REGION 4

Coastal Wetlands Planning Protection & Restoration Act

23rd Priority Project List

Region 4

Regional Planning Team Meeting

January 29, 2013
Abbeville, LA

CWPPRA

1. Welcome and Introductions

- RPT Region 4 Leader: Darryl Clark - USFWS

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Announcements

- Copies of the PPL 23 Selection Process & Schedule available at the sign-in table.
- PPL 23 RPT meetings to accept project nominees:
  - **Region IV, Vermilion LSU Ag Center, Jan. 29, 2013, 11:00 am**
  - Region III, Morgan City Auditorium (W Concourse), Jan. 30, 2013, 9:00 am
  - Region I, New Orleans Corps of Engineers, Jan. 31, 2013, 8:00 am
  - Region II, New Orleans Corps of Engineers, Jan. 31, 2013, 11:30 am
- Coastwide Electronic Vote to select project nominees for all basins:
  - February 19, 2013 by 10:30 am
  - The new voting process will be explained later in the presentation
- Parish representatives must identify themselves during the RPT meetings and **fill out a voting registration form**, including contact information for the primary and secondary voting representatives that will cast votes during the Coastwide Electronic Vote.
- CWPPRA agencies will be assigned responsibilities for preparing nominee fact sheets after the Coastwide Electronic Vote.

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Region 4 Parishes

- Eligible parishes for basins in Region 4 include:
- Calcasieu-Sabine Basin
  - Cameron Parish
  - Calcasieu Parish
- Mermentau Basin
  - Cameron Parish
  - Vermilion Parish

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2. PPL 23 Process and Ground Rules

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RPT Meetings

- Jan. 29-31, 2013 to accept project and demo proposals in 4 coastal regions broken into 8 basins (no limit on number of projects that can be proposed).
- Project proposals should be consistent with the 2012 State Master Plan.
- A project can only be nominated in one basin (except for coastwide projects – more info on coastwide projects after the following "RPT Meetings" slide).
- Proposals that cross multiple basins, excluding coastwide projects, shall be nominated in one basin only, based on the majority area of project influence.
- Coastwide projects apply across basin boundaries; their benefits are not tied to one basin. They can be nominated from any basin and can be presented in all RPT meetings.

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RPT Meetings

- Project presenters can split multi-basin or coastwide projects into multiple individual projects. This must occur during the RPT meeting where the project is first presented. If a presenter does not choose a basin from which to propose a project, the RPT leaders, in conjunction with the CWPRPA Planning & Evaluation (P&E) Committee, will decide collectively after the RPT meetings but before the Coastwide Electronic Vote.
- Presenters must complete a PPL 23 Nomination Sign-Up Sheet for each project nominee (demo projects too).
- Public comments on project proposals will be accepted orally during the RPT meetings and in writing by February 8, 2013.
- Limit project proposals to 5 minutes and Powerpoint presentations to 5 slides.
- Limit comments/questions during meeting to PPL 23 subject proposals and processes.

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Coastwide Electronic Vote

- Feb. 19, 2013: Coastwide Electronic Vote
- RPTs, consisting of CWPPRA agencies & coastal parishes, will select 4 nominees per basin in Barataria and Terrebonne, 3 nominees per basin in Breton Sound and Pontchartrain, 2 nominees per basin in Mermentau, Calcasieu-Sabine, and Teche-Vermilion, 1 nominee in the Atchafalaya Basin, plus 6 demos. If proposed, 1 coastwide may be chosen for inclusion as a nominee.
- CWPPRA agencies and parishes will electronically submit their ranked votes by basin.
- Parishes vote only in basins they occupy. Parishes vote on all demonstration and coastwide projects.

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Nominee Project Evaluations

- Following the Coastwide Electronic Vote, an agency will be assigned to each project to prepare a Nominee Project factsheet (1 page + map).
- CWPPRA Engineering & Environmental Workgroups review draft features and assign preliminary cost and benefit ranges.
- Work groups will also review demo & coastwide projects and verify that they meet PPL 23 criteria.
- CWPPRA Planning and Evaluation Committee prepares cost/benefit summary matrix for Technical Committee.

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PPL 23 Candidate Project Selection

- CWPPRA Technical Committee meeting, April 16, 2013 at 9:30 am, New Orleans District Corps of Engineers.
- Technical Committee ranks nominees and votes to select 10 candidate projects and up to 3 demos.
- Written public comments should be submitted to Corps of Engineers prior to Tech Comm meeting by April 2, 2013.
- Public comments also accepted orally during meeting.
- Technical Committee will assign CWPPRA agencies to develop Phase 0 candidate projects.

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PPL 23 Candidate Project Evaluation

- Candidates evaluated between May and October
- CWPPRA Workgroups
  - Workgroups conduct site visits and meetings to identify needs and establish project baselines and boundaries.
  - Environmental Workgroup WVA meetings to calculate benefits.
  - Engineering Workgroup meetings to refine features and project costs.
  - Engineering and Environmental Workgroup meetings to develop demonstration project scopes and costs.
  - Economics Workgroup conducts economic analyses to develop fully funded cost estimates for 20 year project.

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CWPPRA PPL 23 Selection

- 1 public meeting to present Phase 0 evaluation results:
  - Baton Rouge, Louisiana Department of Wildlife and Fisheries (Louisiana Room), Nov. 13, 2013, 7:00 pm
- Technical Committee votes to select up to 4 candidate projects and up to 1 demo to recommend for Phase 1.
  - Dec. 12, 2013, Baton Rouge, 9:30 am
- Task Force final decision to select PPL 23 in January 2014.

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3. Region 4 – Consistency with the 2012 State Master Plan

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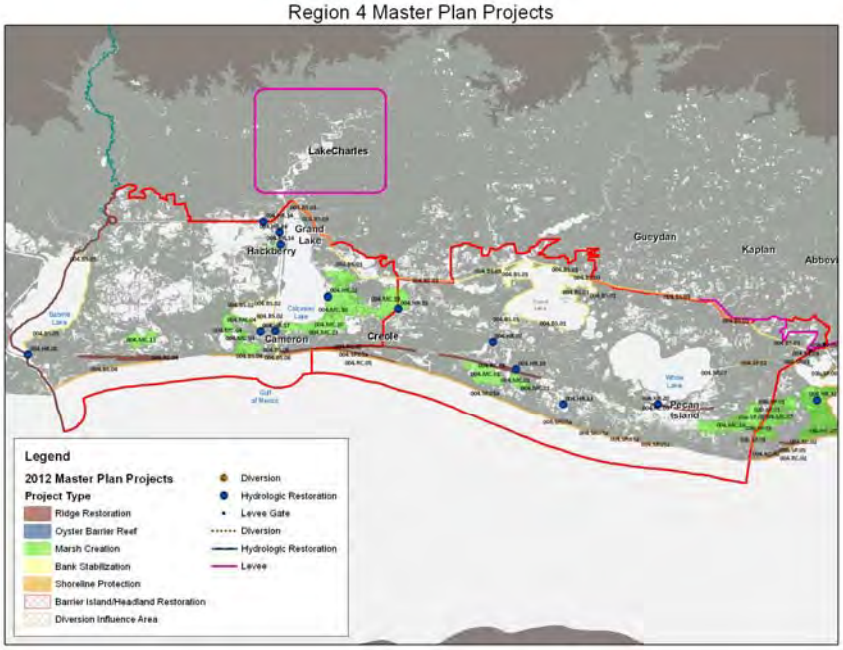
Region 4 Master Plan Projects



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Project Type	Project Name	Project Costs	Project No.
Bank Stabilization	Grand Lake Bank Stabilization: Bank stabilization through earthen fill placement and vegetative plantings of approximately 497,000 feet of perimeter shoreline at Grand Lake to preserve shoreline integrity and reduce wetland degradation from wave erosion.	$74M	004.BS.01
Bank Stabilization	West Cove Bank Stabilization: Bank stabilization through earthen fill placement and vegetative plantings of approximately 106,000 feet of perimeter shoreline in the West Cove area of Calcasieu Lake to preserve shoreline integrity and reduce wetland degradation from wave erosion.	$16M	004.BS.02
Bank Stabilization	GIWW Bank Stabilization (Freshwater Bayou to Calcasieu Ship Channel): Bank stabilization through earthen fill placement and vegetative plantings of approximately 421,000 feet of GIWW bankline between Freshwater Bayou Canal and Calcasieu Ship Channel.	$63M	004.BS.03
Bank Stabilization	Sabine Lake Bank Stabilization: Bank stabilization through earthen fill placement and vegetative plantings of approximately 133,000 feet of the eastern shoreline of Sabine Lake to preserve shoreline integrity and reduce wetland degradation from wave erosion.	$21M	004.BS.05
Bank Stabilization	Calcasieu Ship Channel Bank Stabilization (Gulf to Calcasieu Lake): Bank stabilization through earthen fill and placement of approximately 75,000 feet of Calcasieu Ship Channel bankline from the Gulf of Mexico to Calcasieu Lake to preserve shoreline integrity and reduce wetland degradation from wave erosion.	$12M	004.BS.06
Hydrologic Restoration	Calcasieu Ship Channel Salinity Control Measures: Construction of measures designed to prevent saltwater from entering Calcasieu Lake through the Calcasieu Ship Channel. Measures would control salinity spikes, provide storm surge benefits, and would be constructed in a manner that would allow for the continued functioning, and ideally improvement and increased viability of the Calcasieu Ship Channel and the Port of Lake Charles.	$398M	004.HR.06
Hydrologic Restoration	Little Pecan Bayou Sill: Construction of a saltwater sill at the confluence of Little Pecan Bayou and the Mermentau River to retain freshwater and reduce saltwater intrusion in the Mermentau watershed.	$5M	004.HR.07

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Project Type	Project Name	Project Costs	Project No.
Hydrologic Restoration	Sabine Pass Hydrologic Restoration: Isolation of the southern end of Sabine Lake from the Sabine Ship Channel through a rock dike to retain freshwater in Sabine Lake and reduce saltwater intrusion from the ship channel.	$33M	004.HR.08
Hydrologic Restoration	Tom's Bayou Hydrologic Restoration: Construction of a sheetpile crested weir at Tom's Bayou to provide salinity control for Rainey Marsh.	$1M	004.HR.12
Hydrologic Restoration	Deep Lake Hydrologic Restoration: Dredging of a 700-foot spillway structure (with 100-foot width and 15-foot depth) north of Deep Lake to increase freshwater exchange within the Rockefeller Wildlife Management Area and Game Preserve.	$2M	004.HR.13
Hydrologic Restoration	Alkali Ditch Area Hydrologic Restoration: Construction of structures at Alkali Ditch, Crab Gully, and Black Lake Bayou to provide salinity control in the Calcasieu watershed.	$38M	004.HR.14
Hydrologic Restoration	Oyster Bayou Hydrologic Restoration: Construction of a salinity barrier at Oyster Bayou south of West Cove, Calcasieu Lake to reduce saltwater intrusion into the Calcasieu watershed.	$5M	004.HR.17
Hydrologic Restoration	Mermentau Basin Hydrologic Restoration (East of Calcasieu Lake): Construction of a water control structure east of Calcasieu Lake with operation to introduce freshwater to wetlands west of Highway LA-27 near Creole.	$7M	004.HR.18
Hydrologic Restoration	Mermentau Basin Hydrologic Restoration (South of Grand Lake): Construction of a water control structure south of Grand Lake with operation to introduce freshwater to wetlands south of Highway LA-82 near Grand Chenier.	$7M	004.HR.19

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Project Type	Project Name	Project Costs	Project No.
Hydrologic Restoration	Mermentau Basin Hydrologic Restoration (South of White Lake): Construction of a water control structure south of White Lake with operation to introduce freshwater to wetlands south of Highway LA-82 near Pecan Island.	$7M	004.HR.20
Hydrologic Restoration	East Calcasieu Lake Hydrologic Restoration: Dredging of a 1,500-foot spillway structure (with 200-foot width and 15-foot depth) in the Cameron-Creole Levee at East Calcasieu Lake to increase freshwater exchange with adjacent wetlands.	$5M	004.HR.22
Marsh Creation	East Rainey Marsh Creation: Creation of approximately 3,080 acres of marsh in the eastern portion of Rainey Marsh to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	$429M	03b.MC.07
Marsh Creation	South Grand Chenier Marsh Creation: Creation of approximately 7,330 acres of marsh south of Highway LA-82 near Grand Chenier to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	$708M	004.MC.01
Marsh Creation	Mud Lake Marsh Creation: Creation of approximately 3,910 acres of marsh at Mud Lake south of West Cove, Calcasieu Lake to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	$581M	004.MC.04
Marsh Creation	West Rainey Marsh Creation: Creation of approximately 3,550 acres of marsh at Rainey Marsh near the southeast bank of the Freshwater Bayou Canal to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	$615M	004.MC.07
Marsh Creation	Southeast Calcasieu Lake Marsh Creation: Creation of approximately 7,600 acres of marsh southeast of Calcasieu Lake to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	$666M	004.MC.10

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Project Type	Project Name	Project Costs	Project No.
Marsh Creation	Cameron Meadows Marsh Creation: Creation of approximately 3,290 acres of marsh at Cameron Meadows north of Johnsons Bayou to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	$290M	004.MC.13
Marsh Creation	East Pecan Island Marsh Creation: Creation of approximately 7,340 acres of marsh between Pecan Island and the west bank of the Freshwater Bayou Canal to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	$1,180M	004.MC.16
Marsh Creation	Calcasieu Ship Channel Marsh Creation: Creation of approximately 2,640 acres of marsh south of Calcasieu Lake near Cameron to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	$185M	004.MC.23
Marsh Creation	East Calcasieu Lake Marsh Creation: Creation of approximately 14,840 acres of marsh in the eastern Cameron-Creole watershed to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	$2,484M	004.MC.19
Marsh Creation	Kelso Bayou Marsh Creation: Creation of approximately 260 acres of marsh at Kelso Bayou immediately west of Calcasieu Ship Channel to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	$32M	004.MC.25
Ridge Restoration	Grand Chenier Ridge Restoration: Restoration of approximately 86,000 feet (200 acres) of historic ridge at Grand Chenier Ridge to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	$11M	004.RC.01
Ridge Restoration	Cheniere au Tigre Ridge Restoration: Restoration of approximately 60,000 feet (140 acres) of historic ridge along Bill Ridge and Cheniere au Tigre near the Gulf shoreline to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	$10M	004.RC.02

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Project Type	Project Name	Project Costs	Project No.
Ridge Restoration	Pecan Island Ridge Restoration: Restoration of approximately 44,000 feet (100 acres) of historic ridge along Pecan Island Ridge to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	$8M	004.RC.03
Ridge Restoration	Hackberry Ridge Restoration: Restoration of approximately 130,000 feet (300 acres) of historic ridge along Blue Buck and Hackberry Ridges to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	$2M	004.RC.04
Ridge Restoration	Front Ridge Restoration: Restoration of approximately 147,000 feet (340 acres) of historic ridge along Front Ridge east of Cameron to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	$26M	004.RC.05
Shoreline Protection	Freshwater Bayou Shoreline Protection (Belle Isle Canal to Lock): Shoreline protection through rock breakwaters of approximately 41,000 feet of Freshwater Bayou shoreline from Belle Isle Canal to Freshwater Bayou Lock to preserve shoreline integrity and reduce wetland degradation from wave erosion.	$43M	03b.SP.01
Shoreline Protection	Gulf Shoreline Protection (Freshwater Bayou to Southwest Pass): Shoreline protection through rock breakwaters of approximately 90,000 feet of Gulf shoreline from Freshwater Bayou to Southwest Pass (near Marsh Island) to preserve shoreline integrity and reduce wetland degradation from wave erosion.	$96M	03b.SP.05
Shoreline Protection	Calcasieu-Sabine Shoreline Protection-Component A: Shoreline protection through rock breakwaters of approximately 38,000 feet of Gulf shoreline between Sabine River and Calcasieu Ship Channel to preserve shoreline integrity and reduce wetland degradation from wave erosion.	$48M	004.BS.04a
Shoreline Protection	Freshwater Bayou Canal Shoreline Protection: Shoreline protection through rock breakwaters of approximately 11,000 feet of Freshwater Bayou Canal bankline at Little Vermilion Bay to preserve shoreline integrity and reduce wetland degradation from wave erosion.	$13M	004.SP.03

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Project Type	Project Name	Project Costs	Project No.
Shoreline Protection	Gulf Shoreline Protection (Calcasieu River to Rockefeller): Shoreline protection through rock and low wave-action breakwaters of approximately 290,000 feet of Gulf shoreline between Calcasieu River and Freshwater Bayou to preserve shoreline integrity and reduce wetland degradation from wave erosion.	$401M	004.SP.05a
Shoreline Protection	Northeast White Lake Shoreline Protection: Shoreline Protection through rock breakwaters of approximately 3,000 feet of White Lake shoreline near Schooner Bayou Canal to preserve shoreline integrity and reduce wetland degradation from wave erosion.	$4M	004.SP.07
Shoreline Protection	Southwest Pass Shoreline Protection (West Side): Shoreline protection through rock breakwaters of approximately 37,000 feet of shoreline along Southwest Pass immediately west of Marsh Island to preserve shoreline integrity and reduce wetland degradation from wave erosion.	$40M	03b.SP.08
Shoreline Protection	Schooner Bayou Canal Shoreline Protection: Shoreline protection through rock breakwaters of approximately 21,000 feet of Schooner Bayou Canal bankline from Highway 82 to North Prong to preserve shoreline integrity and reduce wetland degradation from wave erosion.	$23M	004.SP.02

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4. Coastwide Electronic Vote

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Coastwide Electronic Vote

- **Feb. 19, 2013**: The Coastwide Electronic Vote to select 4 nominees per basin in Barataria and Terrebonne, 3 nominees per basin in Breton Sound and Pontchartrain, 2 nominees per basin in Mermentau, Calcasieu-Sabine, and Teche-Vermilion, and 1 nominee in the Atchafalaya Basin. 1 coastwide project and 6 demos may also be selected.
- Parishes of each basin are asked to ***identify*** **TODAY** ***who will vote*** during the Coastwide Electronic Vote.
- No additional projects can be nominated after the RPTs.
- No significant changes to projects proposed at the first round of RPT meetings will be allowed (this includes combining projects).
- Public comments will be heard today and written comments must be submitted by 2/8/2013.

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Coastwide Electronic Vote

- Each officially designated parish representative, each Federal agency, and the State (CPRA) will have one vote.
- Voting will be by ranked vote.
- Each voting entity will be provided an electronic ballot.
- Each voting entity will provide a ranked score for all projects – the highest ranking project will receive the highest vote and the lowest will receive a vote of "1".
- Points will be totaled for all projects within each basin.

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Coastwide Electronic Vote: The NEW Process

- USACE will send out voting sheets as both Excel spreadsheet and PDF documents 1 week prior to the Coastwide Electronic Vote. Voters will only receive voting sheets for the basins that they are eligible to vote for & the column that they need to mark their vote will be highlighted. Voting instructions will be provided with the voting sheets.
- Parish representatives must **fill out a voting registration form** at the RPT meetings with their email addresses to receive the voting sheets in February.
- Voters may either email their voting sheets to allison.murry@usace.army.mil OR fax their voting sheets to 504-862-2572.
  All votes must be received by 10:30 am on February 19, 2013.

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5. PPL 23 Project Nominations

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Coastwide Projects

- Proposes a technique applicable across the coast (e.g. vegetative planting)
- Nominated at any RPT meeting
- All coastal parishes & agencies will vote on selection of coastwide nominee
- Only one coastwide nominee may be selected from the coastwide nominee pool during the Electronic Coastwide Vote on February 19, 2013
- The Technical Committee may or may not select a coastwide project in April 2013.

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Demonstration Projects

- Demonstrates a new technology
- Demonstrates a technology which can be transferred to other areas in coastal Louisiana
- Are unique and not duplicative in nature
- Engineering/Environmental Workgroups will validate that demos fit CWPPRA Standing Operating Procedures criteria and select sites for proposed demonstration projects.
- The RPTs select 6 demos during the Feb. 19 Coastwide Electronic Vote.
- The Technical Committee selects up to 3 demos in April 2o13.
- Previous demo candidates must be ***re-nominated*** for PPL 23.

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6. Announcements of Upcoming Meetings

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PPL 23 Timeline

- **Coastwide Electronic Vote, Feb. 19, 2013**
  - 21 basin-project nominees, 1 coastwide nominee, and 6 demos selected
- **Technical Committee Mtg, Apr. 16, 2013, New Orleans**
  - Selection of 10 candidates and up to 3 demos
- **PPL Public Comment Mtg**
  - Nov. 13, 2013, Baton Rouge
- **Technical Committee Mtg, Dec. 12, 2013, New Orleans**
  - Recommend up to 4 projects for Phase 1 funding
- **Task Force Mtg, Jan. 2014, New Orleans**
  - Final Selection of projects for Phase 1 funding

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Written Comments

- Send written comments on projects & demos proposed today to the CWPPRA program manager
- **Deadline: February 8, 2013**

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

Fax: 504-862-2572
(Attn: Brad Inman)

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

ATTENDANCE RECORD

DATE	SPONSORING ORGANIZATION	LOCATION
January 29, 2013 11:00 A.M.	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	Vermilion LSU Ag Center 1105 West Port Street Abbeville, LA

PURPOSE

MEETING OF THE REGIONAL PLANNING TEAM REGION IV

PARTICIPANT REGISTER*

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER/EMAIL
Ron Boustany	NRCS	337-291-3067
Sharnill Segrera	Vermilion	332 452 [illegible]
Laurie Cormier	Calcasieu Parish Police Jury	337-721-3600
Anne Watkins	URS	504-218-0923
KARIM BELHADJALI	CPRA	225 342-4123
Jammie Favorite	CPRA	225-342-4119
Erick Swenson	LSU	225 578 2730
Kaya Bonsall	CZ Administrator, Cameron Parish	775-2800
Stafford Comeaux	Lake Arthur Hunting Club	318-422-1066
William Comeaux	" "	318-221-9600
RYAN BOURRIAQUE	Cameron Parish Police Jury	337-775-5718
Chad Courville	Miami Corp	337.264.1695
Angela Trahan	FWS	337-291-3137
JOHN FORET	NOAA	337-291-2107
Jeanne Hornsby	Fenstermaker	337-501-4344
Justin Shaw	fenstermaker	337-237-2200
JOHN PETTIJOHN	USACE	504-862-2732
Bryan Kemp	Gulf CPR	225-665-2825
Juli Kemp	Gulf CPR	" "
Kevin Segrera	Vermilion parish police Jury	337-303-4585
Chris Allen	CPRA	225-342-4736
VIC CRESSIEN	VPPJ	337-652-8538

LMV FORM 583-R
JAN 88

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

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MEETING OF THE REGIONAL PLANNING TEAM REGION IV

PARTICIPANT REGISTER*

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER/EMAIL
Charles Sasser	LSU	2255786375
Mike Perry	NRCS	
Ken Teague	EPA	214-665-6687
Steve Beck	LDWF	
Randall Schoeffler	Sierra Club Acadiana	3374715550
Mike Sullo	USDA NRCS	
Woody Martin	Sierra Club	337-232-7953
ROGER PEAK	" "	REPEAKJR@YAHOO.COM
David Richard	Stream Co's	drichmad@jstreamcompany.com
Frank Chapman	Distr. Consv. USDA NRCS	frank.chapman@la.usda.gov
Mark Shirley	LSU Ag Center - Sea Grant	mshirley@agcenter.lsu.edu
Natalie McElyea	LSU AgCenter - Youth Wetlands Program	NMcElyea@agcenter.lsu.edu
Troy Mallach	NRCS	337/291-3064
Robert Dubois	FWS	337/291-3127
RALPH Liberst	Royal	337/456/5351
Jane Rowan	Normandeau	610 6359359
Martin O. Miller III	Rellim Surface Mgt, LLC - Miller Edith Dr. M.O.	(504)616-5700
Darryl Clark	USFWS - Senior Fish Biologist	337-291-3111

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Mike Perry	NRCS	
Ken Teague	EPA	214-665-6687
Steve Beck	LDWF	
Randy Schoeffler	Sierra Club Acadiana	3374171550
Mike Sullo	USDA NRCS	
Woody Hutchinson	Sierra Club	337-232-7953
ROGER PEAK	" "	REPEAKJR@yahoo.com
David Richard	Stream Co's	drichard@streamcompanies.com
Frank Chapman	Distr. Consv. USDA NRCS	frank.chapman@la.usda.gov
Mark Shirley	LSU Ag Center - Sea Grant	mshirley@agcenter.lsu.edu
Natalie McElyea	LSU AgCenter - Youth Wetlands Program	NMCElyea@agcenter.lsu.edu
Troy Mallach	NRCS	337/291-3064
Robert Dubois	FWS	337/291-3127
RALPH Liberst	Royal	337/456/5351
Jane Rowan	Normandeau	610 6359359
Martin O. Miller III	Rollins Surface Mgt, LLC - Miller Estate Dr. M.O.	(504)616-5700
Darryl Clark	USFWS - Senior Fld. Biologist	337-291-3111
Linda Duhon	Vermilion Parish Police Jury	337-898 4300

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Sharon Segrera	Vermilion	332 452 4532
Laurie Cormier	Calcasieu Parish Police Jury	337-721-3600
Anne Watkins	NRS	504-218-0423
KARIM BELHAISTAM	CPRA	225 342-4123
Jammie Favorite	CPRA	225-342-4119
Erick Swenson	LSU	225 578 2730
Kaya Bonsall	CZ Administrator, Cameron Parish	775-2800
Stafford Comeaux	Lake Arthur Hunting Club	318-422-1066
William Comeaux	" "	318-221-9600
RYAN BOURRIAQUE	Cameron Parish Police Jury	337-775-5718
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JOHN FORET	NOAA	337-291-2107
Jeanne Hornsby	Fenstermaker	337-501-4344
Justin Shaw	fenstermaker	337-237-2200
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Chris Allen	CPRA	225-342-4736
VIC CRESSIEN	VPPJ	337-652-8538

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Region 4 – CALCASIEU-SABINE BASIN

Project Number	Project Proposals
R4-CS-01	East Holly Beach Gulf Shoreline Protection
R4-CS-02	East Calcasieu Lake Marsh Creation & Hydrologic Restoration
R4-CS-03	No Name Bayou Marsh Creation
R4- CS-04	North Mud Lake Marsh Creation & Nourishment
~~R4- CS-05~~	~~Sabine National Wildlife Refuge Marsh Creation~~ *(not consistent with 2012 State Master Plan)*
~~R4-CS-06~~	~~Sabine Refuge Marsh Creation Project 6 & 7~~ *(not consistent with 2012 State Master Plan)*
R4-CS-07	West Cove Marsh Creation and Nourishment
~~R4-CS-08~~	*combined with R4-CS-07*
R4- CS-09	East Prong Grand Bayou Marsh Creation

Region 4 – MERMENTAU BASIN

R4-ME-01	South Grand Chenier Marsh Creation
R4-ME-02	East Pecan Island Marsh Creation
R4-ME-03	North Big Marsh Restoration
R4-ME-04	Southeast Pecan Island Marsh Creation & Freshwater Diversion
~~R4-ME-05~~	*combined with R4-ME-04*
R4-M E-06	Umbrella Bay Shoreline Protection

Region 4 – CALCASIEU-SABINE BASIN

R4-CS-01

East Holly Beach Gulf Shoreline Protection

Consistent with 2012 State Master Plan

PPL23 PROJECT NOMINEE FACT SHEET
January 29, 2013

Project Name
East Holly Beach Gulf Shoreline Protection

Master Plan Strategy
Calcasieu-Sabine Shoreline Protection-Component A: Shoreline protection through rock breakwaters of approximately 38,000 feet of Gulf shoreline - 004.BS.04a

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 proposed Beach Nourishment project. Recent loss rates (1998-2008) were calculated from aerial photography at 26.5 ft/yr. In some of the areas proposed for protection, less than 25 feet of shoreline remains between Louisiana State Highway 82 and the Gulf of Mexico.

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 several hundred acres, with **137 acres** directly protected as a result of 75% reduction in loss rate. This project maintains a beach rim component of the coastal ecosystem and has a positive net impact on critical infrastructure (Highway 82) and would have a synergistic effect on the proposed state surplus project. This project would also protect/restore critical habitat for the piping plover, a threatened/endangered species.

Proposed Project Features
The project proposes approximately 15,000 linear feet (2.8 miles) of breakwaters similar to the Holly Beach Breakwater Project (CS- 01) to protect the most critical shoreline area along Highway 82. Breakwaters will be designed on the CS-01 template, using all the lessons learned from the Holly Beach Breakwater Enhancement and Sand Management Project (CS-31). Approximately 40 round rubble breakwaters (ranging from 150 – 170 ft with 250 - 300 ft gaps), placed 300 – 700 feet offshore and built to 3.8 ft NGVD will be created. This project will protect a proposed state surplus project that will create/nourish this beach using sand from offshore borrow sites.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly? The total area benefitted is estimated at 350 acres.

2) *How many acres of wetlands will be protected/created over the project life*? The project would protect/create approximately **137 net 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.

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 Holly Beach Breakwater Project (CS- 01), Holly Beach Breakwater Enhancement and Sand Management Project (CS-31), and a proposed state surplus project that will create/nourish this area using sand from offshore borrow sites.

Identification of Potential Issues
There are no issues identified at this time.

Preliminary Construction Costs (w/25% contingency)
$19 million

Preparers of Fact Sheet
Troy Mallach, NRCS troy.mallach@la.usda.gov

Legend

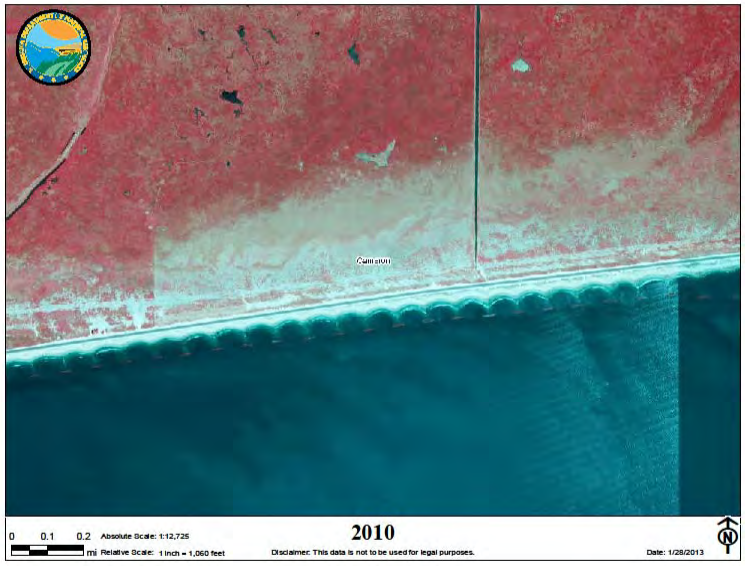
- Breakwaters
- primaryroads

0 1,600 3,200 6,400 9,600 12,800

Feet

East Holly Beach
Gulf Shoreline Protection
Cameron Parish, Louisiana
PPL 23


0 0.1 0.2 mi
Absolute Scale: 1:12,725
Relative Scale: 1 inch = 1,060 feet
1998
Disclaimer: This data is not to be used for legal purposes.
Date: 1/28/2013
N


0 0.1 0.2 mi
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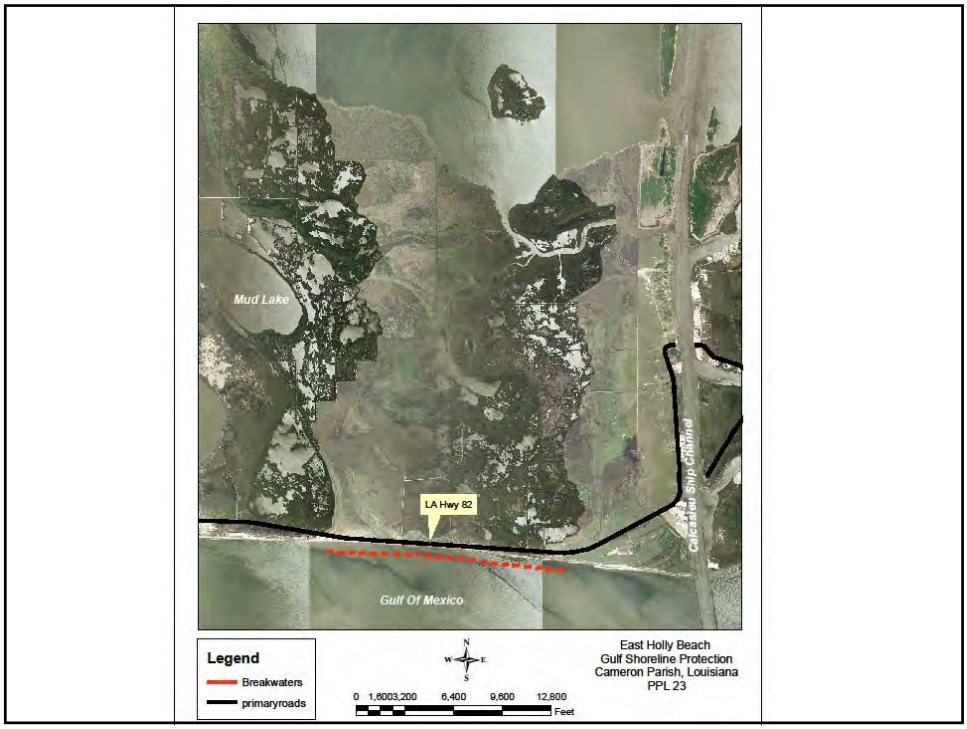
2010
Disclaimer: This data is not to be used for legal purposes.
Date: 1/28/2013
N


Mud Lake
LA Hwy 82
Calcasieu Ship Channel
Gulf Of Mexico
Legend
Breakwaters
primaryroads
N
W
E
S
0 1,600 3,200 6,400 9,600 12,800
Feet
East Holly Beach
Gulf Shoreline Protection
Cameron Parish, Louisiana
PPL 23


partment of Natural Resources
0
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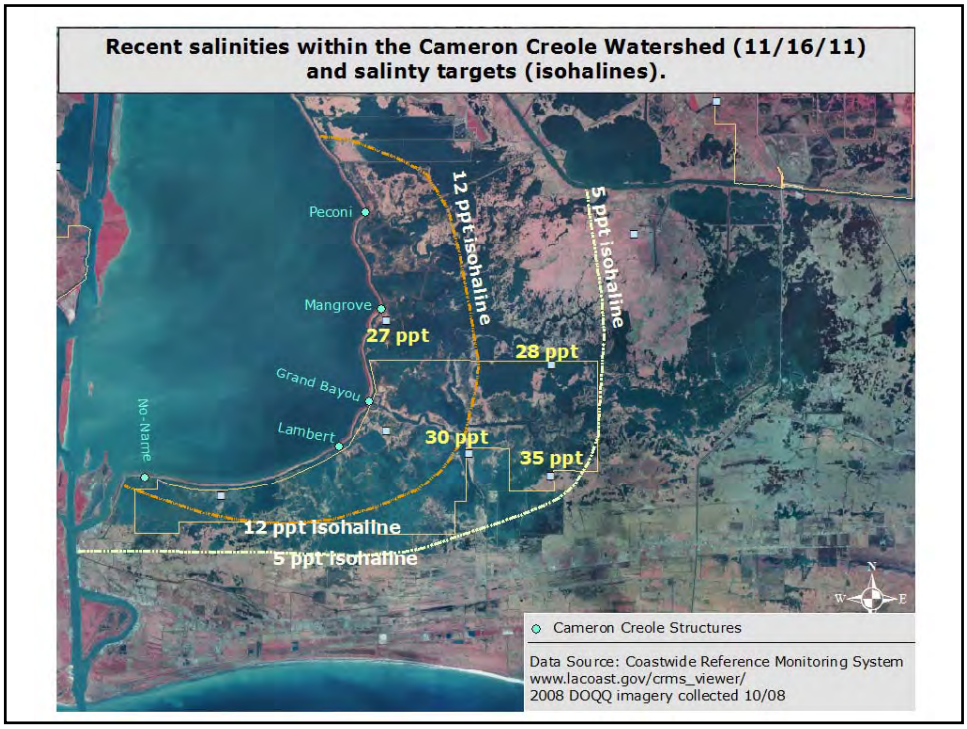
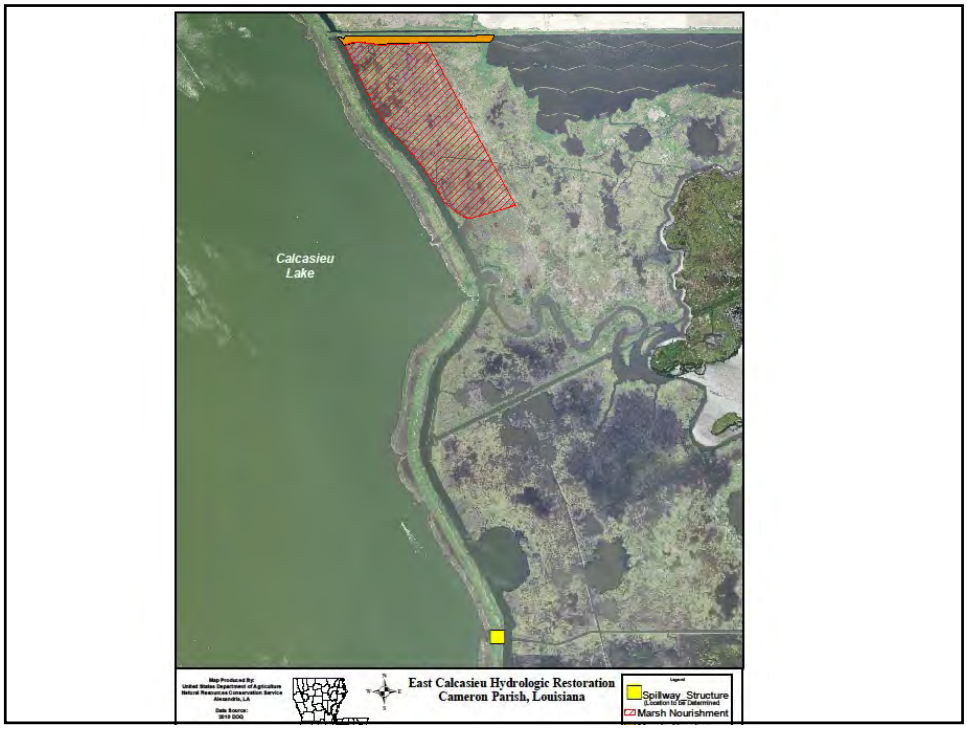

Recent salinities within the Cameron Creole Watershed (11/16/11) and salinty targets (isohalines).
Peconi
Mangrove
Grand Bayou
Lambert
No Name
12 ppt isohaline
5 ppt isohaline
27 ppt
28 ppt
30 ppt
35 ppt
12 ppt isohaline
5 ppt isohaline
Cameron Creole Structures
Data Source: Coastwide Reference Monitoring System
www.lacoast.gov/crms_viewer/
2008 DOQQ imagery collected 10/08


Calcasieu
Lake
East Calcasieu Hydrologic Restoration
Cameron Parish, Louisiana
Spillway_Structure
Location to be Determined
Marsh Nourishment

R4-CS-02

East Calcasieu Lake Marsh Creation & Hydrologic Restoration

Consistent with 2012 State Master Plan

PPL23 PROJECT NOMINEE FACT SHEET
January 29, 2013

Project Name
East Calcasieu Lake Marsh Creation and Hydrologic Restoration

Master Plan Strategy
Southeast Calcasieu Lake Marsh Creation 004.MC.10 and; East Calcasieu Lake Hydrologic Restoration - 004.HR.22

Project Location
Region 4, Calcasieu/Sabine Basin, Cameron Parish, east of Calcasieu Lake west of Highway 27.

Problem
The project area marshes have experienced increased tidal exchange, saltwater intrusion, and reduced freshwater retention associated with the Calcasieu Ship Channel and the GIWW. Between 1952 and 1974, this area is thought to have had some of the highest loss rates of any area in coastal Louisiana. Some of that loss is linked to natural disturbances such as Hurricane Audrey, Hurricane Carla, and the severe droughts of the early 1960's. However, because of man-made alterations to the hydrology those marshes were unable to adapt and repair themselves through natural processes. To reduce impacts associated with the Ship Channel, the Cameron-Creole Watershed Project was completed in 1989. That project has successfully reduced salinities and increased marsh productivity. Recently, Hurricanes Rita and Ike were responsible for additional marsh loss in the Cameron-Creole area. Repairs to the Cameron-Creole Watershed Project structures and levees have been completed; however, hydrology in the project area remains impaired from recent storm impacts.

Goals
The project goal is to promote the expansion of emergent marsh vegetation throughout the project area and restore hydrology by creating marsh in areas designed to reduce salt water intrusion and rapid water exchange.

The project will also reduce prolong periods of inundation by relieving flooding stress and restore the function, value, and sustainability to approximately 7,500 acres of marsh and open water.

Proposed Project Features
The project proposes to create/nourish approximately 150 acres of marsh and construct a spillway structure in the Cameron-Creole Levee at East Calcasieu Lake.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly? The total area benefitted is estimated at 7,500 acres.

2) *How many acres of wetlands will be protected/created over the project life*? The project would protect/create approximately **200 net 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 *25-49%.*

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 protect and create wetlands that provide critical protection to the Cameron-Creole Levee and the east shoreline of Calcasieu Lake.

5) *What is the net impact of the project on critical and non-critical infrastructure*? The proposed project would provide protection to the Cameron-Creole Levee.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects*? The proposed project is also synergistic with the Cameron-Creole Plugs project (CS-17), the Cameron-Creole Maintenance project (CS-04a), and the Cameron-Creole Freshwater Introduction project (CS-49) implemented and/or designed to reduce salinities and increase marsh production.

Identification of Potential Issues
There are no issues identified at this time.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is approximately $18 million.

Preparer of Fact Sheet
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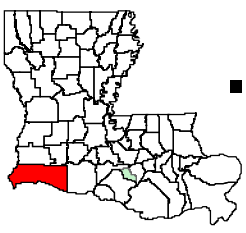
Chad Courville, Miami Corporation (337) 264-1695, cjcourville1@bellsouth.net

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

Data Source:
2010 DOQ

Map Date: November 29, 2012



East Calcasieu Hydrologic Restoration
Cameron Parish, Louisiana

Legend
- Spillway_Structure (Location to be Determined)
- Marsh Nourishment
- Marsh_Creation

0 600 1,200 2,400 3,600 4,800
Feet

R4-CS-03

No Name Bayou Marsh Creation

Consistent with 2012 State Master Plan

R4-CS-03

PPL23 PROJECT NOMINEE FACT SHEET
January 29, 2013

Project Name
No Name Bayou Marsh Creation and Nourishment

Louisiana's 2012 Coastal Master Plan
Marsh Creation – 004.MC.23

Project Location
Region 4, Calcasieu-Sabine Basin, Cameron Parish

Problem
The Calcasieu Ship Channel, immediately west of the project area, provides an avenue for the rapid movement of high-salinity water into the marshes around Calcasieu Lake. This movement increased salinity in the area, resulting in plant death and marsh loss. The marshes located between the East Fork of the Calcasieu River and Calcasieu Lake were decimated by Hurricane Rita in 2005 and Ike in 2008. Marshes that once provided a buffer to the southwest rim of Calcasieu Lake are now shallow open water areas.

Proposed Solution
The proposed project's primary feature is to create and/or nourish approximately 515 acres of marsh (438 acres created, 77 acres nourished) south of Calcasieu Lake. In order to achieve this, sediment will be hydraulically pumped from the upland disposal areas of the Calcasieu River immediately adjacent to, and into the shallow water marsh creation area. Clean out approximately 5,600 LF of the Cameron Creole Watershed Levee borrow channel to facilitate water movement into the newly created area. Approximately 12,000 LF of tidal creeks will be constructed in the newly created/nourished area. Minimal containment dikes will be constructed around the marsh creation area to keep material on site during pumping. Once pumping has been completed, the containment dikes will be degraded to the current platform elevation and gaps will be excavated. Additionally, 260 acres of vegetative plantings will occur within the newly created areas.

Goals
The project goal is to create and/or nourish approximately 515 ac of marsh (438 ac created, 77 ac nourished) of emergent brackish marsh using sediment from upland disposal sites of the Calcasieu River.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 515 ac.

2) *How many acres of wetlands will be protected/created over the project life?* Based on a 50% rate reduction to the projected -1.36%/yr land loss rate, marsh creation and nourishment in the project area would yield 449 net acres, 20 years after initial construction.

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 over the project area is 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, helps to prevent coalescence of Lake Calcasieu with the open water area around No Name Bayou.

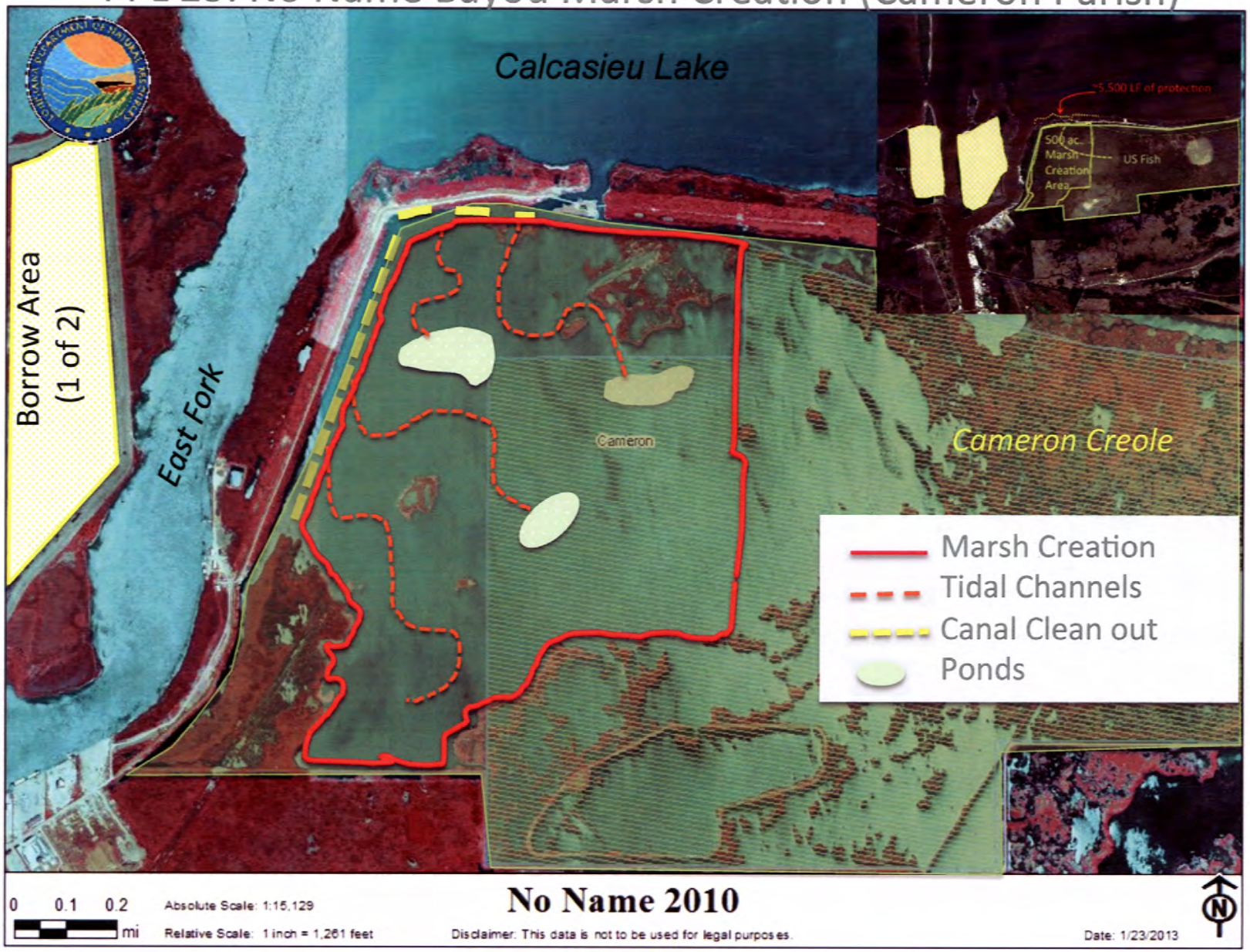
5) *What is the net impact of the project on critical and non-critical infrastructure?* No major impacts to critical infrastructure. Oil and gas facilities in area would be benefited by the project acreage created.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
This project would have a synergistic effect with CWPPRA project CS-20, East Mud Lake Marsh Management, which was completed in 1997. The objective of that project is to create a hydrologic regime conducive to restoration, protection, and enhancement of the Mud Lake area by using various types of water control structures and vegetation plantings. Structural components include culverts with flap gates, two variable crest weirs, three earthen plugs, and repair of an existing levee (CPRA, 2009).

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $21,686,409. The fully funded cost range is $25M-$30M.

Preparer(s) of Fact Sheet:
John D. Foret, Ph.D.; NOAA Fisheries Service 337.291.2107 John.Foret@noaa.gov

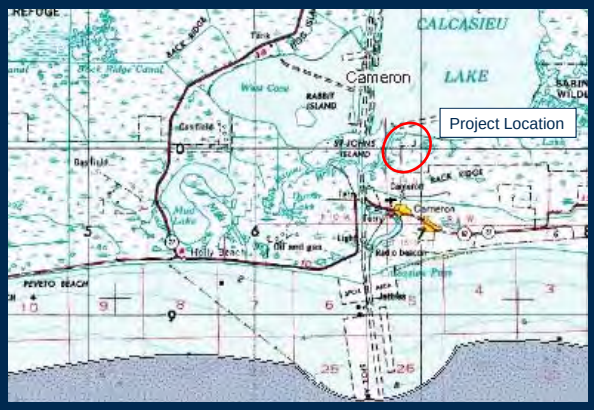
PPL 23: No Name Bayou Marsh Creation (Cameron Parish)



Science, Service, Stewardship

No Name Bayou Marsh Creation and Nourishment (Cameron Parish)

Region IV – Calcasieu-Sabine Basin



NOAA FISHERIES SERVICE

January 29, 2013

NOAA FISHERIES SERVICE

Problem

- High land loss rates in this area of Cal/Sab Basin
- Rapid salinity increases from ship channel weakened plant communities, ultimately leading to vegetation die-off and marsh breakup, allowing for Hurricanes Rita and Ike to scour the area
- Marshes that once provided a buffer to the south rim of Calcasieu Lake are now shallow open water areas
- Historically, these marshes served as storm surge reduction for communities to the north

2

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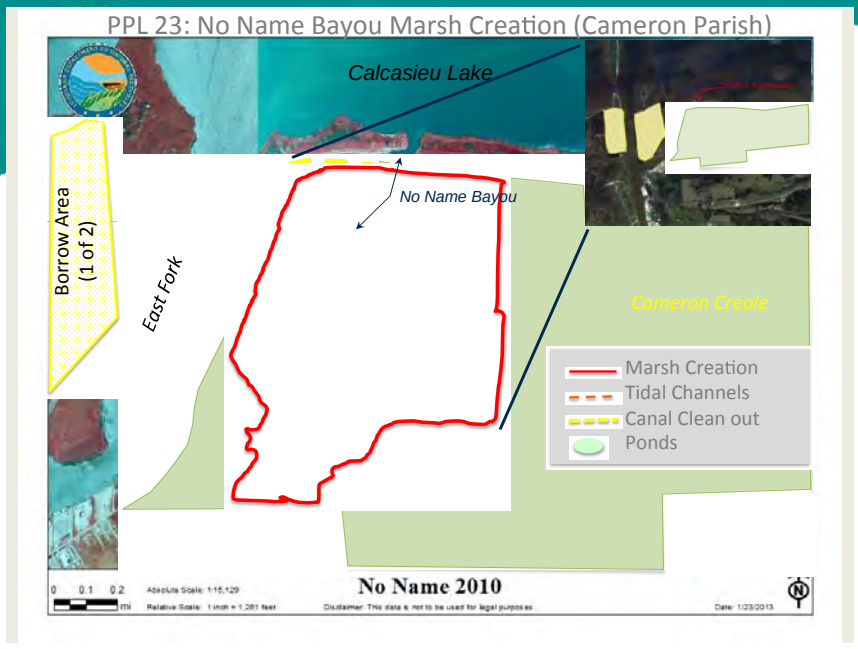
Project Features

- Total Acres = 515 acres (438 created, 77 nourished)
- Reestablishes marsh at the intersection of Calcasieu River and Calcasieu Lake
- Borrow from outside immediate project area from upland disposal site(s)
- Clean out of existing borrow canal to facilitate water exchange to the newly created wetlands
- Approximately 12,000 LF of tidal channels will be constructed.
- Consistent with State Master Plan
- 449 net acres @ TY20
- Construction Cost with 25% contingency = $21.7 million

3



4

R4-CS-04

North Mud Lake Marsh Creation & Nourishment

Consistent with 2012 State Master Plan

RY-CS-04

PPL23 PROJECT NOMINEE FACT SHEET
January 29, 2013

Project Name
North Mud Lake Marsh Creation and Nourishment

Louisiana's 2012 Coastal Master Plan
Marsh Creation – 004.MC.04

Project Location
Region 4, Calcasieu-Sabine Basin, Cameron Parish

Problem
The Calcasieu Ship Channel, immediately east of the project area, provides an avenue for the rapid movement of high-salinity water into the marshes around Mud Lake. This movement increased salinity in the area, resulting in plant death and marsh loss. The marshes located between Mud Lake and West Cove were decimated by Hurricane Rita in 2005 and Ike in 2008. Marshes that once provided a buffer to the southwest rim of West Cove are now shallow open water areas.

Proposed Solution
The proposed project's primary feature is to create and/or nourish approximately 544 acres of marsh (455 acres created, 89 acres nourished) north of Mud Lake. In order to achieve this, sediment will be hydraulically pumped from the upland disposal areas of the Calcasieu River into the shallow water marsh creation area. Minimal containment dikes will be constructed around the marsh creation area to keep material on site during pumping. Once pumping has been completed, the containment dikes will be degraded to the current platform elevation and gaps will be excavated. Additionally, 272 acres of vegetative plantings will occur within the newly created areas.

Goals
The project goal is to create and/or nourish approximately 544 ac of marsh (455 ac created, 89 ac nourished) of emergent brackish marsh using sediment from upland disposal sites of the Calcasieu River.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 544 ac.

2) *How many acres of wetlands will be protected/created over the project life?* Based on a 50% rate reduction to the projected -.36%/yr land loss rate, marsh creation and nourishment in the project area would yield 525 net acres, 20 years after initial construction.

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 over the project area is 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, helps to prevent coalescence of Lake Calcasieu with Mud Lake.

5) *What is the net impact of the project on critical and non-critical infrastructure?* No major impacts to critical infrastructure. Oil and gas facilities in area would be benefited by the project acreage created.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
This project would have a synergistic effect with CWPPRA project CS-20, East Mud Lake Marsh Management, which was completed in 1997. The objective of that project is to create a hydrologic regime conducive to restoration, protection, and enhancement of the Mud Lake area by using various types of water control structures and vegetation plantings. Structural components include culverts with flap gates, two variable crest weirs, three earthen plugs, and repair of an existing levee (CPRA, 2009).

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $25,781,881. The fully funded cost range is $30M-$35M.

Preparer(s) of Fact Sheet:
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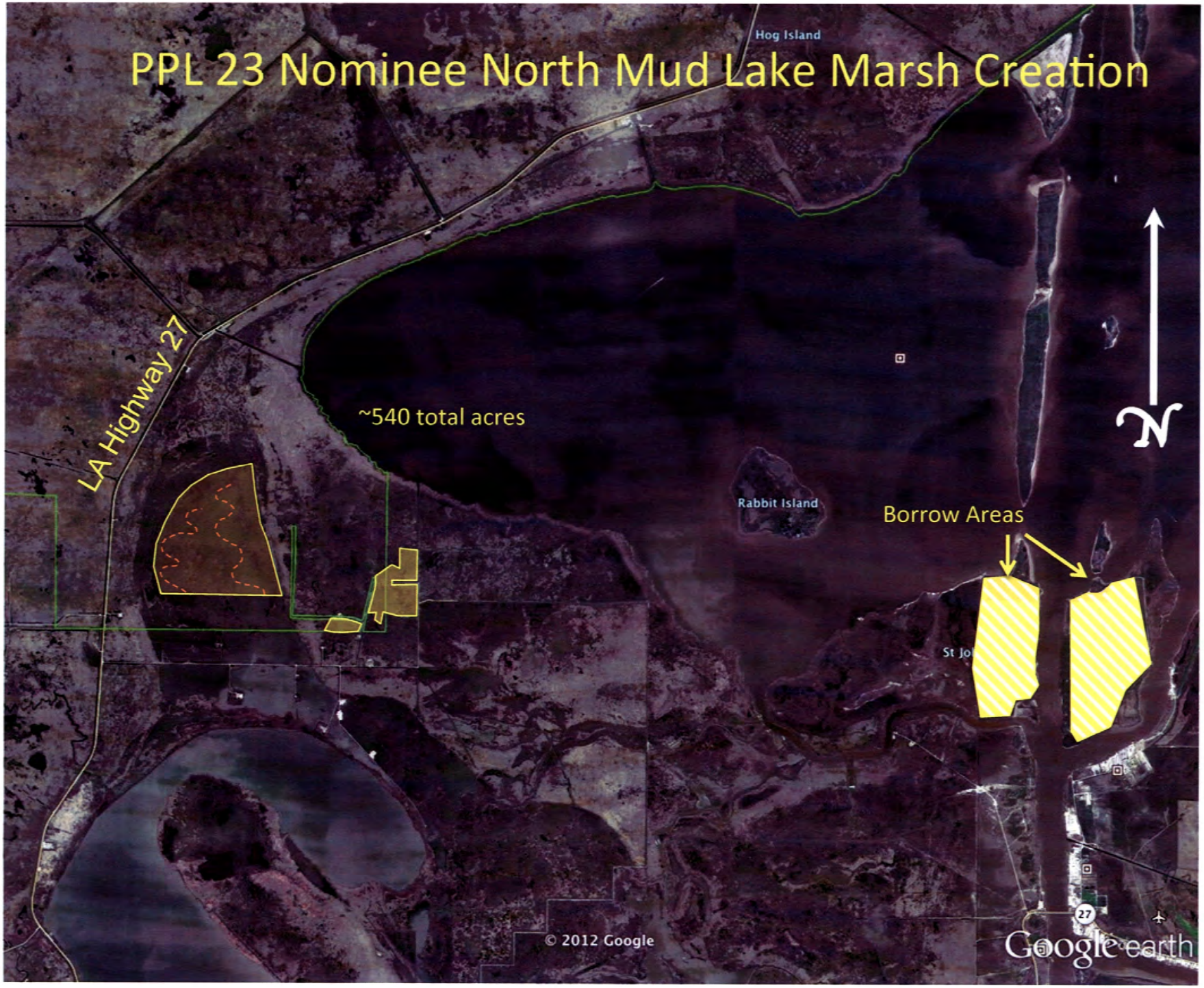
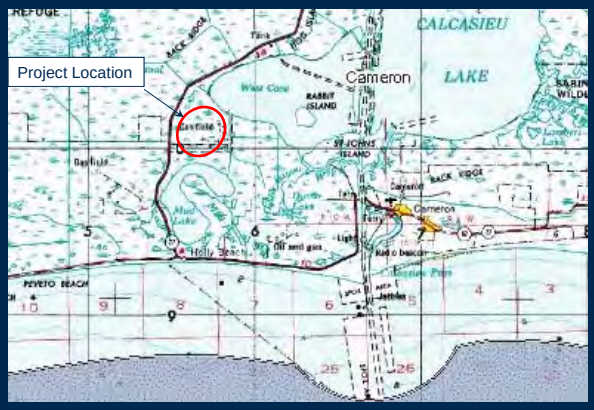

PPL 23 Nominee North Mud Lake Marsh Creation
Hog Island
LA Highway 27
~540 total acres
Rabbit Island
Borrow Areas
St Jo
N
© 2012 Google
Google earth

Science, Service, Stewardship

North Mud Lake Marsh Creation and Nourishment (Cameron Parish)

Region IV – Calcasieu-Sabine Basin



NOAA FISHERIES SERVICE

January 29, 2013

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Problem

- The Calcasieu Ship Channel, immediately east of the project area, provides an avenue for the rapid movement of high-salinity water into the marshes around Mud Lake
- Rapid salinity increases from ship channel weakened plant communities, ultimately leading to vegetation die-off and marsh breakup, allowing for Hurricanes Rita and Ike to scour the area
- Marshes that once provided a buffer to the south rim of Calcasieu Lake (West Cove) are now shallow open water areas
- LA Hwy 27 is Hurricane Evacuation Route.

2

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Project Features

- Total Acres = 544 acres (455 created, 89 nourished)
- Approximately 10,000 LF tidal channels
- Reestablishes marsh between Mud Lake and West Cove
- Provides additional protection to LA Hwy 27
- Borrow from outside immediate project area from upland disposal site(s)
- Consistent with State Master Plan
- 439 net acres @ TY20
- Construction Cost with 25% contingency = $25.8 million

3

~~R4-CS-05~~

~~Sabine Wildlife Refuge Marsh Creation~~

Not consistent with 2012 State Master Plan

R4-CS-05

PPL23 PROJECT NOMINEE FACT SHEET
January 29, 2013

Project Name
Sabine National Wildlife Refuge Marsh Creation and Nourishment

Project Location
Region 4, Calcasieu-Sabine Basin, Cameron Parish

Problem
Historically, 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 such as the construction of the Calcasieu Ship Channel and LA Highway 27 have caused significant hydrologic changes to this system. These factors contributed to the weakening of the wetland plant community, such that the community could not respond to increasing salinities and flood duration. The conversion of wetlands to open water also occurred during increased tidal action (i.e. tropical events), the wetland vegetation is physically removed, leaving open water areas. Salinity levels and flood duration have been improved with time, however water depths are not conducive for the reestablishment of emergent vegetation. In addition, SAV habitat in the project is also limited by wave action within the large, open water area.

Proposed Solution
The proposed project's primary feature is to create and/or nourish approximately 505 ac (450 ac created, 55 ac nourished) of marsh, and approximately 10,000 linear ft of tidal creeks. In order to achieve this, sediment will be hydraulically pumped from the upland disposal areas of the Calcasieu Ship Channel into the shallow water marsh creation area. The upland disposal areas will be mined to approximately +2, reestablishing this 325 acre area as emergent marsh. The project will utilize the existing Hog Island Gully channel as a pipeline corridor, and LA Highway 27 crossing. Containment dikes will be constructed around the marsh creation area to keep material on site during pumping and the tidal creeks and ponds will be constructed. Once pumping has been completed, the containment dikes will be degraded to the current platform elevation and gaps will be made in the containment dike, hydraulically connecting the constructed tidal creeks to the adjacent water. Additionally, the newly constructed marsh will be assessed to determine if vegetative plantings will be necessary. Funds are budgeted to plant 50% of the created marsh acres (275 ac).

Goals
The project goal is to create and/or nourish approximately 830 ac (510 ac created, 40 ac nourished in placement area and 325 created from upland disposal source) of emergent brackish marsh using sediment from the upland disposal areas along the Calcasieu Ship Channel and protect 610 ac of emergent brackish marsh over the project's life.

Preliminary Project Benefits
1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 830 ac.

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

Approximately 610 ac of brackish 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 (<25%, 25-49%, 50-74%, and >75%)?*
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?*
No.

5) *What is the net impact of the project on critical and non-critical infrastructure?*
Reestablishing the critical wetland land bridge in an area that is quickly converting to open water (Calcasieu River/Calcasieu Lake to Black Lake).

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The proposed project would provide a synergistic effect with both CS-23 (Replace Sabine Refuge Water Control Structures at Headquarters Canal, West Cove Canal, and Hog Island Gully), and CS-28 (Sabine Refuge Marsh Creation).

Identification of Potential Issues
The proposed project has potential navigation issues that will have to be taken into account.

Preliminary Construction Costs
The estimated construction cost range including 25% contingency is $25,890,766. Fully funded cost range is $30 - $35M

Preparer(s) of Fact Sheet:
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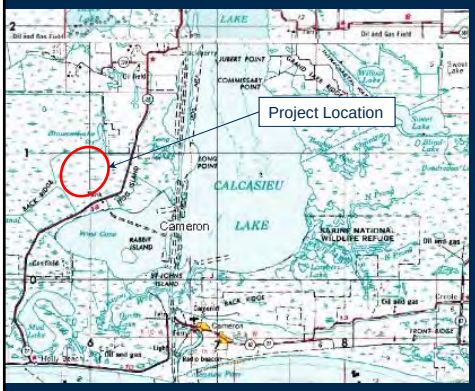
PPL 23: Sabine National Wildlife Refuge Marsh Creation and Nourishment

Science, Service, Stewardship

Sabine National Wildlife Refuge Marsh Creation and Nourishment (Cameron Parish)

Region IV – Calcasieu-Sabine Basin



NOAA FISHERIES SERVICE

January 29, 2013

NOAA FISHERIES SERVICE

Problem

- Significant hydrologic changes from ship channel and Highway 27 weakened plant communities, ultimately leading to vegetation die-off and marsh breakup from increased salinity and flooding, allowing for Hurricanes Rita and Ike to scour the area
- Historically, these marshes served as a storm surge reduction feature for communities to the north

2

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Project Features

- Total Acres = 830 acres (450 created with spoil, 55 nourished, 325 acres from spoil degradation)
- Borrow from outside immediate project area from upland disposal site(s) down to marsh elevation (~325 acres)
- 10,000 LF tidal creeks within marsh creation area
- 610 net acres @ TY20
- Construction Cost with 25% contingency = $25.9 million

3

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PPL 23: Sabine National Wildlife Refuge Marsh Creation and Nourishment

~~R4-CS-06~~

~~Sabine Refuge Marsh Creation Project 6 & 7~~

Not consistent with 2012 State Master Plan

R4-CS-06

PPL 23 Project Nominee Fact Sheet
January 29, 2013

Project Name
Sabine Refuge Marsh Creation Project Cycles 6 and 7

Project Location
Region 4, Calcasieu-Sabine Basin, Cameron Parish, east of Hwy. 27 within the Sabine NWR.

Problem
The project area consists of a large open water area which increases wind induced fetch and saltwater intrusion and loss of freshwater. As the area gets larger the wind induced waves will get larger and increase erosion.

Description of the Project
The project would be an extension of the Sabine Refuge Marsh Creation Project (CS-28) which consists of 5 marsh creation cycles and the construction of a permanent pipeline. Two of the 5 marsh creation cycles have been completed along with the permanent pipeline. Cycles 4 and 5 are scheduled to utilize the material from the FY14 Calcasieu River Ship Channel maintenance dredging cycles. The current project features the creation of two marsh creation cells totaling 448 acres.

Proposed Solution
This project will extract material from the Calcasieu Ship Channel by way of hydraulic dredge and place that material into shallow open water sites with the use of the CWPPRA permanent pipeline. Those sites will have earthen dikes that will be used to contain that dredged material which would be pumped to a healthy marsh elevation as determined by healthy marsh survey. Material could be part of the Army Corps of Engineers' maintenance dredging program of the Calcasieu Ship Channel with CWPPRA paying the incremental portion of the dredging cost to place the material in the project area. Upon consolidation of the dredged material, the containment dikes will be gapped every 1,000 ft. to allow exchange of nutrients and aquatic organisms with the constructed marsh tidal. A series of trenasses would also be constructed within the constructed marsh if deemed necessary.

Goals
Create 448 acres of emergent brackish marsh.

Identification of Potential Issues
The only potential issue is to have the project funded and designed six months prior to the 2016 Calcasieu Ship Channel maintenance dredging event.

Preliminary Construction Cost
The current fully funded cost estimate of the project is $8,111,705.

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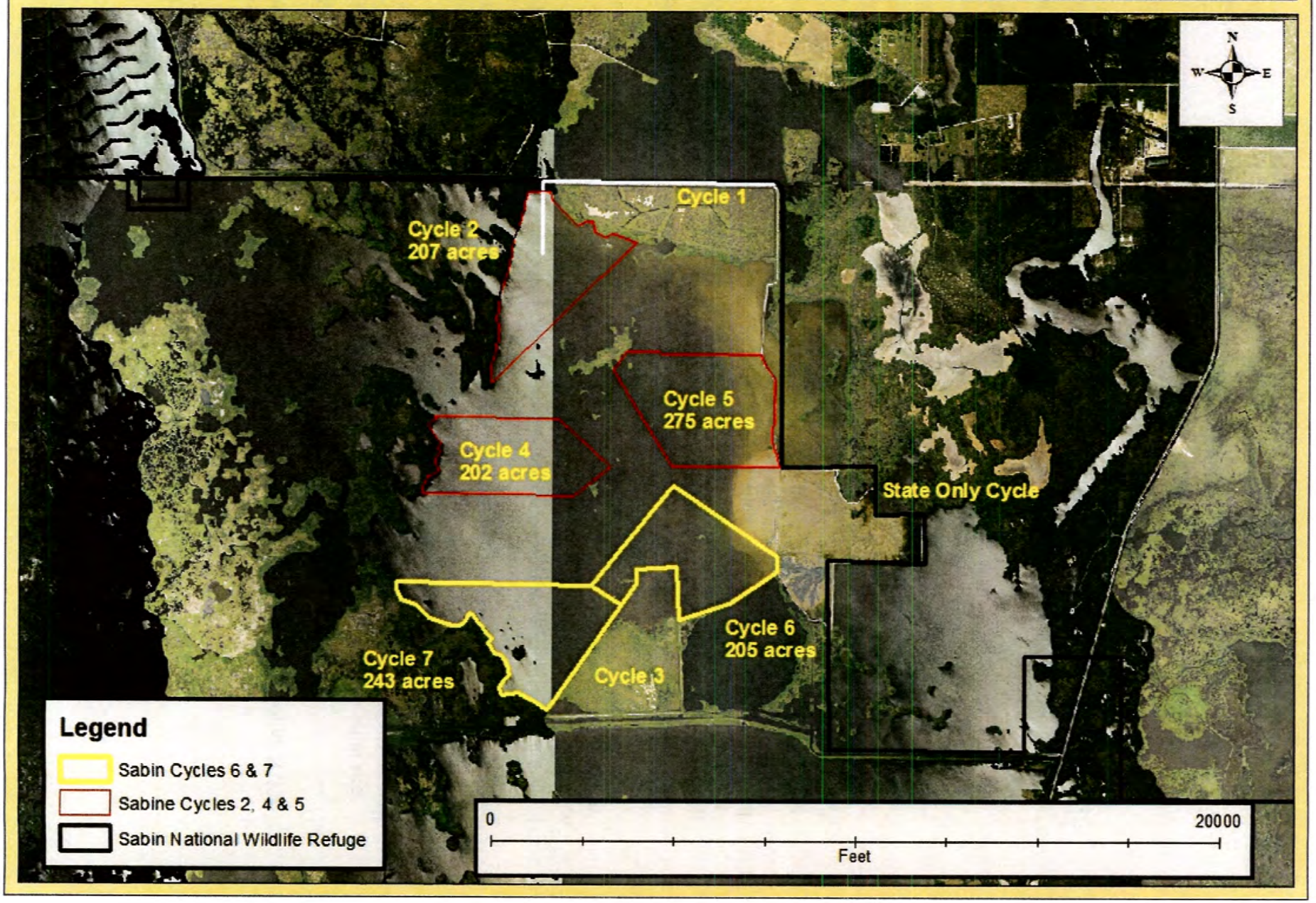
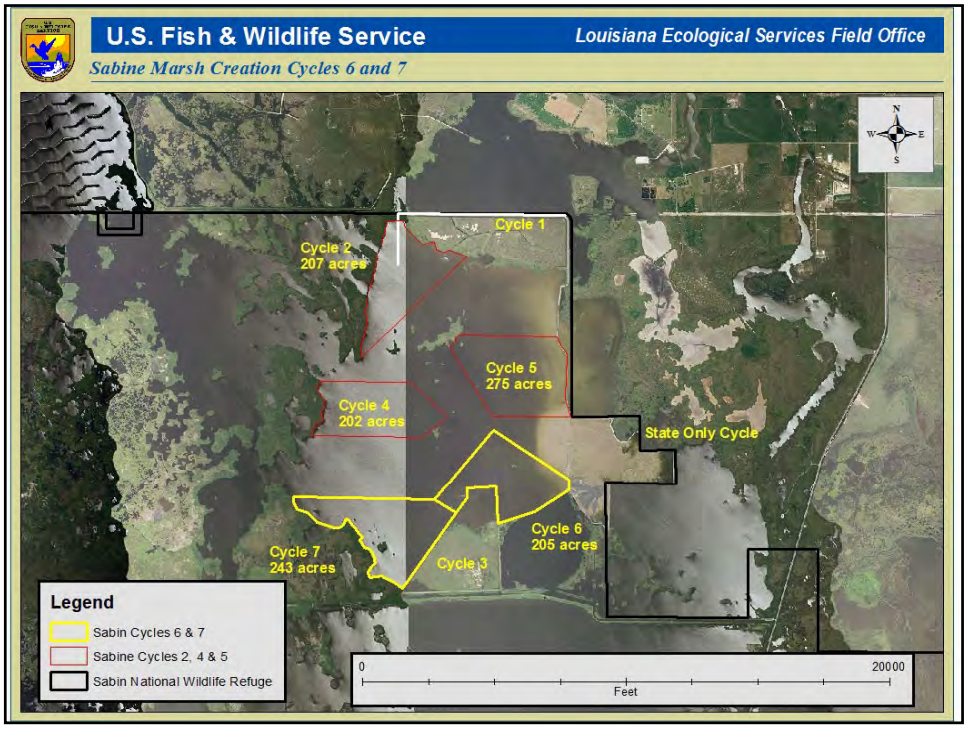
U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

Sabine Marsh Creation Cycles 6 and 7





Sabine Marsh Creation Cycles 6 and 7

Problem

The project area consists of a large open water area which increases wind induced fetch, saltwater intrusion, and loss of freshwater. As the area gets larger the wind induced waves will get larger and increase erosion.

Proposed Solution

This project will extract material from the Calcasieu Ship Channel by way of hydraulic dredge and place that material into shallow open water sites with the use of the CWPPRA permanent pipeline. Those sites will have earthen dikes that will be used to contain that dredged material which would be pumped to a healthy marsh elevation as determined by healthy marsh survey. Material could be part of the Army Corps of Engineers' maintenance dredging program of the Calcasieu Ship Channel with CWPPRA paying the incremental portion of the dredging cost to place the material in the project area. Upon consolidation of the dredged material, the containment dikes will be gapped every 1,000 ft. to allow exchange of nutrients and aquatic organisms with the constructed marsh tidal. A series of trenasses would also be constructed within the constructed marsh if deemed necessary.

Sabine Marsh Creation Cycles 6 and 7

Description of the Project

The project would be an extension of the Sabine Refuge Marsh Creation Project (CS-28) which consists of 5 marsh creation cycles and the construction of a permanent pipeline. Two of the 5 marsh creation cycles have been completed along with the permanent pipeline. Cycles 4 and 5 are scheduled to utilize the material from the FY14 Calcasieu River Ship Channel maintenance dredging cycles. The current project features the creation of two marsh creation cells totaling 448 acres.

Goals

Reduce wind induced waves and reduce saltwater intrusion
Specific Goals: Create 448 acres of emergent brackish marsh.

Preliminary Construction Costs

The estimated construction cost with 25 % contingency is estimated to be **$8.1 M.**

R4-CS-07

West Cove Marsh Creation and Nourishment

Consistent with 2012 State Master Plan

PPL23 PROJECT FACT SHEET
January 29, 2013

Project Name
West Cove Marsh Creation and Nourishment

Strategy
Coastwide: Dedicated dredging to create, restore, or protect wetlands
Regional: Marsh Creation by Sediment Delivery or Dedicated Dredging

Project Location
Region 4, Calcasieu-Sabine Basin, Cameron Parish

Problem
The Calcasieu Ship Channel, immediately east of the project area, provides an avenue for the rapid movement of high-salinity water into the marshes around Mud Lake. This movement increased salinity in the area, resulting in plant death and marsh loss. The marshes located between Mud Lake and West Cove were decimated by Hurricane Rita in 2005 and Ike in 2008. Marshes that once provided a buffer to the southwest rim of West Cove are now shallow open water areas.

Proposed Solution
The proposed project's primary feature is to create and/or nourish approximately 665 acres of marsh (460 acres created, 205 acres nourished). In order to achieve this, sediment will be hydraulically pumped from the Calcasieu River into the shallow water marsh creation cells. Containment dikes will be constructed around the marsh creation areas to keep material on site during pumping. Once pumping has been completed, the gap containment dikes will be to the current platform elevation and gaps will be excavated. Additionally, the newly constructed marsh will be assessed to determine if vegetative plantings will be necessary.

Goals
The project goal is to create and/or nourish approximately 665 ac of marsh (460 ac created, 205 ac nourished) of emergent brackish marsh using sediment from the Calcasieu River.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 627 ac.

2) *How many acres of wetlands will be protected/created over the project life?* Based on a 50% rate reduction to the projected -.15%/yr land loss rate, marsh creation and nourishment in the project area would yield 456 net acres, 20 years after initial construction.

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 over the project area is 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, helps to restore the integrity of West Cove rim (west side of Lake Calcasieu) and prevent coalescence of Lake Calcasieu with Mud Lake.

5) *What is the net impact of the project on critical and non-critical infrastructure?* No major impacts to critical infrastructure. Oil and gas facilities in area would be benefited by the project acreage created.

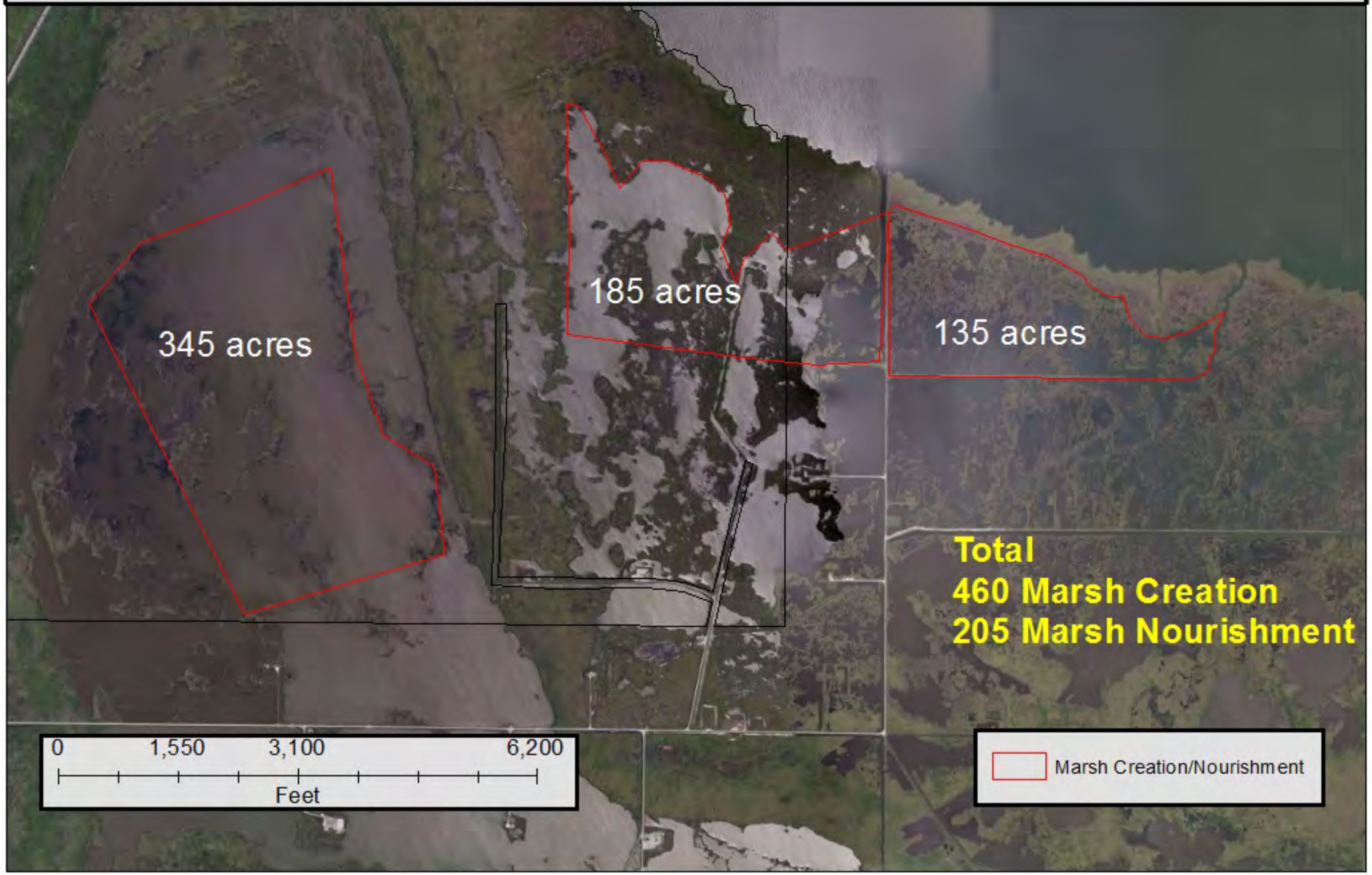
6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
This project would have a synergistic effect with CWPPRA project CS-20, East Mud Lake Marsh Management, which was completed in 1997. The objective of that project is to create a hydrologic regime conducive to restoration, protection, and enhancement of the Mud Lake area by using various types of water control structures and vegetation plantings. Structural components include culverts with flap gates, two variable crest weirs, three earthen plugs, and repair of an existing levee (CPRA, 2009).

Preliminary Construction Costs:
Incremental Project (if constructed during maintenance event on Calcasieu River)
The estimated construction cost including 25% contingency is $12,249,000.

Stand Alone Project
The estimated construction cost including 25% contingency is $25,000,000

Preparer(s) of Fact Sheet:
Scott Wandell, USACE, 504-862-1878 Scott.F.Wandell@usace.army.mil
Robert Dubois, USFWS, 337-291-3127 Robert_Dubois@fws.gov

West Cove Marsh Creation and Nourishment




U.S. Fish & Wildlife Service
Louisiana Ecological Services Field Office
PPL 23 West Cove Marsh Creation
465 acres
0


U.S. Fish & Wildlife Service
Louisiana Ecological Services Field Office
PPL 23 West Cove Marsh Creation
0


U.S. Fish & Wildlife Service
Louisiana Ecological Services Field Office
PPL 23 West Cove Marsh Creation
465 acres
U.S. Fish & Wildlife Service
Louisiana Ecological Services Field Office
PPL 23 West Cove Marsh Creation
465 acres


U.S. Fish & Wildlife Service
Louisiana Ecological Services Field Office
PPL 23 West Cove Marsh Creation

West Cove Marsh Creation

Goals

The project goal is to create and approximately 400 acres and nourish approximately 65 acres of emergent brackish marsh using sediment dredged from the Calcasieu Ship Channel. This project is synergistic with the previously constructed East Mudd Lake Marsh Management (CS-20) and Sabine Marsh Creation (CS-28) which is still under construction.

Identification of Potential Issues

The dredging pipe would have to be laid over existing Louisiana oyster seed grounds.

Preliminary Construction Costs

With beneficial use of dredge material from the Calcasieu Ship Channel, the estimated construction cost including 25% contingency is $3,416,354.
With dedicated dredging from Calcasieu Ship Channel, the estimated construction cost including 25% contingency is $25,513,209.

West Cove Marsh Creation and Nourishment

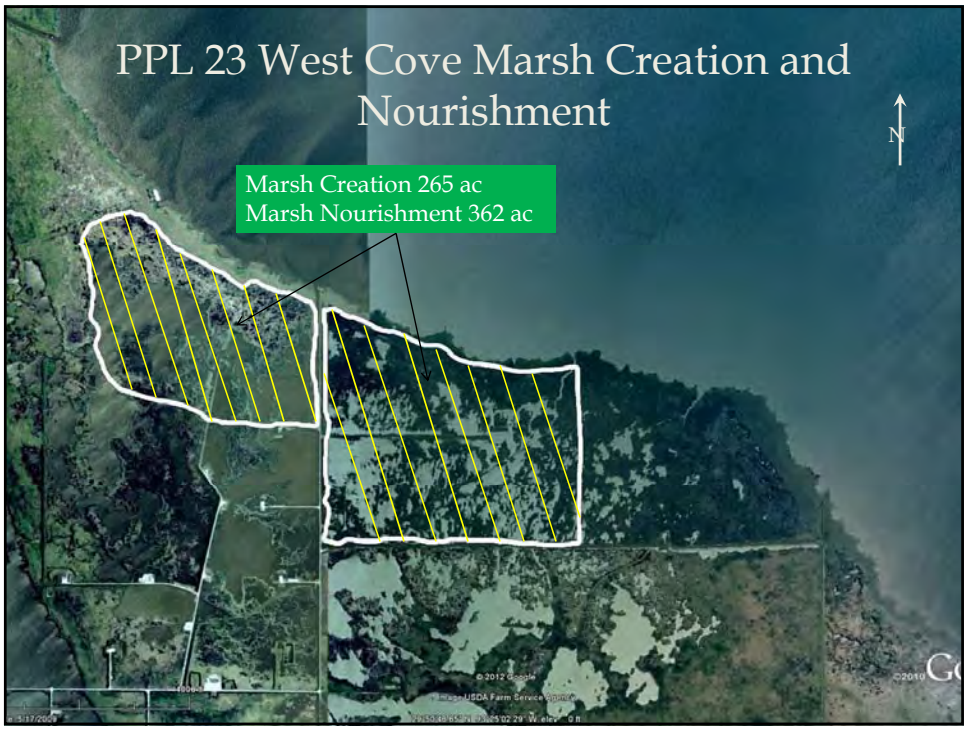
PPL 23
Region 4
Calcasieu-Sabine Basin

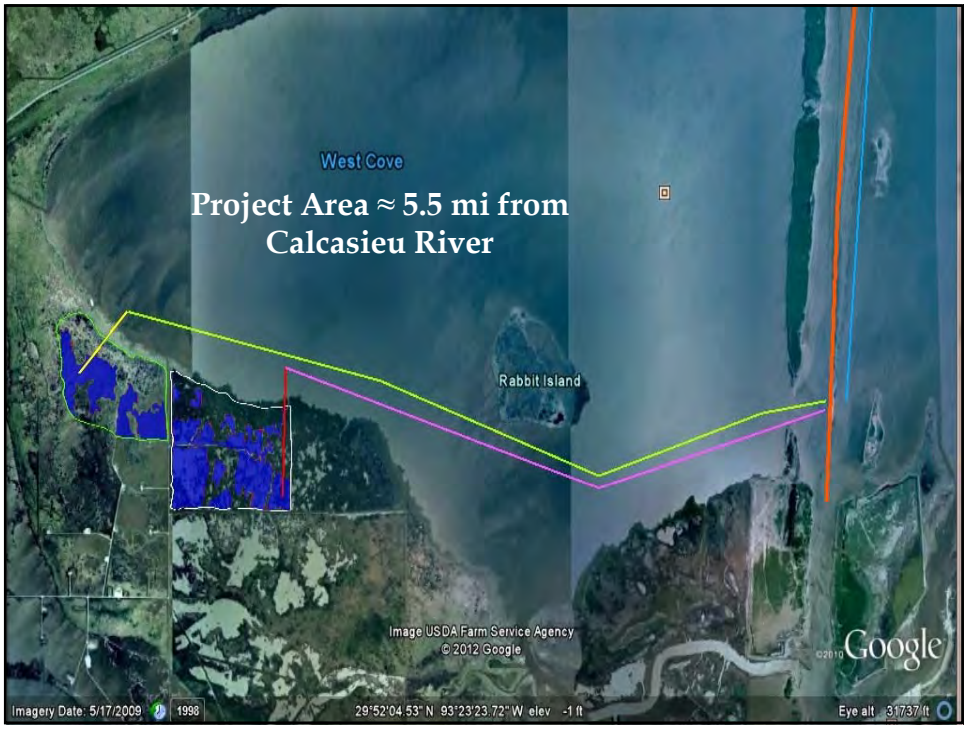

1999 Aerial Photography
West Cove
Rabbit Island


2011 Aerial Photography
West Cove
Rabbit Island

Proposed Project Features:

- Restore 627 acres of marsh (265 acres created/ 362 acres nourished)
- Material would be dredged from Calcasieu River miles 5-9 during USACE maintenance event
- Containment built around entire Marsh Creation-Nourishment Area




West Cove
Project Area ≈ 5.5 mi from Calcasieu River
Rabbit Island
Image USDA Farm Service Agency
© 2012 Google
Google
Imagery Date: 5/17/2009
1998
29°52'04.53" N 93°23'23.72" W elev -1 ft
Eye alt 31737 ft

R4-CS-09

East Prong Grand Bayou Marsh Creation

Consistent with 2012 State Master Plan

R4-CS-09

PPL23 PROJECT NOMINEE FACT SHEET
January 29, 2013

Project Name: East Prong Grand Bayou Marsh Creation Project

Coast 2050 Strategy:

- Coastwide Strategy – Dedicated Dredging, to Create, Restore, or Protect Wetlands

Project Location: Region 4, Calcasieu-Sabine Basin, Cameron Parish, 6 miles northeast of Cameron, LA, on the Cameron Prairie NWR north of East Prong Grand Bayou.

Problem: Historically this area was dominated by saw grass marsh. Loss of the historical saw grass marsh in this area is attributable to saltwater intrusion from the Calasieu Ship Channel (CSC) in the 1950s. Hurricane Audrey (1957) exacerbated the impacts to the dying saw grass system, clearing away the dead and deteriorated saw grass stands. A combination of these human-induced hydrologic changes and accompanied severe storm events has resulted in virtually all of the habitat changes and land losses in the Calcasieu-Sabine Basin (Hydrologic Investigation of the Chenier Plain Report 2002).

The Cameron Creole Watershed Project (CCWP) was implemented by the NRCS in 1989 to reduce saltwater intrusion and stimulate restoration through revegetation. Hurricanes Rita and Ike in 2005 and 2008 breached the watershed levee scouring the marsh and allowing higher Calcasieu Lake salinities to enter the watershed causing more land loss. The Calcasieu-Sabine Basin lost 28 mi^2 (17,920 acres) (4.4%) as a result of Hurricane Rita (Barras et al. 2006). Land loss is estimated to be 1.33 percent/year based on USGS data from 1985 to 2009.

Goals: Project goals include restoring and nourishing marsh with dedicated dredged material to benefit fish and wildlife resources in the Cameron Prairie NWR and within the Calcasieu Lake estuary. Restoring these marshes will reduce wind induced erosion and will help to minimize higher saline waters from penetrating further inland. Specific phase 0 goals include creating 511 acres of brackish marsh and nourishing 151 acres of brackish marsh.

Proposed Solution: Establish two marsh creation/nourishment areas north of East Prong to restore 511 acres and nourish 75 acres of brackish marsh using dedicated dredge material from either the Lake or the ship channel and using interior sediments from the bayous. An additional 138 acres of marsh will be re-nourished through spray dredging existing canals and bayous.

Project Benefits: The project would restore 511 acres and nourish 213 acres of brackish marsh in the 724-acre project area. Approximately 475 (88%) net acres of brackish marsh would be created and protected over the 20-year project life.

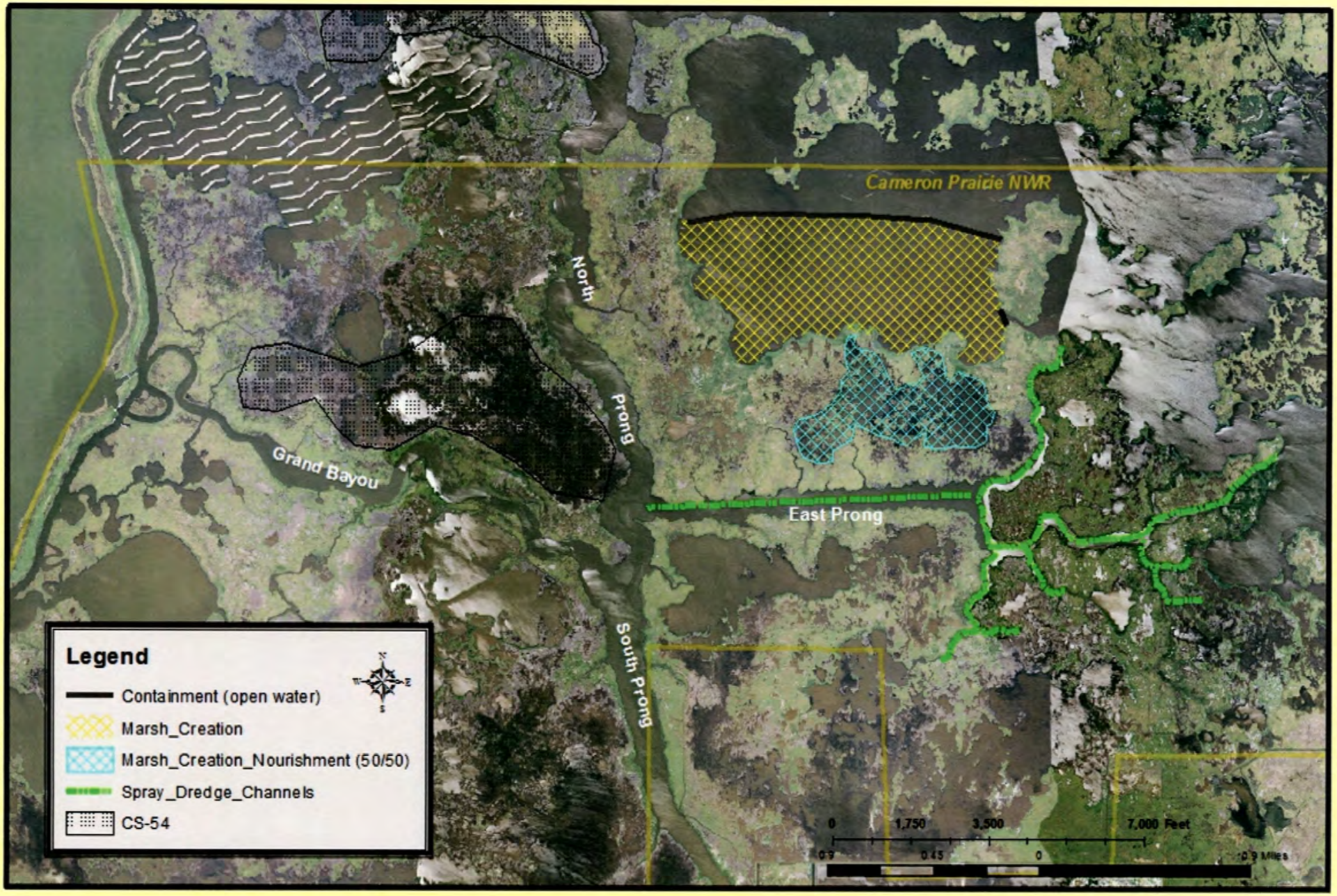
Project Costs: The estimated construction cost including 25% contingency is $18.8 million.

Preparers of Fact Sheet: Angela Trahan, Fish and Wildlife Service, (337) 291-3137, Angela_Trahan@fws.gov

Fish and Wildlife Service

Louisiana Ecological Services Office

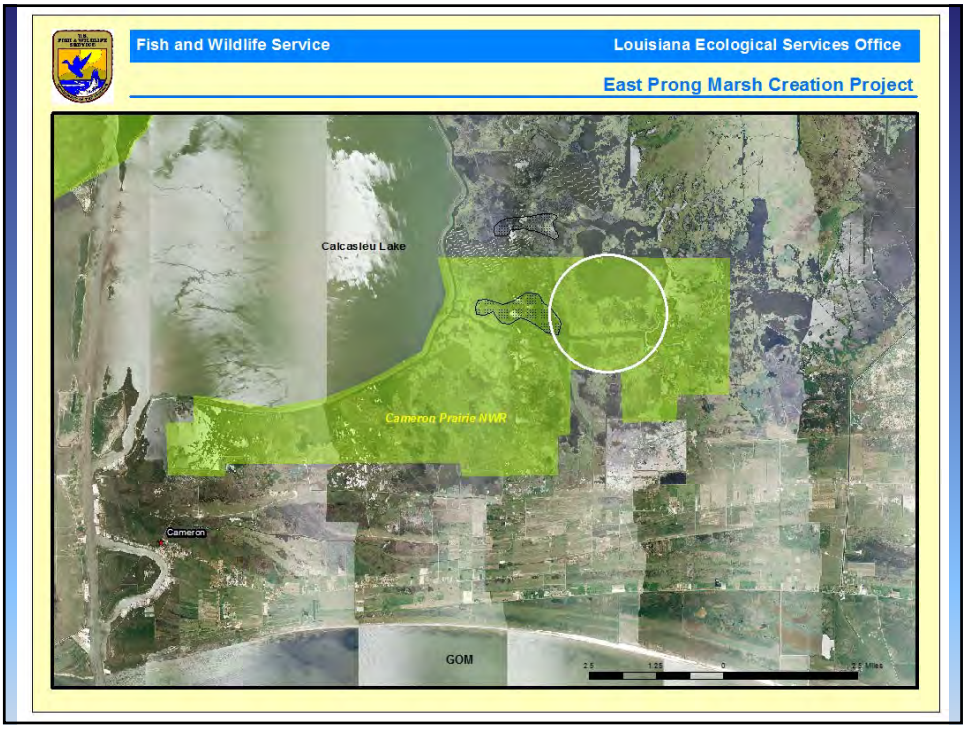
East Prong Bayou Marsh Creation Project



East Prong Grand Bayou Marsh Creation

PPL 23

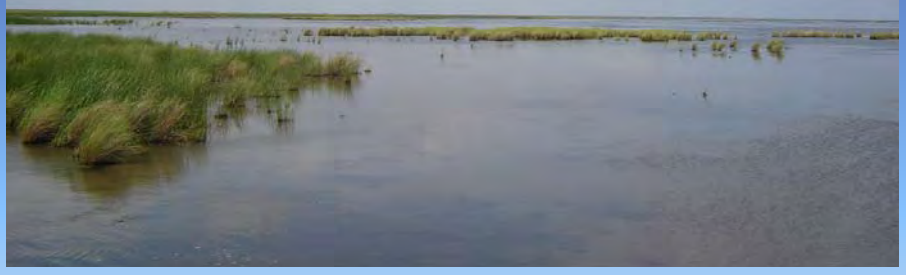
Region 4, Calcasieu - Sabine Basin



East Prong Grand Bayou Marsh Creation

Problem: salt water intrusion, wave induced erosion, storm-induced impacts

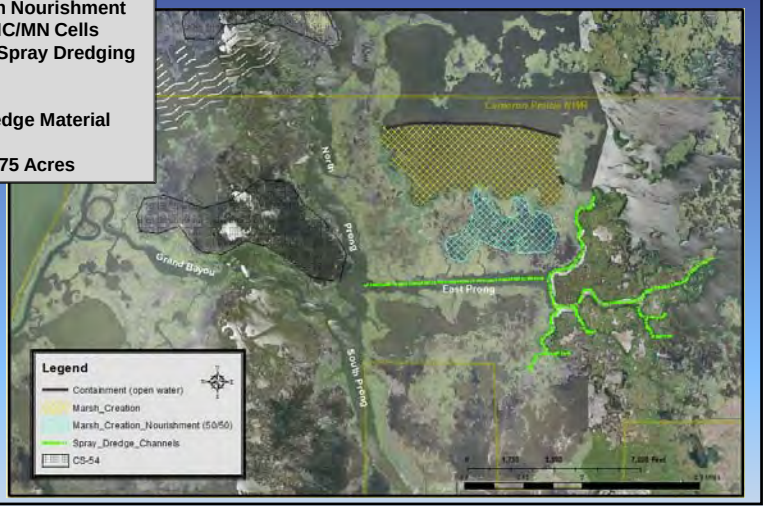
Goal: restore marshes within large open water areas and along the natural historic bayous scoured by tropical storms



East Prong Grand Bayou Marsh Creation

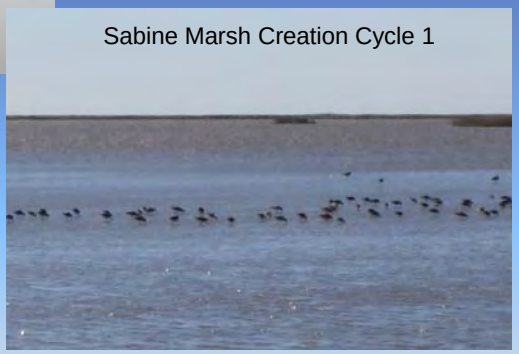
Proposed Solution:

- **511 Acres Marsh Creation (435 ac + 75 ac)**
- **213 Acres Marsh Nourishment**
  - **75 acres MC/MN Cells**
  - **138 acres Spray Dredging**
- **~ 3 M Cyds Dedicated Dredge Material**
- **Net Benefits = 475 Acres**



East Prong Grand Bayou Marsh Restoration

- Potential Issues
- Estimated Cost (25% contingency): $18.8 M



Region 4 – MERMENTAU BASIN

R4-ME-01

South Grand Chenier Marsh Creation

Consistent with 2012 State Master Plan

PPL23 PROJECT NOMINEE FACT SHEET
January 29, 2013

Project Name
South Grand Chenier Marsh Creation

Master Plan Strategy
South Grand Chenier Marsh Creation – 004.MC.01

Project Location
The project is located in Region 4, Mermentau Basin, south of Grand Chenier in Cameron Parish, Louisiana, between Highway 82 and Hog Bayou.

Problem
Marshes within the Hog Bayou Unit are stressed due to limited freshwater input and seasonal salinity spikes exacerbated by construction of the Mermentau Ship Channel. Other contributors to land loss in the area are subsidence, compaction, and erosion of organic soils. Currently, the project area is characterized as large open water with degraded areas of wetland vegetation and low organic production.

Goals
The project goal is to create new wetland habitat, restore degraded marsh, and reduce wave erosion. The project would promote the expansion of emergent marsh and submerged aquatic vegetation throughout the project area.

Proposed Project Features
The project proposes approximately 451 acres of marsh creation.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly? The total area benefitted is approximately 600 acres.

2) *How many acres of wetlands will be protected/created over the project life*? The project would protect/create approximately **430 net 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 *50-74%.*

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 protect the Grand Chenier ridge.

5) *What is the net impact of the project on critical and non-critical infrastructure*? The project would help protect Louisiana Highway 82.

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 South Grand Chenier Hydrologic Restoration and Marsh Creation project (ME-20) by restoring the north bank of Hog Bayou.

Identification of Potential Issues
There are no issues identified at this time.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is $23 million

Preparer of Fact Sheet
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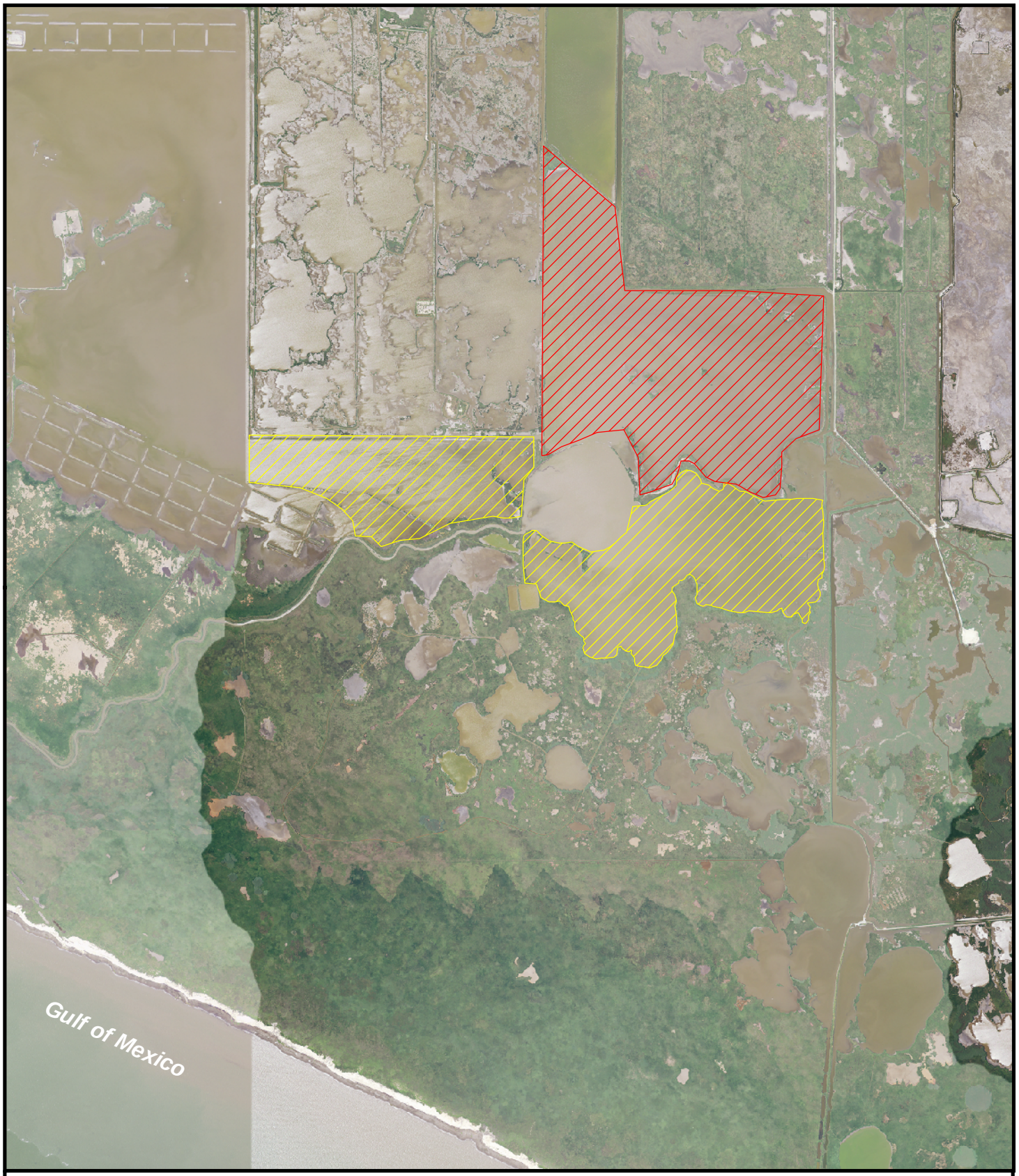
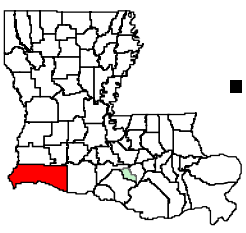


Map Produced By:
United States Department of Agriculture
Natural Resources Conservation Service
Alexandria, LA

Data Source:
2010 DOQ

Map Date: January 16, 2013



South Grand Chenier
Marsh Creation
Cameron Parish, Louisiana

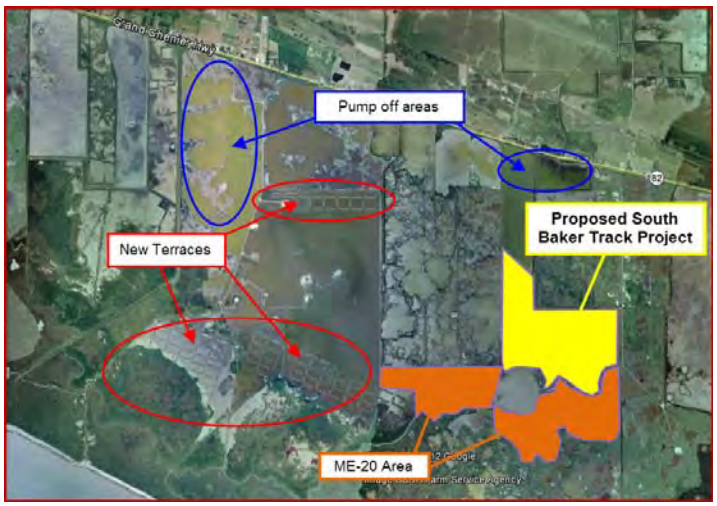
Legend
- Marsh_Creation
- ME-20 Marsh Creation Area

0 1,000 2,000 4,000 6,000 8,000
Feet

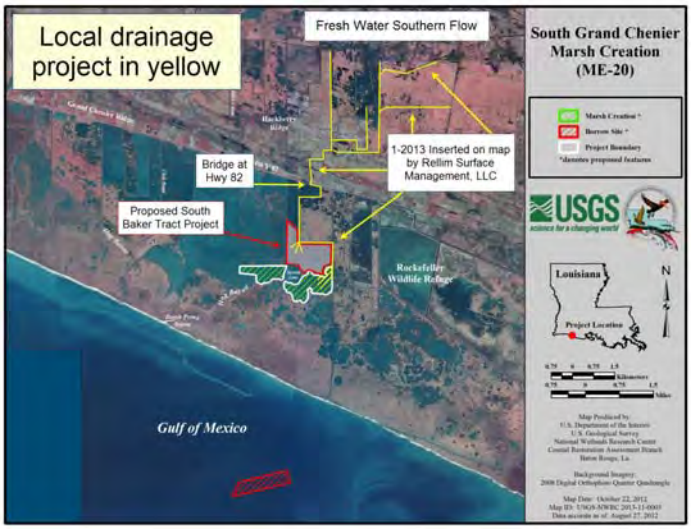
Region 4 – Cameron Parish, LA
Hog Bayou Watershed, S. of Hwy 82

South Grand Chenier Baker Track Marsh Creation Project

South Grand Chenier Baker Track Marsh Creation Project



South Grand Chenier Baker Track Marsh Creation Project



South Grand Chenier Baker Track Marsh Creation Project

South Grand Chenier Baker Track Marsh Creation Project

- **Problem –** Marshes within the Hog Bayou Unit are stressed due to limited freshwater input and seasonal salinity spikes exacerbated by construction of the Mermentau Ship Channel. Other contributors to land loss in the area are subsidence, compaction and erosion of organic soils. Currently, the project area is characterized as large open water with degraded areas of wetland vegetation and low organic production.
- **Goal –** The project goal is to create new wetland habitat, restore degraded marsh and reduce wave erosion. The project would promote the expansion of emergent marsh and submerged aquatic vegetation throughout the project area.
- **Benefits –** The project will help protect the Grand Chenier ridge and LA Hwy 82. It will also provide synergistic effect with the South Grand Chenier Hydrologic Restoration and Marsh Creation (ME-20)
- **Numbers**:
  - The project total area benefitted is approximately 600 acres.
  - The project will protect/create approximately 430 net acres.
  - The anticipated loss rate reduction throughout the area of direct benefit is to be 50 – 74%.
  - Preliminary construction costs is estimated to be $30 million (includes 25% contingency).
- Prepared by Troy Mallach, NRCS & Martin O. Miller III, Rellim Surface Management, LLC 1-29-2013

R4-ME-02

East Pecan Island Marsh Creation

Consistent with 2012 State Master Plan

R4-ME-02

PPL 23 PROJECT NOMINEE FACT SHEET
January 29, 2013

Project Name:
East Pecan Island Marsh Creation – Increment 1

2012 Master Plan Strategy:
004.MC.16 – East Pecan Island Marsh Creation: Creation of approximately 7,340 acres of marsh between Pecan Island and the west bank of the Freshwater Bayou Canal to create new wetland habitat, restore degraded marsh, and reduce wave erosion.

Project Location:
The project is located in Region 4, Mermentau Basin, Vermilion Parish, west of the Freshwater Bayou Navigation Channel.

Problem:
The marshes to the west of the Freshwater Bayou Navigation Channel have experienced severe land loss and habitat conversion. What was once a productive fresh water marsh has been converted to open water due to the negative effects of exchange from the Freshwater Bayou Navigation Canal on soils followed by major hurricane impacts.

Goals:
The primary goal of this project is to create marsh through dedicated dredging and vegetative plantings on the western side of the Freshwater Bayou Navigation Channel. This project will also help to reduce the potential for exchange between the target marshes and the Freshwater Bayou Navigation Channel by working synergistically with the ME-31 Freshwater Bayou Marsh Creation Project.

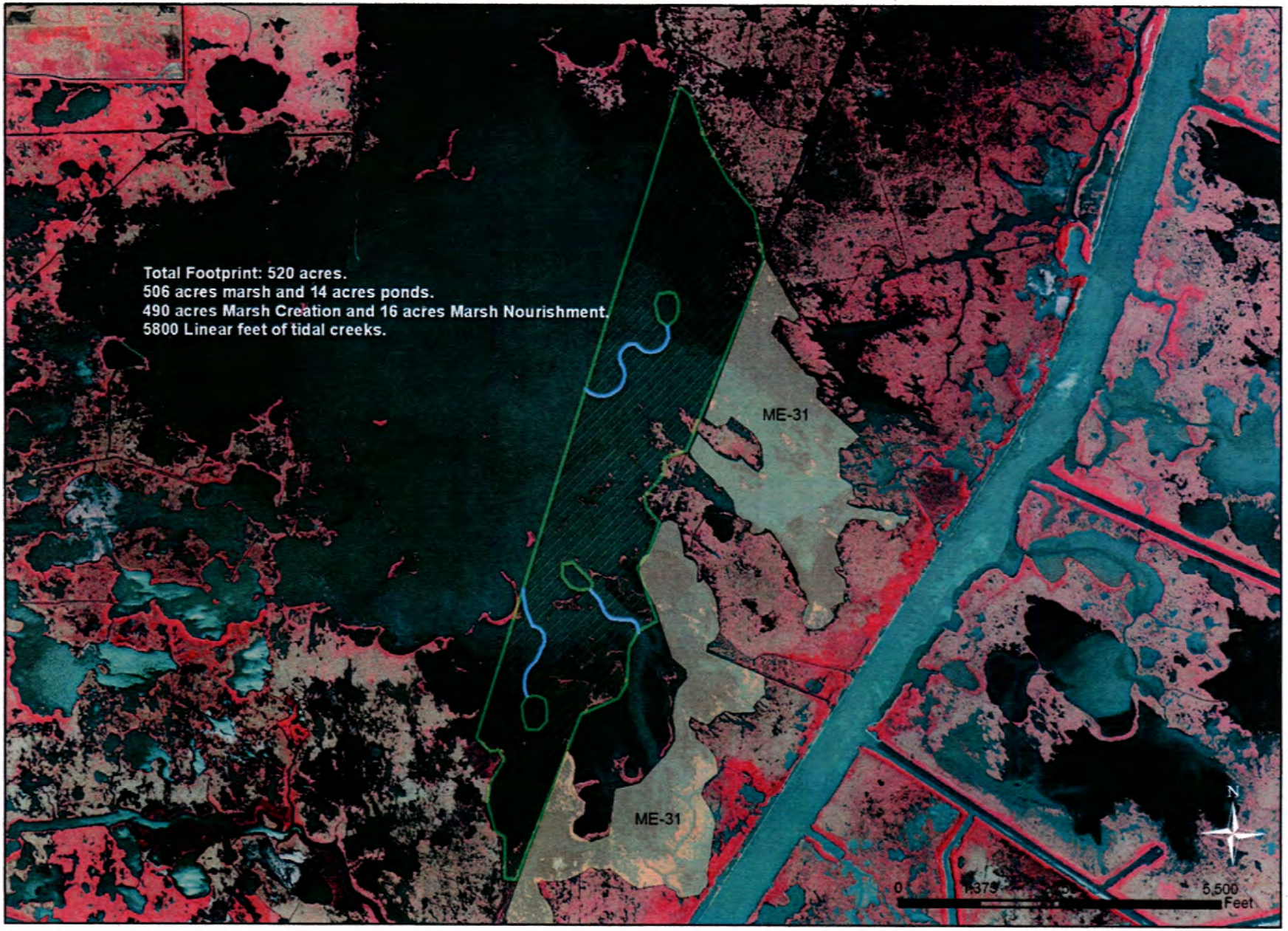
Proposed Solutions:
This project intends to create and nourish 506 acres of marsh using approximately 3.5M C.Y. of marsh fill material borrowed from offshore within state waters. Some historical ponds will be retained and creeks will be included to promote exchange with the surrounding marsh and provide marsh functionality. Half of the acreage will be planted to encourage rapid vegetation. Earthen containment dikes will be gapped upon construction completion and included in the operations and maintenance.

Preliminary Project Benefits:
The project will result in approximately 450 net acres of marsh over the 20-year project life. It will work synergistically with two existing CWPPRA projects: the Freshwater Bayou Wetland Protection project (ME-04, constructed) and the Freshwater Bayou Marsh Creation project (ME-31, in engineering and design).

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $34,181,697.

Preparers of Fact Sheet:
Chris Allen, CPRA; chris.allen@la.gov; (225) 342-4736

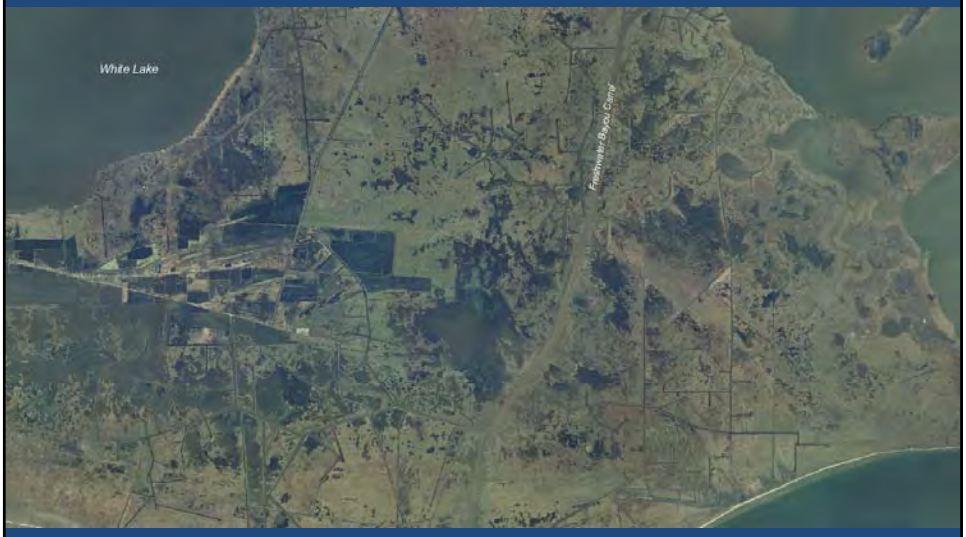
East Pecan Island Marsh Creation - Increment 1

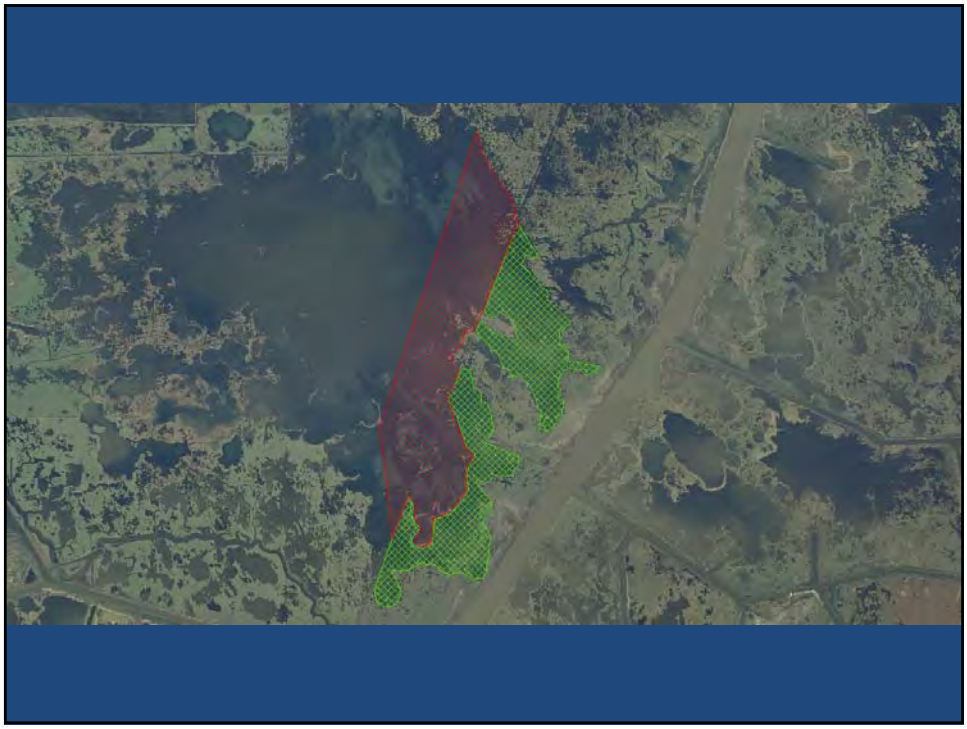


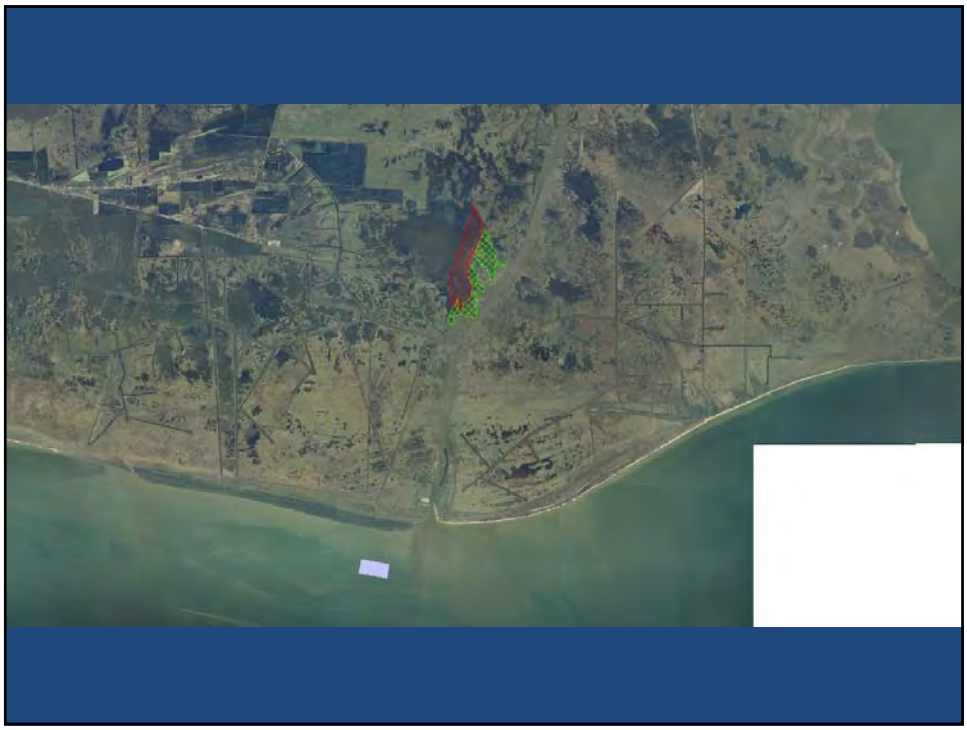
East Pecan Island Marsh Creation – Increment 1

Chris Allen, CPRA

1/29/2013
Region 4 RPT







Project Features

- 506 ac MC using approximately 3.5M cy borrowed from offshore
- Retain historical ponds and add creeks for functionality (14 ac)
- Cost + 25% contingency = $34,181,697

R4-ME-03

North Big Marsh Restoration

Consistent with 2012 State Master Plan

PPL23 PROJECT NOMINEE FACT SHEET
January 29, 2013 – Revised 2-6-2013

North Big Marsh Restoration Project

State Master Plan Consistency
This project is located within and consistent with the State Master Plan "East Pecan Island Marsh Creation" project (No. 004.MC.16) which consists of marsh creation between Pecan Island and Freshwater Bayou Canal.

Project Location
Region 4, Vermilion Parish, Northeast Pecan Island, west of Freshwater Bayou Canal.

Problem

The Big Marsh Coast 2050 unit lost a total of 11% marsh (-3,810 acres) from 1932 to 1990 with the greatest loss during the 1956-1979 period due to the dredging of Freshwater Bayou Canal. That canal caused wake erosion, altered hydrology and increased loses due to storm activity. Although the Coast 2050 study predicted an additional 10% loss (3,000 acres) by 2050, that loss has accelerated due to Hurricanes Rita (2005) and Ike (2008). A large approximately 4,700-acre shallow open water area has developed in the center of Big Marsh mostly due to those hurricanes. The 36,000-acre Big Marsh unit consisted of 57% (21,360 acres) fresh, 25% (9,330 acres) intermediate, 3% (1,180 acres) brackish marshes, and 10% open water in 1998 (Coast 2050 Report).

Goals
1) Restore and nourish 450 acres of fresh and intermediate marsh in the northern portion of Big Marsh.

Proposed Project Features
Restore and nourish over 450 acres of fresh to intermediate marsh in Big Marsh west of Freshwater Bayou Canal with dredged material from the Gulf of Mexico. Water depths range from 1.5 to 2.0 feet. Two 50-100-acre ponds will remain after construction.

Preliminary Project Benefits
1) The total net marsh acreage benefited directly over the 20-year project life would be approximately 394 acres assuming an erosion rate of 0.18 %/year. 2) The project would restore the northern portion of Big Marsh and provide protection to marshes to the north and west.

Identification of Potential Issues
No significant issues have been identified for this project.

Preliminary Construction Costs
The estimated construction cost is $17 M to $20 M.

Preparers of Fact Sheet
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Darryl Clark, U.S. Fish and Wildlife Service, 337-291-3111 Darryl_Clark@fws.gov

Vermilion Corporation/
U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

North Big Marsh Restoration - 2010 Imagery

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R4-ME-04

Southeast Pecan Island Marsh Creation & Freshwater Diversion

Consistent with 2012 State Master Plan

PPL23 PROJECT NOMINEE FACT SHEET
January 29, 2013

Project Name
Southeast Pecan Island Marsh Creation and Freshwater Enhancement

Master Plan Strategy
East Pecan Island Marsh Creation – 004.MC.16
Introduce Freshwater to wetlands south of Highway 82 – 004.HR.20

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

Problem
Virtually all of the project area marshes have experienced increased tidal exchange, saltwater intrusion, and reduced freshwater retention associated with the Freshwater Bayou Canal and Humble Canal. Highway 82 traverses cheniers wherever possible, however, low spots between cheniers historically allowed drainage from the Lakes Subbasin south into the Chenier Subbasin. Currently, Highway 82 forms a hydrologic barrier that isolates those sub basins from freshwater runoff.

Goals
The project goal is to create new wetland habitat, restore degraded marsh, and reduce wave erosion. The project would promote the expansion of emergent marsh and submerged aquatic vegetation throughout the project area.

Proposed Project Features
The project proposes approximately 457 acres of marsh creation and 397 acres of marsh nourishment.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly? The total area benefitted is approximately 854 acres.

2) *How many acres of wetlands will be protected/created over the project life*? The project would protect/create approximately **460 net 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 *50-74%.*

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 protect the Front Ridge Chenier.

5) *What is the net impact of the project on critical and non-critical infrastructure*? The project would help protect Louisiana Highway 82.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects*? The project would provide protection for the constructed Pecan Island Terracing project (ME-14).

Identification of Potential Issues
There are no issues identified at this time.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is approximately $27 million.

Preparer of Fact Sheet
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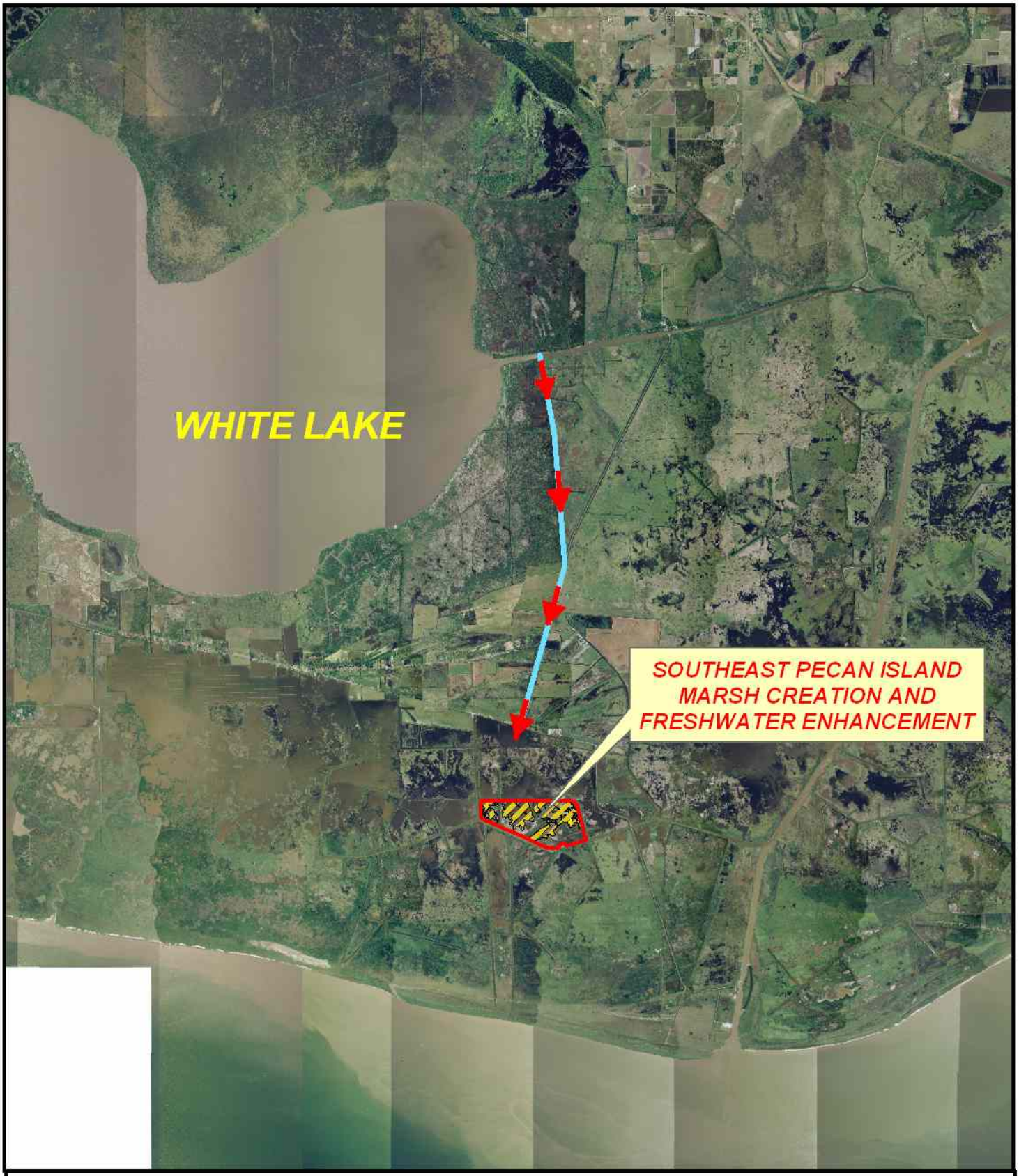


Map Produced By:
United States Department of Agriculture
Natural Resources Conservation Service
Alexandria, LA

Data Source: NAIP 2010

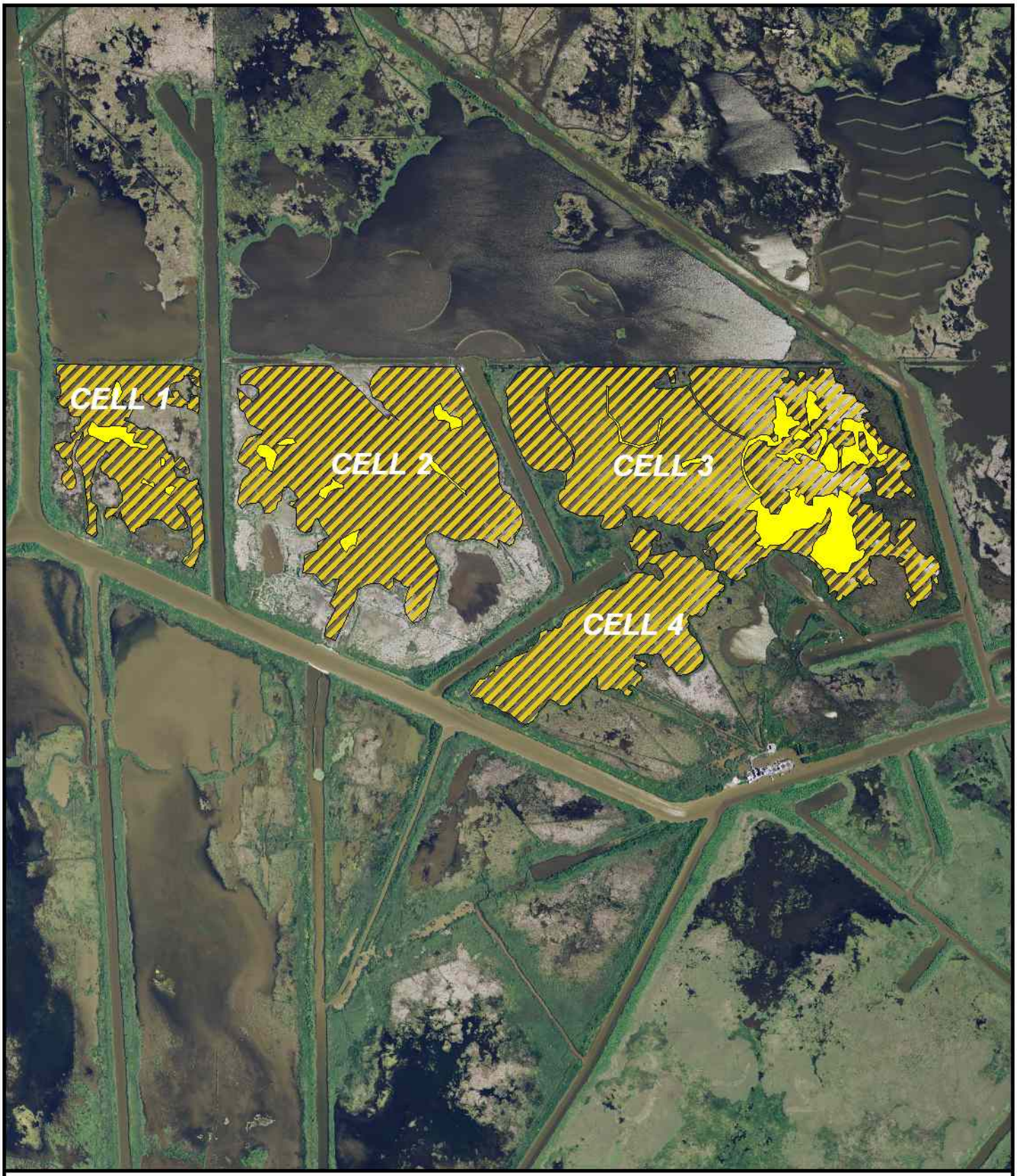
Map Date: January 30, 2013

Map ID: 2004-01-001

SOUTHEAST PECAN ISLAND MARSH CREATION AND FRESHWATER ENHANCEMENT

Legend
- MARSH_CREATION
- FRESHWATER_INTRODUCTION_ROUTE
- MARSH_CREATION_CELLS
- MARSH_ISLANDS

1 inch = 14,282 feet



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

Data Source: NAIP 2010

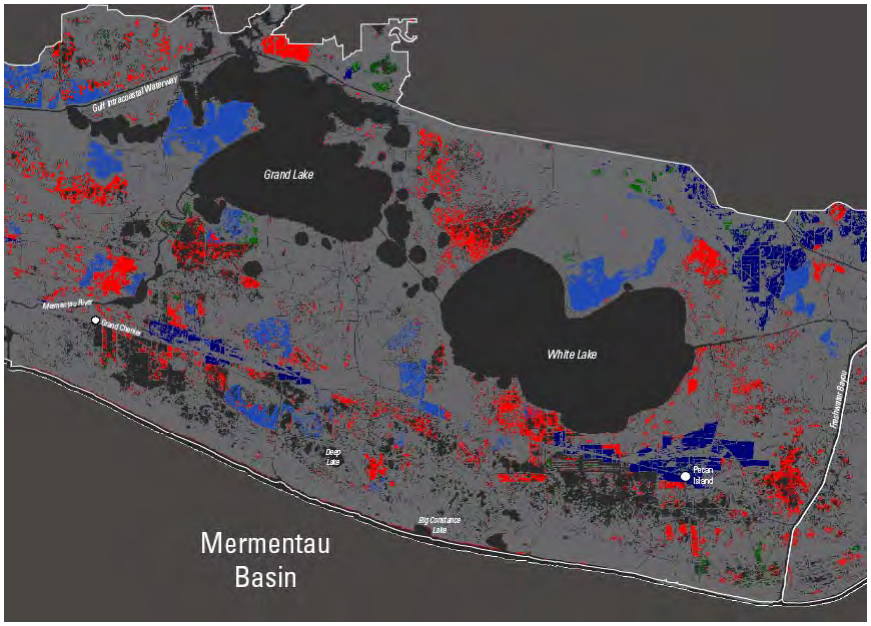
Map Date: January 30, 2013

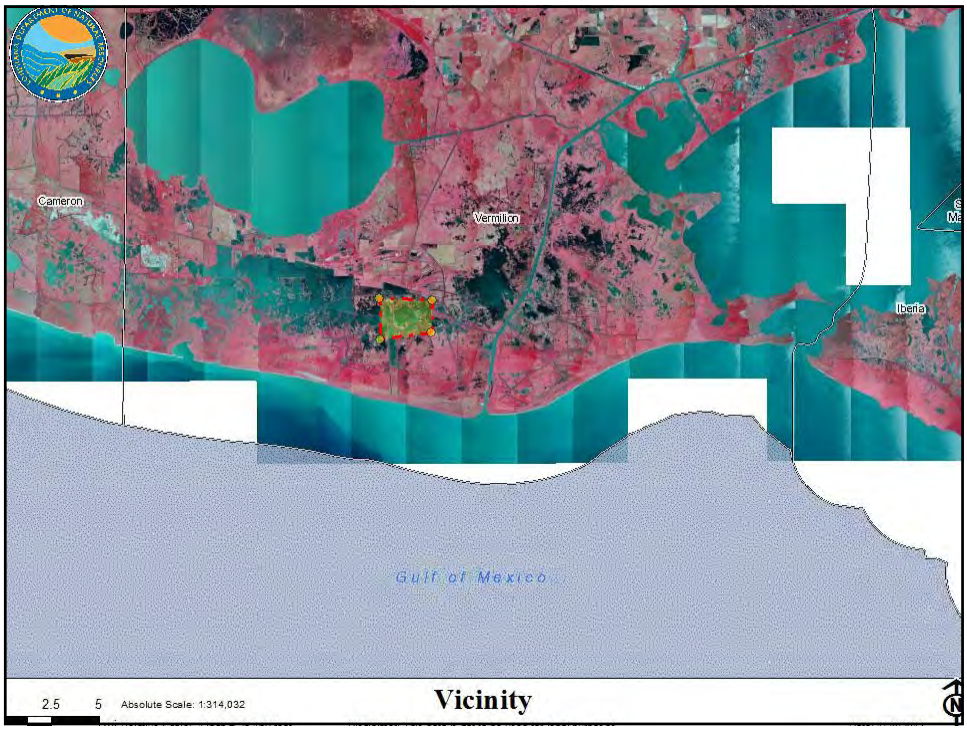
Map ID: 2004-01-001

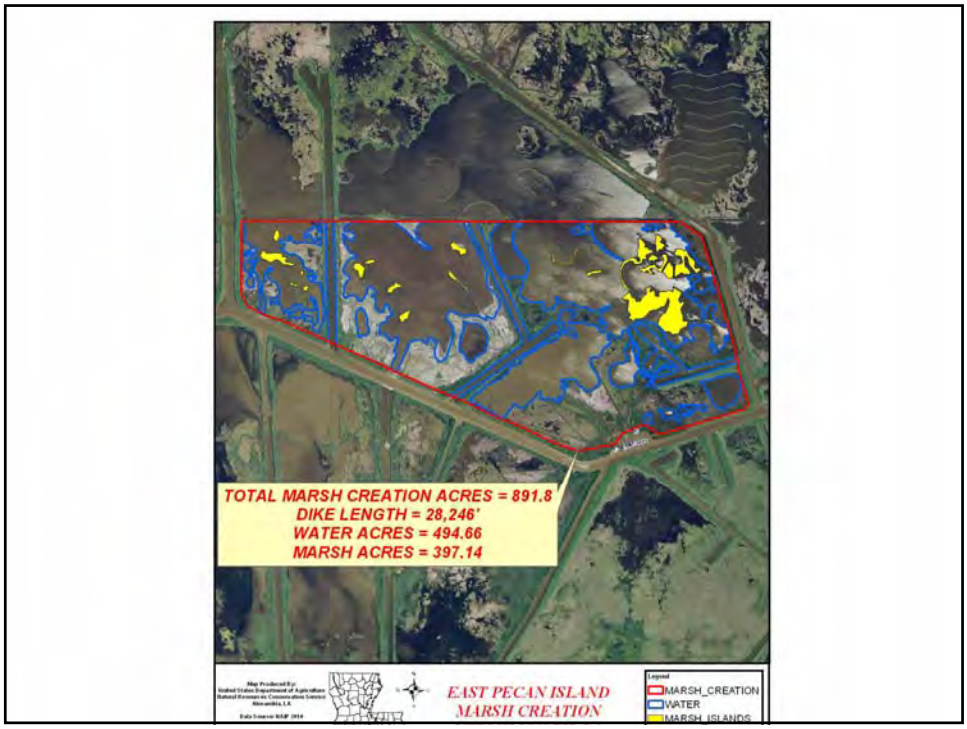
SOUTHEAST PECAN ISLAND MARSH CREATION AND FRESHWATER ENHANCEMENT

Legend
MARSH_ISLANDS
CELLS_MARSH_CREATION

1 inch = 1,625 feet


Grand Lake
White Lake
Deep Lake
Big Constance Lake
Mermentau Basin


Cameron
Vermilion
Iberia
Gulf of Mexico
2.5
5
Absolute Scale: 1:314,032
Vicinity



East Pecan Island Marsh Creation

- The total project area is approximately 892 acres.
- Approximately 495 acres of marsh will be created in open water
- Borrow material will come from the Gulf of Mexico
- The project would help protect the Front Ridge Chenier and the Pecan Island community.

R4-ME-06

Umbrella Bay Shoreline Protection

Consistent with 2012 State Master Plan

R4-ME-06

PPL23 PROJECT NOMINEE FACT SHEET
January 29, 2013

Umbrella Bay Shoreline Protection Project

State Master Plan Consistency
State Master Plan Grand Lake Shoreline Stabilization project (No. 004.BS.01) consists of shore stabilization along the shoreline of Grand Lake thus this project is consistent with the Master Plan. It is also consistent with the Coast 2050 Regional Strategy – Stabilization of the Grand Lake shoreline.

Project Location
Region 4, Cameron Parish, eastern Grand Lake-Umbrella Bay shoreline

Problem
The project area experiences shoreline erosion estimated at an average of 15 feet per year (4 feet to 30 feet/year, based on 1952 to 2008 GIS analysis). Approximately 275 acres of marsh will be lost over the next 20 years at this rate. Shoreline breaches have already caused small interior lakes to be made part of Grand Lake and continued shore loss will increase connectivity with Grand Lake and introduce greater energy to the interior marsh.

Goals
1) Reduce or halt shoreline erosion along the eastern Grand Lake and Umbrella Bay shorelines. 2) Prevent shoreline breaches into interior ponds.

Proposed Project Features
The proposed project consists of approximately 40,000 linear feet (7.5 miles) of foreshore segmented rock breakwater placed at the 1 to 2 foot depth contour with gaps approximately every 1,000 feet and access channel dredged material placed shoreward to restore marsh.

Preliminary Project Benefits
1) The total net marsh acreage benefited directly over the 20-year project life would be approximately 275 acres assuming an erosion rate of 15 ft/yr. 2) Shoreline erosion along the Umbrella Bay and Grand Lake shorelines would be reduced by 100% assuming that the structure is completely effective at stopping erosion from wave energy. 3) The rock dike would prevent breaches that would connect interior ponds to Grand Lake. 4) The project would maintain a portion of the Grand Lake-Umbrella Bay shoreline which is a structural component of the coastal ecosystem. 5) The project would combine with the existing Grand-White Lakes Landbridge Shoreline Protection and the South Grand Lake SP projects to the south to protect Grand Lake.

Identification of Potential Issues
At this time, no significant issues have been identified for this project.

Preliminary Construction Costs
The estimated construction cost (assuming $300 per linear foot) is $12 M to $15 M.

Preparer of Fact Sheet
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Kevin Long, landowner, 318-221-3517, Kevin@longpetro.com


Umbrella Bay Shoreline Protection
Grand Lake
Umbrella Bay
Umbrella Bay Shoreline Protection
Foreshore Rock Dike
40,000 linear feet
Grand-White Lakes Landbridge
Protection Project
Grand Lake Shoreline Protection Project
(CWPPRA & CIAP)
Miles
0
05
1
2

U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

Umbrella Bay Shoreline Erosion - 1952 Imagery

Umbrella Bay Shoreline Protection Project

Problem

- 15 feet/year shoreline erosion (4 feet to 30 feet/year, 1952 to 2008 GIS analysis).
- 275 acres of marsh will be lost over the next 20 years.
- Shoreline breaches have caused small interior lakes to coalesce with Grand Lake; continued shore loss will increase connectivity with Grand Lake & cause future interior marsh loss.

Goals

- 1) Halt/reduce shoreline erosion along the eastern Grand Lake & Umbrella Bay shorelines. 2) Prevent shoreline breaches into interior ponds.

Features - Construct 40,000 linear feet (7.5 miles) of foreshore segmented rock breakwater placed at the 1 to 2 foot depth contour with gaps every 1,000 feet with access channel dredged material placed shoreward to restore marsh.

- **Preliminary Project Benefits** - 1) Total net marsh acreage benefited over the 20-year project life would be approximately 275 acres assuming an erosion rate of 15 feet/yr. 2) Shoreline erosion along the Umbrella Bay & Grand Lake shorelines would be reduced by 100%.

- **Cost** - Estimated construction cost (assuming $300 per linear foot) is $12 to $15 M.