REGION 3
Coastal Wetlands Planning Protection & Restoration Act

24th Priority Project List

Region 3
Regional Planning Team Meeting
February 12, 2014
Houma, LA

1. Welcome and Introductions

- RPT Region 3 Leader: Ron Boustany - NRCS
Announcements

- Copies of the PPL 24 Selection Process & Schedule available at the sign-in table.

- PPL 24 RPT meetings to accept project nominees:
  - Region IV, Estuarine Fisheries & Habitat Center, Feb. 11, 2014, 11:00 am
  - Region III, Terrebonne Parish Main Library, Feb. 12, 2014, 9:00 am
  - Region I, USFWS SE LA Refuges Complex (Big Branch), Feb. 13, 2014, 8:00 am
  - Region II, USFWS SE LA Refuges Complex, Feb. 13, 2014, 11:30 am

- 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.

Region 3 Parishes

- Eligible parishes for basins in Region 3 include:
  - Terrebonne Basin
    - St. Mary Parish
    - Terrebonne Parish
    - Assumption Parish
    - Lafourche Parish
    - Iberia Parish
    - St. Martin Parish
  - Atchafalaya Basin
    - St. Mary Parish
    - Iberia Parish
    - Terrebonne Parish
  - Tech-Vermilion Basin
    - St. Mary Parish
    - Iberia Parish
    - Vermilion Parish
RPT Meetings

• 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.

RPT Meetings

• Presenters must complete a PPL 24 Nomination Sign-Up Sheet for each project nominee (demo projects too).

• Limit project proposals to 5 minutes and Powerpoint presentations to 5 slides.

• Public comments on project proposals will be accepted orally during the RPT meetings and in writing by February 19, 2014.

• Limit comments/questions during meeting to PPL 24 subject proposals and processes.
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 25, 2014.
- The Technical Committee may or may not select a coastwide project in April 2014.

Demonstration Projects

- Demonstrates a technology which can be transferred to other areas in coastal Louisiana
- Engineering/Environmental Workgroups will validate that demos fit CWPPRA Standing Operating Procedures criteria
- The RPTs select up to 6 demos during the Feb. 25 Coastwide Electronic Vote.
- The Technical Committee selects up to 3 demos in April 2014.
- Workgroups may recommend that no demos move forward to candidate stage
- Previous demo candidates must be re-nominated for PPL 24.
Coastwide Electronic Vote

- **Feb. 25, 2014**: 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.

- Each officially designated parish representative, each Federal agency, and the State (CPRA) will have one 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 2/19/2014.

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Coastwide Electronic Voting 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 25, 2014.**
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 24 criteria.

PPL 24 Candidate Project Selection

- CWPPRA Technical Committee meeting, April 15, 2014 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 1, 2014.

- Public comments also accepted orally during meeting.
PPL 24 Candidate Project Evaluation & Selection

- Candidates evaluated between May and October
- Workgroups conduct site visits and meetings to identify needs and establish project baselines and boundaries.
- Workgroups determine benefits, project features, and cost estimates
- Technical Committee votes to select up to 4 candidate projects and up to 1 demo to recommend for Phase 1.
  - Dec. 11, 2014, Baton Rouge, 9:30 am
- Task Force final decision to select PPL 24 in January 2015.

PPL 24 Timeline

- **Coastwide Electronic Vote, Feb. 25, 2014**
  - 21 basin-project nominees, 1 coastwide nominee, and 6 demos selected

- **Technical Committee Mtg, Apr. 15, 2014, New Orleans**
  - Selection of 10 candidates and up to 3 demos

- **Technical Committee Mtg, Dec. 11, 2014, New Orleans**
  - Recommend up to 4 projects for Phase 1 funding

- **Task Force Mtg, Jan. 2015, New Orleans**
  - Final Selection of projects for Phase 1 funding
Written Comments

• Send written comments on projects & demos proposed today to the CWPPRA program manager
• **Deadline: February 19, 2014**

**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
<table>
<thead>
<tr>
<th>Project Type</th>
<th>Project Name</th>
<th>Project Costs</th>
<th>Project No.</th>
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<tr>
<td>Barrier Island/Headland</td>
<td>Isles Dernieres Barrier Island Restoration: Restoration of the Isles Dernieres barrier islands to</td>
<td>$343M</td>
<td>03a.BH.03</td>
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<td>provide dune, beach, and back barrier marsh habitat and to provide storm surge and wave attenuation in the Terrebonne Basin.</td>
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<td>Barrier Island/Headland</td>
<td>Timbalier Islands Barrier Island Restoration: Restoration of the Timbalier barrier islands to</td>
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<td>provide dune, beach, and back barrier marsh habitat and to provide storm surge and wave attenuation</td>
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<td>in the Terrebonne Basin.</td>
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<td>Hydrologic Restoration</td>
<td>Central Terrebonne Hydrologic Restoration: Modification of structure on Liners Canal to improve</td>
<td>$14M</td>
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<td>freshwater flow to Lake Decade and installation of a structure in Grand Pass to restrict the</td>
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<td>opening to Lake Merchant.</td>
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<td>Chacahoula Basin Hydrologic Restoration: Restoration of the Chacahoula Basin on either side of</td>
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<td>Highway 182.</td>
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<td>Hydrologic Restoration</td>
<td>HNC Lock Hydrologic Restoration: Construction of a lock on the Horseshoe Navigation Canal and</td>
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<td>operation to reduce saltwater intrusion and distribute freshwater to the surrounding wetlands.</td>
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<td>Marsh Creation</td>
<td>Timbarone Bay Rim Marsh Creation Study. Planning, engineering and design to develop marsh</td>
<td>$91M</td>
<td>03a.MC.03p</td>
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<td></td>
<td>creation along the northern rim of Terrebonne Bay (approximately 3,370 acres).</td>
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<td>Marsh Creation</td>
<td>Belle Pass-Golden Meadow Marsh Creation (1st Period increment): Creation of approximately 14,420</td>
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<td>03a.MC.07</td>
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<td></td>
<td>acres from Belle Pass to Golden Meadow to create new wetland habitat, restore degraded marsh, and</td>
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<td></td>
<td>reduce wave erosion.</td>
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<td>Marsh Creation</td>
<td>North Terrebonne Bay Marsh Creation: Creation of approximately 4,940 acres of marsh south of</td>
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<td></td>
<td>Montegut between Bayou St. Jean Charles and Bayou Pointe au Chien to create new wetland</td>
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<td>habitat, restore degraded marsh, and reduce wave erosion.</td>
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<td>Marsh Creation</td>
<td>Terrebonne GIWW Marsh Creation: Creation of approximately 1,190 acres of marsh along the GIWW in</td>
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<td>Terrebonne Basin to create new wetland habitat, restore degraded marsh, and reduce wave</td>
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<td>acres between Lake Peppe and Bayou Decade to create new wetland habitat, restore degraded</td>
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<td>and Bayou Decade to create new wetland habitat, restore degraded marsh, and reduce wave</td>
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<td>Oyster Barrier Reef</td>
<td>West Cote Blanche Bay Oyster Barrier Reef Restoration: Creation of approximately 25,000 feet</td>
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<td></td>
<td>of oyster barrier reef in West Cote Blanche Bay from Dead Cypress Point (near Cypremort Point)</td>
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<td>to near Bayou Michael (NNW corner of Marsh Island) to provide oyster habitat, reduce wave</td>
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<td>erosion, and prevent further marsh degradation.</td>
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<td>Oyster Barrier Reef</td>
<td>East Cote Blanche Bay Oyster Barrier Reef Restoration: Creation of approximately 30,000 feet of</td>
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<td>oyster barrier reef in East Cote Blanche Bay from Marline Point to Lake Point (NE corner of</td>
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<td>Marsh Island) to provide oyster habitat, reduce wave erosion, and prevent further marsh</td>
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<td>degradation.</td>
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<td>Ridge Restoration</td>
<td>Bayou DeCade Ridge Restoration: Restoration of approximately 47,000 feet (110 acres) of historic</td>
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<td>ridge along Bayou DeCade from Lake Decade to Raccondu Bay to provide coastal upland</td>
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<td>habitat, restore natural hydrology, and provide wave and storm surge attenuation.</td>
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### Sediment Diversion

- **Atchafalaya River Diversion (150,000 cfs):** Sediment diversion off the Atchafalaya River into or to benefit Penchant and southwest Timbalieres marshes, 150,000 cfs capacity (modeled at 60% of southwest Atchafalaya flow exceeding 50,000 cfs).  
  - **Project Type:** Sediment Diversion  
  - **Project Name:** Atchafalaya River Diversion  
  - **Project Costs:** $78M  
  - **Project No.:** 03a.Di.05

- **Mid-Barataria Diversion (250,000 cfs- 1st Period Increment):** Sediment diversion into mid-Barataria. The influence area shown is for the total 250,000 cfs project upon historic ridge along Bayou LaLoutre to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Sediment Diversion  
  - **Project Name:** Mid-Barataria Diversion  
  - **Project Costs:** $275M  
  - **Project No.:** 02.Di.03

- **Lower Barataria Diversion (50,000 cfs):** Sediment diversion into lower Barataria Bay in the vicinity of Empire, 50,000 cfs capacity (modeled at capacity when Mississippi River flow exceeds 600,000 cfs, at 8% of river flow from 600,000-900,000 cfs, at 5% of river flow from 900,000-1,200,000 cfs, at 8% of river flow between 1,200,000-2,000,000 cfs, at 5% of river flow from 2,000,000-3,000,000 cfs, at 8% of river flow between 3,000,000-900,000 cfs, and no operation when river flow is below 200,000 cfs).  
  - **Project Type:** Sediment Diversion  
  - **Project Name:** Lower Barataria Diversion  
  - **Project Costs:** $212M  
  - **Project No.:** 01.Di.02

### Ridge Restoration

- **Bayou DuLarge Ridge Restoration:** Restoration of approximately 36,000 feet (80 acres) of historic ridge along Bayou DuLarge to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Bayou DuLarge Ridge Restoration  
  - **Project Costs:** $212M  
  - **Project No.:** 03a.RC.02

- **Bayou LaPointe Ridge Restoration:** Restoration of approximately 60,000 feet (140 acres) of historic ridge at Bayou LaPointe to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Bayou LaPointe Ridge Restoration  
  - **Project Costs:** $37M  
  - **Project No.:** 03a.RC.04

- **Bayou Pointe au Chien Ridge Restoration:** Restoration of approximately 55,000 feet (130 acres) of historic ridge along the southern portions of Bayou Tembeonne to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Bayou Pointe au Chien Ridge Restoration  
  - **Project Costs:** $39M  
  - **Project No.:** 03a.RC.05

- **Bayou Sale Ridge Restoration:** Restoration of approximately 90,000 feet (200 acres) of historic ridge along Bayou Sale to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Bayou Sale Ridge Restoration  
  - **Project Costs:** $30M  
  - **Project No.:** 03a.RC.06

- **Bayou LaLoutre Ridge Restoration:** Restoration of approximately 57,000 feet (130 acres) of historic ridge along the southern portions of Bayou LaLoutre to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Bayou LaLoutre Ridge Restoration  
  - **Project Costs:** $28M  
  - **Project No.:** 03a.RC.07

- **Bayou Long/Bayou Fontanelle Ridge Restoration:** Restoration of approximately 63,000 feet (130 acres) of historic ridge along Bayou Long/Bayou Fontanelle to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Bayou Long/Bayou Fontanelle Ridge Restoration  
  - **Project Costs:** $37M  
  - **Project No.:** 03a.RC.08

- **Mauvais Bois Ridge Restoration:** Restoration of approximately 62,000 feet (130 acres) of historic ridge along Mauvais Bois to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Mauvais Bois Ridge Restoration  
  - **Project Costs:** $37M  
  - **Project No.:** 03a.RC.09

- **Spanish Pass Ridge Restoration:** Restoration of approximately 53,000 feet (120 acres) of historic ridge along Spanish Pass to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Spanish Pass Ridge Restoration  
  - **Project Costs:** $30M  
  - **Project No.:** 03a.RC.11

- **Small Bayou LaPointe Ridge Restoration:** Restoration of approximately 55,000 feet (130 acres) of historic ridge along Small Bayou LaPointe to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Small Bayou LaPointe Ridge Restoration  
  - **Project Costs:** $37M  
  - **Project No.:** 03a.RC.12

- **Spanish Pass Ridge Restoration:** Restoration of approximately 53,000 feet (120 acres) of historic ridge along Spanish Pass to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Spanish Pass Ridge Restoration  
  - **Project Costs:** $43M  
  - **Project No.:** 02.Di.02

- **Tripoli Ridge Restoration:** Restoration of approximately 55,000 feet (130 acres) of historic ridge along Tripoli to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Tripoli Ridge Restoration  
  - **Project Costs:** $27M  
  - **Project No.:** 02.Di.03

- **Tripoli Ridge Restoration:** Restoration of approximately 55,000 feet (130 acres) of historic ridge along Tripoli to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Tripoli Ridge Restoration  
  - **Project Costs:** $28M  
  - **Project No.:** 02.Di.04

- **Tripoli Ridge Restoration:** Restoration of approximately 65,000 feet (130 acres) of historic ridge along Tripoli to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Tripoli Ridge Restoration  
  - **Project Costs:** $29M  
  - **Project No.:** 02.Di.05

- **Tripoli Ridge Restoration:** Restoration of approximately 55,000 feet (130 acres) of historic ridge along Tripoli to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.  
  - **Project Type:** Ridge Restoration  
  - **Project Name:** Tripoli Ridge Restoration  
  - **Project Costs:** $22M  
  - **Project No.:** 02.Di.06
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<th>Project Type</th>
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<th>Project Costs</th>
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<tbody>
<tr>
<td>Sediment Diversion</td>
<td>Increase Atchafalaya Flow to Eastern Terrebonne: Dredging of the GIWW east of the Atchafalaya and installation of a bypass structure at the Bayou Boeuf Lock to increase freshwater and sediment flows from Atchafalaya River to Terrebonne marshes (modeled to maintain a minimum of 20,000 cfs east along GIWW towards HNC).</td>
<td>$292M</td>
<td>03b.DI.04</td>
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<td>Shoreline Protection</td>
<td>Vermilion Bay and West Cote Blanche Bay Shoreline Protection (Critical Areas): Shoreline protection through rock breakwaters of approximately 83,000 feet of shoreline along Vermilion Bay and West Cote Blanche Bay to preserve shoreline integrity and reduce wetland degradation from wave erosion.</td>
<td>$86M</td>
<td>03b.SP.06a</td>
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<td>Shoreline Protection</td>
<td>GIWW Shoreline Protection (Intracoastal City to Amelia): Shoreline protection of approximately 690,000 feet of GIWW shoreline between Intracoastal City and Amelia to preserve shoreline integrity and reduce wetland degradation from wave erosion.</td>
<td>$765M</td>
<td>03b.SP.09</td>
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**ATTENDANCE RECORD**

**DATE**
February 12, 2014
9:00 A.M.

**SPONSORING ORGANIZATION**
COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

**LOCATION**
Terrebonne Parish Main Library
151 Library Dr
Houma, LA 70360

**PURPOSE**
MEETING OF THE REGIONAL PLANNING TEAM REGION III

<table>
<thead>
<tr>
<th>PARTICIPANT REGISTER*</th>
<th>JOB TITLE AND ORGANIZATION</th>
<th>PHONE NUMBER</th>
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<tbody>
<tr>
<td>Ron Boudinot</td>
<td>NRCS</td>
<td>337-291-3067</td>
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<tr>
<td>Pardy Belile</td>
<td>FWS</td>
<td>337-291-3117</td>
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<td>Robert Dubuis</td>
<td>FWS</td>
<td>337-291-3127</td>
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<td>T-Roy</td>
<td>FWS</td>
<td>337-291-3120</td>
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<tr>
<td>Bruce Fargo</td>
<td>TRAPBA</td>
<td>872-360-2246</td>
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<td>Ed Brueck</td>
<td>TRAPBA</td>
<td>225-202-8704</td>
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<td>Barry Hought</td>
<td>LDWF</td>
<td>225-769-0233</td>
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<tr>
<td>Amanda Penne</td>
<td>Labourse Parish Gov't</td>
<td>985-493-6616</td>
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<tr>
<td>Karl RedChau</td>
<td>RECON</td>
<td>337-533-8844</td>
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<tr>
<td>Todd Hubbard</td>
<td>CPRA</td>
<td>985-447-0994</td>
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<td>Elaine Lear</td>
<td>CPRA</td>
<td>985-447-0976</td>
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<td>Robert Alton</td>
<td>FSA</td>
<td>985-364-0332</td>
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<td>Marnel Parker</td>
<td>NRCS</td>
<td>329-364-4623</td>
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<td>David Drozet</td>
<td>VERA, CPDC</td>
<td>337-658-2255</td>
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<td>David M. Lee</td>
<td>CPRA</td>
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<td>Glen Curole</td>
<td>CPRA</td>
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<td>Mark Hester</td>
<td>ULLAFAYETE</td>
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<td>Joe Gonzalez</td>
<td>Manson Construction Co.</td>
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<td>Julia Wall</td>
<td>CPRA</td>
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<td>Aaren Hoff</td>
<td>EPA</td>
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<td>Medora Freyssier</td>
<td>NRCS</td>
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<td>Andrea Mora</td>
<td>DC - NRCS</td>
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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.
### ATTENDANCE RECORD

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<tr>
<td>February 12, 2014 9:00 A.M.</td>
<td>COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT</td>
<td>Terrebonne Parish Main Library 151 Library Dr Houma, LA 70360</td>
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### PURPOSE

MEETING OF THE REGIONAL PLANNING TEAM REGION III

<table>
<thead>
<tr>
<th>NAME</th>
<th>JOB TITLE AND ORGANIZATION</th>
<th>PHONE NUMBER</th>
</tr>
</thead>
<tbody>
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</tbody>
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*If you wish to be furnished a copy of the attendance record, please indicate so next to your name.*
### Region 3 – TECHE-VERMILION BASIN

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### Region 3 – TERREBONNE BASIN

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<td>Bayou Jean Lacroix to Bayou Pointe au Chien Marsh Creation &amp; Terracing</td>
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<td>West Bayou Lafourche Marsh Creation &amp; Terracing</td>
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<td>Leeville West Marsh Creation &amp; Nourishment</td>
</tr>
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</table>
Region 3 – TECHE-VERMILION BASIN
R3-TV-01

North Vermilion Bay Shoreline Breach Repair
PPL24 PROJECT NOMINEE FACT SHEET
2/11/2013 - RPT

Project Name
North Vermilion Bay Shoreline Breach Repair

Master Plan Strategy
Central Coast, Vermilion Bay and West Cote Blanche Bay Shoreline Protection (Critical Areas) - 03b.SP.06a.

Project Location
Region 3, Teche/Vermilion Basin, Vermilion Parish, Vermilion Bay shoreline between 4-Mile Canal and Boston Canal

Problem
There are currently five locations along the north Vermilion Bay shoreline between the 4-mile Canal and Boston Canal that have or threaten to breach into the bay. These locations are primarily man-made canals where shoreline erosion has caused breaching and now allows for direct exchange between the bay waters and the interior marshes. These direct connections allow for amplified tidal fluctuations resulting in salinity intrusion and tidal scour as water is rapidly exchanged.

Goals
The goal of the project will be to stop direct tidal exchange of the interior marsh with Vermilion Bay and stop marsh loss.

Proposed Solutions:
The project proposes to backfill the locations where breaches have occurred or threaten to occur with dredge material pumped from the adjacent Vermilion Bay.

Project Benefits: The project will directly create approximately 11 acres of marsh and preserve approximately another 25 acres of interior marsh by preventing salinity intrusion and tidal erosion.

Project Construction Costs: $1.5 million

Preparer(s) of Fact Sheet:
Sherrill Sagrera, Vermilion Soil and Water Conservation District, (337) 893-0636; sherrillsagrera@bellsouth.net
R3-TV-02
Southwest Pass Shoreline
PPL24 PROJECT NOMINEE FACT SHEET
January 29, 2014

Project Name
Southwest Point Shoreline Protection

State Master Plan
03b.SP.08 and 03b.SP.05 Southwest Pass Shoreline Protection (West Side) and Gulf Shoreline Protection (Freshwater Bayou to Southwest Pass).

Project Location
The project is located in the Region 3, Teche/Vermilion Basin, between the Marsh Island Wildlife Refuge in Iberia Parish and Paul J. Rainey Wildlife Sanctuary in Vermilion Parish.

Problem
Erosion of peninsulas in the project area is reducing the effectiveness of the landmass as a mainland barrier to gulf storm surge, wave energy and tidal flux reduction. Average losses of 8.4 ft/yr at Southwest Point were measured from 1998 to 2010. Southwest point is only about 240 ft wide at its thinnest location.

Proposed Project Features
Proposed is the installation of armored shoreline protection along the south shoreline of Vermilion Bay at Southwest Point for approximately 8,350 linear feet. Shoreline protection would consist of oyster crete concrete rings that proved successful in the PPL22 Bioengineering Demonstration Project at Rockefeller Refuge.

Goals
The project goal is to protect and stabilize critical points within Southwest Pass. The current width and subsequent flow pattern will be maintained by installing armor protection around the perimeter of Southwest Point. The armored protection will prevent tidal currents from circumventing the restriction at the pass and breaching into adjacent marsh areas.

Preliminary Project Benefits
The project would significantly reduce marsh losses through shoreline protection. The shoreline protection features would maintain approximately 32 acres of the Gulf shoreline along a peninsula that will in turn help maintain a landmass that plays a significant role in regulating the hydrology of the Vermilion Bay system.

Identification of Potential Issues
There is a potential for oyster lease issues and disturbance of existing oyster seed grounds. The project would not interfere with navigation.

Preliminary Construction Costs
The estimated construction cost with 25% contingency is $5 - $10 million.

Preparer of Fact Sheet
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Troy Mallach, NRCS, 337-291-3064, Troy.Mallach@la.usda.gov
R3-TV-03

South Humble Marsh Creation & Nourishment
South Humble Marsh Creation and Nourishment.

Louisiana’s 2012 Coastal Master Plan
Marsh Creation – 004.MC.07

Project Location
Region 3, Teche - Vermilion Basin, Vermilion Parish

Problem
Project area wetlands are undergoing losses at rates of -0.3 %/year based on USGS analyses conducted through 2009. Marshes in this area are subject to losses from shoreline erosion, subsidence/sediment deficit, and interior ponding. Shoreline erosion along the Freshwater Bayou Canal has resulted in direct wetland loss as the canal has widened from an authorized width of less than 200 feet to 800 feet. In addition to these direct losses, significant interior marsh loss has resulted from saltwater intrusion and hydrologic changes associated increasing tidal influence, and herbivory. As hydrology within this area has been modified, habitats have shifted to more of a floatant marsh type, resulting in increased susceptibility to tidal energy and storm damages. Habitat shifts and hydrologic stress reduce marsh productivity, a critical component of vertical accretion in intermediate wetlands. The ensuing erosion creates water turbidity within the interior ponds, this coupled with increased pond depth, decreases the coverage of submersed aquatic vegetation. Additionally, recent hurricanes have resulted in large and wide spread losses. It is unlikely that many of these areas will recover unsaid. As evidenced from aerial photography the project area is part of a larger feature of weakened interior marsh from the project area south and west to include those marshes south of Pecan Island. If left to deteriorate, the project area would eventually open Vermilion Bay into Freshwater Bayou. This would then threaten the integrity of Freshwater Bayou, exposing a larger interior marsh area to conversion to open water. In the specific project area, erosion of the eastern bank line of Freshwater Bayou has resulted in formation of three breaches, allowing boat wakes and hydrologic action to adversely affect the interior marsh east of the canal. The wakes from passing vessels and tidal action are causing the export of organic material from the project area.

Proposed Solution
The proposed project’s primary feature is to create and/or nourish approximately 500 acres of marsh (365 acres created, 135 acres nourished). Sediment will be hydraulically pumped from the Gulf of Mexico 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. Approximately 12,000 LF of tidal channels, along with two 50-100 acre ponds are planned for the newly created marsh. Additionally, 50 acres of vegetative plantings will occur within the newly created areas.

Goals
The project goal is to create and/or nourish approximately 500 ac of marsh (365 ac created, 135 ac nourished) of emergent brackish marsh using sediment from the Gulf.

Preliminary Project Benefits:
Based on a 50% rate reduction to the projected -0.3%/yr land loss rate, marsh creation and nourishment in the project area would yield 485 net acres, 20 years after initial construction.

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $22,095,565.

Preparer(s) of Fact Sheet:
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John D. Foret, Ph.D.; NOAA Fisheries Service; 337.291.2107 John.Foret@noaa.gov
Billy Broussard; Vermilion Corporation; 337.893.0268; vermilioncorporation@connections-llc.com
South Humble Marsh Création and Nourishment (Vermilion Parish)
Region III – Teche - Vermilion Basin
February 12, 2013

Problem

- Land loss rates in this area result of FW Bayou breaching into hydrologically modified marsh
- Increasing tidal influence along with saltwater intrusion weakened plant communities, ultimately leading to vegetation die-off and marsh breakup, export to FW Bayou, and allowing for Hurricanes Rita and Ike to scour the area
- Marshes that once provided a buffer between FW Bayou and Belle Isle are now shallow open water areas
- Part of a larger feature of weakened interior marsh between Vermilion Bay and areas south & east of Pecan Island
Project Features

- Total Acres = 500 acres (365 created, 135 nourished)
- Reestablishes critical land bridge between Belle Isle and FW Bayou
- Borrow from outside immediate project area from GOM
- Create ~ 12,000 LF of tidal channels within newly created area
- Consistent with State Master Plan
- 485 net acres @ TY20
- Construction Cost with 25% contingency = $22.1 million
R3-TV-04

South & West Vermilion Bay Shoreline Protection – Critical Reaches
Project Name:
South & West Vermilion Bay Shoreline Protection - Critical Reaches Project

Project Location:
Region III, Teche-Vermilion Basin, Marsh Island Refuge, Iberia Parish and State Wildlife Management Area, Vermilion Parish (LDWF ownership)

Coast 2050 Strategy:
Regional: [01.] Maintain shoreline integrity and stabilize critical areas of the Teche-Vermilion Bay systems including the gulf shorelines
Mapping Units: [64.] Marsh Island – Protect bay/lake/gulf shorelines
                      [82 & 84.] Vermilion Bay & Vermillion Marsh - Protect bay/lake shorelines

Master Plan:
Project No. 03b.SP.06a – Vermilion Bay and West Cote Blanche Bay Shoreline Protection (Critical Areas): Shoreline protection through rock breakwaters of approximately 83,000 feet of shoreline along Vermilion Bay & West Cote Blanche Bay to preserve shoreline integrity and reduce wetland degradation from wave erosion ($86 million).

Problem: Wave action generated across the long fetch lengths of Vermilion Bay is causing severe erosion on bordering Marsh Island Refuge and State WMA shorelines. In addition to direct loss from shoreline retreat, of particular concern is the loss of certain shoreline reaches that would also allow coalescence of the Bay and large interior lakes. This capture of interconnected shallow lake-marsh ecosystems will significantly alter hydrology, increasing tidal exchange impacts and accelerate interior degradation and loss of fragile wetland areas important to the large fish and wildlife populations that they support.

Goal: The goal of this project is to protect critical shoreline areas and associated adjacent interior marshes and lakes along the southern and western Vermilion Bay shorelines by halting erosion in selected reaches.

Proposed Solutions: The project feature consists of an approximate total of 26,400 LF of rock breakwater structure at selected reaches of shoreline from Redfish Point to Bayou Fearman of the State WMA, and from Bayou Michael to the eastern tip of Marsh Island Refuge.

Preliminary Project Benefits: Maintaining the shoreline integrity and stabilizing selected areas of the Vermilion Bay system will prevent future shoreline losses in critical reaches, and protect important interior wetlands and shallow lakes utilized by numerous species of fish, waterfowl and other wildlife, and endangered species. With 5 miles of shoreline protection, approximately 136 ac of shoreline marsh would be protected over 20 years; and the project structures would prevent the bay from capturing even greater acreage of existing shallow water lakes and surrounding marsh – the acreage of the just the 4 largest lakes adjacent to the bay shoreline is 2,430 acres. The proposed project will have significant synergistic effects with other existing restoration and protection projects on the refuges.

Identification of Potential Issues:
There are no potential issues anticipated with this proposed project.

Preliminary Construction Costs:
The anticipated construction cost, with contingency, is in the $25-30 million range.

Preparer(s) of Fact Sheet:
Cindy S. Steyer (225) 665-4253, cindy.steyer@la.usda.gov
Cassidy Lejeune, (337) 373-0032, clejeune@wlf.la.gov
Master Plan Measure 03b.SP.06a – A Total of 83,000 LF of Rock Shoreline Protection at Critical Areas at a Total Cost of $86 million

Project builds a portion of the MP 03b.SP.06a measure - address the most critical reaches of shoreline – selected by highest shoreline loss rates &/or where interior lakes are vulnerable to coalescing with Vermilion Bay.

LDWF provided guidance in identifying critically eroding areas on the State WMA and Marsh Island Refuge shorelines.
1998-2013 average shoreline retreat rate 7-8 ft/yr with hot spots retreating 13 ft/yr. Two largest lakes at risk total 237 acres (not incl surrounding marsh areas).

On the State Management Area narrowed focus to address specific critical areas between Fearman Bayou and Redfish Point – approx 3.1 mi (16,240 LF) of shoreline

1998-2013 average shoreline retreat rate 11-12 ft/yr with hot spots retreating 32-47 ft/yr. Three largest lakes at risk total 2,206 acres (not incl surrounding marsh areas).

On Marsh Island Refuge... Approx 18 mi (95,060 LF) of shoreline between the two arrows were considered.
South and West Vermilion Bay Shoreline Protection – Critical Areas

- Consists of 26,400LF (5mi) of rock breakwater at critical reaches subject to shoreline retreat &/or breaching & capture of interior lakes
- Construction cost - $25-30 million range
Region 3 – ATCHAFALAYA BASIN

No projects were nominated in this basin.
Region 3 – TERREBONNE BASIN
R3-TE-01

East Island Beach & Backbarrier Marsh Restoration
PPL24 Project Nominee Fact Sheet
February 12, 2014

Project Name
East Island Beach and Backbarrier Marsh Restoration

Coast 2050 Strategy
Coastwide Common Strategies-Dedicated dredging to create, restore, or protect wetlands; Vegetative planting; Offshore and riverine sand and sediment resources.
Region 2 Ecosystem Strategies- Restore and sustain marshes- #8. Dedicated delivery of sediment for marsh building by any feasible means; Restore barrier islands and Gulf shorelines-#12. Restore and maintain the Isles Dernieres and Timbalier barrier island chains, Marsh Island, Point au Fer, and Cheniere au Tigre (including back barrier beaches).
Mapping Unit Strategies- #33. Protect bay/gulf shorelines

Master Plan
Project No. 03a.BH.03

Project Location
Region 3, Terrebonne Basin, Terrebonne Parish, part of the Isles Dernieres, approximately 38 miles south of Houma, LA

Problem
East/Trinity Island is part of the Isles Dernieres barrier island chain, one of the most rapidly deteriorating barrier shorelines in the U.S. These barrier islands play an important role in protecting the Terrebonne barrier-built estuary and its surrounding wetlands from the destructive forces of high wave energy, storm surges and salt water intrusion (van Heerden and DeRouen 1997). Additionally, the number and size of the tidal inlets influence the tidal prism. Finally, the habitats provided by barrier islands are highly valuable, particularly for colonial nesting birds and shorebirds, and for nekton. Unfortunately, East Island and the rest of the Isles Dernieres barrier island system, is rapidly deteriorating, averaging -36.4 ft/yr of gulfside erosion, and -8.9 ft/yr of bayside erosion, during the period 1987-1988 (McBride and Byrnes 1997). In addition, Louisiana deltaic barriers lack stable subaerial backbarrier platforms upon which barrier island can migrate landward (McBride and Byrnes 1997).

Proposed Project Features
Sediment will be placed on the landward side of the island, creating additional backbarrier marsh, and along the Gulf shoreline, creating additional intertidal beach and dune. Sand fences will be installed to retain sand and create and maintain supratidal and dune habitat. Appropriate plant species will be planted to help stabilize sediment and to create marsh, dune, and swale habitats. Besides the habitat values, the former will provide a stable backbarrier platform on which the island can migrate landward, while the latter will provide additional sand for redistribution by currents and waves along the entire island’s Gulf beach.

Goals
- provide a backbarrier platform to enable successful island migration
- extend the life of this barrier island by increasing its width
- create 130 ac of vegetated intertidal marsh using new dredged material and vegetative plantings
- create 60 ac of vegetated dune using sand, sand fencing, and vegetative plantings
- create 80 ac of intertidal gulf beach
- protect the Terrebonne estuary and vegetated wetlands against direct exposure to the Gulf of Mexico
- add sand to this sand-starved barrier island system

Preliminary Project Benefits
The project would benefit about 2148 acres of barrier island habitat. Approximately 250 acres of barrier island habitat would be created initially with an estimated 175 protected over the 20-year project life.

Identification of Potential Issues
None

Preliminary Construction Costs
The estimated construction cost including 25% contingency is $23.5 Million.

Preparers of Fact Sheet:
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Aaron Hoff, ORISE intern, EPA Region 6, (214) 665-7319Hoff.aaron@epa.gov
East Island Dune and Marsh Restoration

Coastal Wetlands Planning, Protection and Restoration Act
East Island Dune and Marsh Restoration

**Goals:**
- Create 130 ac backbarrier marsh
- Create 60 ac dune
- Create 180 ac of beach
- Total of 250 ac BI habitat

**Preliminary Project Benefits:**
- 175 net ac over 20 years

**Identification of Potential Issues:**
- None

**Preliminary Construction Costs:**
- $23.5 million

Coastal Wetlands Planning, Protection and Restoration Act

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**Questions**

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Crawford.brad@epa.gov

Coastal Wetlands Planning, Protection and Restoration Act
R3-TE-02
Timbalier Island Restoration
PPL24 PROJECT NOMINEE FACT SHEET
February 12, 2014

Project Name
Timbalier Island Restoration

Coast 2050 Strategy
Coastwide Common Strategies-Dedicated dredging to create, restore, or protect wetlands; Vegetative planting; Offshore and riverine sand and sediment resources. Region 2 Ecosystem Strategies- Restore and sustain marshes; 8) Dedicated delivery of sediment for marsh building by any feasible means; Restore barrier islands and Gulf shorelines; 12) Restore and maintain the Isles Derrieres and Timbalier barrier island chains, Marsh Island, Point au Fer, and Cheniere au Tigre (including back barrier beaches).

Master Plan
Project No. 03a.BH.04

Project Location
Region 3, Terrebonne Basin, Terrebonne Parish, approximately 38 miles south of Houma, LA.

Problem
The Lafourche Delta headland and barrier island system, including Timbalier Island, plays an important role in protecting the Terrebonne barrier-built estuary and its surrounding wetlands from the destructive forces of high wave energy, storm surges and salt water intrusion (van Heerden and DeRouen 1997). Additionally, the number and size of the tidal inlets influence the tidal prism. Finally, the habitats provided by barrier islands are highly valuable, particularly for colonial nesting birds and shorebirds, and for nekton. Unfortunately, Timbalier Island and the rest of the Lafourche Delta headland and barrier island system, is one of the most rapidly deteriorating barrier shorelines in Louisiana, averaging -13.1 ft/yr of erosion from the 1990s through 2005 in the proposed project area. Recent hurricanes have breached the island in the proposed project area.

Proposed Project Features
This project will place sediment on the Gulf and bay side of Timbalier Island. Placing sediment on the bay side of Timbalier Island will increase the area of backbarrier marsh which will provide a stable platform which the island needs to migrate landward. Placement of dredge material on the Gulf side of Timbalier Island will provide sand that can be redistributed along the island’s shoreline by currents and waves. Sediment fences and plantings will be utilized to manage new placed sediments.

Goals:
- Close the breach in the island
- Provide a backbarrier platform to enable sustainable and successful island migration
- Extend the life of this barrier island by increasing its width
- Create about 76 acres of intertidal marsh using new dredged material and vegetative plantings
- Fortify/protec the platform and marsh by creating 104 acres of beach and 16 ac of dune.
- Protect the Terrebonne estuary and its surrounding wetlands from waves, storm surges, and salt water intrusion
- Add sand to this sand-starved barrier island system

Preliminary Project Benefits
- Creation of 196 ac of beach, dune, and marsh habitat
- Protect approximately 100 ac of barrier island habitat over 20 years

Identification of Potential Issues
None

Preliminary Construction Costs
The estimated construction costs including 25% contingency is $21,686,257

Preparers of Fact Sheet:
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Barbara Aldridge, EPA Region 6, (214-665-2712), Aldridge.barbara@epa.gov
Timbalier Island Shoreline Sediment Nourishment

Coastal Wetlands Planning, Protection and Restoration Act
Timbalier Island Shoreline Sediment Nourishment

**Goals/ Preliminary Benefits:**
- Close breach
- Provide backbarrier platform
- Extend life of the island
- Create 76 ac of marsh
- Protect marsh by creating 104 ac beach, 16 ac dune
- Protect Terrebonne estuary and surrounding wetlands from waves, storm surges, saltwater intrusion
- Add sand to this sand-starved barrier island system

**Preliminary Cost Estimate:**
- $21.7 million

Coastal Wetlands Planning, Protection and Restoration Act

**Questions**

Brad Crawford  
(214) 665-7255  
Crawford.brad@epa.gov
R3-TE-03
Leeville Canal Backfill & Marsh Creation
Project Name
Leeville Canal Backfill and Marsh Creation

Master Plan Strategy
03a.MC.07– Belle Pass-Golden Meadow Marsh Creation

Project Location
Region 3, Terrebonne Basin. The project is located to the south of the Southwestern Louisiana Canal and west of Bayou Lafourche, southwest of the town of Leeville in Lafourche Parish, Louisiana.

Problem
The compound effects of subsidence, erosional forces, and human intervention have taken a toll on the Terrebonne Basin. According to USGS data, nearly 324,000 ac of land were lost between 1932 and 2010 within the basin, which had the highest land loss rate in the state from 1985 to 2004. Oil and gas canal dredging is widespread within the project area, altering the hydrology and exacerbating the problem further. Wetlands have been replaced by open water where canals are dug, while spoil banks convert them to upland habitat. The natural banks of Bayou Lafourche and Southwest Louisiana Canal have been seriously impacted near the project area, and impounded areas can occur when several spoil banks intersect, causing flood stress to the marsh within.

Goals
Create and nourish 424 acres of emergent marsh using sediment from Little Lake or possibly Bayou Lafourche. Additionally, conduct canal backfill operations in three other cells that would convert 2 miles of upland canal habitat to an additional 37 ac of emergent marsh and 18 ac of shallow water habitat that would support the growth of aquatic vegetation. Also, the project will provide indirect benefits to the surrounding area through hydrologic restoration.

Proposed Project Features
This project would create up to 355 acres and nourish up to 106 acres of emergent marsh using sediment from a borrow site within Little Lake. An additional 37 ac of emergent marsh and 18 ac of shallow water habitat would be created by re-grading upland habitat from oil and gas canal spoil banks to marsh elevation, returning the soil to the canal to create shallow water habitat and additional emergent marsh.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly?
   Emergent Marsh = 461; Shallow water habitat = 18 ac
2) How many acres of wetlands will be protected/created over the project life?
   The average wetland loss rate for the South Point Au Chene WMA sub-unit is -0.89% per year. Using a loss rate reduction of 50%, an expected loss rate of -0.45% per year is used, with net acreages at TY20 totaling 333 ac.
3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%)?
   A 50% loss rate reduction is anticipated throughout the entire project area.

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 marsh created within the project would help to restore the natural banks of Bayou Lafourche as well as Bayou Pierre et Lee/Southwest Louisiana Canal. Backfilling operations will also help to partially restore hydrology within the area.

5) What is the net impact of the project on critical and non-critical infrastructure? The project helps protect infrastructure in the immediate area such as LA-1 and nearby port terminal/marina infrastructure along Bayou Lafourche/Belle Pass to the east.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? There are no currently constructed projects within the near vicinity.

Identification of Potential Issues
There are several pipeline terminals and other facilities within the area that will need access preserved; extensive planning with the landowner is currently in progress. A survey of spoil bank height within Cells 4, 6, and 7 would be needed to determine suitability for creating marsh within the canals.

Preliminary Construction Costs
Cells A&B w/borrow from Little Lake: $19.2 million
2 mi backfill: $753,000
Total Cost +25% contingency = $25 million

Preparer of Fact Sheet
Aaron Hoff, EPA (214) 665-7319, hoff.aaron@epa.gov
Adrian Chavarria, EPA (214) 665-3103, chavarria.adrian@epa.gov
Terrebonne Basin’s vulnerability to land loss
- ~324,000 ac lost from 1932-2010
- Highest land loss rate across state from 1985-2004

Compound effects driving marsh loss
- Subsidence, storm losses, & human intervention
- Numerous oil & gas canals in project area have altered hydrology
Solution

- Create 318 acres and nourish 106 acres of emergent marsh with sediment from Lost Lake
- Backfill 2 miles of canal to create an additional 37 ac of emergent marsh and 18 ac of shallow water habitat
- Net benefit at TY 20 = 333 ac
- Backfilling will partially restore hydrology to project area
- Estimated preliminary cost $25 million

Coastal Wetlands Planning, Protection and Restoration Act

Project Features

Coastal Wetlands Planning, Protection and Restoration Act
Questions?

Aaron Hoff  
EPA Region 6  
hoff.aaron@epa.gov

Coastal Wetlands Planning, Protection  
and Restoration Act
R3-TE-04

Bayou Terrebonne Ridge Restoration & Marsh Creation
PPL 24 PROJECT NOMINEE FACT SHEET

Project Name
Bayou Terrebonne Ridge Restoration and Marsh Creation

Master Plan Strategy:
- 03a.RC.05 – Bayou Terrebonne Ridge Restoration

Project Location
The project is located directly along Bayou Terrebonne, northwest of Cocodrie, in Terrebonne Parish, Louisiana.

Problem
Terrebonne basin was historically structured by a series of north-south ridges—remnants of the many distributaries of Bayou Lafourche. Much of the habitat function of these ridges has been lost over the last half-century to erosion, subsidence, and development. Land loss projections predict that the ridge and surrounding marshes will be converted to open water by 2050.

Goals
1) Restore both the structural and habitat functions of 3.9 miles of Bayou Terrebonne Ridge.
2) Create and nourish 221 acres of marsh habitat.
3) Install 7,100 feet of artificial oyster reef, to provide habitat and help protect the newly created marsh and ridge.

Proposed Project Features
Create a 20,461 foot ridge along the east bank of Bayou Terrebonne. The ridge will have a +5.2 ft settled top height, a 15-foot top width, and 1:7 side slopes. The ridge feature would result in 7 acres of marsh and 24 acres of ridge habitat (Figure 2). Ridge material will come from Bayou Terrebonne. The borrow sites will be noncontiguous, as not to facilitate the northward flow of saltwater. The project will also include 214 acres of marsh creation and nourishment adjacent to the ridge component and 7,100 feet of artificial oyster reef. Borrow for the marsh creation component will come from Terrebonne Bay.

Preliminary Project Benefits
The project would restore 24 acres of resting and foraging habitat necessary to support transient migratory land birds in the spring and fall. Additional benefits of restoring the ridge include helping reduce storm surge and restoring natural hydrologic patterns in the area. The ridge and marsh components of this project would also help restore and protect the eastern bank of Bayou Terrebonne.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly?
246 acres

2) How many acres of wetlands will be protected/created over the project life?
This project will create a net benefit of 185 acres of marsh and ridge habitats over the 20-year project life.
3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?
The anticipated land loss rate reduction throughout the area of direct benefits will be 50% for the MC feature and 50% for the ridge feature over the project's life.

4) Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?
The project will help restore nearly 4 miles of the natural ridge habitat along the east bank of Bayou Terrebonne. The project also helps maintain the Bayou Terrebonne bank line, keeping the bayou from coalescing with Lake Barre.

5) What is the net impact of the project on critical and non-critical infrastructure?
The project would help maintain Bayou Terrebonne which sees heavy commercial and recreational boat traffic. The ridge may offer some protection to infrastructure (LA-56) and communities to the west and north of the project.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?
The project will have a synergistic effect with other efforts to protect and restore Terrebonne Bay rim, including Terrebonne Bay Shore Protection Demonstration (TE-45), and Terrebonne Bay Marsh Creation and Nourishment Project (TE-83).

Preliminary Construction Cost +25% Contingency: $21.2M

Preparer of Fact Sheet
Stuart Brown, CPRA (225) 342-4596, stuart.brown@la.gov
Figure 1 - Bayou Terrebonne Ridge Restoration and Marsh Creation

Ridge: 20,461 feet long. 15 ft. top width. 7:1 side slopes. Target top elevation +5.2 ft.
Marsh Creation/Nourishment Cells: 214 acres. (An additional 7 acres of marsh will be created on the bayou side of the ridge feature). 7,100 feet of artificial oyster reef.
PPL-23
Bayou Terrebonne Ridge and Marsh Restoration
2/12/2014
Ridge: 21,000 feet long. 15 ft. top width. 7:1 side slopes. Target top elevation +5.2 ft.

Marsh: 200 acres.

7,100 ft of artificial oyster reef.

Borrow material will be dredged from a noncontiguous borrow area in Bayou Terrebonne.

Preliminary Construction + 25% = $21.2M
R3-TE-05

West Fouchon Marsh Creation & Marsh Nourishment
PPL 24 PROJECT NOMINEE FACT SHEET

Project Name
West Fourchon Marsh Creation and Marsh Nourishment

Master Plan Strategy:
- 03a.MC.07 - Belle Pass-Golden Meadow Marsh Creation.

Project Location
The project is located west of Port Fourchon, north of West Belle Pass, in Lafourche Parish, Louisiana.

Problem
Historic wetland loss in the project area stems from interior marsh loss stems from subsidence, sediment deprivation, and construction of pipeline canals. Over the last twenty years the interior marsh in the project area has deteriorated dramatically (Figure 1).

Goals
The goals of this project are to create and nourish 614 acres of marsh, by pumping sediment from an offshore borrow site.

Proposed Project Features
This project would create 314 acres of marsh and nourish 300 acres of emergent marsh, using material dredged from the Gulf of Mexico.

Preliminary Project Benefits
This project would create and nourish 614 acres of marsh habitat, utilizing offshore borrow. The project will fill in pipeline canals, reducing the artificial exchange of saltwater. In addition to habitat benefits, this project will restore and increase the longevity of marshes that help protect Highway 1, Port Fourchon and Bayou Lafourche.

Identification of Potential Issues
Pipelines: at least three pipelines bisect the project. *The landowner, LL&E, has indicated that we would be able to place material and create marsh in the pipeline canals.

Preliminary Construction Costs
Preliminary Construction Costs + 25% contingency: $27.0M

Preparer of Fact Sheet
Stuart Brown, CPRA (225) 342-4596, stuart.brown@la.gov
PPL 23
West Fourchon Marsh Creation and Nourishment

2/12/2014

Project Area
Land-Water

1988

2008

Current Alignment

614 Acres

314 Marsh Creation
300 Marsh Nourishment

Offshore Borrow Source

Construction +25%:
$26.5M
R3-TE-06

Grand bayou Freshwater Enhancement
PPL24 PROJECT NOMINEE FACT SHEET
January 29, 2014

Project Name
Grand Bayou Freshwater Enhancement

Project Location
Region 3, Terrebonne Basin, Lafourche Parish

Problem
The project area is located within the North Bully Camp Marsh (43,882 acres) and St. Louis Canal (25,563 acres) mapping units. Between the years 1932 and 1990, these two mapping units lost an estimated 12,840 and 3,450 acres of marsh, respectively. A significant amount of the land loss in these areas since 1949 may be attributed to direct removal and altered hydrology from canal dredging. Altered hydrology remains a current cause of land loss along with high rates of subsidence which are estimated to be between 2.1 and 3.5 ft/century (LCWCRTF 1999).

Because of the high number of canals that have been dredged in the area, high salinity Gulf waters move rapidly northward into the marshes within the project area. The amount of high salinity waters moving north is increasing as the marshes continue to breakup and disappear. The only freshwater input to this area originates from the Gulf Intracoastal Waterway (GIWW) along the northern project boundary. The freshwater inflow from the GIWW is restricted by the small cross-section of the channel north of the Hwy. 24 bridge and continuing for several thousand feet south of that bridge. There is also a restriction (earthen plug) in Margaret’s Bayou which prevents fresh water from moving east from Grand Bayou into the broken marshes.

Goals
The primary goal of this project is to increase the flow of fresh water from the GIWW down Grand Bayou Canal. That increase is water would lower salinities and add nutrients to the wetlands south of the GIWW along the east and west banks of Grand Bayou Canal. Specific goals: 1) Increase the flow of fresh water from the GIWW into Grand Bayou Canal from approximately 600 cfs to 1,600 cfs; 2) redirect much of the freshwater from Grand Bayou Canal into the marshes east and west of Grand Bayou Canal, and 3) Create 112 acres of fresh marsh and nourish an additional 14 acres of intermediate marsh west of Grand Bayou near Hwy 24.

Proposed Solution
This project would increase the Grand Bayou cross-section from an average of 628 cfs to 1,604 cfs with the use of a hydraulic dredge. Material dredged from the channel would be beneficially used to create approximately 126 acres of intermediate marsh. Along the west bank of the channel a rock plug would be replaced with a 5-48” flap-gated culvert water control structure, an increase of 122 cfs. Along the east bank an earthen plug would be removed to allow freshwater to flow directly into the marshes to the east down Margaret’s Bayou, an increase in 385 cfs.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly?
   This total project area is 26,533 ac.
2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 676 acres of intertidal marsh habitat will be protected/created over the
project life.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the
project life (e.g., 50% reduction in the background loss rate)?*
The anticipated land loss rate reduction throughout the area of direct benefits will be 50-
74% over the projects life.

4) *Do any project features maintain or restore structural components of the coastal
ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims,
cheniers, etc?*
No.

5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project would have moderate net positive impact to critical infrastructures which
consists of Laroise to Golden Meadow Levee, oil and gas infrastructure, and businesses
near Hwy. 24.

6) *To what extent does the project provide a synergistic effect with other approved and/or
constructed restoration projects?*
The project will have a synergistic effect with several Ducks Unlimited projects, Bayou
Point aux Chenes WMA management units, and several mitigation projects located within
the project area.

**Identification of Potential Issues**
The proposed project has the following potential issues: O&M, utility/pipeline, and DOTD
bridge replacement.

**Preliminary Construction Costs**
The estimated construction cost including 25% contingency is $15 M.

**Preparer(s) of Fact Sheet:**
Robert Dubois, FWS, (337) 291-3127; robert_dubois@fws.gov
GRAND BAYOU FRESHWATER ENHANCEMENT

Problem:

• Project area salinities are increasing due to the continued loss of marshes south of the project area

• Freshwater inflows into the project area originate from the GIWW are restricted by small channel cross-sections along the northern section of Grand Bayou Channel (GBC)

• Margaret’s Bayou is also plugged keeping fresh water from moving east from GBC into the broken marshes

• Land loss rates are estimated between -0.328 and -0.583 %/year.

• Project area encompasses 26,533 acres of which 10,018 acres (38%) was marsh and the remaining 16,515 acres (62%) was open water as of 2010
GRAND BAYOU FRESHWATER ENHANCEMENT

Proposed Solution:

• Increase the GBC cross-section from an average of 600 cfs to 1,604 cfs with the use of a hydraulic dredge (1,000 cfs increase)

• Use that material to create/nourish approximately 126 acres of intermediate marsh.

• Replace a rock plug with 5-48” flap-gated culverts (increase 122 cfs)

• Increase flow down Bayou Blue and two other canals totaling 25 cfs

• Remove earthen plug at Margaret’s Bayou allowing freshwater to flow directly into the marshes east (increase 385 cfs)

• Place fixed crest weir with barge bay below Margaret’s Bayou (increase 449 cfs)
GRAND BAYOU FRESHWATER ENHANCEMENT

• Increase the flow of fresh water from the GIWW down Grand Bayou Canal from an average 600 cfs to 1,600 cfs

• Redirect a portion of the freshwater from Grand Bayou Canal into the marshes east and west of Grand Bayou Canal

• Create/nourish 126 acres of fresh marsh

• The project would result in approximately 676 net acres over the 20-year project life.

• The construction cost plus 25% contingency is $15 M.

• Project is currently not part of the State’s Convey Atchafalaya River Water East
R3-TE-07

Lake Felicity Oyster Reef Shoreline Protection & Marsh Creation
PPL24 PROJECT NOMINEE FACT SHEET
January 29, 2014

Project Name
Lake Felicity Oyster Reef Shoreline Protection and Marsh Creation

Project Location
Region 3, Terrebonne Basin, Terrebonne Parish, Terrebonne Bay

Problem
Marshes along the northern shoreline of Terrebonne Bay have a high interior marsh loss rate, estimated to be 1.2%/yr (USGS-1985-2009-TE-83). The shoreline erosion rate in some areas along the northern Terrebonne Bay shoreline has been shown to be 8 to 34 ft/yr (TE-45 Demo Project). Other estimates (FWS -Ronnie Paille) are as high as 30 ft/yr. The reasons for these high erosion rates include subsidence, a lack of sediment input, a limited supply of freshwater, and a dramatically increase in the tidal prism north of Terrebonne Bay. The increase in the tidal prism directly contributes to the increasing flooding problems of many communities along Bayou Terrebonne including the town of Montegut. As emergent marshes in this area convert to open water, tidal surges will continue to increase thus increasing the flooding north of the bay.

Goals
The goals of the project are to reduce shoreline erosion along 30,030 linear feet of Terrebonne Bay shoreline and to prevent the bay shoreline from breaking into interior marsh ponds. Protect 82 acres of existing highly productive marsh with the construction of 30,030 LF of oyster reef shoreline protection. Create 131 acres of marsh and nourish 11 acres of marsh with hydraulic dredge.

Proposed Solution
This project would create approximately 131 acres and nourish 11 acres of marsh by filling small shallow open-water areas with material dredged from the bottom of Terrebonne Bay with a small hydraulic dredge. Limited containment dikes would be used and there would be a net gain of 181 acres of marsh after 20 years.

This project would also protect approximately 30,030 linear feet of Terrebonne Bay shoreline through the construction of habitats suitable for the establishment of oyster reefs. This would be done by installing rock-filled gabion mats along the shoreline and foreshore structures across any open water areas to enhance oyster reef production. This would promote the creation of oyster reefs which would reduce the shoreline erosion rates with little to no maintenance. Shoreline loss rates associated with this proposed project is estimated to be 12 ft./yr. This project should reduce area loss rates by over 95%. This equates to protecting approximately 181 acres of existing or created emergent marsh throughout the 20 project life.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly?
This total project area is 307 ac.
2) How many acres of wetlands will be protected/created over the project life?
Approximately 181 acres of intertidal marsh habitat will be protected/created over the project life.

3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?
The anticipated land loss rate reduction throughout the area of direct benefits will a 95% reduction in shoreline erosion rates associated with the shoreline protection and 50%-74% for marsh creation and marsh nourishment over the 20 year projects life.

4) Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?
The project will help maintain the Terrebonne Bay shoreline.

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

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?
The project will have a synergistic effect with Terrebonne Bay Oyster Demo (TE-45) and Terrebonne Bay Marsh Creation Project (TE-83).

Identification of Potential Issues
This area has many oyster leases, but through the light loading of material and shallow draft equipment the impacts to the leases should be minimal. Potential issues include the following: Oysters and pipelines.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is between $15 - $20 M.

Preparer(s) of Fact Sheet:
Robert Dubois, USFWS, (337) 291-3127, robert_dubois@fws.gov
**Triton™ Gabion Mats**
(filled w/ limestone rocks)
(an on-shore structure)

5'W x 20'L x 1' Deep

Geotextile grid material formed into a basket and interconnected to form a mat.
Each with galvanized steel anchors

Weight @ 10,000-15,000 lbs each

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
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<tr>
<td>5' OD x 20' Tall x 9' Wall OysterKrete Top Unit - FOB New Iberia</td>
<td>EA</td>
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<tr>
<td>9' OD x 20' Tall x 6' Wall OysterKrete Bottom Unit - FOB New Iberia</td>
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<tr>
<td>Armor Unit Installation</td>
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<tr>
<td>Geogrid/Geotextile Corrugates</td>
<td>SQ YD</td>
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</tbody>
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Note: Optional Extension to 48' Tall

Spacing: 0.529 OysterBreak rings per LF

**WAYFARER**
Environmental Contractors, LLC
LAKE FELICITY OYSTER REEF SHORELINE PROTECTION AND MARSH CREATION

- Protect 30,000 feet of bay shoreline and 85 acres of highly productive natural marshes

- Little to no maintenance for shoreline protection and created/nourished marshes

- Create 131 acres and nourish 11 acres of marsh with small hydraulic dredge

- Net acres = 181 acres

- Project Cost plus 25% contingency = < $20 M

- First demonstration project to expand to a full project
R3-TE-08

Lake Barre Marsh Creation
PPL24 PROJECT NOMINEE FACT SHEET
January 29, 2014

Project Name:
Lake Barre Marsh Creation

Project Location:
Region 3, Terrebonne Basin, Terrebonne Parish. Southeast Montegut between Wonder Lake and Madison Bay.

Problem:
The marshes near the Madison Bay area have experienced tremendous wetland loss due to a variety of factors, including subsidence, saltwater intrusion, a lack of sediment supply, and oil and gas activities. The loss of the marshes have exposed significant infrastructure to open water conditions and has made the area less suitable for various wildlife and fisheries. The 1983 to 1990 loss rate for the Montegut area is 3.5%/yr (Coast 2050). With high wetland loss in the vicinity, the Montegut Levee to the north of the project area has become extremely susceptible to high wave energies caused by the increased fetch distance in the now open water areas of Madison Bay and Wonder Lake. The Montegut Levee breached during Hurricanes Lili and Rita in 2002 and 2005, respectively.

Goals:
This project would strategically tie together three ridges (Bayou Terrebonne Ridge, Bayou St. Jean Charles Ridge, and Point au Chein Ridge) and two other CWPPRA projects (Maddison Bay Marsh Creation and Terracing project and Island Road Marsh Creation project).
Specific goals: 1) Create 440 acres and nourish 19 acres of emergent brackish marsh.

Proposed Solution:
This project would propose to create/nourish approximately 459 acres of emergent marsh by hydraulically dredging material from Maddison Bay and placing that material in in shallow open water areas between Wonder Lake and Maddison Bay. Dredge material would be placed in open water areas to a target height of +1.4 NAVD 88. All constructed containment dikes would be sufficiently gapped or degraded no later than 3 years post construction to allow for fisheries access.

Preliminary Project Benefits:
1) What is the total acreage benefited both directly and indirectly?
This total project area is 459 ac.

2) How many acres of wetlands will be protected/created over the project life?
Approximately 353 ac of brackish marsh will be protected/created over the 20 year project life.

3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?
The anticipated land loss rate reduction throughout the area of direct benefits would be 50-74% over the 20 year project life.
4) Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc? The project would help restore portions of the Wonder Lake shoreline and portions of the Bayou Barre bankline.

5) What is the net impact of the project on critical and non-critical infrastructure? This project would help protect the Point Barre road, several camps, and some oil and gas infrastructure.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? This project would work synergistically with two other projects (Maddison Bay Marsh Creation and Terracing project and Island Road Marsh Creation project) which would tie together three ridges (Bayou Terrebonne Ridge, Bayou St. Jean Charles Ridge, and Pointe aux Chene Ridge). This would also work synergistically with the TE-83 project that will be located just south of the project area.

**Identification of Potential Issues:**
There would most likely be some pipeline issues and numerous oyster leases within the project area.

**Preliminary Construction Costs:**
The estimated construction cost including 25% contingency is estimated between $25-$30 M.

**Preparer(s) of Fact Sheet:**
Robert Dubois, USFWS, (337) 291-3127, Robert_Dubois@fws.gov
BAYOU BARRE MARSH CREATION

Problem:

• Project area wetlands loss is due to subsidence, saltwater intrusion, a lack of sediment supply, and oil and gas activities.

• The 1984 to 2011 loss rate 2.29%/yr. (Madison Bay project).

• Losses have exposed infrastructure to open water conditions and has made habitats in the area less suitable for various wildlife and fisheries.

• Montegut Levee north of the project area more susceptible to high wave energies. Breached during Hurricanes Lili and Rita in 2002 and 2005, respectively.
• This project would strategically tie together three ridges (Bayou Terrebonne Ridge, Bayou St. Jean Charles Ridge, and Point au Chene Ridge)

• Tie together two other CWPPRA projects (Maddison Bay Marsh Creation and Terracing project and Island Road Marsh Creation project)

• Create 440 acres and nourish 19 acres of emergent brackish marsh

• Nearby borrow source Maddison Bay
BAYOU BARRE MARSH CREATION

Net Acres:
Approximately 353 ac of brackish marsh will be protected/created over the 20 year project life.

Identification of Potential Issues:
There would most likely be some pipeline issues and numerous oyster leases within the project area.

Preliminary Construction Costs:
The estimated construction cost plus 25% contingency $25-30 M.
R3-TE-09

East Catfish Lake Marsh Creation & Terracing
PPL24 PROJECT NOMINEE FACT SHEET
February 12, 2014

Project Name
East Catfish Lake Marsh Creation and Terracing

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

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

Goals
Goals are to restore a portion of the eastern Catfish Lake shoreline via marsh creation and restore marsh along the alignment of the Golden Meadow hurricane protection levee.

Proposed Project Features
1. Sediments will be hydraulically dredged in Catfish Lake and pumped via pipeline to create/nourish approximately 610 acres of marsh. The maximum pump distance for a Catfish Lake borrow site is approximately 31,000 feet (5.9 miles).
2. Containment dikes will be constructed as necessary and gapped upon project completion.
3. Terraces (25,800 linear ft-18 ac) will be constructed in deteriorated marsh areas to reduce fetch, promote SAV production, and provide marsh edge habitat.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly? Approximately 1,070 acres would be benefited directly and indirectly. Direct benefits include 610 acres of marsh creation and 18 acres of terraces. Indirect benefits would occur to surrounding marshes and within the 460-acre terrace field.

2) How many acres of wetlands will be protected/created over the project life? The total net acres protected/created over the project life is approximately 502 acres.

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

4) Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc. The project would restore marsh along the eastern Catfish Lake shoreline.
5) *What is the net impact of the project on critical and non-critical infrastructure?* The project would afford protection to the Golden Meadow Hurricane Protection Levee.

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

**Identification of Potential Issues**
Oil and gas infrastructure and oyster leases in Catfish Lake.

**Preliminary Construction Costs**
The estimated construction cost including 25% contingency is $25.6M.

**Preparer of Fact Sheet**
Kevin Roy, USFWS, (337) 291-3120, kevin_roy@fws.gov
East Catfish Lake Marsh Creation

- Catfish Lake borrow site
- Maximum pump distance of 31,000 feet
- 610 acres of marsh creation/nourishment
- 25,000 linear feet of terraces – 18 acres
- Net acres = 502
- Construction plus contingency = $25.6M
R3-TE-10

Small Bayou LaPointe Marsh & Ridge Restoration
PPL24 PROJECT NOMINEE FACT SHEET
February 12, 2014

Project Name
Small Bayou LaPointe Marsh and Ridge Restoration

Project Location
Region 3, Terrebonne Basin, Terrebonne Parish, east of Raccourci Bay, adjacent to Small Bayou LaPointe

Problem
Examination of historical aerial photography clearly indicates significant marsh loss in the vicinity of the project area, particularly in the area between Small Bayou LaPointe and Bayou DeCade. Subsidence, canal dredging, saltwater intrusion, and altered hydrology are all important factors contributing to marsh loss in the area. USGS calculated a 1985-2009 loss rate of -0.45% per year for the Lake Mechant LCA polygon. In addition, forested ridge no longer exists along Small Bayou LaPointe. The ridge has subsided over several centuries and is now marsh.

Goals
The goals are to: 1) Restore 393 acres of intermediate/brackish marsh habitat along the northern side of Small Bayou LaPointe and 2) Restore ridge habitat along Small Bayou LaPointe.

Proposed Project Features
1. Sediments will be hydraulically dredged in Lake Mechant and pumped via pipeline to create/nourish approximately 393 acres of marsh.
2. Containment dikes will be constructed as necessary and gapped upon project completion.
3. The maximum pump distance for the Lake Mechant borrow site is approximately 29,000 feet.
4. Approximately 18,500 ft (23 acres) of ridge will be constructed along the southern bank of Small Bayou LaPointe. Ridge material will be obtained north of the ridge alignment and the borrow area filled during construction of the marsh platform. Proposed ridge dimensions include a settled elevation of +5 ft, a 25 ft top width, 1V:6H side slopes, and a base width of 55 ft.
Chinese tallow tree control and hardwood plantings are included.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly? Approximately 393 acres of marsh would be benefited directly from marsh creation. Ridge restoration would result in 23 acres of ridge habitat.

2) How many acres of wetlands will be protected/created over the project life? The total net acres protected/created over the project life is approximately 279 acres.
3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life* (<25%, 25-49%, 50-74% and >75%). The anticipated loss rate reduction throughout the area of direct benefit is estimated to be 50%.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.*
Yes. The project would restore a forested ridge along Small Bayou LaPointe.

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

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The project would provide a synergistic effect with the North Lake Mechaint Landbridge Restoration Project (TE-44) located to the west. Both projects would work together to maintain ridge/marsh landbridge along the intermediate zone between Lake Mechaint and Bayou DeCade.

**Identification of Potential Issues**
Oyster leases in Lake Mechaint.

**Preliminary Construction Costs**
The estimated construction cost including 25% contingency is $18.9M.

**Preparer of Fact Sheet**
Kevin Roy, USFWS, (337) 291-3120, kevin_roy@fws.gov
Small Bayou LaPointe Marsh and Ridge Restoration

- Lake Mechant borrow site
- Maximum pump distance of 29,000 feet
- 395 acres of marsh creation/nourishment
- 18,500 ft of ridge restoration (23 ac)
- Net acres = 279
- Construction plus contingency = $18.9M
R3-TE-11

Carencro Bayou Marsh Creation and Freshwater Introduction
PPL24 PROJECT NOMINEE FACT SHEET  
February 12, 2014

Project Name: Carencro Bayou Marsh Creation and Freshwater Introduction Project

Coast 2050 Strategies:
- Regional Strategy #4 (enhance Atch River influence to Terrebonne marshes)
- Regional Strategy #8 (dedicated sediment delivery to create marshes)
- Regional Strategy #10 (restore lake/marsh tidal exchange)

Project Location: Region 3, western Terrebonne Basin, northeast shore of Lost Lake

Problem: Erosion of the northeast Lost Lake shoreline is creating new water exchange points and threatening to accelerate loss of interior broken marshes. Additional lakeshore breaching will reduce the effectiveness of existing and future freshwater inputs. Freshwater inputs to the north Lost Lake marshes could be increased if structures were constructed to discharge freshwater into Carencro Bayou.

Proposed Solution: Strategically create 211 ac of marsh and nourish 187 ac of existing marsh along the northeast Lost Lake shoreline. Increase freshwater discharge into Carencro Bayou by installing 5 discharge structures in the north bayou bank. A structure would also be installed in the west Voss Canal bank to facilitate entry of that fresh water into marshes north of Lost Lake. Additionally, a canal plug would be gapped to increase flows of Bayou Panchent freshwater into marshes within the CWPPRA Brady Canal project area. Existing oil-field canal spoil banks would be cut in one or two locations to improve the distribution of that additional freshwater within existing open water areas of the lower Brady Canal project area.

The proposed freshwater introduction structures will in part utilize the Ducks Unlimited (DU) Carencro Bayou West Leg Project (that was recently on Joint Public Notice) by drawing additional freshwater from canals which the DU project is connecting to Bayou Panchent. This will help to increase suspended sediment concentrations of the introduced freshwater and over time, may result in formation of mineral soil marshes as has occurred in nearby areas where this brown water is flowing. The proposed features would enhance the function of the Brady Canal Hydrologic Restoration CWPPRA Project (TE-28), the Lost Lake Marsh Creation and Hydrologic Restoration CWPPRA Project (TE-72), and the Ducks Unlimited Carencro Bayou West Leg Project. The proposed marsh creation/nourishment along the northeast rim of Lost Lake will protect broken interior organic soil marshes from increased wave erosion and loss expected to occur as the very narrow lake rim erodes away.

Project Benefits: Freshwater discharge from marshes north of Carencro Bayou might benefit 1,000 acres or more. Freshwater introduction benefits within the Brady Canal Project area might benefit an additional 1,000 acres. Benefits to north Lost Lake marshes associated with the increased freshwater inputs and lakeshore protection would accrue to approximately 4,000 acres of marsh.

Project Costs: The estimated construction cost including 25% contingency, is approximately $18.5 million.

Preparers of Fact Sheet: Ronny Paille, Fish and Wildlife Service, (337) 291-3117, Ronald_Paille@FWS.GOV
Carencro Bayou Marsh Creation and Freshwater Introduction Project

CWPPRA Nominee
For PPL 24
January 2014

LEGEND
- Water discharge structure
- Riprapped bank cut
- Control structure or bank out
- Marsh creation or nourishment

211 ac marsh creation
187 ac marsh nourishment
Lower Atchafalaya River Stages Are Rising

\[ y = 26.272x^{.442} \]
\[ R^2 = 0.8803 \]

LEGEND
- Channel accretion
- Lake accretion

Old Carencro Bayou
### Depth and Density Data

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*Old Carencro Bay near Bayou Penchant*

*1998 shore position*

*Mar 2010 to Jan 2011*
Accreting Marsh DU
Carencro Bayou Freshwater Introduction & Marsh Creation Project

- Designed to be synergistic with...
- DU Carencro FW Intro #2
- Carencro Bayou Freshwater Introduction & Marsh Creation Project
- Freshwater Entry Structure
- Lost Lake MC & HR (TE 72)
- Brady Canal HR (TE 28)
- Penchant Project (TE 34)
- North Lake Mechant Landbridge (TE 44)

- Increase freshwater discharge to tidal marshes near Voss Canal
- Introduce more TSS into receiving area marshes
- Effectiveness likely to improve in the future due to increasing Atch River stages

Accreting Marsh DU East Leg Project

Proposed DU Structure (two 48-inch-dia culverts)
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**Structure Design**

(each structure would be ~ 5 bays)
Proposed plug cut enlargement

November 2005
END

October 2012
Proposed plug cut enlargement

November 2005
R3-TE-12

Bayou De Cade Bankline & Marsh Restoration
Louisiana’s 2012 Coastal Master Plan:
Consistent Ridge Restoration Subunit - 03a.RC.01

Project Location:
Region 3, Terrebonne Basin, Terrebonne Parish, Lake Mechant Mapping Unit

Problem:
The Terrebonne Basin is an abandoned delta complex, characterized by a thick section of unconsolidated sediments that are undergoing dewatering and compaction, contributing to high subsidence, and a network of old distributary ridges extending southward from Houma. Historically, subsidence and numerous oil and gas canals and pipelines in the area have contributed significantly to wetland losses. Since 1932, the Terrebonne Basin has lost approximately 20% of its wetlands. Current loss rates range from approximately 4,500 to 6,500 acres/year. This loss amounts to up to 130,000 acres during the next 20 years. One-third of the Terrebonne Basin’s remaining wetlands would be lost to open water by the year 2040. The wetland loss rate for the Lake Mechant subunit is -0.45%/year based on USGS data from 1995 to 2009.

Goals:
The project goals are to:
- Create and/or nourish up to 400 acres of emergent intermediate marsh along the northern bank of Bayou Decade and a portion of the western shoreline of Lake Decade
- Construct 10,560 linear feet of ridge along the northern bank of Bayou Decade

Proposed Solutions:
The proposed project’s primary feature for either option is to create and/or nourish approximately 400 acres of intermediate marsh adjacent to Lake Decade and restore 10,560 ft of Bayou Decade northern bankline. In order to achieve this, sediment will be hydraulically pumped from a borrow source in Lake Decade. The borrow area in Lake Decade would be located and designed in a manner to avoid and minimize environmental impacts (e.g., to submerged aquatic vegetation and water quality) to the maximum extent practicable. Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. No later than three years post construction, the containment dikes will be degraded and/or gapped. Additionally, the half of the newly constructed marsh will be planted following construction to stabilize the platform and reduce time for full vegetation. Material for the ridge feature will also be hydraulically pumped from a borrow source in Lake Decade and lifted to a crown elevation of +6.0 feet, 25 feet wide, and will be planted.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly?
The total project area is approximately 418 acres (350 acres of marsh creation and 50 acres of marsh nourishment + 18 acres of ridge).

2) How many acres of wetlands will be protected/created over the project life?
Assuming a 50% reduction in the background loss rate (Lake Mechant Subunit, -0.45%/year), for the marsh creation and nourishment; and, no loss for the ridge feature would result in 355 net acres after 20 years.

3) **What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?**
   A 50% loss rate reduction is assumed for the marsh creation and marsh nourishment. (Lake Mechant Mapping Unit, from -0.45%/year to -0.27%/year)

4) **Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.?**
   The project will help restore Bayou Decade bankline and a portion of the Lake Decade shoreline.

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

6) **To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?**
   (TE-39) South Lake Decade Freshwater Introduction Project and (TE-44) North Lake Mechant Landbridge Restoration

**Identification of Potential Issues:**
The proposed project has the following potential issues: utilities/pipelines, etc. The fill areas are located on Apache Corporation property and the conceptual features have been coordinated with them.

**Preliminary Construction Costs**
The estimated construction cost including 25% contingency is $22,607,918. The fully-funded cost range is $25M - $30M.

**Preparer(s) of Fact Sheet:**
Kimberly Clements, NOAA Fisheries, 225-389-0508 ext 204, kimberly.clements@noaa.gov
Patrick Williams, NOAA Fisheries, 225-389-0508, ext 208, patrick.williams@noaa.gov
Project Features Option 1 – Lake De Cade:
- 400 acres marsh creation
- 10,560 feet of ridge construction
PPL24 BAYOU DECADE BANKLINE AND MARSH RESTORATION

PPL24 Region 2 RPT, February 13, 2014
Kimberly Clements
National Marine Fisheries Service
Problems near Bayou De Cade Area:

- High Land Loss rates in Terrebonne Basin, 20% since 1932 and currently 4,000-6,500 acres lost per year
- High Subsidence in the area, 2.1-3.5 ft/century, Coast 2050 Mechant/Decade Unit
- Wetland Loss Rate for the Lake Mechant subunit is -0.45%/year
- Reduced intermediate/brackish habitat for fisheries in the area
Project Features and Benefits

- Total habitat restored range between 362-418 acres, including 335-400 acres of marsh (depending on option) and 2 miles of ridge construction
- Borrow from outside immediate project area in Lake Decade
- Consistent with State Master Plan, Ridge Creation Subunit – 03a.RC.01, “restoration of historic ridge along Bayou Decade from Lake Decade to Raccourci Bay to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation”
- Supports “T9” Concept for Terrebonne Parish, 4th Annual Coastal Restoration Workshop
- Construction + 25% Contingency is $22.6M
R3-TE-13
Bayou Jean Lacroix to Bayou Pointe au Chien Marsh Creation & Terracing
PPL24 Bayou Jean Lacroix to Bayou Pointe au Chien Marsh Creation and Terracing
February 12, 2014

Louisiana’s 2012 Coastal Master Plan:
Consistent with Marsh Creation Subunit – 03a.MC.09b

Project Location
Region 3, Terrebonne Basin, Terrebonne and Lafourche Parish

Problem
The Terrebonne Basin is an abandoned delta complex, characterized by a thick section of unconsolidated sediments that are undergoing dewatering and compaction, contributing to high subsidence, and a network of old distributary ridges extending southward from Houma. Historically, subsidence and numerous oil and gas canals and pipelines in the area have contributed significantly to wetland losses. Since 1932, the Terrebonne Basin has lost approximately 20% of its wetlands. Current loss rates range from approximately 4,500 to 6,500 acres/year. This loss amounts to up to 130,000 acres during the next 20 years. One-third of the Terrebonne Basin’s remaining wetlands would be lost to open water by the year 2040. The wetland loss rate for the Wonder Lake subunit is -0.87%/year based on USGS data from 1985 to 2009.

Goals
The project goals are to:
- create and/or nourish up to 360 acres of emergent brackish marsh;
- construct 27,300 linear ft. of terraces (17 acres) south of and adjacent to the newly restored marsh platform

Proposed Solution
The proposed project’s primary feature is to create 288 acres and nourish 72 acres of existing marsh to form a land bridge south of the Twin Pipeline Canal between Bayou Jean Lacroix and Bayou Pointe au Chien. Sediment will be hydraulically pumped from a borrow source near Lake Felicity. Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. Dikes will be degraded and/or gapped no later than three years post construction to allow greater tidal exchange and estuarine organism access. Half of the newly constructed marsh (144 acres) will be planted following construction to stabilize the platform and reduce time for full vegetation. The project will also construct 27,300 ft. (17 acres) of terraces in 390 acres of shallow open water just south of the marsh platform to help reduce wave fetch generated from the south in Terrebonne Bay. Terraces would be constructed to an elevation of +2.5 feet NAVD 88, with a 15-ft crown width, and would be planted. The proposed solution is synergistic with (TE-53) Madison Bay Marsh Creation and Terracing and (TE-117) Island Road Marsh Creation and Nourishment projects currently authorized under the CWPPRA program.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly?
This total project area is approximately 750 acres (288 acres of marsh creation and 72 acres of marsh nourishment + 390 acres of terrace field).
2) **How many acres of wetlands will be protected/created over the project life?**
Assuming a 50% reduction in the background loss rate (Wonder Lake Mapping Unit, -0.87%/year), the marsh creation, nourishment, and constructed terraces would result in 286 net acres after 20 years.

3) **What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?**
A 50% loss rate reduction is assumed for the marsh creation, marsh nourishment, and terraces. (Wonder Lake Mapping Unit, from -0.87%/year to -0.43%/year)

4) **Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.?**
The project will help restore a small portion of Bayou Jean Lacroix.

5) **What is the net impact of the project on critical and non-critical infrastructure?**
The project would provide positive impacts to non-critical (i.e., minor oil and gas facilities) infrastructure. Minor oil and gas facilities and pipelines in the area would benefit from an increase in marsh acreage. The loss of wetlands in this area increases the vulnerability of infrastructure to wave energy.

6) **To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?**
The project may have indirect synergy with the (TE-53) Madison Bay Marsh Creation and Terracing project and (TE-117) Island Road Marsh Creation and Nourishment project; and, the Ducks Unlimited marsh management unit on Point aux Chien Wildlife Management Area.

**Identification of Potential Issues**
The proposed project has potential utility/pipeline issues and oyster leases.

**Preliminary Construction Costs**
The estimated construction cost including 25% contingency is $20,556,249. The fully-funded cost range is $25M - $30M.

**Preparer(s) of Fact Sheet:**
Kimberly Clements, NOAA Fisheries, 225-389-0508 ext 204, kimberly.clements@noaa.gov
Patrick Williams, NOAA Fisheries, 225-389-0508, ext 208, patrick.williams@noaa.gov
Bayou Jean Lacroix to Bayou Pointe au Chien Marsh Creation and Terracing

Project Features:
- 360 ac marsh creation
- 390 ac terraces
- Bayou Jean Lacroix Twin Pipeline
- Twin Pipeline Restoration Map

Twin Pipeline Canal
- 170 ac
- 80 ac
- 130 ac
- 250 ac

Bayou Jean Lacroix
Concepts along Twin Pipeline Corridor “T-9” developed from Agency/Parish/Landowner Coastal Restoration Workshop
Potential Projects Along Twin Pipeline Consistent with 2012 Louisiana Coastal Master Plan

Restoration Concepts Along Twin Pipeline Between Bayou Terrebonne and Bayou Lafourche
Problems near Point au Chene Area

- High Land Loss rates in Terrebonne Basin, 20% since 1932 and currently 4,000-6,500 acres lost per year
- High Subsidence in the area, 2.1-3.5 ft/century, Coast 2050 Terrebonne Marshes
- Wetland Loss Rate for the Wonder Lake subunit is -0.87%/year
- Limited protection to surrounding communities as seen with PPL23 Island Road WVA trip
Bayou Jean Lacroix to Bayou Pointe au Chien Marsh Creation and Terracing

Project Features:
- 360 ac marsh creation
- 390 ac terraces
- Bayou Jean Lacroix
- Twin Pipeline

Project Features and Benefits

- Total Acres is 377 (360 acres of marsh and 17 acres of terraces)
- Re-establishes a portion of Bayou Jean Lacroix
- Borrow from outside immediate project area
- Allows for additional restoration activities in the area (i.e. Ducks Unlimited)
- Consistent with State Master Plan, Marsh Creation Unit – 03a.MC.09b, “create new wetland habitat, restore degraded marsh, and reduce wave erosion south of Montegut between Bayou St. Jean Charles and Bayou Pointe au Chien”
- Supports “T9” Concept for Terrebonne Parish, 4th Annual Coastal Restoration Workshop
- Synergistic to TE-117 Island Road Marsh Restoration Project
- Construction + 25% Contingency is $20.5 M
R3-TE-14

West Bayou Lafourche Marsh Creation & Terracing
PPL24 West Bayou Lafourche Marsh Creation and Terracing
February 12, 2014

Louisiana’s 2012 Coastal Master Plan:
Consistent with Marsh Creation Subunit - 03a.MC.07

Project Location:
Region 3, Terrebonne Basin, Lafourche Parish

Problem:
The Terrebonne Basin is an abandoned delta complex, characterized by a thick section of unconsolidated sediments that are undergoing dewatering and compaction, contributing to high subsidence, and a network of old distributary ridges extending southward from Houma. Historically, subsidence and numerous oil and gas canals and pipelines in the area have contributed significantly to wetland losses. Since 1932, the Terrebonne Basin has lost approximately 20% of its wetlands. Current loss rates range from approximately 4,500 to 6,500 acres/year. This loss amounts to up to 130,000 acres during the next 20 years. One-third of the Terrebonne Basin’s remaining wetlands would be lost to open water by the year 2040. The wetland loss rate for the S. Pointe Aux Chenes State WMA subunit is -0.89%/year based on USGS data from 1995 to 2009.

Goals:
The project goals are to:
- Create and/or nourish up to 400 acres of emergent brackish marsh
- Construct up to 37 acres of terraces in a 1,000 acre open water terrace field adjacent to the marsh creation/nourishment

Proposed Solutions:
The proposed project’s primary feature is to create and/or nourish approximately 400 acres of emergent brackish marsh. In order to achieve this, sediment will be hydraulically pumped from a borrow source near Little Lake. Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. No later than three years post construction, the containment dikes will be degraded and/or gapped. Additionally, the half of the newly constructed marsh (150 acres) will be planted following construction to stabilize the platform and reduce time for full vegetation. The project will also construct 70,000 ft. (37 acres) of terraces in 1,000 acres of shallow open water just west of the marsh platform to help reduce wave fetch generated to the south by Terrebonne Bay. Terraces would be constructed to an elevation of +2.0 feet NAVD 88, with a 15-ft crown width, and would be planted.

Preliminary Project Benefits
1)  What is the total acreage benefited both directly and indirectly?
   This total project area is approximately 1,400 acres (350 acres of marsh creation and 50 acres of marsh nourishment + 1,000 acre terrace field).

2) How many acres of wetlands will be protected/created over the project life?
   Assuming a 50% reduction in the background loss rate (S. Pointe Aux Chenes State WMA Subunit, -0.89%/year), the marsh creation, nourishment, and constructed terraces would result in 358 net acres after 20 years.
3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?
A 50% loss rate reduction is assumed for the marsh creation, marsh nourishment, and terraces. (S. Pointe Aux Chenes State WMA Subunit, from -0.89%/year to -0.44%/year)

4) Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.? The project will help restore the backside of the natural Bayou Lafourche bank.

5) What is the net impact of the project on critical and non-critical infrastructure? The project will provide additional protection to LA 1 south of Golden Meadow. The project would also provide positive impacts to non-critical (i.e., minor oil and gas facilities) infrastructure. Minor oil and gas facilities and pipelines in the area would benefit from an increase in marsh acreage.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? This is an area of need due to the lack of previous restoration efforts.

Identification of Potential Issues:
The proposed project has potential utility/pipeline issues along with oyster leases along the dredge pipeline path.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is $25,063,476. The fully-funded cost range is $30M - $35M.

Preparer(s) of Fact Sheet:
Kimberly Clements, NOAA Fisheries, 225-389-0508 ext 204, kimberly.clements@noaa.gov
Patrick Williams, NOAA Fisheries, 225-389-0508, ext 208, patrick.williams@noaa.gov
Concepts along Twin Pipeline Corridor “T-9” developed from Agency/Parish/Landowner Coastal Restoration Workshop
Potential Projects Along Twin Pipeline Consistent with 2012 Louisiana Coastal Master Plan

Restoration Concepts Along Twin Pipeline Between Bayou Terrebonne and Bayou Lafourche
Problems near Bayou Lafourche Area

- High Land Loss rates in Terrebonne Basin, 20% since 1932 and currently 4,000-6,500 acres lost per year
- High Subsidence in the area, 2.1-3.5 ft/century, Coast 2050 South Bully Camp Marsh
- Limited protection to the western side of LA 1
- Wetland Loss Rate for the S. Pointe Aux Chenes State WMA subunit is -0.89%/year
Project Features and Benefits

- Total Acres 437 acres (400 acres of marsh creation and 37 acres of terraces)
- Borrow from outside immediate project area in Little Lake
- Consistent with State Master Plan, Marsh Creation Subunit – 03a.MC.07, “create new wetland habitat, restored degraded marsh, and reduce wave erosion from Belle Pass to Golden Meadow”
- Supports “T9” Concept for Lafourche Parish, 4th Annual Coastal Restoration Workshop
- Promotes protection to LA 1
- Construction + 25% Contingency is $25 M
R3-TE-15

Raccoon Island West Restoration
Project Name:
Raccoon Island West Restoration Project

Project Location:
Region III, Terrebonne Basin, Terrebonne Parish, Isle Dernieres Barrier Islands Refuge

Master Plan:
Project No. 03a.BH.03

Problem:
The Isles Dernieres barrier island chain is experiencing some of the highest rates of erosion of any coastal region in the world. A simple analysis of aerial imagery from 1998 to 2008 revealed an average loss of 110 feet per year on the western portion of Raccoon Island (i.e., the spit), which is the western most island of the chain. Raccoon Island serves as breeding bird habitat for a variety of avian species including brown pelicans, terns, gulls, and wading birds. During peak years of nest success, well over 30,000 nests have been documented at Raccoon Island. As a result of erosional processes (particularly hurricane activity over the past 10 years), the western end of Raccoon Island has degraded to roughly 20 acres and is at risk of being a subaqueous sand shoal in the near future. This portion of the island no longer serves as breeding bird habitat due to lack of elevation and rapid shoreline loss. The subaqueous sand shoal that exists offshore on the southeast corner of the island that provides littoral material to the segmented breakwaters and areas west has also been substantially depleted over time.

Goals:
The goal of this project is to restore the western portion of Raccoon Island to pre-2005 & 2008 hurricane conditions and provide a sustaining mechanism to preserve newly created areas.

Proposed Solutions:
Project features include the restoration of approx. 100 acres of comparable barrier island habitat between the existing island and spit (breached area). This area of the island would be recreated/restored by depositing offshore dredge material within a contained area. Vegetative plantings, both herbaceous and woody, will follow the construction of the newly created platform to provide improved breeding bird habitat and to stabilize the island. Replenishment of the eastern subaqueous sand shoal would make long-shore/cross-shore littoral material available to further sustain a sediment source to western areas of the island.

Preliminary Project Benefits:
The western side of Raccoon Island will be restored to productive avian habitat and expand the storm buffering capabilities of the Isle Dernieres barrier island chain. Approximately 100 acres of subtidal, tidal, and emergent marsh habitat will be created and protected over the life of the project. The sustainability of accreted gulf shoreline areas will be greatly enhanced. The proposed project will have a significant synergistic effect on the existing Raccoon Island CWPPRA restoration projects (TE-48 and TE-29).

Identification of Potential Issues:
There are no potential issues anticipated with this proposed project.

Preliminary Construction Costs:
The anticipated construction cost, with 25% contingency, is $25 million.

Preparer(s) of Fact Sheet:
Cassidy Lejeune, (337) 373-0032, clejeune@wlf.la.gov
Loland Broussard, (337) 291-3069, loland.broussard@la.usda.gov
Ron Boustany, (337) 291-3067, ron.boustany@la.usda.gov
Project Features
A - Sand Shoal Replenishment
B - Breach Closure

Note: Sediment budget will be done in Phase 1
On cores taken from Coupe Colin to Raccoon Pt.
Raccoon Island West Restoration Project

PPL 24 – Houma, LA

Cassidy Lejeune
LDWF – CNR Division
New Iberia, LA

Loland Broussard and Ron Boustany
NRCS – USDA
Lafayette, LA

Historical Footprint of IDBIR

IDBIR refuge since 1992
Roughly 2,000 acres
Includes Raccoon, Whiskey, Trinity, East, and Wine Islands
Raccoon Island TE-48 and TE-29 Projects

2012 Master Plan
Benefits of Barrier Island Restoration

• Protects inland marshes – wave break
• Reduction of storm surges
• Regulate tidal exchange
• Fisheries and wildlife habitat
• Etc…
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Includes:
- Vegetative plantings
- Creation of 100 acres
- Use of offshore sediments

Anticipated cost = 25 million dollars
Trinity Island Restoration Project

• 10.8 million dollars
• Timeline:
  – Approved by CWPPRA Task Force in 1992
  – Initiated in January 1998
  – Completed in June 1999
• Creation of 300+ acres
Questions or Comments?

Cassidy Lejeune
LA Dept. of Wildlife and Fisheries
Coastal and Nongame Resources Division
Coastal Operations Section
New Iberia, LA
337-373-0032
clejeune@wlf.la.gov
R3-TE-16

Bayou Dularge Ridge Restoration & Marsh Creation
PPL24 PROJECT NOMINEE FACT SHEET
2/12/2014 - RPT

Project Name
Bayou Dularge Ridge Restoration and Marsh Creation Project

Master Plan Strategy
Central Coast, Ridge Restoration; Bayou Dularge Ridge Restoration-03.ARC.02.

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

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

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

Proposed Solutions
The project would creation of approximately 27,000 linear feet of ridge feature north of Bayou Dularge along with approximately 550 acres of marsh creation and nourishment.

Project Benefits:
The acres of wetlands created/protected over the project life is estimated at 514 acres with approximately 40% being marsh creation and ridge restoration (206 acres) and 60% resulting from marsh nourishment (308 acres).

Project Construction Costs: $20-25 million

Preparer(s) of Fact Sheet:
Ron Boustany, NRCS, (337) 291-3067, ron.boustany@la.usda.gov
John Jurgensen, NRCS, (337) 473-7694, john.jurgensen@la.usda.gov
DIKE LENGTH = 23,830’
MARSH CREATION ACRES = 220
RIDGE LENGTH = 11,110’

DIKE LENGTH = 31,571’
MARSH CREATION ACRES = 336
RIDGE LENGTH = 15,236’

LAKE MECHAN

BAYOU DULARGE

PPL-24 BAYOU DULARGE
RIDGE RESTORATION AND
MARSH CREATION

Legend:
- CONTAINMENT_DIKE
- RIDGE_RESTORATION
- EXISTING_MARSH

1 inch = 3,598 feet
Bayou Dularge Ridge Restoration and Marsh Creation
R3-TE-17

Marsh Creation at Houma Navigation Canal
PPL24 PROJECT NOMINEE FACT SHEET
2/12/2014 - RPT

Project Name
Marsh Creation at Houma Navigation Canal

Master Plan Strategy
Central Coast, Marsh Creation; Terrebonne Bay Rim Marsh Creation Study-03a.MC.03.

Project Location
Region 3, Terrebonne Basin, Terrebonne Parish, Mouth of HNC at Terrebonne Bay

Problem
The Terrebonne Bay rim has severely eroded throughout its entire length from both subsidence and erosion. Where the Houma Navigation Canal (HNC) meets Terrebonne Bay, the beneficial use of maintenance dredge material to create marsh has been very limited even though the quantities of material have been fairly substantial and the Corps maintenance dredge schedule is fairly routine. Most of the maintenance dredge material over the past ten years has deposited into designated open water disposal locations with exception to only a few small beneficial use locations (Bay Chaland, 2003 and 2005, Wine Island 2007). Coordination and additional funding would potentially allow for much more efficient beneficial use of resources.

Goals
The project will create and nourish approximately 454 acres of marsh along the Terrebonne Bay Rim at the Houma Navigation Canal.

Proposed Solutions:
The project will coordinate the with US Army Corps maintenance dredge program of the Houma Navigation Canal to beneficially use navigation maintenance dredge material to create marsh along the Terrebonne Bay Rim. Sediments will be hydraulically dredged from the HNC and Terrebonne Bay and pumped via pipeline to create/nourish approximately 454 acres of marsh habitat.

Project Benefits:
The project should net at least 375 acres of marsh over the 20 year life of the project.

Project Construction Costs: $18-20 million

Preparer(s) of Fact Sheet:
Ron Boustany, NRCS, (337) 291-3067, ron.boustany@la.usda.gov
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PPL 24
Regional Planning Team
February 12, 2014

Region 3
Terrebonne Basin

Marsh Creation at Houma
Navigation Canal
R3-TE-18

Leeville West Marsh Creation & Nourishment
PPL24 PROJECT NOMINEE FACT SHEET
2/12/2014 - RPT

Project Name
Leeville West Marsh Creation and Nourishment

Master Plan Strategy
Central Coast, Marsh Creation; Belle Passe-Golden Meadow Marsh Creation-03a.MC.07.

Project Location
Region 3, Terrebonne Basin, Lafourche Parish, West of Leeville

Problem
The coastal marshes west of Leeville are notoriously recognized as a prominent area of wetland loss particularly by those who have frequently travel Highway 1 and witnessed the area’s rapid conversion to open water. Long abandoned by the influence of the Mississippi River, these marshes have slowly succumbed to the forces of subsidence and erosion exacerbated by construction of numerous oil and gas canals and a major navigation channel (SW Louisiana Canal). Very few options for restoration are currently available in this area other than protecting the existing marsh and strategically creating new marsh through beneficial use of dredge material. The location of the project area is of particular importance in that it provides the only remaining band of contiguous marsh that separates the bay system from Bayou Lafourche ridge.

Goals
The project will create and nourish approximately 526 acres of marsh located adjacent to the Southwest Louisiana Canal at the intersection of Little Lake to strengthen and stabilize the existing marsh.

Proposed Solutions:
The project will create and nourish marsh along the lake rims of the Little Lake and Hackberry Bay west of Bayou Lafourche and along the Southwestern Louisiana Navigation Canal to reestablish a healthy and stable marsh community. Sediments will be hydraulically dredged from Little Lake and pumped via pipeline to create/nourish approximately 526 acres of marsh habitat.

Project Benefits:
The project should net at least 450 acres of marsh over the 20 year life of the project.

Project Construction Costs: $20-25 million

Preparer(s) of Fact Sheet:
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Ron Boustany, NRCS, (337) 291-3067, ron.boustany@la.usda.gov
John Jurgensen, NRCS, (337) 473-7694, john.jurgensen@la.usda.gov
Leeville West Marsh Creation and Nourishment