additional Marsh Creation - \$28,805 per acre



Lost Lake Marsh Creation and Hydrologic Restoration (TE-72) Request for Project Expansion

The total base bid for the TE-72 project was \$19,328,007 to create 465 acres of marsh, construct 30,000 linear feet of terraces, remove four water control structures, and install five water-control structures. Approximately 3,115,621 cubic yards of material will be dredged in Lost Lake. The total CWPPRA authorized funding includes \$22,273,576 for Construction and \$5,568,394 for Contingency.

The Construction S&I cost is \$724,979, which is above the CWPPRA budgeted amount of \$572,411. The balance of \$152,568 will be taken from contingency.

This leaves a total available Construction plus Contingency funding of \$8,361,395. Approximately \$200,000 must be reserved for terrace plantings and an amount must be reserved for contingency. To date, the construction contractor has begun building containment dikes and removing water control structures and does not foresee any significant issues with either of those items. It is our opinion, that containment dike stability and removal of the existing water control structures were the two most likely items to result in the expenditure of contingency funds, therefore, we feel confident with keeping \$1,000,000 in contingency.

The project team has investigated a modification of Marsh Creation Area 1 (see figure below) that will connect it to a portion of the previously constructed North Lake Mechant Landbridge Restoration Project (TE-44). The additional marsh creation area (Marsh Creation Area 1A) is 245 acres (approximately 85% open water) and would require 1,763,706 cubic yards for a total estimated cost of \$7,057,247, or \$28,805 per acre. This would leave an estimated \$1,304,148 in contingency.

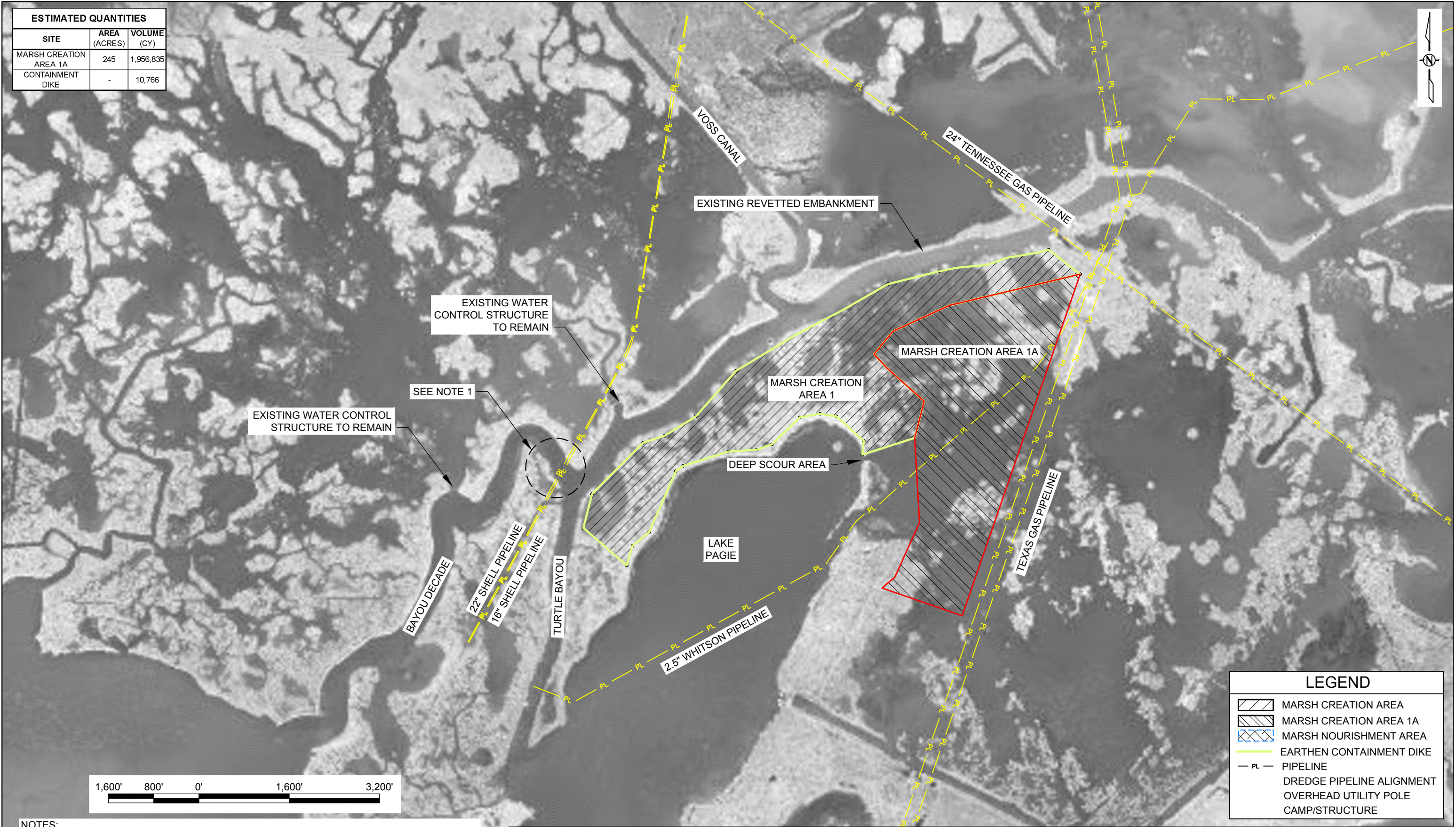
The cost breakdown for Marsh Creation Area 1A is as follows:

- Additional 1,857 linear feet of containment dike: \$74,280
- Additional surveys: \$50,000
- Abandoned pipeline removal: \$200,000
- Additional dredge quantity of 1,763,706 cubic yards: \$6,732,967.2

Marsh Creation Area 1A is already covered under the existing Corps of Engineers Section 404 permit. A modification is required to the existing construction servitude agreement with LL&E (ConocoPhillips), but they are in agreement with the proposed project expansion.

The cost (including mob/demob, containment, dredging, etc.) of marsh creation for the base project is approximately \$35,723 per acre. Marsh Creation Area 1A would be a very cost-effective addition to this project at an approximate cost of \$28,805 per acre.

ESTIMATED QUANTITIES		
SITE	AREA (ACRES)	VOLUME (CY)
MARSH CREATION AREA 1A	245	1,956,835
CONTAINMENT DIKE	-	10,766



- NOTES:
1. THE DREDGE PIPELINE SHALL REMAIN FLOATING ACROSS THE SHELL PIPELINES. ANY OTHER METHOD OF CROSSING SHALL BE APPROVED BY THE ENGINEER.
 2. OVERHEAD UTILITY POLES ARE SHOWN OVERSIZED ON PLANS FOR REFERENCE ONLY.
 3. DECANTED WATER FROM THE MARSH CREATION AREA SHALL BE DISCHARGED INTO THE ADJACENT NOURISHMENT AREA.
 4. CONTAINMENT DIKE NEAR THE DEEP SCOUR AREA MAY REQUIRE MODIFICATION OF THE ALIGNMENT BASED ON THE PRE-CONSTRUCTION SURVEY.

1	11/29/16	ADDED MARSH CREATION AREA 1A	SF
REV.	DATE	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		LOST LAKE MARSH CREATION AND HYDROLOGIC RESTORATION		MARSH CREATION AREA 1 PLAN
		STATE PROJECT NUMBER: TE-72		
				FEDERAL PROJECT NUMBER: TE-72
DRAWN BY: SHANE FAUST	DESIGNED BY: SHANNON HAYNES, P.E.	APPROVED BY: RUSS JOFFRION, P.E.		SHEET 5A OF 62

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 27, 2017

ADDITIONAL AGENDA ITEMS

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 27, 2017

REQUEST FOR PUBLIC COMMENTS

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
TECHNICAL COMMITTEE MEETING

APRIL 27, 2017

DATE OF UPCOMING CWPPRA PROGRAM MEETING

For Announcement:

The Task Force meeting will be held May 11, 2017 at 9:30 a.m. at the Estuarine Habitats and Fisheries Center, 646 Cajundome Blvd., Lafayette, Louisiana.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 27, 2017

SCHEDULED DATES OF FUTURE PROGRAM MEETINGS

For Announcement:

May 11, 2017	9:30 a.m.	Task Force	Lafayette
September 14, 2017	9:30 a.m.	Technical Committee	Baton Rouge
October 12, 2017	9:30 a.m.	Task Force	New Orleans
December 7, 2017	9:30 a.m.	Technical Committee	Baton Rouge