

MEMORANDUM FOR RECORD

SUBJECT: Regional Planning Team (RPT) Region 1, Lacombe, LA, 13 Feb 14, 8:10 am

1. Agenda Item #1, Welcome and Introductions. Mr. Stuart Brown, Louisiana Coastal Restoration and Protection Authority (CPRA) and RPT Region 1 Leader, opened the meeting and welcomed the attendees. He stated that the purpose of the meeting was to accept project nominations and hear public comments for developing the 24th Project Priority List (PPL). He welcomed Mr. David Brunet representing St. Tammany Parish, Ms. Albertine Kimble representing Plaquemines Parish, Mr. Jason Smith representing Jefferson Parish, Mr. William McCartney representing St Bernard Parish, and Mr. Maurice Baird representing Orleans Parish. He asked all attendees to introduce themselves.

2. Agenda Item #2, PPL 24 Selection Process Brief Overview and Ground Rules for PPL 24 Nomination Meeting. Mr. Brown delivered a PowerPoint presentation, which is available online at the CWPPRA website. He asked parish representatives to provide their voting member information to Mr. Josh Carson, U.S. Army Corps of Engineers (USACE).

The Louisiana coast is divided into eight hydrologic basins. Region 1 consists of the Pontchartrain Basin. The parishes eligible to vote for Region 1 are: Plaquemines, Jefferson, Orleans, St. Bernard, Ascension, Livingston, St. James, St. Charles, St. John the Baptist, St. Tammany, and Tangipahoa. Proposals should be consistent with the 2012 State Master Plan. A project can be nominated from only one basin, except for coast-wide projects. If a project crosses multiple basins, excluding coast-wide projects, it should be nominated in one basin only, based on the majority area of project influence. Coast-wide projects apply across basin boundaries.

Presenters were asked to complete a PPL 24 project information sheet for each project nominee with the name of the project and the contact information of the presenter. Presentations should be limited to five PowerPoint slides and five minutes. Public comments on project proposals were accepted orally during the meeting and in writing until February 19, 2014. Mr. Brown asked that comments be pertinent to the project being presented.

Coast-wide projects propose a technique that is applicable across the State. One example is the Coast-wide Vegetative Plantings Project. They can be nominated at any RPT meeting. All coastal parishes and agencies will vote on the selection of one coast-wide nominee. The Technical Committee may or may not select a coast-wide project. Demonstration projects demonstrate a technology that can be transferred to other areas within coastal Louisiana. The Engineering and Environmental Work Groups will validate that a demonstration project meets CWPPRA criteria. The RPTs can select up to six demonstration projects. Previous demonstration projects must be re-nominated to be considered for PPL 24.

3. Agenda Item #3, Announcement of Coast-Wide Voting Process. A coast-wide electronic vote will be held on February 25, 2014. Parishes were asked to identify their designated representative at the RPT meeting and submit their contact information to Mr. Josh Carson. No additional projects can be nominated and no significant changes can be

made after the RPT meetings. Public comments can be made at the RPT meetings or submitted in writing prior to February 19, 2014.

Information will be sent to the parish voters (identified by the parish representative at the RPT meeting) with voting instructions one week prior to the electronic vote. Voters will only receive voting sheets for the basins in which they are eligible to vote. Votes must be submitted via email or fax to Ms. Allison Murry, USACE, by February 25, 2014 at 10:30 am.

After the coast-wide vote, an agency will be assigned to each project to prepare a fact sheet and a map. The CWPPRA Environmental and Engineering Work Groups will evaluate projects and assign preliminary costs and benefits. Ten candidate projects and up to three demonstration projects will be chosen at the Technical Committee meeting on April 15, 2014. Written comments can be submitted to the USACE until April 1, 2014 and public comments can be made orally at the Technical Committee meeting. After selection, these ten projects will be evaluated in greater detail. Up to four candidate projects and one demonstration project will be selected at the December 2014 Technical Committee meeting to move into Phase I Engineering & Design (E&D), and the final decision will be made at the January 2015 Task Force meeting.

4. Agenda Item #4, PPL 24 Project Nominations.

a. Mr. Brown opened the floor for nominations in the Lake Pontchartrain Basin.

#1 – Oyster Bay Oyster Reef Restoration and Marsh Creation. This project was presented by Mr. Aaron Hoff, Environmental Protection Agency (EPA), on behalf of Mr. Adrian Chavarria, EPA. It is located in Oyster Bay in St. Bernard parish. This project would build oyster reefs in the upper Biloxi Marsh area, which is exposed to high wave energy and has no natural deltaic sediment source. The project would create 10 miles of oyster reef and 242 acres of emergent marsh habitat between Drum Bay and Chino Bay. The borrow area would be in Chandeleur Sound. The preliminary cost estimate is \$30-35 million.

#2 – Bayou Bienvenue Marsh Creation. This project was presented by Ms. Barbara Aldridge, EPA. It is located mostly in Orleans Parish along the border with St. Bernard Parish. It is north of Lower 9th Ward near Bayou Bienvenue. This area has experienced altered hydrology due to impoundment, subsidence, and saltwater intrusion. The goal of the project is to create and nourish 350 acres of intermediate marsh and restore the historic bankline of Bayou Bienvenue, with 340 net acres after 20 years. The project would use dedicated dredging from the Mississippi River or other areas such as Lake Borgne depending on the final alignment. This project could be expanded in future increments. Due to its location, this project would lend itself to educational and outreach opportunities. Potential issues in this area include landrights, utilities, and pipelines. The estimated construction cost is \$30 million.

#3 – Northwest Lake Pontchartrain Shoreline Protection. This project was presented by Mr. Alton James, Natural Resources Conservation Service (NRCS). The project would consist of five to seven miles of foreshore rock dike in critical areas along the shoreline of Lake Pontchartrain between Stinking Bayou and the Tchefuncta River, which is a high wave energy area that is losing up to 18 feet of shoreline per year. The dike would be designed to allow fisheries access. Any dredging required for access would be used to create marsh behind the

dike. The preliminary cost estimate is \$15-20 million. Mr. Bren Haase, CPRA, stated that the Master Plan identified a project in this area for about \$13 million and this proposed project is significantly larger than that project. However, if CWPPRA can do this project for \$13 million, then the State would be in support of the whole length. Mr. Haase suggested that this project could look at areas that are particularly critical. Dr. Gary Schaffer, Southeastern Louisiana University, stated that there is already some shoreline protection in the Manchac landbridge area, but there is a gap in protection in front of the narrowest part of the landbridge. He suggested that this project look at protecting that critical area south of the proposed section, which is approximately two miles long. Landowners in the area are trying to increase the freshwater flows so that Cypress Tupelo trees will grow again. Mr. James and Mr. Haase agreed with that suggestion.

#4 – New Orleans Landbridge Shoreline Stabilization & Marsh Creation. This project was presented by Ms. Angela Trahan, U.S. Fish and Wildlife Service (USFWS). The project area is along the New Orleans landbridge, in the Hospital Wall Area. It is between Lake Pontchartrain, Lake St. Catherine's, and Rigolets Pass. This area lost significant amounts of marsh due to Hurricane Katrina. This has resulted in a lot of flooding in the Lake St. Catherine community. As large open water areas have formed, tidal exchange has increased, causing further erosion. The Eastern New Orleans landbridge is a critical area to maintain the ecological integrity of the Lake Pontchartrain basin. The goals of the project are to create and restore brackish marsh, enhance the shoreline with an earthen containment dike, enhance fish and wildlife habitat, and protect the community of Lake St. Catherine. The project would create 192 acres of marsh, with 107 acres on the west side of Hwy 90 and 85 acres on the east side of Hwy 90. The project also includes 12,716 linear feet of earthen berm. The containment levees will be left intact as a shoreline protection feature with the exception of gaps for historic bayous. Ms. Trahan proposed two borrow areas: one in Lake Pontchartrain and one in Lake St. Catherine. Depending on costs, the project could be expanded to other areas south of the current marsh creation cells. The preliminary fully funded cost estimate is \$10-15 million. Ms. Carol Giardina, Lake Catherine Civic Association, spoke in support of this project. She stated that residents have seen a dramatic increase in the frequency and volume of flooding since Hurricane Katrina. This project would protect Hwy 90, which is a hurricane evacuation route, and was also used when I-10 was closed recently due to the winter freeze. Ms. Marisa Escudero, Land Trust for Louisiana, stated that the Land Trust owns three parcels in the Hwy 90 area and one has experienced erosion.

#5 – Fritchie Marsh Creation and Terracing. This project was developed and presented by Mr. Patrick Williams, National Marine Fisheries Service (NMFS), in partnership with the USACE. Much of the project is located on the Big Branch National Wildlife Refuge. The project area adjoins potential mitigation areas for the USACE Hurricane Storm Damage Risk Reduction System (HSDRRS). The proposed project includes 325 acres of marsh creation and 25 acres of marsh nourishment, along with 49,000 linear feet of terraces. In addition, the project includes four culverts to improve tidal exchange to the Las Conchas marshes south of Prevost Island. Mr. Williams stated that he is open to considering other areas if the project progresses. Known issues in this area are landowner desires and potential complications with ongoing mitigation plans. Mr. John Jurgensen, NRCS, asked if the HSDRRS mitigation is funded. Mr. Williams replied that mitigation planning should be complete very soon, and funds are available for mitigation. This project and the mitigation would likely abut. The preliminary fully funded cost is \$30-35 million. The Refuge supports this project. This project will restore habitat, wildlife, and public use values to the Refuge. Also, it would

protect some fairly large communities on the east side of Slidell. Mr. David Brunet of St. Tammany Parish also expressed support for this project. There are approximately 13,000 homes within a five mile radius of this site, most of which are low income housing. The Parish would like to see this project move forward.

#6 – Golden Triangle Marsh Creation. This project was presented by Mr. Patrick Williams, NMFS. This project represents a strategic attempt to site marsh creation in front of flood protection, in particular the surge barrier along the Mississippi River Gulf Outlet (MRGO) and Inner Harbor Navigation Canal (IHNC). This project would take advantage of a shallow water area to make the project more cost competitive. The proposal consists of six marsh creation cells totaling 440 acres of marsh creation, with material mined from Lake Borgne. The borrow site will be far enough away from the shoreline to avoid induced impacts. The USACE has requested that 18 acres be left unused for their future disposal needs. The preliminary construction cost is \$22.1 million.

#7 – Shell Beach South Marsh Creation. This project was presented by Mr. Scott Wandell, USACE, who collaborated with Ms. Rachel Sweeney, NMFS. Shell Beach is in St. Bernard Parish on north shore of the MRGO and the south shore of Lake Borgne. The proposed project consists of marsh creation within the boundaries of the existing rock structures of the CWPPRA Lake Borgne Shoreline Protection (PO-30) Project and other existing shoreline protection features. The project consists of two marsh creation cells totaling 617 acres of emergent brackish marsh (370 created and 247 nourished). Dredged material would be sourced from NEPA-cleared borrow sites in Lake Borgne. Containment and possibly earthen overflow weirs would be built around the marsh creation sites. The preliminary construction cost estimate is \$22 million. The project would stabilize the landbridge between Lake Borgne and the MRGO and would protect the communities of Shell Beach, Yscloskey, and Hopedale. It is consistent with the Master Plan. Mr. William McCartney of St. Bernard Parish thanked Mr. Wandell for nominating this project. This is St. Bernard Parish's #1 project this year. Commercial fisherman and landowners in the area are very excited about this project and they support it wholeheartedly. The project will protect parish utilities, commercial fishing fleets, and several hundred full time residents.

#8 – Hog Island Marsh Restoration. This project was presented by Mr. Scott Wandell, USACE. This project is north of the Rigolets near the mouth of the Pearl River. The project would consist of one large marsh creation cell and would convert 295 acres of shallow water bottoms to brackish marsh and enhance 800 acres of existing distressed marsh platform on Hog Island. The project would include 37,000 linear feet of containment dikes that would be gapped to reestablish tidal exchange and aquatic access. Material would be dredged from a site in Lake Borgne that is 2.8 miles from the project site. Net benefits after 20 years are 311 acres. The estimated construction cost is \$32 million.

#9 – Bayou La Loutre Ridge. This project was presented by Mr. Josh Carson, USACE. The project extends along the south bank of Bayou La Loutre southeast of Lake Borgne and north of the MRGO. The area is currently marsh habitat but was historically an upland ridge habitat. The proposed ridge would be constructed on top of the existing marsh to an initial elevation of +8 and planted with native woody species. Sandy material would be mined from the Mississippi River and barged to the project site. The preliminary fully funded cost estimate is \$24 million. The project would create 54 acres of ridge, which would provide

critical habitat for neotropical migratory bird species and provide storm protection to marshes in the area as well as the communities of Hopedale, Shell Beach, and Yscloskey. Some natural cuts would remain open. The USACE is partnering with NRCS; NRCS would be the federal sponsor, but the USACE would complete the design. It is consistent with the Master Plan, and there would be opportunities to expand the project if this increment is constructed. Mr. John Jurgensen reiterated that this area is a historical ridge, even though it is now marsh. He explained that he would like for CWPPRA to reexamine the process of estimating benefits for ridges. Mr. Carson added that this is a component of the MRGO Plan, which is not currently funded. Mr. Patrick Williams stated that the proposal will have potential regulatory challenges. Mr. William McCartney, St. Bernard Parish, thanked Mr. Carson for nominating this project. The Parish is aware of the challenges associated with this project, and those challenges are the reason that this project is their #2 priority, but it is a great project.

#10 – St. Catherine Island Shoreline Protection and Marsh Creation. This project was presented by Mr. Robert Dubois, USFWS. This project is located along the Lake Pontchartrain shoreline east of Chef Mentaure Pass on the Bayou Sauvage National Wildlife Refuge. The area experiences shoreline erosion rates ranging from 12 ft/year to 60-70 ft/year. A critical area of marsh between Lake Pontchartrain and Chef Mentaure Pass is in the process of breaching. The project would place 15,648 linear feet of rock along the Lake Pontchartrain shoreline. The project also includes several small areas of marsh creation close to the shoreline and the Pass, totaling 74 acres of marsh creation and 22 acres of nourishment using a Lake Pontchartrain borrow site. Mr. Dubois stated that this project needs to be completed before the area suffers from another major storm. A potential issue is that the borrow site is located within Gulf Sturgeon critical habitat. The preliminary construction cost estimate is \$20 million. If the project is selected, the Refuge would like to investigate whether this project could include small maintenance lifts of nearby CWPPRA projects to reduce total costs to the Program by combining them in one contract. Mr. Ron Boustany, NRCS, suggested that the three small marsh creation cells on the east of the Pass could be combined into one larger cell to reduce containment costs and nourish the existing marsh.

Nominations were closed for the Lake Pontchartrain Basin.

b. Mr. Brown opened the floor for nominations for coast-wide projects.

#1 – Coast-wide Canal Backfilling Pilot Project. This project was presented by Mr. Aaron Hoff, EPA. Canal dredging is a significant contributor to Louisiana wetland loss, and there has been little effort to reverse the damage caused by hydrologic alterations. This project would partially restore hydrology to the selected areas. It would perform about 52 miles of backfilling using in-situ material from the spoil banks, for a total cost of about \$25 million. Those 52 miles of backfilling would convert 923 acres of spoil banks and 51 acres of open water to emergent wetlands and 462 acres of open water to shallow water habitat. The project areas would have to be chosen strategically and would have to consider landowner desires. Mr. Patrick Williams asked whether any landowners or oil and gas companies had been contacted. Mr. Hoff answered that he had not contacted landowners at this stage, and that some areas would have landowner issues.

#2 – Coast-wide Sand Fencing. This project was presented by Mr. Stuart Brown, CPRA, on behalf of Mr. Darin Lee, CPRA. This project consists of systematic and strategic deployment of

sand fencing to manage sediments and dunes along the Gulf shoreline. Sand fencing is a proven technique to capture aeolian transported sands, increase elevations, develop habitat diversity, and supply sediment to beaches during storm events. This programmatic effort would supplement existing project O&M and provide long-term sediment management along the coast. The Program would prioritize shorelines annually, deploying two miles of sand fencing per year over the 20-year project life. The project would also include \$50,000 per year for vegetative plantings. The estimated total cost is roughly \$5 million. Mr. Ron Boustany suggested adding other materials such as hay bales. Mr. John Jurgensen suggested that Mr. Lee review lessons learned from the Coast-wide Vegetative Plantings Project.

Nominations were closed for coast-wide projects.

c. Mr. Brown opened the floor for nominations for demonstration projects.

#3 – Stabilized Shorelines for Shoreline Protection. This project was presented by Mr. Karl Peckhaus, Remedial Construction Services. This stabilization technology has been demonstrated with stabilized levees but not shorelines. Stabilized levees have withstood surges from Hurricanes Rita, Ike, and Isaac. It is a long-term solution that provides a non-rock alternative for areas where excessively soft soil conditions prevent the use of riprap. It consists of environmentally safe soil amendments which are used to stabilize dredged soil to protect shorelines with a high organic content. Green reagents can be used to stabilize existing shorelines, to create non-dispersive, irreversible characteristics, and reinforce perimeters of barrier islands to contain spoils. The product can create a foundation for oyster beds and could be used in areas with high energy wave action to create containment berms. The stabilization process forms calcium silicate hydrate minerals or derivatives thereof. These minerals are strong, irreversible, and long-lasting. The product has little to no maintenance requirements. It allows ingress and egress for aquatic species. It can trap sediment, reduce wave energy, and reduce interior marsh losses.

#4 – Shoreline Protection/Sea Rise and Recovery Strategy. This project was presented by Mr. Gary Cook, Trident Environmental Services. This demonstration technique, used to replace rock jetties, is a geotextile fabric container that holds dredged material and is used to create a Geo-Tech-Jetti. The containers have lifting loops and steel rings and can be driven into the soil with PVC pipe. They can be covered with compost and grass. They can be installed with equipment with very shallow drafts, eliminating the need for access channels. The system can be placed solidly directly on the shoreline or it can be staggered to allow ingress and egress for aquatic species. Studies have shown that plant roots grow three times longer in the humus in the geotextile bag. This system costs approximately 30% less than rock jetties. This system should last 32-35 years in the water. Trident is investigating an eco-friendly sealer to make the system last even longer.

#5 – Barrier Island & Levee System. This project was presented by Mr. Kurt Boudreaux and Mr. Billy Hebert with Tidal Solutions. Tidal Solutions has designed a system that can take the shape of any coastline using panels built out of autoclaved aerated concrete (AAC) mats, which are lined with geotextile and filled with sand. Three feet of sand can be pumped on top of the matting allowing the planting of native vegetation for bird habitat. This system is more rigid than the geo-tube technique that was used for restoration at Grand Isle. This is an armored system, so the sand will not wash away with the tide, although it may require some maintenance after storm events. This system could be used on the beaches to contain sand or along shorelines with

material behind it. Once the vegetation takes root, the system can be left in place or removed. AAC is one-fifth the weight of regular concrete. This material is used in the construction industry for housing and commercial buildings, and Tidal Solutions has found another use for it in the containment of sand. Texas A&M performed a three-year study on this system and it was proven to work with 18- to 25-foot wave action.

Nominations were closed for demonstration projects.

5. Agenda Item #6, Adjourn. The meeting was adjourned at 10:20 am.

MEMORANDUM FOR RECORD

SUBJECT: Regional Planning Team (RPT) Region 2, Lacombe, LA, 13 Feb 14, 11:30 am

1. Agenda Item #1, Welcome and Introductions. Mr. Brad Inman, U.S. Army Corps of Engineers (USACE) and RPT Region 2 Leader, opened the meeting, welcomed the attendees, and thanked the U.S. Fish and Wildlife Service (USFWS) for the use of their facility.

2. Agenda Item #2, Project Priority List (PPL) 24 Selection Process Brief Overview and Ground Rules for PPL 24 Nomination Meeting. Mr. Inman delivered a PowerPoint presentation, which is available online at the CWPPRA website. He stated that the purpose of the meeting was to accept project nominations and hear public comments for developing the 24th PPL. He asked parish representatives to see Mr. Josh Carson, USACE, to complete a voting registration form. Parishes will not be able to vote if they do not submit this information.

The Louisiana coast is separated into eight hydrologic basins. Region 2 consists of the Barataria Basin and Breton Sound. Parishes eligible to vote for projects in Region 2 include: Plaquemines, Jefferson, Orleans, Ascension, Assumption, St. James, St. Charles, Lafourche, St. John the Baptist, and St. Bernard. Proposals should be consistent with the 2012 State Master Plan. A project can be nominated from only one basin, except for coast-wide projects. If a project crosses multiple basins, excluding coast-wide projects, it should be nominated in one basin only, based on the majority area of project influence. Coast-wide projects apply across basin boundaries.

Presenters should prepare a project nominee form for each proposed project. Project proposals should be limited to five PowerPoint slides and five minutes. Comments should be germane to the project being presented.

Coast-wide projects propose a technique applicable across the coast. Only one coast-wide project may be selected in the coast-wide electronic vote and the Technical Committee may or may not select a coast-wide project for PPL 24. Demonstration projects demonstrate a technology that can be transferred across coastal Louisiana. The Engineering and Environmental Work Groups will validate that demonstration projects meet CWPPRA criteria. The RPTs can select up to six demonstration projects. The Work Groups can recommend that no demonstration projects move forward this year. Previous demonstration projects must be re-nominated to be considered for PPL 24.

The RPTs will select up to four projects per basin in the Terrebonne and Barataria Basins; three projects per basin in the Pontchartrain Basin and Breton Sound; two projects per basin in the Teche-Vermilion, Mermentau, and Calcasieu-Sabine Basins; and one project in the Atchafalaya Basin.

3. Agenda Item #3, Announcement of Coast-Wide Voting Process. A coast-wide electronic vote will be held on February 25, 2014. Parishes must identify their voting representative for the coast-wide electronic voting at the RPT meeting. Parishes only vote in the basins they occupy. No additional projects can be nominated and no significant changes can be made after the RPT meeting. Final fact sheets should be provided to Ms. Allison Murry, USACE, by Wednesday,

February 19, 2014. Voters should email or fax their votes to Ms. Murry by 10:30 am on February 25.

Mr. Inman described the remaining steps in the PPL 24 process. After the coast-wide electronic vote, an agency will be assigned to each project to develop a fact sheet and a project map. The Engineering and Environmental Work Groups will prepare preliminary costs and benefits. Ten candidate projects and up to three demonstration projects will be selected by the Technical Committee at the April 15, 2014 meeting in New Orleans. Written public comments can be submitted to the USACE through April 1, 2014 at the addresses provided on the agenda. Public comments will also be accepted orally at the Technical Committee meeting. The Technical Committee will vote to select up to four candidate projects and up to one demonstration project to move into Phase I Engineering and Design (E&D) in December 2014 and the Task Force will make the final decision in January 2015.

Prior to opening the floor for project nominations, Mr. Inman asked all attendees to introduce themselves.

4. Agenda Item #4, PPL 24 Project Nominations.

a. Mr. Inman opened the floor for nominations in the Breton Sound Basin.

#1 – Long Distance Sediment Transport East – Breton Sound Marsh Creation. Ms. Albertine Kimble, Plaquemines Parish Government, presented this project. The East Bank of Plaquemines Parish is experiencing the same problems as the West Bank and the solution is a landbridge using material from the Mississippi River. Freshwater diversions are planned that will feed the marshes in this area. However, this project is not consistent with the Master Plan.

Nominations were closed for the Breton Sound Basin.

b. Mr. Inman opened the floor for nominations in the Barataria Basin.

#1 – Bayou Dupont Sediment Delivery – Marsh Creation 4. This project was presented by Mr. Brad Crawford, Environmental Protection Agency (EPA). The marshes in this project area have been disconnected from the Mississippi River deltaic system, causing them to deteriorate. Several Bayou Dupont Marsh Creation projects have been completed or are underway. Cycle 1 is completed, Cycle 2 will be under construction soon, and Cycle 3 is in E&D. E&D for Cycle 3 should be completed in 2014 and it may be able to be included in the Long Distance Sediment Pipeline Project. This proposed project will create 300 acres of emergent intermediate marsh using sediment from the Mississippi River. It will include tidal creeks and appropriate vegetation. The preliminary construction cost estimate is \$22.5 million. Ms. Marnie Winter with Jefferson Parish and Ms. Albertine Kimble with Plaquemines Parish spoke in support of this project.

#2 – Caminada Headlands Back Barrier Marsh Creation 2. This project was presented by Mr. Aaron Hoff, EPA. The first phase of this project proceeded into Phase I E&D last year. The State will construct a second phase of Caminada beach restoration soon and this proposed project would build the back barrier marsh for that beach. This would provide a platform to capture overwashed sediment. The project would create and nourish 394 to 728 acres of back barrier marsh habitat depending on how many cells can be built. It would use an offshore

borrow site. Several alternatives are under consideration and could be finalized during Phase I. The preliminary construction cost estimate is \$16-30 million depending on the exact alignment. Mr. Hoff stated that his preference, based on CWPPRA funding constraints, is to construct the westernmost 2.75 miles, Cells A and B (521 acres), for \$20 million. If the eastern cells are included, the project could extend into Jefferson Parish. Potential issues include pipelines, camps, and a pump station. Most of the marsh creation would be located on property owned by the Wisner group; the State has a good relationship with this group.

#3 – Grand Bayou Marsh Creation and Terracing. This project was presented by Mr. Kevin Roy, USFWS. It is in the Lake Hermitage Basin between the Mississippi River and Bayou Grande Cheniere near the West Pointe a la Hache Siphons. This project would build upon other work in the area: the Lake Hermitage Marsh Creation (BA-42) Project is under construction and may be able to be expanded due to favorable bids; and the Bayou Grande Cheniere Marsh Creation Project was recently approved for Phase I in PPL 23 and USFWS would like to pursue additional features such as terracing if costs allow. This proposed project consists of 375 to 480 acres of marsh creation and 70,000 to 77,000 feet of terracing depending on which alignment is selected. The marsh creation cells could be on either side of Grand Bayou, to be determined during Phase I. The area east of Grand Bayou is shallower and could perhaps allow for more marsh creation for the same cost. The project has been deemed consistent with the Master Plan because it will use material from the Mississippi River. The preliminary construction cost estimate is \$28-29 million. The costs for the pump distance are based on the borrow site used for the Lake Hermitage Project. Ms. Albertine Kimble stated that this is Plaquemines Parish's #1 project for PPL 24. Plaquemines Parish prefers the Option A alignment, which has the marsh creation on the west side of Grand Bayou and terracing on the eastern side.

#4 – East Bayou Lafourche Marsh Creation & Terracing. This project was presented by Mr. Kevin Roy, USFWS. This project has been deemed consistent with the Master Plan, even though it is on the eastern side of Bayou Lafourche. This project would provide protection to the Golden Meadow levee and community and to old LA-1. The project includes 450 acres of marsh creation and 49,000 linear feet of terracing. The areas are somewhat deep so the cells may need to be modified to maintain the budget. The proposed borrow area is Little Lake, with a pump distance of 48,000 feet. The project benefits are 409 net acres after 20 years. The preliminary construction cost estimate is \$24.2 million.

#5 – St. Joseph Bay Shoreline Protection & Marsh Creation. This project was presented by Mr. Robert Dubois, USFWS. This project is located between Little Lake and Barataria Bay. The project area has very high shoreline erosion rates. The proposed project consists of shoreline protection along the St. Joseph Bay shoreline with marsh creation and nourishment behind it. The shoreline protection would consist of almost 16,000 linear feet of foreshore rock dike. The project includes 208 acres of marsh creation and 149 acres of nourishment. The project would not use a lot of containment, but would allow the existing marsh to act as a containment dike. The State has deemed this project to be consistent with the Master Plan, including the shoreline protection component. The project benefits are 305 net acres after 20 years. Potential issues include pipelines and oyster seed grounds. The estimated construction cost is \$25 million. The landowner has not yet been identified.

#6 – Bayou Long Marsh & Ridge Restoration. This project was presented by Ms. Angela Trahan, USFWS. This project is located on the eastern side of Bayou Long south of Empire, LA. Restoration of the Barataria barrier islands is ongoing and has helped reduce the increased tidal exchange in this area. Shell Island, Pelican Island, and Scofield Island have all been restored. The next step is to restore some of the ridge features to establish a skeletal framework for future marsh creation. Bayou Long was a historical ridge from the Mississippi River. This project proposes to create 400 acres of marsh, 28 acres of ridge habitat with a target elevation of +5, and 21,000 linear feet of shoreline protection to protect the marsh from Adams Bay. The project would use Mississippi River sediments. The estimated construction cost is \$50-55 million. Potential issues include oil and gas canals, pipelines, and oyster leases. Ms. Albertine Kimble said that this is Plaquemines Parish's #2 project.

Based on comments received at the RPT meeting, the scope of this project was reduced and the name was changed to the Bayou Long Marsh & Ridge Restoration – Increment 1 Project. This project consists of 200 acres of marsh creation, 14 acres (9,400 linear feet) of forested coastal ridge habitat, and 11,000 feet of gabion mat shoreline protection. The estimated construction cost is \$35-40 million.

#7 – Bay Dos Gris Marsh Creation. This project was presented by Mr. Quin Kinler, Natural Resources Conservation Service (NRCS). This project consists of two cells of marsh creation and nourishment, totaling 213 acres of creation and 441 acres of nourishment. There may be a need for a small amount of shoreline protection in some problematic areas. Although the location is slightly outside of the Master Plan polygon, the State has agreed that it is consistent with the Master Plan. The estimated construction cost is \$18.3 million. The intended borrow site is in Little Lake. There are some pipelines and some oil and gas activity in the area, but no oyster lease issues. Ms. Marnie Winter with Jefferson Parish expressed the Parish's support for this project.

#8 – Barataria Bay Rim Marsh Creation. This project was presented by Mr. Quin Kinler, NRCS. Loss of the Barataria Rim landmass could cause a significant expansion of Barataria Bay and make the communities of Lafitte and Barataria more vulnerable to storm surge events. This project is located at the intersection of Bayou St. Denis and Barataria Bay. The project includes 232 acres of marsh creation and 322 acres of marsh nourishment with a borrow site in Barataria Bay. There are some pipelines in this area. The estimated construction cost is \$14.2 million. Ms. Marnie Winter with Jefferson Parish expressed the Parish's support for this project.

#9 – Barataria Bay Waterway East Marsh Creation. This project was presented by Mr. Quin Kinler, NRCS. The marshes east of the Barataria Bay Waterway and north of the Bayou Barataria ridge have completely converted to open water. There are several existing projects in this area and a corridor has been established as part of the Long Distance Sediment Pipeline Project. This project would take advantage of the Long Distance Pipeline corridor to establish a continuous band of marsh along the waterway. The project would create 241 acres of marsh, tie together several other projects, and further the concept of the Long Distance Sediment Pipeline Project. The estimated construction cost is \$29.2 million, assuming that CWPPRA would have to provide the pipe for the project. That cost could decrease if the project is timed correctly to use the same pipe being used for the other

projects. Ms. Marnie Winter stated that Jefferson Parish supports this project and this is the Jefferson Parish Coastal Stakeholder Group's priority project.

#10 – Bayou Lafourche near Leeville Marsh Creation and Nourishment. This project was presented by Ms. Janet Rhodus, Launch Leeville. This project would focus on the east side of Bayou Lafourche to create marsh that is critical to protecting old LA-1, residents and businesses of Leeville, and Port Fourchon. This area has been significantly damaged by oilfield work and most recently with the construction of the elevated highway. The east side of Leeville no longer has any barrier between the community and the Gulf of Mexico. Most of the marsh creation of this project would be south of Southwestern Louisiana Canal. Mr. Patrick Williams, National Marine Fisheries Service (NMFS), stated that this project was nominated by NMFS in PPL 23. This project would create or nourish up to 440 acres of emergent saline marsh. The estimated construction cost is \$28 million. The borrow source would be Little Lake, which is in Region 3. This project is consistent with the Master Plan even though it is on the eastern side of Bayou Lafourche.

Based on comments provided at the RPT meeting, the name of this project was changed to the East Leeville Marsh Creation & Nourishment Project. This project would create and nourish approximately 400 acres of emergent saline marsh east of Leeville with an estimated construction cost of \$28 million.

#11 – Grand Pierre Island Restoration. This project was presented by Mr. Patrick Williams, NMFS. Grand Pierre Island is between Chenier Ronquille, which is going to construction soon, and East Grand Terre, which is currently under construction. This is the only island in the Barataria Barrier Shoreline Complex yet to be restored. Borrow sites have been identified and environmentally cleared for other projects and there will be sufficient material for the restoration of Grand Pierre. This project should progress through E&D quickly. The project would create 127 acres of beach and dune and create or nourish 229 acres of back barrier marsh. The estimated construction cost is \$18.5 million. Plaquemines Parish supports this project, and it is in Jefferson Parish's Master Plan.

#12 – Wilkinson Canal Marsh Creation & Terracing. This project was presented by Ms. Kimberly Clements, NMFS. This project would create and nourish 465 acres of emergent brackish marsh in three cells near Bayou Dupont and construct 24,150 linear feet (13 acres) of terraces in a 345-acre open water terrace field. The project would help reestablish the banks of Bayou Dupont and provide protection to the Plaquemines Parish flood protection levee. The water depths and constructability of the terraces would have to be reviewed during Phase I. The borrow site would be a location in the Mississippi River near Poverty Point that is not identified for any other restoration projects at this time. The construction cost is \$28 million. Ms. Albertine Kimble stated that Plaquemines Parish supports this project.

Nominations were closed for the Barataria Basin.

c. Mr. Inman opened the floor for nominations for coast-wide projects.

#3 – Coast-wide Oyster Reef Shoreline Protection. This project was presented by Mr. Robert Dubois, USFWS. The oyster reef shoreline protection technique is currently being used in several areas along the coast, and much of the coast can benefit from oyster reefs along the

shoreline. Several successful technologies are available to create oyster reefs, including Triton Gabion Mats, Oyster Break Rings, or A-Jacks. Triton Gabion Mats consist of a geotextile grid material formed into a basket and interconnected to form a mat. Oyster Break Rings and A-Jacks are concrete structures. CWPPRA could do several small projects each year depending on funding availability. The estimated construction cost is less than \$24 million.

#4 – Coast-wide Breach Management, Prevention, and Response. This project was presented by Mr. Patrick Williams, NMFS. This project would allow CWPPRA to respond quickly and cost-effectively when there is a storm or an area of emergency need. This project needs more investigation to develop the project state-wide.

Nominations were closed for coast-wide projects.

d. Mr. Inman opened the floor for nominations for demonstration projects.

#6 – Innovative Bedload Sediment Collector. This project was presented by Mr. Brian Halm, StreamSide Technology. StreamSide's bedload sediment collector technology removes up to 99% of fine sediments from rivers and streams. It can be used in lieu of or in conjunction with traditional dredging to offset project costs. It consists of passive collectors which allow the energy of the stream to move bedload sediment up the collector's ramp into a hopper. As the sediment fills the hopper, it is pumped to a dewatering or disposal site. The removal rate is at the natural transport rate of the sediment in the river. Fish or other organisms in the water are not pulled into the device. Based on the size of one system that is currently in use, operating costs are approximately \$53,000/year. The USACE Engineer Research and Development Center (ERDC) has studied this system and has stated that it has the capability to remove 874,000 cubic yards of sediment per year. Sediment can be stockpiled for re-handling on future projects. This system could be put on the bottom of a river and work as a control structure for maintaining water depths for navigation. The estimated engineering, construction, and operating costs are \$1.7 million.

#7 – Ecosystems by Walter Marine. This project was presented by Mr. David Walter, Walter Marine. It consists of using wave attenuators as shoreline protection features. Product installation begins with a fiberglass piling, which is driven down far enough to support the entire weight of the wave attenuator. One-foot circular wave attenuators are then placed around the piling to the desired height. Rocks can be placed inside the attenuators to produce marine habitat for oysters and other organisms. The product produces calm water from both swell and chop. It has been installed in Chesapeake Bay, Cape Fear, Dead Man's Island in Pensacola Bay, and Yellow River Marsh Preserve near Milton, Florida. Installation of 1,000 feet of attenuators at the Yellow River Marsh Preserve only required two weeks. The area has experienced zero erosion in the six months since installation and grasses are now growing behind the structure. The cost is \$400-600/foot to install, which is comparable to other types of wave attenuators. Units can be added or subtracted as the water depth changes along the shoreline. This product requires little to no maintenance and withstands storm surge.

Nominations were closed for demonstration projects.

5. Agenda Item #6, Adjourn. The meeting was adjourned at 2:00 pm.

MEMORANDUM FOR RECORD

SUBJECT: Regional Planning Team (RPT) Region 3, Houma, LA, 12 Feb 14, 9:15 am

1. Agenda Item #1, Welcome and Introductions. Mr. Ron Boustany, Natural Resources Conservation Service (NRCS) and RPT Region 3 Leader, opened the meeting and welcomed the attendees. Region 3 includes the Teche-Vermilion, Atchafalaya, and Terrebonne Basins, from Vermilion Parish to Lafourche Parish. Mr. Boustany asked the parishes to provide contact information for their designated voters to Mr. Josh Carson, U.S. Army Corps of Engineers (USACE). Mr. Boustany welcomed Mr. Robert Freeman, Iberia Soil & Water Conservation; Mr. Nic Matherne, Terrebonne Parish; Mr. Kevin Sagrera, Vermilion Parish; Mr. Gerald Schouest, Terrebonne Parish; and Ms. Amanda Penick, Lafourche Parish. Mr. Boustany asked attendees to introduce themselves and to sign in.

2. Agenda Item #2, Project Priority List (PPL) 24 Selection Process Brief Overview and Ground Rules for PPL 24 Nomination Meeting. Mr. Boustany delivered a PowerPoint presentation, which is available online at the CWPPRA website. The purpose of the meeting was to accept project nominations and hear public comments for developing the 24th PPL. Parish representatives were asked to identify themselves at the RPT meeting so that they can be provided with voting information.

Parishes eligible to vote for projects in Region 3 are: Vermilion, Iberia, St. Mary, St. Martin, Terrebonne, Assumption, and Lafourche. Proposals should be consistent with the 2012 State Master Plan. A project can be nominated from only one basin, except for coast-wide or demonstration projects. If a project crosses multiple basins, excluding coast-wide projects, it should be nominated in one basin only, based on the majority area of project influence. Coast-wide projects apply across basin boundaries; their benefits are not tied to one basin. Coast-wide projects can be nominated from any basin and can be presented at any or all of the RPT meetings.

Presenters must complete a PPL 24 project information sheet for each project nominee, including demonstration projects, with the project name and presenter contact information. Presentations should be limited to five minutes and five PowerPoint slides. Public comments on project proposals will be accepted orally at the RPT meeting and in writing until February 19, 2014. Comments should be related to the PPL 24 projects being presented.

Coast-wide projects propose a technique applicable across the coast. They can be nominated at any RPT meeting. All coastal parishes and agencies will vote on the selection of one coast-wide nominee. Demonstration projects demonstrate a technology which can be transferred to other areas in coastal Louisiana. The Engineering and Environmental Work Groups will validate that demonstration projects meet the CWPPRA criteria. RPTs will select up to six demonstration projects during the coast-wide electronic vote and the Technical Committee may select up to three demonstration projects. The Work Groups may recommend that no demonstration projects move forward to the candidate stage. Previous demonstration candidates must be re-nominated for PPL 24.

3. Agenda Item #3, Explanation of Coast-wide Voting Process. A coast-wide electronic vote will be held on February 25, 2014. The RPTs will select four projects per basin in the Terrebonne and Barataria Basins; three projects per basin in the Pontchartrain and Breton Sound Basins; two projects per basin in Teche-Vermilion, Mermentau, and Calcasieu-Sabine Basins; and one project in the Atchafalaya Basin. If proposed, one coast-wide project may be chosen for inclusion as a nominee and the RPTs may select up to six demonstration projects for further evaluation. Parishes must identify who will vote during the coast-wide electronic vote at the RPT meeting. Each officially designated parish representative, federal agency, and the State will have one vote. No additional projects can be nominated and no significant changes can be made after the RPTs. Decisions to combine projects should be made at the RPT meeting. Public comments can be made at the RPT meeting or submitted in writing by February 19, 2014.

The USACE will send out voting sheets to the voting representatives identified at the RPT meetings. The completed voting sheets can be submitted via email or fax to the USACE and must be received by 10:30 am on February 25, 2014.

After the coast-wide voting, a CWPPRA agency will be assigned to each project to prepare a fact sheet with a map for the project. CWPPRA Engineering and Environmental Work Groups will review the features, assign preliminary costs and benefits, and ensure that demonstration and coast-wide projects meet PPL 24 criteria. The Technical Committee will select ten candidate projects and up to three demonstrations for further review on April 15, 2014 in New Orleans. Written public comments should be submitted to Mr. Brad Inman, USACE, by April 1, 2014, at the addresses provided in the agenda. Public comments will also be accepted orally during the Technical Committee meeting.

In December 2014, the Technical Committee will vote to select up to four candidate projects and up to one demonstration project for Phase I Engineering & Design (E&D). The Task Force will make the final decision for PPL 24 in January 2015.

Mr. Bren Haase, Louisiana Coastal Protection and Restoration Authority (CPRA), briefly explained that all CWPPRA projects should be consistent with the 2012 State Master Plan. The Master Plan was prepared to develop a single vision for coastal restoration in Louisiana. He expressed appreciation for everyone's coordination with CPRA leading up to the RPT meetings.

4. Agenda Item #4, PPL 24 Project Nominations

a. Mr. Boustany opened the floor for nominations in the Teche-Vermilion Basin.

#1 – North Vermilion Bay Shoreline Breach Repair. This project was presented by Mr. Sherrill Sagera, Vermilion Parish. This project is located on the Vermilion Bay shoreline between Four Mile Canal and Boston Canal. Two existing breaches are allowing saltwater to flow into the marsh in this area, causing significant breakup. Several additional locations may breach in the near future. This project proposes to backfill the locations where breaches have occurred or are likely to occur with material dredged from Vermilion Bay. The project will create 11 acres of marsh a preserve another 25 acres of marsh. The estimated construction cost is \$1.5 million.

#2 – Southwest Pass Shoreline Protection. This project was presented by Mr. Sherrill Sagrera, Vermilion Parish. This project is located between Marsh Island and the Rainey Wildlife Refuge. The Southwest Point peninsula is likely to breach in the near future, which will cause an increase in tidal flux. This project proposes to use 8,350 linear feet of oyster rings around the perimeter of Southwest Point and along the shoreline towards Amite Point to protect this shoreline and adjacent marshes. Nature Conservancy has put something similar in the project area already that is working well. No access channels will be required. The project would maintain 32 acres of Gulf shoreline. The estimated construction cost is \$5-10 million.

#3 – South Humble Marsh Creation & Nourishment. This project was presented by Dr. John Foret, National Marine Fisheries Service (NMFS). The project is located on the western edge of the basin between Freshwater Bayou Canal and Belle Isle Canal. This highly organic marsh has experienced significant land loss rates due to altered hydrology. This project proposes 365 acres of marsh creation and 135 acres of marsh nourishment using sediment from the Gulf of Mexico. The marsh will include 12,000 linear feet of tidal channels and two 50- to 100-acre interior ponds. The preliminary construction cost estimate is \$22 million. The landowners have some concerns about doing just marsh creation, and NMFS has considered using the existing channel north of the marsh creation cell for water flow with more solid marsh to the south. Vegetation will be stimulated with plantings. Mr. Harold Schoeffler, Sierra Club, expressed concern about using the dredged material from the Gulf due to higher salinities. Landowners Mr. Randy Moertle, McIlhenny Corporation, and Mr. Billy Broussard, Vermilion Corporation, spoke in support of the project. The Vermilion Parish Police Jury and Rainey Conservation Alliance support this project.

#4 – South & West Vermilion Bay Shoreline Protection – Critical Reaches. This project was presented by Ms. Cindy Steyer, NRCS. This project addresses shoreline protection on the State Wildlife Management Area between Redfish Point and Fearman Bayou and on Marsh Island from Bayou Michael to the eastern tip of the Marsh Island Refuge. Several hotspots in the area are losing 25-30 feet/year with some significant sized (over 2,400 total acres) lakes very close to breaching. If these lakes coalesce with Vermilion Bay or West Cote Blanche Bay the area will experience significant altered hydrology. This project proposes a total of 26,400 linear feet of a rock breakwater structure in front of critical areas with the highest loss rates and the potential for breaching. The estimated construction cost is \$25-30 million. Mr. Sherrill Sagrera asked whether Redfish Point was included in the shoreline protection. Ms. Steyer responded that the rock breakwater had to be shortened due to costs. However, the project could potentially be expanded during Phase I if costs allow. Mr. Cassidy Lejeune noted that the Louisiana Department of Wildlife and Fisheries (LDWF) was involved in the development of this proposal. The State is the landowner. Iberia Parish and Vermilion Parish support the project.

Nominations were closed for the Teche-Vermilion Basin.

b. Mr. Boustany opened the floor for nominations for the Atchafalaya Basin.

There were no nominations for the Atchafalaya Basin.

Nominations were closed for the Atchafalaya Basin.

c. Mr. Boustany opened the floor for nominations for the Terrebonne Basin.

#1 – East Island Beach and Back Barrier Marsh Restoration. This project was presented by Mr. Brad Crawford, Environmental Protection Agency (EPA). East Island is part of the Isle Dernieres barrier island chain and is east of Trinity Island. East Island is rapidly deteriorating from the east to the west. This project proposes to create 130 acres of back barrier marsh, 60 acres of dune, and 180 acres of beach for a total of 250 acres of barrier island habitat. The net benefits are 175 acres over 20 years. The cost estimate is \$23.5 million. The property is owned by the LDWF. Sediment transport in this area is from east to west so placing sediment on East Island could benefit Trinity Island as well. The borrow site would be in the Gulf of Mexico but a specific site has not been identified.

#2 – Timbalier Island Restoration. This project was presented by Mr. Brad Crawford, EPA. Timbalier Island is another hole in the barrier island complex shoreline. This project would repair a breach and fill in the back barrier marsh to fortify the island and extend its life. The project would create 76 acres of marsh, 104 acres of beach, and 16 acres of dune. The preliminary construction cost estimate is \$21.7 million. A potential issue is an active well in the area that would have to be avoided. The borrow site is yet to be determined.

#3 – Leeville Canal Backfill and Marsh Creation. This project was nominated by Mr. Aaron Hoff, EPA. This project is located south of the Southwestern Louisiana Canal and west of Bayou Lafourche, southwest of Leeville in Lafourche Parish. This project would create 355 acres and nourish 106 acres of emergent marsh with sediment from Little Lake or potentially Bayou Lafourche. The marsh creation would be supplemented with two miles of canal backfilling totaling 37 acres of emergent marsh and 18 acres of shallow water habitat. The estimated cost is \$25 million. Lafourche Parish expressed support for this parish. Potential issues include existing oil and gas terminals but it is not clear whether they are still active. The landowner has not yet been contacted.

#4 – Bayou Terrebonne Ridge Restoration & Marsh Creation. This project was presented by Mr. Stuart Brown, CPRA. This project is located northwest of Cocodrie. Historically, Terrebonne Parish had significant north-south ridges which provided unique habitat and structural support to the marshes in the area. This project would restore 3.9 miles of Terrebonne Bayou ridge. It is currently only about one foot above sea level. There is a lot of material available in the Terrebonne Bayou to construct this feature. This project would also include marsh creation to buffer the structure and the whole complex, as well as an artificial oyster reef along the back side of the marsh. Material from the marsh would come from Terrebonne Bay. Project features include 20,461 linear feet of ridge with a 15-foot top width, 7:1 slopes, and a target top elevation of +5.2; 214 acres of marsh; and 7,100 feet of artificial oyster reef. The preliminary construction cost is estimated at \$21.2 million. Mr. Nic Matherne, Terrebonne Parish Government, stated that this is one of Terrebonne Parish's highest priorities this year. Terrebonne Parish has received many complaints about siltation in lower Bayou Terrebonne so the Parish would prefer to use the Bayou as a borrow source.

#5 – West Fourchon Marsh Creation & Marsh Nourishment. This project was presented by Mr. Stuart Brown, CPRA. This project is located west of Port Fourchon and north of West Belle Pass in Lafourche Parish. This area has experienced significant interior marsh loss. The goal of this project would be to create 314 acres and nourish 300 acres of emergent marsh using material borrowed from the Gulf of Mexico. The specific borrow area has not been identified. The project would fill in pipeline canals to reduce the artificial exchange of

saltwater. The landowner LL&E supports the project, including filling in the pipeline canals. Other alignments could be investigated during Phase I. The estimated construction cost is \$26.5 million, based on offshore borrow. Lafourche Parish expressed support for this project.

#6 – Grand Bayou Freshwater Enhancement. This project was presented by Mr. Robert Dubois, U.S. Fish and Wildlife Service (USFWS). This project would increase the freshwater flow in Grand Bayou Canal. The project area is 26,500 acres including 10,000 acres of marsh and 16,500 acres of open water within the North Bully Camp Marsh and St. Louis Canal mapping units. The biggest problem in this area is altered hydrology due to pipeline canals and dredging. The marshes below the project area are fragmenting, allowing more saltwater into the project area. Margaret's Bayou is plugged, preventing freshwater flow into the area. This project proposes to increase the flow of fresh water from the Gulf Intracoastal Waterway (GIWW) into Grand Bayou Canal from 600 cubic feet/second (cfs) to 1,600 cfs by increasing the cross sectional area and to redirect much of the flow into the marshes east and west of Grand Bayou Canal by removing the earthen plug in Margaret's Bayou, placing a fixed crest weir with a barge bay below Margaret's Bayou, and replacing a rock plug with a flap gate. The material dredged from Grand Bayou Canal would be used to create 112 acres of fresh marsh and nourish an additional 14 acres of intermediate marsh near Hwy 24. The construction cost is estimated at \$15 million, including replacement of a bridge, which is likely to be unnecessary. The project benefits are 676 net acres over 20 years. This project is not currently part of the State's Convey Atchafalaya River Water East Project. Lafourche Parish supports this project.

#7 – Lake Felicity Oyster Reef Shoreline Protection & Marsh Creation. This project was presented by Mr. Robert Dubois, USFWS. This project would reduce shoreline erosion along 30,030 feet of the Terrebonne Bay shoreline using an artificial oyster reef. Several options are available for the oyster reefs including Triton gabion mats or OysterBreak rings. The project would also include small marsh creation cells totaling 131 acres of creation and 11 acres of nourishment. The project would protect 30,000 feet of bay shoreline and 82 acres of highly productive natural marshes. The oyster reef should be self-maintaining. The net acres are 181 after 20 years. The estimated cost is \$15-20 million. This would be the first demonstration project in CWPPRA to be expanded into a full project. Mr. Nic Matherne stated that this is another one of Terrebonne Parish's top priorities this year.

#8 – Lake Barre Marsh Creation. This project was presented by Mr. Robert Dubois, USFWS. This project is southeast of Montegut between Wonder Lake and Madison Bay. The Montegut Levee north of the project area is more susceptible to high wave energies with the loss of marsh in this area. The levee was breached in 2002 and 2005 during Hurricanes Lili and Rita. The project would strategically tie together three ridges (Bayou Terrebonne Ridge, Bayou St. Jean Charles Ridge, and Point au Chein Ridge) with two CWPPRA projects (Madison Bayou Marsh Creation and Terracing and Island Road Marsh Creation). The project would create 440 acres and nourish 19 acres of emergent brackish marsh in five cells. There is already infrastructure that would reduce the need for containment dikes. The borrow source would be in Madison Bay. There are pipelines and oyster leases in the area which could be potential issues. The estimated construction cost is \$25-30 million. The State has agreed that this project is consistent with the Master Plan. Mr. Nic Matherne stated that this is a great project and a continuation of the Twin Pipelines alignment, but it is not an emergency

need for Terrebonne Parish at this time. Terrebonne Parish's highest priority is the North Terrebonne Bay Rim.

#9 – East Catfish Lake Marsh Creation and Terracing. This project was presented by Mr. Kevin Roy, USFWS. This is located in Lafourche Parish between Catfish Lake and Golden Meadow. The project includes 610 acres of marsh creation and nourishment and 18 acres (25,800 feet) of terraces. Terraces allow for habitat enhancement in a larger area while maintaining a reasonable cost range. Containment dikes will be constructed as needed and breached after project completion. The network of oil and gas pipelines in the area may hinder the project. There are two potential borrow areas in Catfish Lake, one of which is proposed for a North Catfish Lake NRCS project currently in Phase I. The borrow distances are not unreasonable. The construction cost estimate is \$25.6 million. Mr. Stuart Brown asked if Mr. Roy had coordinated with Lafourche Parish because there may be a ConocoPhillips project planned for that area. Mr. John Jurgensen responded that ConocoPhillips has expressed a willingness to move their project if necessary.

#10 – Small Bayou LaPointe Marsh and Ridge Restoration. This project was presented by Mr. Kevin Roy, USFWS. The State Master Plan includes four ridge restoration projects in the area north of Caillou Lake; Mr. Roy proposed the Small Bayou LaPointe Ridge for PPL 24 because it has the least amount of infrastructure of the four. Additionally, this project could connect to other projects such as the North Lake Mechant Landbridge Restoration (TE-44) Project and the Lost Lake Marsh Creation and Hydrologic Restoration (TE-72) Project. This ridge is along the intermediate zone of marsh that protects the northern fresh marshes from the southern salt marshes. The ridge restoration would encompass 18,500 feet (23 acres) of ridge. ConocoPhillips and Terrebonne Parish have expressed a preference for the ridge to be built south of Small Bayou LaPointe. The southern alignment would eliminate the need for a plug that was constructed as part of another project. The current proposal is for the ridge to be built across the plug alignment and to replace the plug, although that could change during Phase I analysis. The ridge material would come from a ridge borrow canal that would be dredged between the ridge and the bayou and filled with marsh creation after completion of the ridge. The project also includes 393 acres of marsh creation north of the ridge using an interior borrow site in Lake Mechant. The project benefits 279 net acres after 20 years. The estimated construction cost is \$18.9 million. Mr. Nic Matherne, Terrebonne Parish, stated that the western part of the Parish is very important, but the eastern and southern parts of the basin represent an emergency need.

#11 – Carencro Bayou Marsh Creation and Freshwater Introduction. This project was presented by Mr. Ronny Paille, USFWS. The project would create 211 acres of marsh and nourish 187 acres of marsh along the northeastern shoreline of Lost Lake. Five discharge structures would increase freshwater discharge from Bayou Penchant into Carencro Bayou; a structure would be installed in the west Voss Canal to facilitate freshwater entry into marshes north of Lost Lake; a canal plug would be breached to increase flows of Bayou Penchant freshwater into marshes in the CWPPRA Brady Canal Hydrologic Restoration (TE-28) project area; and existing oil field canal spoil banks would be breached. The project would build upon the Ducks Unlimited Carencro Bayou West Leg Project. The preliminary cost estimate is \$18.5 million.

#12 – Bayou De Cade Bankline and Marsh Restoration. This project was presented by Ms. Kimberly Clements, NMFS. Ms. Clements presented two options for this project; the selection would be made after further review. Option 1 would include 400 acres of marsh creation and 10,560 feet of bankline/ridge on the north side of Bayou De Cade. Option 2 would include 335 acres of marsh creation and 15,400 feet of bankline/ridge on the south side of Bayou De Cade and on the north shore of Raccourci Bay. Camps in the area present potential issues, particularly for Option 2, but the landowners are amenable to the project and so these issues can be overcome. Both options would borrow from Lake De Cade and construction would cost approximately \$22.6 million. Mr. Gerald Schouest, Terrebonne Parish, stated that many areas in Terrebonne Parish need restoration and thanked CWPPRA for working in this area.

#13 – Bayou Jean Lacroix to Bayou Pointe au Chien Marsh Creation & Terracing. This project was presented by Ms. Kimberly Clements, NMFS. This project would create or nourish up to 360 acres of emergent brackish marsh in four cells and construct up to 17 acres (27,300 linear feet) of terraces in two cells adjacent to the marsh creation. The alignment is south of the Twin Pipeline Canal and along the eastern bankline of Bayou Jean LaCroix. The borrow site would be in Lake Felicity. This project would form a landbridge south of the Twin Pipeline Canal between Bayou Jean Lacroix and Bayou Pointe au Chien and is synergistic with several other projects in the area. The estimated construction cost is \$20.5 million. Mr. Nic Matherne stated that this is one of Terrebonne Parish's favorite projects. It is synergistic with the Island Road Project, and it is located in a high need area. The communities of Point au Chien and Isle de Jean Charles are immediately north and west of this project.

#14 – West Bayou Lafourche Marsh Creation and Terracing. This project was presented by Ms. Kimberly Clements, NMFS. This project is located along the western side of Bayou Lafourche south of the Twin Pipeline Canal and would provide protection to LA-1. The project would create up to 400 acres of emergent brackish marsh and 37 acres (70,000 linear feet) of terraces in a 1,000-acre open water terrace field west of the marsh creation area. The borrow site would be located in Little Lake. The estimated construction cost is \$25 million. Lafourche Parish supports this project. Future projects could build upon this project to create east-west or north-south barriers along the Twin Pipelines or Bayou Lafourche.

#15 – Raccoon Island West Restoration. This project was presented by Mr. Cassidy Lejeune, LDWF. The federal sponsor is NRCS. Raccoon Island is part of the Isle Dernieres Barrier Island Refuge Chain. Two recent restoration projects have been constructed on Raccoon Island: TE-29 in 1996 and TE-48 in 2007. Raccoon Island is a critical bird habitat for a variety of species including pelicans, terns, skimmers, gulls, and wading bird species. Over 30,000 nests can be seen in the summer months. The spit of this island is also an important loafing and foraging ground for overwintering piping plovers and other species. This project proposes to construct a breach closure using offshore borrow to close the widening breach that occurred in 2007 using offshore borrow. The project would also replenish the sand shoal on the southeastern tip to feed the rest of the island in future years, construct eight segmented breakwaters in front of the breach closure, and construct a terminal groin to trap sediment moving from east to west with the littoral drift. The volume of the shoal replenishment is not yet quantified. Overall, the project would create 100 acres of barrier island habitat. The breakwaters would duplicate the efforts of the TE-29 demonstration project, which was very

successful. Without breakwaters, this project may lack longevity. The estimated construction cost is \$25 million. A member of the audience asked about the existence of scientific research to determine the angle of the breakwaters. Mr. Boustany responded that there are models that can determine the distance from the shoreline, orientation, and placement of gaps between the units to maximize the value of the breakwaters.

Based on comments at the RPT meeting, the breakwaters and terminal groin were removed from this project.

#16 – Bayou Dularge Ridge Restoration and Marsh Creation. This project was presented by Mr. Ron Boustany, NRCS. NRCS has worked with Terrebonne Parish and property owners to develop the project features and location. This project would create/restore ridge and marsh in the Lake Mechant Landbridge, which separates Lake Mechant from Sister Lake, to ensure the integrity of the ridge and to sustain optimal salinity to promote healthy marsh recovery. The project consists of 27,000 linear feet of ridge restoration on either side of Grand Pass and 556 acres of marsh creation/nourishment. Phase I E&D would determine whether the alignment should be located on the north or south side of Bayou Dularge. Potential issues include existing camps in the area, and the ridge would probably need to be set back from the bayou due to the location of those camps. The estimated cost is \$20-25 million based on an elevation of +6. This project would work synergistically with the Central Terrebonne Freshwater Enhancement (TE-66) Project. This project is one of Terrebonne Parish's top priorities.

#17 – Marsh Creation at Houma Navigation Canal. This project was presented by Mr. Ron Boustany, NRCS. The project location is at the mouth of the Houma Navigation Canal (HNC) at Terrebonne Bay. This project would use dredge material from the USACE maintenance of the HNC to create or nourish 454 acres of marsh in three cells with a small delta formation. Some of the areas have already been environmentally cleared. ConocoPhillips is the landowner and has some ideas for placement. There is oyster activity in this area which could create a challenge. The estimated construction cost is \$18-20 million. Mr. Nic Matherne, Terrebonne Parish, stated that he has been in discussion with the USACE and other stakeholders to determine what needs to occur to be able to beneficially use sediment from USACE maintenance. The structure containment needs to be ready when the USACE has material for placement. Mr. Boustany specified that historically the USACE has dredged 1.5 to 2 million cubic yards every two years. Mr. John Jurgensen explained that the cost estimate for this project assumes that material will be borrowed from the Gulf. However, if CWPPRA can coordinate with the USACE, CWPPRA would only have to pay for the costs above the federal standard. Mr. Bren Haase stated that the dredging schedule is not consistent and this could create a problem for planning this project.

#18 – Leeville West Marsh Creation and Nourishment. This project was presented by Mr. Ron Boustany, NRCS. He has worked with ConocoPhillips and Lafourche Parish to identify areas of high need. This area is west of LA-1 and has an enormous amount of oil and gas activity; many of the oil and gas canals are still very active. This project would create and nourish 526 acres of marsh in two cells at the intersection of Little Lake and the Southwestern Louisiana Navigation Canal. ConocoPhillips is the landowner. The proposed borrow site is in Little Lake. The estimated construction cost is \$20-25 million.

Nominations for the Terrebonne Basin were closed.

d. Mr. Boustany opened the floor for nominations for coast-wide projects.

#1 – Coast-wide Canal Backfilling Pilot Project. This project was presented by Mr. Aaron Hoff, EPA. Canal dredging is a significant contributor to wetland loss in Louisiana, and there has been little effort to reverse the damage caused by hydrologic alterations. This project would use in-situ dredging to backfill as much as 52 miles of canals. This project could convert 923 acres of spoil banks and 51 acres of open water to emergent wetlands. Mr. Hoff proposed several sites including one near Rainey Refuge and Pecan Island, one near Leesville, one south of Bayou Dupont, and one in Biloxi Marsh. This project would need to strategically target areas with healthy marsh. Spoil banks compact the area below them and prevent underground water exchange. Some of the areas of the greatest marsh loss are those areas that are impounded and hydrologically isolated. Natural exchange can bring in sediment and allow the plants to grow stronger roots and maintain marsh elevation in a subsiding environment. However, this is still a disputed theory.

Nominations were closed for coast-wide projects.

e. Mr. Boustany opened the floor for nominations for demonstration projects.

#3 – Stabilized Shorelines. This project was presented by Mr. Karl Peckhaus, Remedial Construction Services. This stabilization technology has been demonstrated with stabilized levees but not shorelines. Stabilized levees have withstood surges from Hurricanes Rita, Ike, and Isaac. It is a long-term solution that provides a non-rock alternative for areas where excessively soft soil conditions prevent the use of riprap. It consists of environmentally safe soil amendments which are used to stabilize dredged soil to strengthen shorelines with a high organic content. Green reagents can be used to stabilize existing shorelines, to create non-dispersive, irreversible characteristics, and reinforce perimeters of barrier islands to contain spoils. The product can create a foundation for oyster beds and could be used in areas with high-energy wave action to create containment berms. The stabilization process forms calcium silicate hydrate minerals or derivatives thereof. These minerals are strong, irreversible, and long-lasting. The product has little to no maintenance requirements. It allows ingress and egress for aquatic species. It can trap sediment, reduce wave energy, and reduce interior marsh losses. The type of dredge spoil and the percent of reagent can be adjusted based on the desired maneuverability of the end product so that containment dikes can be manipulated and breached after construction.

Nominations were closed for demonstration projects.

5. Agenda Item #6, Adjourn. The meeting was adjourned at 1:05 p.m.

MEMORANDUM FOR RECORD

SUBJECT: Regional Planning Team (RPT) Region 4, Lafayette, LA, 11 Feb 14, 11:00 am

1. Agenda Item #1, Welcome and Introductions. Mr. Darryl Clark, U.S. Fish and Wildlife Service (USFWS) and RPT Region 4 Leader, opened the meeting and welcomed the attendees. The purpose of the RPT meeting is to receive nominations and public comments for projects in Region 4. Dr. John Foret, National Marine Fisheries Service (NMFS), welcomed everyone to the Estuarine Fisheries and Habitat Center. Mr. Clark welcomed Mr. Kevin Sagrera, Vermilion Parish, and Ms. Kara Bonsall, Cameron Parish. Mr. Clark introduced CWPPRA Committee and Work Group members Mr. Brad Inman, U.S. Army Corps of Engineers (USACE), Mr. John Jurgensen, Natural Resources Conservation Service (NRCS), Mr. Stuart Brown, Louisiana Coastal Protection and Restoration Authority (CPRA), Mr. Bren Haase, CPRA, and Dr. Charles Sasser, Louisiana State University (LSU). Mr. Clark asked all attendees to introduce themselves.

2. Agenda Item #2, Project Priority List (PPL) 24 Selection Process Brief Overview and Ground Rules for PPL 24 Nomination Meeting. Mr. Clark delivered a PowerPoint presentation, which is available online at the CWPPRA website. Mr. Clark asked that parish designated voters fill out a voting registration form and provide their contact information to Mr. Scott Wandell, USACE. Parishes eligible to vote for candidates in Region 4 are: Cameron, Calcasieu, and Vermilion.

Nominees must be consistent with the 2012 State Master Plan. A project can be nominated from only one basin, except for coast-wide projects. If a project crosses multiple basins, excluding coast-wide projects, it should be nominated in one basin only, based on the majority area of project influence. Coast-wide projects apply across basin boundaries; their benefits are not tied to one basin. Coast-wide projects can be nominated from any basin and can be presented at any or all of the RPT meetings.

Presenters were asked to complete a project information sheet for each project nominee, including demonstration project nominees, with the name of the proposed project and the presenter's contact information. Mr. Clark announced that Mr. Wandell could help attendees fill out this form if they need assistance. Presentations should be limited to five minutes and five PowerPoint slides. Public comments on project proposals will be accepted orally during the meeting and in writing until February 19, 2014. Mr. Clark asked that attendees limit comments and questions to the PPL 24 proposals and processes.

Coast-wide projects propose a technique applicable across the entire coast. Only one coast-wide nominee may be selected during the electronic coast-wide vote on Feb 25. The Technical Committee may or may not select a coast-wide project. Demonstration projects demonstrate a technology which can be transferred to other areas in coastal Louisiana. The Engineering and Environmental Work Groups will determine whether or not a project meets CWPPRA criteria. The RPT will select up to six demonstration projects; the Technical Committee may select up to three demonstration projects at the April meeting. The Work Groups may recommend that no demonstration projects move into candidate stage. Previous demonstration projects must be re-nominated to be considered for PPL 24.

3. Agenda Item #3, Explanation of Coast-wide Voting Process. A coast-wide electronic vote will be held on February 25, 2014. The RPTs will select four projects per basin in the Terrebonne and Barataria Basins; three projects per basin in the Pontchartrain and Breton Sound Basins; two projects per basin in the Teche-Vermilion, Mermentau, and Calcasieu-Sabine Basins; and one project in the Atchafalaya Basin. If proposed, one coast-wide project may be chosen for inclusion as a nominee. In addition, the RPTs will select up to six demonstration projects for further evaluation.

Parishes must identify their voting representative at the RPT meeting to be eligible to vote. No additional projects can be nominated and no significant changes can be made to projects after the RPT meeting. If projects overlap, nominators will have the option to combine them into one project.

Mr. Clark explained the voting process. Excel spreadsheets will be provided to the voting representatives one week prior to the vote. Voters must email or fax their votes to Ms. Allison Murry by 10:30 am on February 25, 2014.

Following the coast-wide electronic vote, an agency will be assigned to each project to prepare a fact sheet and map if one is not already prepared. The CWPPRA Engineering and Environmental Work Groups will then review the draft features and assign preliminary costs and benefits. They will also verify that the coast-wide and demonstration projects meet PPL 24 requirements.

Mr. Clark reviewed the remaining steps in the PPL 24 process. Ten candidate projects and up to three demonstration projects will be selected on April 15, 2014 at the Technical Committee meeting. Written public comments should be submitted to Mr. Brad Inman, USACE, at the addresses in the agenda by April 1, 2014. Oral comments will be accepted at the Technical Committee meeting. Candidate projects will undergo further review between May and October, and the Technical Committee will vote to recommend up to four projects for Phase I Engineering & Design (E&D) in December 2014. The Task Force will make the final decision in January 2015.

4. Agenda Item #4, PPL Project Nominations (Entire RPT).

a. Mr. Clark opened the floor for nominations in the Calcasieu-Sabine Basin.

#1 – East Holly Beach Gulf Shoreline Protection Project. This project was presented by Mr. Troy Mallach, NRCS. Rapid land loss in this area is threatening Hwy 82, and in some areas less than 25 feet separate the highway from the Gulf. In the mid 1990's, the State constructed a rock breakwater in a nearby area and CWPPRA pumped 1.5 million cubic yards of sand behind the breakwater. That project has been effective, and the fill material remains even after Hurricanes Rita and Ike. The State has recently pumped sand from the Gulf onto the east side of Holly Beach to create 267 acres of beach and supratidal habitat. However, without rock protection none of this beach will remain after 20 years. This CWPPRA project would provide breakwaters in front of that sand. The project proposal consists of 15,000 linear feet of breakwaters similar to those used in the Holly Beach Breakwater (CS-01) Project. It is estimated that the rock breakwaters could decrease shoreline loss by about 75%. This is a critical habitat area for the piping clover and a high priority for the Parish. The preliminary construction cost is \$15 million.

#2 – East Calcasieu Lake Marsh Creation and Hydrologic Restoration. This project was presented by Mr. Troy Mallach, NRCS. Saltwater intrusion from the Calcasieu Ship Channel (CSC) is a major problem in this area. The goal of this project is to reduce the exchange of saltwater, which has increased since Hurricane Rita. The project proposes a spillway structure in the Cameron-Creole Levee at East Calcasieu Lake to allow high water to exit the area. The best location and elevation for the structure would be determined during E&D. The project also includes 70 acres of marsh creation and nourishment in the northern portion of the project area. The project would reduce prolonged periods of inundation by relieving flooding stress and would restore the function, value, and sustainability to approximately 7,500 acres of marsh. The estimated construction cost is \$15 million.

This project was combined with R4-CS-07 North Cameron Creole Marsh Creation. The new project is the Cameron Creole Marsh Restoration Project. Features include: a spillway structure at two locations in the Cameron-Creole Levee to reduce flood stress; creation/nourishment of 292 acres of marsh in several strategically located cells; and the filling of a small borrow canal to preclude unnatural water circulation patterns. The estimated construction cost is \$19 million.

#3 – West Cove Marsh Creation. This project was presented by Mr. Scott Wandell, USACE. This project is located in the Sabine National Wildlife Refuge, east of Hwy 27 and north of Mud Lake. Mr. Wandell noted that this area is not part of the USACE CSC Dredged Material Management Plan (DMMP) so it will not be considered for beneficial use of dredged material from the CSC. Hurricanes have caused significant damage to this marsh. This project proposes to restore 392 acres of open water to emergent marsh using material dredged from the CSC during a USACE maintenance event. The marsh creation is approximately six miles from the CSC. The estimated construction cost is \$19 million; this represents the incremental cost to pump material to this area rather than upland disposal. Mr. Harold Schoeffler, Sierra Club, asked about the nature of the material coming from the CSC. Mr. Wandell responded that the material is not sandy and it is appropriate for marsh creation. Mr. Aaron Hoff added that the Environmental Protection Agency (EPA) performs regular testing and has not encountered any toxic material.

#4 – Southwest Cameron Creole Marsh Creation. This project was presented by Mr. Robert Dubois, USFWS. This project is located south of Calcasieu Lake and east of the CSC, partially within the Cameron Prairie National Wildlife Refuge. The primary cause of marsh loss in this area is saltwater intrusion from the CSC. Large losses occurred in 1957 during Hurricane Audrey and more recently during Hurricanes Rita and Ike. The project consists of four polygons of marsh creation using silty material from the Gulf of Mexico, which is about 3.5 miles from the project area. It would consist of 469 acres of marsh creation and 73 acres of marsh nourishment; the project would net 407 acres after 20 years. The landowners are in favor of the project, and the area is not part of the DMMP. This project should be constructed soon while water depths are shallow. The construction estimate is \$23 million.

#5 – East Prong – Grand Bayou Marsh Creation. This project was presented by Ms. Angela Trahan, USFWS. The project area is north of East Prong. Problems include saltwater intrusion from the CSC, recent hurricanes, drought conditions, wave induced erosion, subsidence, and wind fetch. This project would be a continuation of the Cameron Creole Watershed Grand Bayou Marsh Creation (CS-54) Project which is currently in E&D. Several water management

projects have been constructed in the area through CWPPRA, and terracing projects have been constructed in the area by Ducks Unlimited and other agencies. This project consists of 510 acres of marsh creation and 75 acres of marsh nourishment in two polygons and 212 acres of spray dredging bankline marsh nourishment. The marsh creation will require 3 million cubic yards of material. The bankline nourishment would consist of dredging 60,000 linear feet of bayous and using a spray dredge to put the material back onto the bank. The project may incorporate terracing to reduce the amount of material required by the marsh creation. The project may also breach containment dikes to create semi-unconfined areas which would produce shallow water habitat for shore birds on the Refuge. The estimated net benefits after 20 years are 485 acres. The cost estimate is \$18.8 million, assuming that the material would be sourced from Calcasieu Lake. CWPPRA will have to work closely with Louisiana Department of Wildlife and Fisheries (LDWF) because the Lake is an oyster seed ground.

#6 – East Cove Marsh Creation. This project was presented by Ms. Angela Trahan, USFWS. This is a beneficial use of dredged material project. The USACE has developed a DMMP but it has not been funded, and the USACE cannot beneficially use material within their current dredging budget. CSC Miles 5-12 are dredged biannually and the 1.8 million cubic yards of material goes to upland disposal. This project is proposing to use 1.5 million cubic yards of maintenance dredging material to create 315 acres of marsh on the Cameron Prairie National Wildlife Refuge. The project would require 10,800 linear feet of retention dikes and 6,400 linear feet of earthen weirs. CWPPRA would only be required to pay for the incremental cost of using the material beneficially. Since the USACE is not currently dredging the CSC to its full width, some dedicated dredging may be required to acquire the full 1.5 million cubic yards; if the dedicated dredging is closer to the project, this could reduce CWPPRA's cost. The estimated cost was \$5.8 million in 2007, but this needs to be updated. Containment dikes would be gapped to allow for ingress and egress of aquatic species. Mr. Bren Haase added that there is a value to not putting the material into the upland disposal areas, but a methodology has not been developed to calculate that value.

This project was combined with R4-CS-09, No Name Bayou Marsh Creation & Nourishment. Project features include 438 acres of marsh creation and 77 acres of marsh nourishment south of Calcasieu Lake using sediment pumped from the upland disposal area adjacent to the East Fork. The project would also clean out approximately 5,600 linear feet of the Cameron Creole Watershed Levee borrow channel. The resulting project is the No Name Bayou Marsh Creation & Nourishment Project.

#7 – North Cameron Creole Marsh Creation. This project was presented by Ms. Angela Trahan, USFWS, on behalf of Mr. Ronnie Paille, USFWS. This project is north of the Cameron Creole Watershed marshes and north of Peconi Bayou on Miami Corporation property. This project proposes 405 acres of marsh creation that is strategically located to break up water circulation. A canal plug would also be installed to further preclude unnatural water circulation. The estimated construction cost is \$24.4 million, based on using material from the CSC, which is approximately six miles from the project area.

This project was combined with R4-CS-02 Cameron Creole Marsh Creation. The new project is the Cameron Creole Marsh Restoration Project. Features include: a spillway structure at two locations in the Cameron-Creole Levee to reduce flood stress; creation/nourishment of 292 acres

of marsh in several strategically located cells; and the filling of a small borrow canal to preclude unnatural water circulation patterns. The estimated construction cost is \$19 million.

#8 – Wild Horse Ridge Protection Project. This project was presented by Mr. Bart Yakupzack, Gray Law Firm, on behalf of the landowner GCPC. This project is located along the Gulf Intracoastal Waterway (GIWW) between the Calcasieu River and the Sabine River, between the Vinton Drainage Canal and Gum Cove Road. From 1998 to 2013, as much as 96.3 feet was lost along the north bank of the GIWW. This project proposes 23,000 linear feet of foreshore rock dike with a top height of 3.5 feet. This will protect approximately 3,500 acres of marsh north of the GIWW as well as a nearby pipeline and utility corridor. This bank is one of the last defenses to storm surge for populated and industrial areas north of the project. The cost is estimated at \$12 million. This project is not consistent with the Master Plan.

#9 – No Name Bayou Marsh Creation & Nourishment. This project was presented by Dr. John Foret, NMFS. This project is located on the south shore of Calcasieu Lake along the East Fork of Calcasieu River. Problems include salinity, hurricanes, and marsh loss. The project would create 515 acres of marsh with some interior ponds and tidal channels. The existing borrow channel is silted in; the project would also clear out 5,000 linear feet of the channel to restore tidal exchange. Material for the marsh creation would come from the channel clear out and an upland disposal area between the East Fork and the Calcasieu River. The pumping distance is only 7,300 feet. The upland disposal borrow area allows for independence from the USACE dredging timeframe. The project would reestablish marsh at the intersection of the CSC and Calcasieu Lake. Net benefits after 20 years are 449 acres. The construction cost is estimated at \$21.7 million. Dr. Foret has spoken to the landowner, who supports the project. Miami Corporation suggested placing the marsh closer to the levee to act as a buffer.

This project was combined with R4-CS-06, East Cove Marsh Creation. Project features include 438 acres of marsh creation and 77 acres of marsh nourishment south of Calcasieu Lake using sediment pumped from the upland disposal area adjacent to the East Fork. The project would also clean out approximately 5,600 linear feet of the Cameron Creole Watershed Levee borrow channel. The resulting project is the No Name Bayou Marsh Creation & Nourishment Project.

#10 – North Oyster Bayou Marsh Creation. This project was presented by Dr. John Foret, NMFS. This project is west of the CSC, east of Holly Beach, and south of the west fork of the CSC. Rapid and complete tidal exchange occurs between this area and Oyster Lake. This project would expand the Oyster Bayou Marsh Restoration (CS-59) Project by creating another 400 to 600 acres of saline marsh using the same borrow source and pipe over Hwy 82. The project is expandable to up to 852 acres. Terraces may be added during Phase I. The construction cost is \$24 million. This project would reestablish the landbridge between Hwy 82 and Oyster Lake and provide storm surge protection to Hackberry.

Nominations were closed for the Calcasieu-Sabine Basin.

b. Mr. Clark opened the floor for nominations in the Mermentau Basin.

#1 – Deep Lake Hydrologic Restoration. This project was presented by Mr. Troy Mallach, NRCS. Hwy 82 restricts the drainage of communities and marshes north of the highway, which results in prolonged periods of inundation during high rainfalls and flooding events. An existing structure, East End Lock, is operated by Rockefeller Wildlife Refuge and restricts water outflow. This project will reduce prolonged periods of inundation by repairing the East End Lock to allow it to move water more efficiently; constructing a spillway structure at the north end of Deep Lake; and replacing two existing plugs with structures such as flap gates to allow drainage through Joseph Harbor. These would be emergency relief mechanisms so that levees do not have to be cut and rebuilt during flood events. The estimated cost is \$8 million.

#2 – Southwest Grand Lake Shoreline Protection. This project was presented by Mr. Troy Mallach, NRCS. This project is along the southwest shoreline of Grand Lake. The Grand Lake shoreline is experiencing erosion at rates of 11 to 32 feet per year. In some areas the historic lake rim is completely lost. This project would protect the shoreline with a rock structure. The flotation canal would be placed inside the rock and the material would be used to create marsh. The project includes 42,000 linear feet of shoreline protection from Catfish Lake to Hackberry Point and 96 acres of marsh creation behind the rock structure. The project would protect another 20 acres of marsh for a total benefited area of 116 acres. The project may use shoreline plantings instead of rock protection to reduce costs along Catfish Lake, which experiences lower loss rates. The estimated construction cost is \$25 million.

#3 – Southeast Pecan Island Marsh Creation & Freshwater Enhancement. This project was presented by Mr. Troy Mallach, NRCS. This project is east of Pecan Island and south of Hwy 82. This project proposes to bring freshwater across Front Ridge into southern marshes. The project would construct a flap-gated outlet at Front Ridge which would allow water to flow south into the marsh creation and terracing area. The project includes 270 acres of marsh creation, 90 acres of marsh nourishment, and 55,300 linear feet of terraces. It would require minimal improvement and cleanout of canals. The total benefited area is over 4,000 acres. The fully funded cost estimate is \$30-35 million.

#4 – East Pecan Island Marsh Creation – Increment 1. This project was presented by Mr. Brad Crawford, EPA. This project is located in Vermilion Parish west of Freshwater Bayou. The project would create 506 acres of marsh using dedicated dredging at an offshore borrow site. The project would retain existing tidal ponds and creeks. The estimated cost is \$30-35 million. The project would reduce wave fetch in the area. Vermilion Parish and Vermilion Corporation expressed support for this project.

#5 – North Big Marsh Restoration. This project was presented by Mr. Darryl Clark, USFWS. This project is co-nominated by USFWS and Vermilion Corporation. This project is northeast of Pecan Island and west of Freshwater Bayou. The Big Marsh Unit lost 11% of the marsh (3,810 acres) between 1932 and 1990. Freshwater Canal caused wake erosion, altered hydrology, and increased losses due to storm activity. The project includes freshwater introduction from a structure near Hwy 82 through an existing trenasse system, as well as restoration and nourishment of 450 acres of fresh and intermediate marsh using a Gulf borrow site. The project would restore the northern portion of Big Marsh and provide protection to adjacent marshes. The cost estimate is \$17-20 million. Vermilion Corporation and Vermilion Parish expressed support for this project.

#6 – Umbrella Bay Shoreline Protection. This project was presented by Mr. Darryl Clark, USFWS. This project is co-nominated by the USFWS and the Lake Arthur Club. This project is located along the eastern Grand Lake-Umbrella Bay shoreline. This area experiences shoreline erosion at a rate of 15 feet/year. Shoreline breaches have caused interior lakes and ponds to coalesce with Grand Lake. Umbrella Point and Short Point have experienced tremendous loss. The goals of the project are to halt shoreline erosion and prevent further breaches into interior ponds. The project proposes to construct 26,500 linear feet of earthen berm with lakeside revetment. The borrow area would be an adjacent Grand Lake access channel. Openings would be placed adjacent to natural bayous to maintain hydrology. The project benefits 213 net acres. The estimated cost is \$12-13 million. Mr. Kevin Long and Mr. Stafford Comegys, representing the Lake Arthur Club, expressed support for this project. The Lake Arthur Club is willing to accept any and all liability for the project and would perform any repairs/maintenance activity required by the project.

Based on comments at the RPT meeting, the project was revised to include shoreline protection all the way to the existing ME-19 project. The new project consists of 35,100 linear feet of earthen berm at a cost of \$16-17 million.

Nominations were closed for the Mermentau Basin.

c. Mr. Clark opened the floor for nominations for coast-wide projects.

#1 – Coast-wide Canal Backfilling Pilot Project. This project was presented by Mr. Aaron Hoff, EPA. Canal dredging is a significant contributor to Louisiana wetland loss. This project proposes to backfill up to 52 miles of canals with in-situ spoil banks. It would convert 923 acres of spoil banks and 51 acres of open water to emergent wetlands and convert 462 acres of open water to shallow water. The estimated cost is \$25 million. Several sites were recommended across the coast. Each site must be examined very closely.

Nominations were closed for coast-wide projects.

d. Mr. Clark opened the floor for nominations for demonstration projects.

#1 – Sediment Capture Tide Pump. This project was presented by Mr. Richard Russo. The Sediment Capture Tide Pump uses tidal energy to capture and distribute water and sediment through the marsh. It creates a siphon to move water and sediment uphill. This product could reduce the need for fuel, use shoreline waves as an asset, backfill oilfield canals, and rebuild shoreline breaches and barrier islands with sediment from the continental shelf. The product is still in the development/prototype stage. More information is available at www.greenaccessibility.com or www.welouisiana.net.

#2 – TrapBag Coastal and Canal Erosion Control DuneCore Barriers. This project was presented by Mr. Bruce Boyd with TrapBag. TrapBag is a continuous structural cellular barrier that is currently used for flood mitigation in Louisiana. The TrapBag DuneCore product is used in Florida, New York, and New Jersey for coastal protection and restoration. The TrapBag DuneCore product captures material and simulates sand dunes. The barriers are put in place, covered to encase the sand, and topdressed. They can be topped with burlap or geotextile material and seeded after construction. The product has been used for the

reinforcement of the Pontchartrain Levee in Louisiana. Unlike the square Hesco baskets, the TrapBag DuneCore is trapezoidal in shape, which allows wave action to go over the front and down the back in the case of overtopping. It has been tested by the USACE Engineer Research and Development Center (ERDC).

Nominations were closed for demonstration projects.

5. Agenda Item #5, Announcement of Upcoming PPL 24, Task Force, Technical Committee and Other Meetings. Mr. Clark announced that coast-wide voting will be on February 25, 2014 and the Technical Committee meeting will be on April 15, 2014. Additional dates are on the agenda.

6. Agenda Item #6, Adjourn. The meeting was adjourned at 2:00 pm.