CEMVN-PM-C (10-1-7a) 28 Jan 16

MEMORANDUM FOR RECORD

SUBJECT: Regional Planning Team (RPT) Region 1, Lacombe, LA, 28 Jan 16, 8:00 am

1. Agenda Item #1, Welcome and Introductions. Mr. Stuart Brown, Louisiana Coastal Protection and Restoration Authority (CPRA), and RPT Region 1 Leader, opened the meeting and welcomed the attendees. Mr. Brown thanked Mr. Pon Dixon of U.S. Fish and Wildlife Service (USFWS) for the use of the facility at the Big Branch Marsh National Wildlife Refuge (NWR) of the Southeast Louisiana Refuge Complex. Mr. Dixon welcomed the attendees to the facility and encouraged everyone to explore the Visitor's Center in the adjacent building. The purpose of the RPT meeting is to receive nominations and public comments for projects in Region 1. Region 1 consists of the Pontchartrain Basin. Mr. Brown announced that Ms. Michelle Fischer, United States Geological Survey (USGS), will be providing Geographical Information System (GIS) mapping of the 2012 State Master Plan. He added that Ms. Kaitlyn Carriere, United States Army Corps of Engineers (USACE) CWPPRA Program Coordinator, has organized the entire meeting and can answer any questions that arise. The minutes will be taken by Ms. Kylie Ford, AECOM. Mr. Brown introduced Mr. David Brunet, St. Tammany Parish; Mr. Robert Spear, Plaquemines Parish; and Mr. Mike Lockland, Jefferson Parish. He also introduced Ms. Karen McCormick, EPA, who is a member of the Technical Committee. Mr. Brown asked all attendees to introduce themselves.

2. Agenda Item #2, Project Priority List (PPL) 26 Selection Process Brief Overview and Ground Rules for PPL 26 Nomination Meeting. Mr. Brown delivered a PowerPoint presentation, which is available online at the CWPPRA website. He announced that copies of the agenda and PPL 26 selection process were available at the sign-in table and encouraged each attendee to sign in. Mr. Brown asked that the parish-designated voters fill out a voting registration form and provide their contact information to Mr. Scott Wandell, USACE. Parishes eligible to vote for projects in Region 1 are: Plaquemines, Jefferson, Orleans, St. Bernard, Ascension, Livingston, St. James, St. Charles, St. John the Baptist, St. Tammany, and Tangipahoa.

Nominees must be consistent with the 2012 State Master Plan. A project can be nominated from only one basin, except for coastwide projects. If a project crosses multiple basins, excluding coastwide projects, it should be nominated in one basin only, based on the majority area of project influence. Coastwide projects apply across basin boundaries; their benefits are not tied to one basin. An example of a successful Coastwide project is the Coastwide Nutria Control Program (LA-03b). Coastwide 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, if a fact sheet was not provided. Mr. Brown announced that Mr. Wandell could help attendees complete this form if they required assistance. The project information sheet should be provided to Ms. Carriere, and if a fact sheet is available, copies should be provided to Ms. Fischer, Ms. Carriere, and Ms. Ford. 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 16, 2016. Written comments should be sent to Mr. Brad Inman, USACE. Mr. Brown asked that attendees limit comments and questions to the PPL 26 proposals and processes.

Coastwide projects propose a technique applicable across the entire coast. Only one coastwide nominee may be selected during the Coastwide Electronic Voting on February 23, 2016. The Technical Committee may or may not select a coastwide project at the April 5, 2016 meeting. 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 the CWPPRA Standard Operating Procedures (SOP) criteria for demonstration projects. The RPT will select up to six demonstration projects; the Technical Committee may select up to three demonstration projects at the April 5, 2016 meeting. The Work Groups may recommend that no demonstration projects move into the candidate stage. Previous demonstration projects must be re-nominated to be considered for PPL 26.

3. Agenda Item #3, Explanation of Coastwide Voting Process. The Coastwide Electronic Voting will be held on February 23, 2016. 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 Mermentau, Teche-Vermilion, and Calcasieu-Sabine Basins; and one project in the Atchafalaya Basin. If proposed, one coastwide 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 prior to the end of the meeting.

Mr. Brown explained the voting process. Excel spreadsheets and portable document format (pdf) documents will be provided to the voting representatives one week prior to the vote. Voters will receive voting sheets for the basins for which they are eligible to vote, and the column on which they need to mark their vote will be highlighted. Voters must email or fax their votes to Ms. Carriere by 10:30 am on February 23, 2016. Oral comments on nominee projects will be accepted throughout the meeting, and written comments can be submitted to Mr. Inman before February 17, 2016.

Following the Coastwide Electronic Voting, an agency will be assigned to each project to prepare a fact sheet and map if one is not already prepared. The Engineering and Environmental Work Groups will then review the draft features and assign preliminary costs and benefits. They will also verify that the coastwide and demonstration projects meet PPL 26 requirements.

Mr. Brown reviewed the remaining steps in the PPL 26 process. Ten candidate projects and up to three demonstration projects will be selected on April 5, 2016 at the Technical Committee Meeting. Written public comments should be submitted to Mr. Inman at the addresses in the agenda by March 22, 2016. 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) on December 7, 2016. In 2015, five projects were moved into Phase I E&D. The Task Force will make the final decision in January 2017.

Mr. Brown provided a brief overview of the 2012 State Master Plan projects. He reiterated that all projects must be consistent with the 2012 State Master Plan. As the State (CPRA) Representative, Mr. Brown will determine project eligibility based on consistency with the 2012 State Master Plan.

Mr. Robert Dubois, USFWS, requested that the 2017 Region 1 RPT Meeting be held later than 8:00 am to better accommodate those attendees who travel a long distance. Mr. Inman noted that a change in start time will be considered for 2017, and asked the audience if another location is preferred. Many audience members expressed their preference for the existing Lacombe venue.

4. Agenda Item #4, PPL project Nominations.

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

 # 1 – Isle au Pitre Oyster Reef and Marsh Creation: Option A. This project was presented by Mr. Brad Crawford, Environmental Protection Agency (EPA). Both the oyster reef and marsh creation components of this project are consistent with Master Plan. The project is located on the northeastern tip of the Biloxi Marsh. The Chandeleur Sound is disconnected from the Mississippi River sediment supply and is exposed to a high wave energy environment that erodes the shoreline and results in marsh loss. The project team has developed two options, but is currently proposing Option A, which will create 9,500 linear feet (LF) of oyster reef and create and nourish 535 acres of emergent marsh. The construction cost including a 25% contingency is $25 million.

#2 – Biloxi Marsh Oyster Reef and Marsh Creation: Option A. This project was presented by Mr. Brad Crawford, EPA. Both the oyster reef and marsh creation components of this project are consistent with Master Plan. The project area is experiencing high wave energy and shoreline erosion. The project team has developed two options for the project; both options are consistent with the 2012 State Master Plan. The project team is currently proposing Option A. Option A consists of 14,800 LF of oyster reef and 263 acres of marsh creation. This project would protect the shoreline between Drum Bay and Chino Bay and could be expanded in future iterations to form a much larger project. The construction cost including 25% contingency is $21 million.

#3 – Bayou Bienvenue Marsh Creation Increment 1. This project was presented by Ms. Karen McCormick, EPA. This project has been proposed in previous PPLs. In PPL 23, the project moved forward to Phase 0 but has not proceeded since that time. The project team is currently proposing one increment; however, there is potential for four additional increments in the area. The project is consistent with the Master Plan. Problems in the area include impoundment, subsidence, and saltwater intrusion, which has resulted in marsh losses and left very shallow open water areas littered with cypress stumps. The project area was a vibrant cypress swamp, used for kayaking, fishing, and other recreation activities, as recently as 50 years ago. The proposed Increment 1 is located adjacent to the Orleans-St. Bernard Parish border. The proposal

includes creating 350 acres of intermediate marsh that would provide a net benefit of 276 acres after the 20-year life. There are many alternatives to obtain borrow material; the current proposal suggests utilizing the Mississippi River through an existing corridor. The proposed pipeline route from the Mississippi River is largely vacant and is less expensive than using borrow material from Lake Borgne due to distance and the saltwater barrier seawall. The pipeline would traverse a drainage canal from the Mississippi River. The construction cost including a 25% contingency is $26 million. The fully-funded cost range is $30 to $35 million. The people of Louisiana know how important coastal restoration is; however, this project is less than 30 minutes away from a major international airport, as well as the City of New Orleans, and will allow for outreach to both residents and tourists from outside of Louisiana. The project will also restore habitats within the project area and will provide additional hurricane protection to the City of New Orleans. Mr. Prahnger Draper, Fort Pike Volunteer Fire Department (VFD), stated that he utilized the swamp for recreation in the 1960's. Mr. Draper added that he has fond memories of the previous habitat and expressed his support to restore it to its previous nature. Mr. Lockland stated that he has previously worked for the Sewage and Water Board of New Orleans (SWBNO) and he is aware that there is a waste water treatment plant located near the project area. He asked if there has been any interest in augmenting the project with upland disposal from the nearby plant. Ms. McCormick responded that the project team has not specifically looked at partnering with the SWBNO; however, the plant has been used to augment nearby areas in the past. Ms. Janet Rhodus, Launch Leeville, stated that she supports any project that can create public awareness. Dr. Charles Sasser, Louisiana State University (LSU), stated that his first question to students is if they have heard of CWPPRA. Unfortunately, they usually have not, and he would like to increase the public awareness of the Program. Ms. McCormick added that the Barataria-Terrebonne National Estuary Program (BTNEP) has suggested that signage be added to projects to promote public awareness.

#4 – Christmas Camp Marsh Creation: Increment 1. This project was presented by Mr. Brad Crawford, EPA. The project is consistent with the Master Plan. The project area is a target rich environment that includes many options for restoration. Problems include high wave energy, shoreline erosion, and other common issues as a result of the Mississippi River Gulf Outlet (MRGO). Historical references show that the project area was solid marsh in 1955, but is now largely open water. The project would create and nourish 400 to 600 acres of emergent marsh near Drum Bay. The construction cost including a 25% contingency is $25 million.

#5 – Hopedale Marsh Creation: Increment 1. This project was presented by Mr. Brad Crawford, EPA. The project is consistent with the Master Plan. It is located near Belle Chasse, Louisiana. Problems in the area include both natural processes and human intervention, including sea level rise. In 1952, the project area was solid marsh, but is now deteriorated. The project would create and nourish 640 acres of emergent marsh habitat. The construction cost including a 25% contingency is approximately $26 million. The project would have excellent synergy with a nearby marsh management project sponsored by NMFS. Mr. Pat Williams, NMFS, added that there is also a hydrologic restoration project nearby that has improved connections.

#6 – Bayou LaLoutre Ridge Restoration and Marsh Creation. This project was presented by Mr. Brad Crawford, EPA. The project is consistent with the Master Plan. A major problem in the area is saltwater intrusion due to the construction of the MRGO. This area had nearly solid marsh in

1955. The project will construct 6,119 linear feet of ridge and will create and nourish 393 acres of emergent marsh. The construction cost including a 25% contingency is $26 million. The project is also located in a very popular area and could be used for public outreach.

This project was combined with R1-PO-10 Bayou La Loutre Ridge Restoration and Marsh Creation. The new project is the Bayou La Loutre Ridge and Marsh Restoration. Features include: 10 acres of Live Oak Hackberry maritime forest habitat; 129 acres of marsh creation; and 254 acres of marsh nourishment. The construction cost including a 25% contingency is $21 million

#7 – Tchefuncte River Lighthouse Habitat Restoration & Shoreline Protection. This project was presented a representative of the Lake Pontchartrain Basin Maritime Museum (LPBMM). The project will protect and maintain the existing shoreline of the peninsula at the site of the only remaining and functioning historic lighthouse in Louisiana. Project features will provide shoreline protection, aid navigation through the dredging a channel, and preserve the historic lighthouse constructed. It will also construct a new pier structure to provide access to the Tchefuncte River Lighthouse. The construction cost is estimated to be $1,517,584, based on the existing E&D plans. Mr. Stephen Champagne, LPBMM Board Member, expressed his excitement for the project. He added that the project would provide public outreach opportunities. There are 11 active marinas in nearby Madisonville, additional marinas in Mandeville, and 3,500 registered boaters in the immediate area. The historic lighthouse that sits on top of the project area is a very active part of the boating community and will provide CWPPRA with a very high level of visibility. Mr. Brown stated that this project is very different than many of the traditional projects that have been reviewed. The CWPPRA Program is for habitat restoration and projects are evaluated on their habitat benefits. Mr. Ron Boustany, NRCS, asked for clarification on the amount of marsh creation and preservation. The presenter responded that if coastal restoration does not occur, an entire peninsula will be lost to shoreline erosion. Mr. Inman, as Chairman of the P&E Subcommittee, stated that benefits will need to be quantified as they pertain to the shoreline protection component and then compared to the total project costs. By law, CWPPRA funding is to be used for coastal restoration; thus, benefits must be based on shoreline protection and potential marsh preservation. Mr. Don Lynch, Executive Director of the LPBMM, stated that when the lighthouse was originally constructed, it was not built on a peninsula, but on solid ground at the mouth of the river. The project will protect the remaining area so that the river will continue to flow in the historic direction. Mr. Champagne added that the area is experiencing tremendous erosion. The City of Madisonville has contributed funding to restore nearby shoreline at the mouth of the river. Historically, there was a cypress swamp that diverted the river to the east and created the channel that exists today. Without the project, shoreline breaching may occur and divert the mouth of the river. Additionally, the proposed breakwaters could create marsh land accretion.

#8 – Point Aux Marchettes Shoreline Protection. This project was presented by Mr. Robert Dubois, USFWS. The project is located on the Biloxi Marsh Wildlife Management Area (WMA). The project area has experienced shoreline erosion that has destroyed as much as 600 acres along Lake Borgne. The average erosion is approximately 26 feet per year; however, the erosion ranges from 10 to 90 feet per year in various areas. Since 1998, it is anticipated that between 650 and 1,400 feet of shoreline has been lost. The landowners, the Biloxi Marsh WMA,

have expressed their preference for restoration in this area to avoid the breaching of an existing waterway. The project protects approximately 500 acres within the Biloxi Marsh WMA. The cost estimate is based on using gabion mats, but the project team is open to other alternatives. As proposed, the project would include 41,000 feet of shoreline protection and 100 acres of terracing. The project will protect 53,000 feet of shoreline and 522 acres of highly productive brackish marsh, which will provide a net benefit of 421 acres after the 20-year life. The construction cost including a 25% contingency is $21 million. Mr. Dubois added that there are several species of concern in the project area, such as black rail, mottled duck, and brown pelican. Mr. Skye Duront, Biloxi Marsh Land Corporation, stated that the land in the project area was previously very solid; however, it has received significant wave energy from the open water in Lake Borgne and is quickly deteriorating. He added that there will be large deterioration if the shoreline erodes further, breaching into the existing bayous. Mr. Duront expressed his support for the project. Mr. Dubois reiterating that this project is located on WMA property which can be used for public recreation.

#9 – St. Catherine Island Marsh Creation & Shoreline Protection. This project was presented by Mr. Robert Dubois, USFWS. The project was presented in PPL 25 and is being re-nominated. It is located in the Bayou Sauvage NWR near Bayou Chevee and Chef Menteur Pass. Erosion in the area can be as high as 60 to 70 feet per year. Borrow material would be sourced from within Lake Pontchartrain. The project will protect 33,000 linear feet of shoreline, construct 6,400 feet of foreshore rock dike and 13,800 feet of revetment, create 100 acres of marsh, and nourish an additional 15 acres of marsh. Since 1998, the area has changed from nearly solid marsh to significantly deteriorated marsh. Without interference, the shoreline will continue to erode and will possibly breach into Chef Menteur Pass. There are several businesses and camps along Highway 90 that would be threatened if erosion continues. The project will benefit 260 net acres after the 20 year life and 226 acres would be protected in perpetuity. One concern is that the borrow source is located within gulf sturgeon habitat. The construction cost including a 25% contingency is $14.8 million.

#10 – Bayou La Loutre Ridge Restoration Marsh Creation. This project was presented by Mr. Blaise Pezold. Mr. Pezold is a member of the St. Bernard Parish Government Office of Coastal Zone Management Board and participated in determining which projects the Parish would support. The Parish determined that ridge creation was the largest goal for the community, and decided to focus on the La Loutre Ridge in the Parish Master Plan. The alignment of this project has been altered multiple times, but as it is currently proposed, the project connects with the existing ridge. It is located near Lena Lagoon, which is consistent with the State Master Plan. The project features include 5.46 miles of ridge including 10 acres of Live Oak Hackberry forest habitat. This is extremely critical habitat for migratory birds. The project also includes 129 acres of marsh creation and 254 acres of marsh nourishment. The construction cost including a 25% contingency is $21 million.

This project was combined with R1-PO-6 Bayou LaLoutre Ridge Restoration and Marsh Creation. The new project is the Bayou La Loutre Ridge and Marsh Restoration. Features include: 10 acres of Live Oak Hackberry maritime forest habitat; 129 acres of marsh creation; and 254 acres of marsh nourishment. The construction cost including a 25% contingency is $21 million

#11 – North Shell Beach Marsh Creation. This project was presented by Mr. Scott Wandell, USACE. The project was presented in PPL 25; NMFS and USACE have been working together to develop this project and to move it forward. It is consistent with the Master Plan. The project is located on the edge of Lake Borgne, near the Shell Beach South Marsh Creation (PO-169) project. The project proposes to create and nourish 394 acres of emergent brackish marsh. The dredged material would be mined from an existing National Environmental Policy Act (NEPA)-cleared borrow site in Lake Borgne. The borrow site is only one mile from the shore and is near the project area. The construction cost including a 25% contingency is $20 million. The project would stabilize the landbridge between Lake Borgne and the MRGO, which would protect neighborhoods and nearby infrastructure. The project is outside of the New Orleans Hurricane and Storm Damage Risk Reduction System (HSDRRS) surge barrier, making the added protection even more valuable.

Nominations were closed for the Lake Pontchartrain Basin.

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

#1 – Southwest Louisiana Salvinia Weevil Propagation. This project was presented by Mr. Ronald Paille, USFWS. *Great Salvinia* is an invasive fern from Brazil that is prominent in south Louisiana. *Cyrtobagous Salviniae*, commonly known as weevils, are very small insects that have been used as a successful biocontrol agent in 13 countries and three continents. The weevil has been released in Louisiana since the early 2000s. Mr. Paille stated that Mr. Randy Moertle has previously utilized weevils to control *Salvinia* at Delta Farms. Within three years, weevils provided *Salvinia* control to his land. The weevil has been studied by the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) and it has been determined to be safe as it will not attack other species. The LDWF Aquatic Plant Control Program has tested the control of *Salvinia* across Louisiana using both chemical treatments and weevils and determined weevils to be effective. The *Salvinia*-infested acres in Louisiana have increased from 5,000 in 2010 to over 40,000 in 2014, showing the need for an additional facility. LSU and LDWF have been cultivating weevils from ponds in Houma, Louisiana, but they have recently lost the right to use the property. In the past, LSU has produced the weevils and provided them to the public free of charge. Individuals would collect weevil-infested *Salvinia* from the Houma facility, place the infested *Salvinia* throughout their property, and allow the weevils to spread. There is an LSU Agricultural Center pond that could be used to create a new facility in Jeanerette, Louisiana with CWPPRA funding. LSU has tested this location and has determined that it is suitable for weevil propagation. The project would include little to no construction costs, but would include the cost of supplies, such as fertilizer, and staff. An estimated $1.6 million in CWPPRA funding would allow LSU to operate the facility for 20 years. Mr. Inman asked how benefits would be determined for this project. Mr. Paille answered that the current cost estimate includes funding for only a part time staff position, which is not enough to track the success of the program. He added that project stakeholders plan to pursue non-governmental organization (NGO) funding, which would convert the position to full time and would allow for the tracking of distribution and success. Mr. Moertle, Clovelly Farms and Point Au Fer, added that he has personally dealt with *Salvinia* problems in Cut Off, Louisiana in Lafourche Parish. To control *Salvinia,* he has been releasing weevils obtained from the Houma

LSU facility at two of the properties he manages, Golden Ranch and Delta Farms. The weevils are a very successful biocontrol agent. Without treatment, *Salvinia* can cause marsh loss. The *Salvinia* can become blanket-like, which during high winds or high water events can be moved on top of existing, emergent marsh. The *Salvinia* "blanket" then smothers the marsh underneath, leaving a mud flat that eventually erodes. It is extremely difficult to prevent this without a Coastwide project as a high wind event can also transplant *Salvinia* from neighboring properties onto property that was previously clear. When infested, *Salvinia* affects wildlife by reducing duck habit, fisheries, and the ability to track alligators and affects coastal restoration by clogging hydrologic restoration structures. The alternative to weevil propagation is chemical treatment. The chemicals, such as diquat, cost approximately $120 per gallon and require several treatments, a process that is much more costly than weevil propagation. This project will benefit both duck hunters and landowners throughout the state.

Nominations were closed for coast-wide projects.

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

#1 – Marine Gardens LLC Geopolymer Composites. This project was presented by Mr. Michael Botright, Marine Gardens. Mr. Botright started his company in 2003 and has significant experience in reef management systems, as well as on oyster reefs and environmental restoration. His demonstration project proposes the use of marine geopolymer stone casign and composites. These marine geopolymers can create a low cost, customized, macromolecular, stone-like structure that can be used to prevent coastal erosion. The marine geopolymers can be customized by weight and size. The product has been used on various types of projects worldwide. It performs strongly in a highly corrosive environment, can be poured, pumped, used as a mortar, or molded, and is impermeable to water. The marine geopolymers fare much better than both traditional, Portland cement and limestone.

#2 – Ecobale Containment Barrier for Shoreline Protection and Marsh Creation. This project was presented by Ms. Janet Rhodus, Launch Leeville. This project can be used to protect shorelines using an "eco-bale", and could be demonstrated in areas such as Leeville in Lafourche Parish to combat erosion problems near Bayou Lafourche and LA-1. It has the potential to alleviate the issues affecting the highway, and could be applicable to other areas throughout the state. Mr. Williams added that Leeville is a potential location for this project, but demonstrations are not tied to a specific location and could be deployed elsewhere.

Nominations were closed for demonstration projects.

5. Agenda Item #5, Announcement of Upcoming PPL 26, Task Force, Technical Committee and Other Meetings. Mr. Brown announced that the Coastwide Electronic Voting will be on February 24, 2016. He reiterated that Parish representatives should coordinate with Mr. Wandell to register to participate. The voting sheets must be turned into Ms. Carriere by 10:30 am .Comments on nominee projects are due to Mr. Inman by February 17, 2016.

6. Agenda Item #6, Adjourn. The meeting was adjourned at 9:49 am.

CEMVN-PM-C (10-1-7a) 28 Jan 16

MEMORANDUM FOR RECORD

SUBJECT: Regional Planning Team (RPT) Region 2, Lacombe, LA, 28 Jan 16, 10:00 am

1. Agenda Item #1, Welcome and Introductions. Mr. Brad Inman, United States Army Corps of Engineers (USACE) and RPT Region 2 Leader, opened the meeting and welcomed the attendees. He thanked the Big Branch National Wildlife Refuge (NWR) for providing the venue and encouraged attendees to explore the adjacent Visitor's Center. Mr. Inman introduced Ms. Michele Fischer, United States Geological Survey (USGS), who provided Geographic Information System (GIS) mapping of the 2012 State Master Plan; Mr. Kaitlyn Carriere, USACE CWPPRA Program Coordinator, who organized and provided logistics for the meeting; and Ms. Kylie Ford, AECOM, who recorded the minutes. Mr. Inman also introduced Mr. Stuart Brown, the RPT Region 1 Leader, Louisiana Coastal Protection and Restoration Authority (CPRA) State Representative, and Planning and Evaluation (P&E) Subcommittee member. The purpose of the RPT meeting is to receive nominations and public comments for projects in Region 2. Region 2 consists of two basins: Barataria and Breton Sound.

2. Agenda Item #2, Project Priority List (PPL) 26 Selection Process Brief Overview and Ground Rules for PPL 26 Nomination Meeting. Mr. Inman delivered a PowerPoint presentation, which is available online at the CWPPRA website. He announced that the PPL 25 process was recently completed. The January 2016 Task Force meeting was cancelled due to the Mississippi River high water event, and it was replaced with an electronic vote. The results of the Task Force meeting were announced in a CWPPRA Newsflash. Mr. Inman asked that the 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 2 are: Plaquemines, Jefferson, Orleans, Ascension, Assumption, St. Bernard, St. James, St. Charles, Lafourche, and St. John the Baptist.

Nominees must be consistent with the 2012 State Master Plan. Mr. Inman noted that planning and modeling for the 2017 State Master Plan is underway, and suggested that areas of concern should be directed to CPRA for inclusion. The Task Force will likely require nominees to be consistent with the 2017 State Master Plan in the future. A project can be nominated from only one basin, except for coastwide projects. If a project crosses multiple basins, excluding coastwide projects, it should be nominated in one basin only, based on the majority area of project influence. Coastwide projects apply across basin boundaries; their benefits are not tied to one basin. Coastwide 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, if a factsheet was not provided. Mr. Inman announced that Mr. Wandell could help attendees complete this form if they require 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 17, 2016. Written comments should be

sent to Mr. Inman. Mr. Inman asked that attendees limit comments and questions to the PPL 26 proposals and processes.

Coastwide projects propose a technique applicable across the entire coast. Only one coastwide nominee may be selected during the Coastwide Electronic Voting on February 23, 2016. The Technical Committee may or may not select a coastwide 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 5, 2016 meeting. The Work Groups may recommend that no demonstration projects move into the candidate stage. Previous demonstration projects must be re-nominated to be considered for PPL 26.

3. Agenda Item #3, Explanation of Coastwide Voting Process. The Coastwide Electronic Voting will be held on February 23, 2016. 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 Mermentau, Teche-Vermilion, and Calcasieu-Sabine Basins; and one project in the Atchafalaya Basin. If proposed, one coastwide 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 prior to the end of the meeting.

Mr. Inman explained the voting process. Excel spreadsheets and portable document format (pdf) documents will be provided to the voting representatives one week prior to the vote. Voters will receive voting sheets for the basins for which they are eligible to vote, and the column on which they need to mark their vote will be highlighted. Voters must email or fax their votes to Ms. Carriere by 10:30 am on February 23, 2016.

Following the Coastwide Electronic Voting, an agency will be assigned to each project to prepare a factsheet and map if one is not already prepared. The Engineering and Environmental Work Groups will then review the draft features and assign preliminary costs and benefits. They will also verify that the coastwide and demonstration projects meet PPL 26 requirements.

Mr. Inman reviewed the remaining steps in the PPL 26 process. Ten candidate projects and up to three demonstration projects will be selected at the April 5, 2016 Technical Committee Meeting. Written public comments should be submitted to Mr. Inman at the addresses in the agenda by March 22, 2016. 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) on December 7, 2015. The Task Force will make the final decision in January 2017. In PPL 25, 11 projects were selected at the April Technical Committee and five projects were approved in January 2016.

Mr. Inman stated that there were questions regarding the process of combining project nominations at the Region 3 RPT meeting. He added that there is not an official process listed in the CWPPRA Standing Operating Procedures (SOP) document and a recommendation will be made to the Technical Committee to improve upon the process in the future.

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

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

#1 – Breton Land Bridge Marsh Creation (West), River aux Chenes to Grand Lake. This project was presented by Ms. Kimberly Clements, NMFS. The project is located just south of the Caernarvon Freshwater Diversion (BS-08) project, and is based on a project previously developed by the United States Fish and Wildlife Services (USFWS). The project would restore a land bridge in Breton Sound. Borrow material could be sourced from the Mississippi River or interior borrow from within Lake Lery or Grand Lake. The project would require between two and four increments. The first increment, currently proposed as Option A, would include 500 acres of marsh creation and nourishment, restore one mile of Orange Bayou, and protect one mile of the Grand Lake western shoreline. The project would connect to the River Aux Chenes (Oak River). The construction cost including a 25% contingency is $22 to 37 million. Fully-funded, the project would cost $25 to 48 million.

Mr. Brown announced that the project does not comply with the 2012 State Master Plan and confirmed that it will not be eligible for PPL 26 voting. He expressed his appreciation for the project and added that it will be considered for the 2017 State Master Plan.

Nominations were closed for the Breton Sound Basin.

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

#1 – Bay Coquette Ridge Restoration Option A. This project was presented by Mr. Brad Crawford, Environmental Protection Agency (EPA). This project is consistent with Master Plan project. It is located at the end of Spanish Pass Ridge. From 1958 to 1985, the project area was almost entirely solid marsh; however, it is now deteriorated marsh and shallow open water areas. There are three increments available for this project, but the currently proposed project is Option A. Option A includes 706 acres of marsh creation and 14,000 linear feet (LF) of ridge restoration. In the event that construction bids are favorable, the project could be expanded to include all or portions of Option B. The construction cost including a 25% contingency is $29 million.

#2 – Freeport Sulphur Marsh Creation. This project was presented by Mr. Brad Crawford, EPA. This project is consistent with the Master Plan. Problems include saltwater intrusion and other common issues that have contributed to marsh loss. In 1935, the area was solid marsh, but it is now deteriorated. The project includes 627 acres of marsh creation and nourishment near the Port Sulphur Canal. It is located near Barataria Bay. Borrow material would be sourced from the

Mississippi River. The construction cost including a 25% contingency is $24 million and the fully-funded cost is $30 to 35 million.

#3 – Barataria Bay Waterway East Marsh Creation. This project was presented by Mr. Quin Kinler, Natural Resources Conservation Service (NRCS). The project is located near the Bayou Dupont Sediment Delivery System (BA-39) and the South Shore of the Pen Shoreline Protection and Marsh Creation (BA-41) projects. The project area is adjacent to the Barataria Bay waterway and just north of the Bayou Barataria Ridge. The project will construct a band of marsh creation extending from the Barataria Bay waterway to fill in a large open water area. The project is consistent with the 2012 State Master Plan. It will include 240 acres of marsh creation using material from the Mississippi River, sourced through the long distance dredge corridor. The construction cost including a 25% contingency is $35.5 million; without the contingency, the construction cost is estimated to be $28.4 million. An audience member expressed concerns regarding the southern portion of the project. He stated that the existing footprint overlaps with an existing Ducks Unlimited project. Mr. Kinler responded that NRCS would adjust the project accordingly to adapt to the projects currently in place. The audience member added that he has enjoyed working with NRCS in the past and feels that the project can be completed with adjustments. There are approximately six years remaining on the existing Ducks Unlimited contract.

#4 – Bay Dos Gris Marsh Creation. This project was presented by Mr. Quin Kinler, NRCS. Problems include a widespread loss of emergent marsh and increased shoreline erosion along Little Lake and Turtle Bay. The project is located in Jefferson Parish near the Lafourche Parish border. Only the remnants of deteriorated marsh currently separate Little Lake from Barataria Bay and the 2012 State Master Plan has identified the area to be in need of marsh creation. The project was originally proposed to align with the 2012 State Master Plan exactly; however, due to anticipated construction difficulties, the project alignment was altered to more efficiently capture the goals of the Master Plan. The current proposal would be the first increment and would consist of 214 acres of marsh creation and 418 acres of marsh nourishment. The construction cost including a 25% contingency is $20.4 million. Mr. Patrick Williams, NMFS, asked about the source of the borrow material. Mr. Kinler responded that Little Lake would likely be the borrow source.

#5 – Northeast Turtle Bay Marsh Creation and Critical Shoreline Protection. This project was presented by Mr. Quin Kinler, NRCS. The project is located within a small area of Little Lake known as Northeast Little Bay. There are numerous projects within the area, including the Northwest Turtle Bay Marsh Creation (BA-125), Barataria Basin Landbridge Shoreline Protection (BA-27), and Dedicated Dredging on the Barataria Basin Landbridge (BA-36) projects. The current proposal lies to the southwest of the existing projects. Problems include the potential for shoreline breaches that would engulf existing channels, water exchanges through a pipeline canal, and the widespread loss of emergent marsh. A particular area of concern is from the Harvey Cut Off to the Bay. The project consists of three basic components: 2,335 LF of critical shoreline protection along the small peninsula to prevent the loss of the land strip, 505 acres of marsh creation and 254 acres of marsh nourishment, which would fill in an existing pipeline channel, and two channel liners at primary water exchange points. The construction cost including a 25% contingency is $86.5 million assuming a Mississippi River borrow site. An

audience member asked when material would be available through the dedicated corridor. Mr. Kinler responded that the long distance dredge pipeline corridor ends at the Barataria Bay Waterway. He added that the distance from that point would be an additional five to eight miles. There is a permit underway to expand this corridor, but it is currently not constructed. The cost is high largely due to the necessary corridor extension. The audience member added that the recently implemented corridor has already subsided due to high water events.

#6 – Elmer's Island Back Barrier Marsh Creation. This project was presented by Mr. Patrick Williams, NMFS. Jefferson Parish requested that this project be nominated. There have been significant investments in the project area from Grand Isle to the Caminada Headlands. This project was originally brought to the candidate stage as a part of PPL 22. Recently, the Caminada Beach and Dune Increment II (CAM2) project has been completed and the Caminada Headlands Back Barrier Marsh Creation (BA-171) project was approved for E&D. Since these approvals, NMFS has refined the features of this project and is now moving forward with re-nomination. Since PPL 22, the marsh creation acreage has been reduced and two culverts have been added to maintain hydrology with the lagoon. NMFS has coordinated with Mr. Brad Miller, CPRA, to ensure cohesiveness with CAM2. The project would create 265 acres of marsh with two million cubic yards of borrow material, and would include eight culverts under Elmer's Road. After the 20-year project life, the project is expected to benefit 237 net acres. The construction cost including a 25% contingency is $19 million

#7 – Wilkinson Canal Marsh Creation and Terracing. This project was presented by Mr. Patrick Williams, NMFS. This project has been proposed in multiple PPLs and has previously been a candidate project. It is consistent with the 2012 State Master Plan. There are multiple, complementary CWPPRA projects within the nearby Bayou Dupont area. The project includes 465 acres of marsh creation within three cells and an additional 24,150 LF of terraces within 345 acres of open water. The project could be scaled down to fit within the budget constraints of the CWPPRA Program. The current project alignment is just north of Poverty Point. The construction cost including a 25% contingency is $28 million. The fully-funded cost is estimated to be $38 to 40 million

#8 – Spanish Pass Ridge and Marsh Creation. This project was presented by Ms. Kimberly Clements, NMFS. The goal of this project is construct a ridge and marsh habitat that connects to the Mississippi River. The project is located near the recently constructed Grand Liard Marsh and Ridge Restoration (BA-68) project, which has provided several learning opportunities, such as ways to avoid pipelines and oyster leases. There is another project underway complementary to this project that is working with the Beneficial Use of Dredged Material (BUDMAT) Tiger Pass project, which is utilizing a Hopper Dredge Disposal Area (HDDA) to recreate marsh and ridge habitat. Due to the existing project, this Spanish Pass Ridge and Marsh Creation proposal has been adapted to fill in the missing components. It will include 20,000 feet (15 acres) of ridge and 370 acres of marsh creation utilizing borrow material from a nearby bay. The construction cost including a 25% contingency is $26.5 million.

#9 – Coffee Bay Marsh Creation and Shoreline Protection. This project was presented by Mr. Robert Dubois, USFWS. The project is located southwest of Little Lake, adjacent to the Little Lake Shoreline Protection/Dedicated Dredging Near Round Lake (BA-37) project, and is

complementary to the existing project. This area is north of Bayou L'ours Ridge. Problems include altered hydrology from numerous canals and levees and natural subsidence. The area also experiences high shoreline erosion rates ranging from 10 to 70 feet per year, with an average of 22 feet per year. The project will utilize borrow material from nearby Little Lake to create 158 acres of marsh creation and 35 acres of marsh nourishment. It will also include 720 feet of foreshore rock dike. The project will close existing shoreline breaches, and is expandable to include additional areas in the event that construction bids are favorable. It will benefit habitats for several species of concern. The project is expected to benefit 377 net acres after 20 years. The project will need to work around several existing pipelines and an oyster seed ground area within Little Lake. The construction cost including a 25% contingency is $25 million. Mr. Randy Moertle, representing Clovelly Farms, stated that the project runs on or near his organization's land. He thanked Mr. Dubois for nominating the project and added that Clovelly Farms has worked with the Parish, Barataria-Terrebonne National Estuary Program (BTNEP), ConocoPhillips, and other agencies to build terraces and to protect the Bayou L'ours Ridge. This project would be complementary to these projects and would fill in the large amounts of open water within the area. Clovelly Farms supports this project.

#10 – Grand Bayou Marsh Creation and Terracing. This project was nominated by Mr. Kevin Roy, USFWS. The project lies between the Bayou Grand Chenier Marsh and Ridge Restoration (BA-173) and Lake Hermitage Marsh Creation (BA-42) projects. A significant amount of funding has been spent in this area from multiple agencies including CWPPRA, Louisiana Department of Natural Resources Coastal Management Division (LDNR-CMD), Louisiana Oil Spill Coordinator's Office (LOSCO), and Natural Resource Damage Assessment (NRDA) to restore over 1,000 acres. The current proposal will be complementary to all of the existing work in the area. It would utilize borrow material from the Mississippi River to construction 365 acres of marsh creation and nourishment and 21,600 LF (15 acres) of terracing. It is anticipated to benefit 319 net acres after the 20-year project life. The construction cost including a 25% contingency is $28.7 million

#11 – East Bayou Lafourche Marsh Creation. This project was presented by Mr. Kevin Roy, USFWS. This project was previously a candidate project in PPL 25; during the PPL 25 evaluation process, the water depths were determined to be too deep to construct terracing, requiring adjustments. The proposal now includes only one marsh creation cell, but will secure an area of marsh between Bayou Lafourche and the non-elevated, marsh-level LA-1. It is near the recently approved PPL 25 East Leeville Marsh Creation project, and will complement it by protecting Leeville and Port Fouchon. It will utilize the same Little Lake borrow site to create and nourish 417 acres of marsh. After the 20-year project life, the project is anticipated to benefit 330 net acres. The construction cost including a 25% contingency is $25.5 million.

#12 – Bayou Long Marsh Creation and Ridge Restoration – Increment 1. This project was presented by Ms. Angela Trahan, USFWS. It is located in an area that has some of the highest subsidence in the State. It is consistent with the 2012 State Master Plan. The project will complement many of the recently completed barrier island restorations by restoring a north-south ridge, which will help protect the upper basin from fetch and saltwater intrusion. It will also create a footprint for future marsh creation projects and support potential diversion projects. The Plaquemines Parish Ridge Restoration Program has identified this as an area of need for ridge restoration. There are several pipelines in the area which would require strategic planning.

Preliminary investigations have resulted in the current proposal of two northern cells as the first increment of the project. This increment will include 142 acres of marsh creation utilizing Mississippi River borrow material, eight acres of ridge, and 10,000 LF of gabion mat shoreline protection. The construction cost including a 25% contingency is $35 to 40 million.

#13 – Grand Pierre Island Restoration. This project was presented by Ms. Donna Rogers, NMFS. It is located in Plaquemines Parish near many recently and soon-to-be constructed projects. Grand Pierre is located between the East Grand Terre and Chenier Ronquille islands. Aside from Grand Pierre Island, every barrier island in the State has been restored or has funding for restoration. If the island is lost, it will create the largest pass within 50 miles of barrier islands and headlands. The island has not been identified by the State as a priority for restoration under any funding mechanism. The project will utilize material from the site used by the Chenier Ronquille restoration, and will require a pump distance of approximately four miles. It will include a complete barrier island restoration: 127 acres of beach and dune construction, 93 acres of marsh creation, and 136 acres of marsh nourishment. The construction cost including a 25% contingency is $19.2 million.

Nominations were closed for the Barataria Basin.

c. Mr. Inman opened the floor for nominations for coastwide projects.

Nominations were closed for coastwide projects.

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

Nominations were closed for demonstration projects.

5. Agenda Item #5, Announcement of Upcoming PPL 26, Task Force, Technical Committee and Other Meetings. Mr. Inman reiterated that Parish representatives should coordinate with Mr. Wandell to register to participate in the Coastwide Electronic Voting. The voting sheets must be turned into Ms. Carriere by 10:30 am on February 24, 2016. Additional dates are on the agenda. Mr. Inman thanked everyone for attending.

6. Agenda Item #6, Adjourn. The meeting was adjourned at 11:25 pm.

CEMVN-PM-C (10-1-7a) 27 Jan 16

MEMORANDUM FOR RECORD

SUBJECT: Regional Planning Team (RPT) Region 3, Gray, LA, 27 Jan 16, 10:00 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. The purpose of the RPT meeting is to receive nominations and public comments for projects in Region 3. Region 3 goes from Vermilion Parish to Bayou Lafourche and consists of three basins: Terrebonne, Atchafalaya, and Teche-Vermilion. Mr. Boustany introduced Ms. Kaitlyn Carriere, U.S. Army Corps of Engineers (USACE), who organized the meeting and controlled the PowerPoint presentations; Ms. Anne Watkins, AECOM, who recorded the minutes of the meeting; Ms. Michelle Fischer and Ms. Adrienne Garber, U.S. Geological Survey (USGS), who provided geographic information system (GIS) mapping; and Mr. Randy Perkins, who recorded the sound for the meeting. Mr. Boustany welcomed Mr. Mart Black, Coastal Restoration Director for Terrebonne Parish; Mr. Jerry Ledet, Terrebonne Parish Coastal Zone Management (CZM) & Restoration Advisory Committee; Gerald Schouest, Terrebonne Parish; Vicki Summers, Terrebonne Parish; Ms. Amanda Voisin, Lafourche Parish CZM; Mr. Ray Freemin, Iberia Parish Levee, Hurricane, and Conservation District; and Mr. Ralph Libersat, Vermilion Parish. Mr. Boustany introduced the Technical Committee, Planning and Evaluation (P&E) Subcommittee, and Work Group members Ms. Karen McCormick, Environmental Protection Agency (EPA); Mr. Brad Inman, USACE; Dr. Charles Sasser, Louisiana State University (LSU); Dr. Mark Hester, University of Louisiana at Lafayette (ULL); and Mr. Stuart Brown, Louisiana Coastal Protection and Restoration Authority (CPRA), who will help determine whether proposed projects are consistent with the 2012 State Coastal Master Plan.

2. Agenda Item #2, Project Priority List (PPL) 26 Selection Process Brief Overview and Ground Rules for PPL 26 Nomination Meeting. Mr. Boustany delivered a PowerPoint presentation, which is available online at the CWPPRA website. Copies of the PPL 26 Selection Process and Schedule were available at the meeting.

Mr. Boustany asked that the parish-designated voters fill out a voting registration form and provide their contact information. Parishes eligible to vote for nominees in Region 3 are: St. Mary, Terrebonne, Assumption, Lafourche, Iberia, and St. Martin.

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

Presenters without factsheets 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. 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 17, 2016. Mr. Boustany asked that attendees limit comments and questions to the PPL 26 proposals and processes.

Coastwide projects propose a technique applicable across the entire coast. They can be nominated at any or all RPT meetings. All coastal Parishes and agencies will vote on the selection of a coastwide nominee. Only one coastwide nominee may be selected during the Coastwide Electronic Voting on February 23, 2016. The Technical Committee may or may not select a coastwide project at the April 5, 2016 meeting. Demonstration projects demonstrate a technology which can be transferred to other areas in coastal Louisiana. The Engineering and Environmental Work Groups will validate whether or not a project meets CWPPRA Standard Operating Procedure (SOP) criteria. The RPT will select up to six demonstration projects during the February 23, 2016 Coastwide Electronic Vote; the Technical Committee may select up to three demonstration projects at the April 5, 2016 meeting. The Work Groups may recommend that no demonstration projects move into the candidate stage. Previous demonstration projects must be re-nominated to be considered for PPL 26.

3. Agenda Item #3, Explanation of Coastwide Voting Process. The Coastwide Electronic Voting will be held on February 23, 2016. 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 Mermentau, Teche-Vermilion, and Calcasieu-Sabine Basins; and one project in the Atchafalaya Basin. If proposed, one coastwide project may be chosen for inclusion as a nominee. In addition, the RPTs can select up to six demonstration projects for further evaluation.

Parishes must identify their voting representative at the RPT meeting to be eligible to vote. Each parish representative, Federal agency, and the State (CPRA) will have one 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 prior to the end of the meeting. Public comments will be accepted orally at the RPT meeting or in writing by February 17, 2016.

Mr. Boustany explained the voting process. Excel spreadsheets and portable document format (pdf) documents will be provided to the voting representatives one week prior to the vote. Voters will receive voting sheets for the basins for which they are eligible to vote, and the column on which they need to mark their vote will be highlighted. Voters must email or fax their votes to Ms. Carriere by 10:30 am on February 23, 2016.

Following the Coastwide Electronic Voting, an agency will be assigned to each project to prepare a nominee project factsheet and map if one is not already prepared. The CWPPRA Engineering and Environmental Work Groups will then review the draft features and assign preliminary cost and benefit ranges. They will also verify that the coastwide and demonstration projects meet PPL 26 requirements.

Mr. Boustany reviewed the remaining steps in the PPL 26 process. Ten candidate projects and up to three demonstration projects will be selected on April 5, 2016 at the Technical Committee Meeting. Written public comments should be submitted to the USACE by March 22, 2016.

Oral comments will be accepted at the Technical Committee Meeting. Candidate projects will undergo further review between May and October. The Work Groups will conduct site visits and determine benefits, project features, and cost estimates. The Technical Committee will vote to recommend up to four projects for Phase I Engineering and Design (E&D) on December 7, 2016. The Task Force will make the final decision in January 2017.

Mr. Boustany reviewed the PPL 26 timeline again and presented the address for written public comments, which was also available in the PPL 26 Selection Process and Schedule available at the meeting.

Mr. Boustany announced that nominees must be consistent with the 2012 State Master Plan.

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

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

#1 – West Vermilion Marsh Creation and Shoreline Protection. This project was presented by Dr. Sharon Osowski, EPA. The project was developed in partnership with Ms. Cindy Steyer, NRCS. This project is consistent with the Master Plan. The project area has experienced both wetland loss and shoreline erosion due to subsidence, storm loss, sea level rise, oil and gas canals, and shoreline wave energy. The project consists of a marsh creation polygon near North Lake in one large marsh creation cell and shoreline protection along Vermilion Bay. It will use sediment from Vermilion Bay to create 303 acres and nourish 374 acres of marsh, and will also armor 18,000 linear feet (LF) of shoreline along Vermilion Bay. The construction cost including a 25% contingency is $17.3 million. Mr. Randy Moertle, representing E. A. McIlhenney Enterprises, the property owner adjacent to the project, stated that the Louisiana Department of Wildlife and Fisheries (LDWF) agreed to take on the maintenance of the shoreline protection feature of the project when it was proposed in 2015. Mr. Lance Campbell, LDWF, clarified that LDWF supports the project and is willing to assume ownership and liability of the hard structures at the end of the project's 20-year life. Mr. Libersat expressed his full support for this project; it fits nicely with Vermilion Parish's objectives in protecting the rim of Vermilion Bay.

#2 – West Rainey Marsh Creation Increments A-C. This project was presented by Dr. Sharon Osowski, EPA. This project is consistent with the Master Plan and is located near the southeast bank of Freshwater Bayou Canal. Problems in the project area include interior marsh loss, subsidence, construction of oil and gas canals, shoreline erosion along Freshwater Bayou, and the enlargement of Freshwater Bayou resulting in the erosion of embankments and increased tidal exchange. Project features include the creation and nourishment of 400 acres of emergent marsh using sediment from Freshwater Canal and Little Vermilion Bay. The marsh creation will include tidal ponds and creeks. The construction cost including a 25% contingency is $26 million.

#3 – Cheniere Au Tigre Ridge Restoration and Marsh Creation. This project was presented by Dr. Sharon Osowski with EPA. The project is consistent with the Master Plan. Problems in the project area include subsidence and the degradation of the ridge systems. Salinity gradients are currently maintained by the skeletal distributary ridges and cheniers that act as barriers between

the internal marshes and the Gulf of Mexico. When breaches occur, the tidal process converts the marsh to interior ponds, lakes, and bays with increased salinities. This project proposes to create approximately 60,000 LF of historic ridge along Bill Ridge and Cheniere au Tigre and create or nourish 934 acres of emergent marsh using sediment from Gulf of Mexico. The construction cost including a 25% contingency is $28 million and the estimated fully-funded cost is $35-40 million.

#4 – Belle Isle Bayou Marsh Creation and Nourishment. This project was presented by Dr. John Foret, National Marine Fisheries Service (NMFS). This project is located east of Freshwater Bayou, south of Belle Isle Bayou, and immediately north of the West Rainey Marsh Creation Increments A-C proposal. This area has undergone a significant hydrologic shift with the creation, dredging, and widening of the Freshwater Bayou Channel. Interior ponding has led to a floatont system, which is more susceptible to storm damages. It is now a shallow open water area. The project location is part of a larger landscape that separates Vermilion Bay on the east from Freshwater Bayou and the marshes south of Pecan Island on the west. If left to deteriorate, the project area would eventually open Vermilion Bay into Freshwater Bayou. The project would construct 450 to 500 acres of marsh with interior training dikes filled with sediment from the Vermilion Bay area. Vermilion Bay was chosen as the borrow site despite a longer pumping distance because it is a recurring source of material. The project also includes 8,000 LF of trenasses or tidal channels. The project is expandable should bids come in lower than anticipated. The project would reestablish a historic land bridge between Vermilion Bay and the marshes south of Pecan Island. This project is consistent with the Master Plan. The construction cost including a 25% contingency is $24.6 million. Mr. Libersat spoke in support of this project. This project would work synergistically with the Cole's Bayou Marsh Restoration (TV-63) project and other projects slated for that area. Dr. Foret explained that the project uses Vermilion Bay as a borrow source rather than Freshwater Bayou because he does not want to widen the Freshwater Bayou footprint.

#5 – Deadman's Island Marsh Creation and Nourishment. This project was presented by Dr. John Foret, NMFS. This project is immediately west of Southwest Pass on the southern rim of Vermilion Bay. Canals in the area are getting larger, and interior ponding is leading to the coalescence of open water areas. This area was introduced to NMFS by the Rainey Conservation Alliance as an area of interest for a CWPPRA project. The area has a rim of high marsh that would be a good boundary for the project. The proposal consists of 300 acres of unconfined marsh creation and 10,000 LF of bay shoreline, which would be built to +3 North American Vertical Datum of 1988 (NAVD88) with earthen material and overlaid with articulated mats that could be planted. This height would allow for overtopping without daily erosion. The project would create a total of 350 acres of marsh with unconfined fill using material from Vermilion Bay. The project is expandable if favorable construction bids are received. It would create 10,500 LF of low elevation living shoreline and reestablish a historic land bridge feature between Vermilion Bay and Hell Hole Bayou. Because it is unconfined, interior ponds and tidal channels would be expected to reform. The construction cost including a 25% contingency is $25 million. Mr. Libersat spoke in support of the project and stated that Vermilion Parish would like to see this project expanded towards the east to protect the spit, which is quickly disappearing. Without that hydrologic barrier, Vermilion Bay will experience dynamic salinity changes. Mr. Moertle, representing the Rainey Conservation Alliance, noted that he represents the landowner between

Freshwater Bayou Channel and Vermilion Bay. The Rainey Conversation Alliance held a meeting with the agencies to discuss the projects that they wanted to be proposed at the PPL meeting, and he thanked everyone for meeting with private landowners, listening to them, and developing projects that address their major concerns. Mr. Moertle spoke in support of each of the Teche-Vermilion projects; they are in perfect alignment with private landowners' desires. Mr. Campbell expressed support for this project and stated that it is located on the State Wildlife Refuge. Mr. Scott Porter, shellfish consultant for the State, stated that he has experience in the Vermilion Basin and asked about remediation plans for oil and gas access canals. Dr. Foret responded that the project team would need to coordinate with the oil and gas companies to see what they would be willing to agree to, which would occur during the design phase. Canals would probably just be shallowed, but not completely filled.

#6 – South Humble Canal Shore Protection and Marsh Creation. This project was presented by Mr. Kevin Roy, U.S. Fish and Wildlife Service (USFWS). This project is located just to the south of the two previous nominees along Freshwater Bayou Canal, Belle Isle Bayou Marsh Creation and Nourishment and West Rainey Marsh Creation Increments A-C. This project was a candidate for PPL 24, but several changes were made for this years' proposal. The landowner's top priority is shoreline protection along the eastern bank of Freshwater Bayou, so the changes reflect that request. The project includes a revetment along the east bank of the Freshwater Bayou Canal and a band of marsh creation that would be placed directly behind the revetment. The project would create 201 acres and nourish 157 acres of marsh, and the shoreline protection feature would protect 27 acres over the course of the project life. The project currently proposes to use material from the Gulf of Mexico, but the project team could look at other borrow sources during the E&D phase. The cost estimate including a 25% contingency is $22.7 million. Mr. Libersat echoed Mr. Moertle's earlier comments; the Parish told the agencies their priorities, and is very happy that the proposed projects are in line with that agenda. The Parish is supportive of this project, especially because of the shoreline protection feature. Mr. Libersat avowed that marsh creation without shoreline protection is a waste of money. He encouraged the use of Vermilion Bay as a borrow source if possible because it is a renewable source.

#7 – Lake Sand Shoreline Protection. This project was presented by Ms. Cindy Steyer, NRCS. This project is consistent with the Master Plan. The project is located on the east side of Marsh Island and the south shore of West Cote Blanche Bay. Marsh Island is structurally important to maintaining the estuarine character of the bay system, and the eastern tip of the island maintains the tidal circulation pattern. This area receives the wave and tidal impacts of long fetch along the open West and East Cote Blanche Bays. This project would address the narrow bands of marsh that currently separate Lake Sand and other interior lakes from West Cote Blanche Bay. The average shoreline erosion rate is 14 feet per year, and some areas experience losses of up to 35 feet per year. These areas have become very deteriorated and have narrowed quite a bit. Without protection, this large area could coalesce with West Cote Blanche Bay. The proposed project includes 20,260 LF of rock breakwater to provide continuous shoreline protection in association with the Marsh Island Hydrologic Restoration (TV-14) project and beneficial use of dredged material to create marsh, which would be placed between the foreshore rock dike and the existing shoreline. A Coastal Impact Assistance Program (CIAP) project on the south shore of Grand Lake used the same methodology and was very successful. The project would directly protect 120 acres of marsh, construct 37 acres of marsh creation, and create another 28 acres of marsh

via accretion over the project life. It would stabilize the rim of Lake Sand, protecting over 975 acres of habitat. The construction cost including a 25% contingency is $15 million. This area is structurally important to retain the Bay as an estuary and maintain the salinity gradient and tidal circulation. It provides habitat for waterfowl, shore birds, and migrating neotropical species. The quiet water of interior marshes and mudflats have a high value for foraging, nesting, resting, and diving. If the Bay coalesces with the Lake, the point would be narrowed significantly, and the East Marsh Island Marsh Creation (TV-21) project would experience wave action from the north, causing erosion to accelerate. Mr. Campbell stated that this project is located on Marsh Island, which is a very important wildlife refuge. This area protects the northern shore of Vermilion Bay. The eastern portion of Marsh Island is very susceptible to wave action from the north across the Bay. LDWF fully supports the project and is willing to assume the liability and ownership of the shoreline protection structures at the end of the 20-year life of the project. Mr. Freemin expressed his support of the project, especially because it will protect the existing TV-14 and TV-21 investments.

#8 – Freshwater Bayou East Marsh Creation and Hydrologic Restoration. This project was presented by Mr. Ron Boustany, NRCS. The project is on the southeast side of Freshwater Bayou Canal. This project uses less borrow material to impact a broader area than a traditional marsh creation project. It consists of 119 acres of marsh creation in open water, 35 acres of marsh nourishment, and 24,500 LF of terraces, but affects over 2,000 acres of habitat. The project consists of both marsh creation and terracing, but some terraces would be closed circular cells that would then be filled. The project would use material from Freshwater Bayou to create and fill the terraces. This project could stabilize the area by separating the larger open water areas. It is designed to use the tide to capture sediments, silts and clays, from the water, basically using the marsh as a filter of sediment and nutrients. It would be similar to the TV-63 project. The project also includes seven water control structures to move water from north to south through the project, which will allow the terraces to capture sediment and nutrients. The construction cost including a 25% contingency is $11 million. Mr. Jason Kroll, National Oceanic and Atmospheric Administration (NOAA) Restoration System, asked about the location of existing and funded shoreline protection projects along the east bank of Freshwater Bayou. Mr. Boustany responded that NRCS has built shoreline protection features on the west side, but he was unsure of the locations of other features. Mr. Libersat stated that he would like to see the agencies work together to all cosponsor a project. Each proposed project has elements that Vermilion Parish supports. The area needs shoreline protection along Freshwater Bayou. He encouraged the agencies to work together to get one very good project. Mr. Randy Moertle, representing the Rainey Conservation Alliance, stated that requiring projects to be consistent with the 2012 State Master Plan will continue to lead to project overlap. However, the projects that have been proposed are significantly different and therefore should be left in as separate project proposals. The landowners in the area would like to see more shoreline protection; this is the Mississippi River Gulf Outlet (MRGO) of the west, and the marshes are being destroyed from the inside out. This area is not protected. As long as the shoreline protection is less than 25% of the cost of the project, the State is amenable to paying for these features along federal navigation channels. Mr. Boustany noted that the cost of this project would allow for some shoreline protection. Mr. Moertle stated that Freshwater Bayou Channel was built at 125 feet wide, but is now over 1,000 feet wide. Mr. Porter, representing EcoRigs, expressed his support

for filtering and capturing the material using the methods proposed in this project, but noted that the project also needs to include armoring.

Nominations were closed for the Teche-Vermilion Basin.

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

Nominations were closed for the Atchafalaya Basin.

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

#1 – Cocodrie East Marsh Creation Option A. This project was presented by Dr. Sharon Osowski, EPA. This project is consistent with the Master Plan. The project area has experienced subsidence, saltwater intrusion, a lack of sediment supply, sea level rise, and exposure to open water conditions, which have caused marsh loss. The project features include 420 acres of marsh creation and nourishment in Increment A using sediment from Terrebonne Bay. The project would reestablish the western rim of Terrebonne Bay and reduce shoreline erosion. The construction cost including a 25% contingency is $25 million.

#2 – Pointe au Chien Ridge Restoration and Marsh Creation Option A. This project was presented by Dr. Sharon Osowski, EPA. This project is consistent with the Master Plan. The project area has experienced wetland losses due to the high subsidence of soils, historic oil and gas activity, storm surge, and erosion. This project will try to return the area to its geography in 1954. Project features include the creation and nourishment of 760 acres of marsh using sediment from Deep Lake and Lake Raccourci and restoration of 9,300 LF of the historic ridge. The construction cost including a 25% contingency is $26 million. Mr. Porter stated that this should be the top priority of the State, and that barrier islands are needed to protect this area.

#3 – Belle Pass-Golden Meadow Marsh Creation: West Leeville Increment. This project was presented by Dr. Sharon Osowski, EPA. This project is consistent with the Master Plan. Problems in the project area include altered hydrology due to oil and gas dredging, subsidence, and storm losses. The Terrebonne Basin had the highest land loss rate across the state from 1985 to 2004. Project features include the creation and nourishment of 400 acres of emergent marsh from within four polygon options using sediment from Little Lake. The construction cost including a 25% contingency is $24.3 million. The project is located on ConocoPhillips property, and they support the project. Ms. Voisin expressed support for this project. This project area partially overlaps an area that was identified in Lafourche's Multiyear Implementation Plan. The area experiences a very high land loss rate.

#4 – North Terrebonne Marsh Creation. This project was presented by students from the Wetlands Discovery Center, Ms. Mallory Robichaux and Ms. Jenna Brunet from South Terrebonne High School. This project is sponsored by EPA and is consistent with the Master Plan. The marshes in eastern Terrebonne are the most rapidly deteriorating in all of Louisiana. Problems in the project area include subsidence, saltwater intrusion, historic oil and gas activity, and deterioration of the barrier islands. The project is located near Lake Chien, Lake Felicity, and the community of Isle de Jean Charles, which recently received over $50M from the Department

of Housing and Urban Development (HUD) to relocate their community due to increased vulnerability from land loss. The project would create and nourish 730 acres of marsh using material from Lake Felicity and would use containment dikes that allow for tidal exchange. Once complete, the project will be planted to reestablish plant productivity within the marsh. The construction cost including a 25% contingency is $25 million. The estimated fully-funded cost is $25-30 million. The project protects levees, communities, and infrastructure in the most vulnerable areas of the region. Mr. Schouest endorsed this project wholeheartedly. This project is the closest to human development of all projects proposed at the RPT. The project protects a multi-million dollar levee system that the Parish is building. It is a very important area. Mr. Black stated that this is a needed project in Terrebonne Parish. He pointed out that this is the eastern part of Terrebonne and questioned why it was named the North Terrebonne Marsh Creation project. Dr. Foret responded that it is titled "North" because that is the name of the polygon in the Master Plan.

#5 – East Catfish Lake Marsh Creation and Terracing. This project was presented by Mr. Kevin Roy, USFWS. The project is consistent with the Master Plan. The Catfish Lake area has a lot of oil and gas canals and is seeing increasing interior marsh breakup, with only spoil banks and remnant islands of marsh remaining. The lake shoreline is also eroding, with rates as high as 29 feet per year on the southeast shoreline. If the eastern and southeastern shoreline of Catfish Lake is not reestablished, erosion could eventually threaten the hurricane protection levee. The project consists of 483 acres of marsh creation in three cells, 37,730 LF of terracing in three cells, and 6,900 LF of shoreline armoring. Other areas could also be reviewed during the E&D phase. Filling some of the canals could also be reviewed. PPL 22 North Catfish Lake is an NRCS project that is currently in Phase I, and the proposed project would continue reestablishing the lake shoreline on the east and southeast. The alignment of the project features does need to consider the LA-1 extension, which will eventually be built in the area. The project would use Catfish Lake as a borrow source; the borrow site for the NRCS project may have enough material for both projects. The cost is based on using gabion mattresses for the armoring portion of the project. The project would result in 405 net acres over the 20-year project life. The construction cost including a 25% contingency is $23.9 million. Ms. Voisin expressed her appreciation for this project being renominated and stated that Lafourche has always supported it in the past. The project overlaps with one that is included in Lafourche's Multiyear Implementation Plan.

#6 – Bayou Terrebonne Ridge Restoration and Marsh Creation. This project was presented by Mr. Kevin Roy, USFWS. This was a PPL 25 candidate project, but changes have been made for PPL 26. The project consists of ridge restoration on the eastern bank of Bayou Terrebonne with marsh creation behind the ridge. This year's proposal focuses on the upper reach of the project, and therefore it would not need armoring for the marsh creation. It uses a Lake Barre borrow site. The project consists of 209 acres of marsh creation, 34 acres of nourishment, and 12,543 LF of ridge restoration. The project would net 199 acres over 20 years. The construction cost including a 25% contingency is $25.6 million. Several mitigation projects have been constructed in this area that would be protected by this project, and it would also protect the brand new hurricane protection levee and floodgate, as well as other public infrastructure. Mr. Schouest wholeheartedly supported the project. The Parish's multi-million dollar levee system is very

close to the open water of Madison Bay. The project would also protect residents of Bayou Petit Caillou.

#7 – Small Bayou LaPointe Marsh and Ridge Restoration. This project was presented by Mr. Kevin Roy, USFWS. This project is consistent with the Master Plan. Four ridges are included in the Master Plan in this area. Instead of doing small projects on each, Mr. Roy suggested focusing on one, with the one best suited for CWPPRA being Small Bayou LaPointe. It is well protected from erosion and nearly continuous all the way from Bayou Dularge to Lake Mechant, and can tie into the North Lake Mechant Landbridge Restoration project (TE-44). The proposed project features 18,500 LF (23 acres) of ridge restoration, with marsh creation on the back side of the ridge in three cells totaling 393 acres. The proposed borrow area is Lake Mechant. The ridge could be placed on either the north or south side of the historical bayou. The geography in the area would allow for a nearly continuous ridge for more than ten miles, and there are no camps that would need to be accommodated. The construction cost including a 25% contingency is $27 million.

#8 – Bayou Jean Lacroix Marsh Creation and Terracing. This project was presented by Ms. Kimberly Clements, NMFS. The Terrebonne Basin has high land loss rates and high subsidence. The wetland loss rate for the Wonder Lake subunit is -0.87% per year, and there is limited protection to the surrounding communities. This project is consistent with the Master Plan. It is located on the south shore of the Twin Pipeline Canal. This project fits in with the goal of restoring the landbridge from east to west, starting with the Island Road Marsh Creation and Nourishment (TE-117) project which is currently in E&D and progressing towards LA-1 in Lafourche Parish. Soils in the area are a challenge, so the project team for the TE-117 project is actually looking to move from the north side to the south side of the Twin Pipeline, just east of Isle de Jean Charles community. This same approach is being applied to the current proposal. This project differs from previous years' proposals because it avoids some of the deeper open water areas and challenging soils to the east. Ducks Unlimited is also working on terraces in some of the deeper waters in the area, which can provide some protection by breaking up the wave area. This proposal includes 351 acres of marsh creation in one cell and 25,000 LF of terraces in two cells. It reestablishes a portion of Bayou Jean Lacroix and is synergistic with other projects in the area. The project would borrow from outside of the immediate project area. The construction cost including a 25% contingency is $19.3 million.

#9 – West Louisiana Highway 1 Marsh Creation and Terracing. This project was presented by Ms. Kimberly Clements, NMFS. There are several other projects in the area that either are constructed or are in E&D. Highway 1 (LA-1) is very vulnerable and can easily be flooded by a frontal passage event. The marsh in the area is very broken up, and, in some sections, there is less than 200 feet remaining between the marsh and the highway. This proposed project includes 360 acres of marsh creation in one large cell south of the Twin Pipelines between the current LA-1 and the future LA-1 corridor expansion, as well as 50,000 LF of terraces in an open water area to the west. The construction cost including a 25% contingency is $22 million. The currently proposed borrow source is Catfish Lake, but other sources are possible. The project is consistent with the Master Plan. Ms. Voisin spoke in support of this project because it provides protection for LA-1 and it overlaps with the Parish's Multiyear Implementation Plan.

#10 – Bayou De Cade Bankline and Marsh Restoration. This project was presented by Ms. Kimberly Clements, NMFS. The area has reduced intermediate/brackish marsh habitat for fisheries and the marsh is deteriorated. This project has been nominated in past years with various features. This year's proposal was Option 1 from the PPL 24 proposal, which is less challenging and avoids the issues with camps in the area. The project includes 10,560 LF of ridge on the north side of Bayou De Cade with 400 acres of marsh creation in a contained cell north of the ridge. The proposed borrow site is Lake De Cade. The project would restore a portion of the Lake De Cade shoreline and is consistent with the Master Plan. The construction cost including a 25% contingency is $22.6 million.

#11 – Terrebonne Floating Marsh Restoration. This project was presented by Mr. Quin Kinler, NRCS. This project builds on the concept of the Floating Marsh Creation Demonstration project (LA-05). It is located in Northern Terrebonne near the Gulf Intracoastal Waterway (GIWW) in what is largely a thin mat floating marsh complex. This area is experiencing floating marsh mat fragmentation due to high water conditions and wave energy north of the GIWW and excessive water flow from the Atchafalaya and GIWW at various breaks in the bank south of the GIWW. The water flow is tearing the floating marsh apart and moving these pieces out of the system via bank failures and water hyacinth mats. In some cases, the water hyacinths overtop the floating marsh mats and smother it. Another issue is reduced Submerged Aquatic Vegetation (SAV) due to turbidity, wave energy, and excessive water exchange. The project area is very large, so it is broken into five areas north and south of the GIWW to illustrate the various project features. The project features include breach repairs, bank maintenance and stabilization, floating marsh terraces, water hyacinth fields, and the creation of marsh platform. The floating terrace would be based on those designed for LA-05. It is supported by bamboo with a mesh screen on the bottom, plants above the mesh screen, and then another mesh screen above the plants, with a tent structure above to protect the plants from nutria predation. These structures would be strung together across an open water area; this project proposes to construct three rows together with an anchor system approximately every 55 feet. The type of structure can directly create floating marsh acres, can protect existing marsh from wave action, and can create an environment for marsh expansion. Another concept is the water hyacinth field, which would establish a floating barrier, trap water hyacinths, and close it with another floating barrier. This trapped water hyacinth mat would be used to create a platform upon which self-sustaining floating marsh could form. This already occurs in dead end canals when water hyacinths are prevented from leaving the system and other species invade the platform on top of the water hyacinths. This could reduce the movement of free floating water hyacinths, which would limit the movement of the water hyacinths that are causing damage to the floating marsh, and would reduce fetch and wave energy to allow the floating terraces and existing marsh floats to grow and spread. This feature would also reduce turbidity, which would improve conditions for SAV. The project area is losing the framework, the mats, and the SAV, which are very important to the habitat. The proposed project would require some flexibility due to mat movement; the exact location of the floating terraces would have to change with the location of the mats. Overall, the project features 164,000 LF of floating marsh terraces, 160 acres of water hyacinth fields, 33,600 LF of bank maintenance, 2,220 LF of bank breach repair, 1,600 LF of bank stabilization, and 73 acres of marsh creation platform. The construction cost including a 25% contingency is $36 million. Mr. Greg Linscombe, Continental Land and Fur, stated that this is a unique project for a unique area. The biggest problem in the area is that the GIWW was originally 400 feet, and is now 1,500 feet

and getting wider. As the Atchafalaya Delta fills, the water levels in the GIWW are rising. The proposed project is one way to address this problem. The project area is extremely productive in terms of waterfowl, wading birds, eagles, fish, and alligators, and boasts the largest average size alligators along the coast. This productivity is largely due to SAV. Another challenge is that traffic on the GIWW causes bankline erosion, and when the bankline is lost, breaches deepen quickly. Some breaches are ten feet deep. These breaches lead to water movement, the export of floats, the export of the bottoms of ponds, and organic material leaving the system. Then, as ponds get deeper, sunlight penetration lessens and the system loses the SAV, which protect the floating marsh. This is quite different from most projects, but it is a good project. If this issue is not addressed, the result will be thousands of acres of big muddy ponds with water hyacinths, and the productivity of the system will plummet. Mr. Schouest stated that every proposed project has been great. This area has a unique problem in Terrebonne Parish, which is too much freshwater. This project presents a way to stop the floating marsh from leaving the system. Mr. Porter expressed support for this project. Mr. Kinler added that this problem cannot be addressed by pumping in material. If the existing marsh is not built upon now, the base soils are too soft to allow for regular marsh creation later. He also noted that the cost estimate is probably high because a lot of the features in this project have not been tried before.

#12 – Bayou Terrebonne Freshwater Diversion project. This project was presented by Mr. Ron Boustany, NRCS. The marshes in this portion of the Terrebonne Basin are deprived of freshwater, and the flow of water that exists exits the system through Terrebonne Bay. This project would install two additional dedicated restoration pumps at an existing backflow culvert into Bayou Terrebonne to create a forced diversion project. The existing forced drainage pumps would remain to handle rain events, and would not jeopardize the Parish's ability to evacuate the water. Mr. Boustany worked with Parish Administration and the Public Works Department to develop the project. It would use existing pump stations and infrastructure and would also make some connection improvements to connect drainage systems. The freshwater introduction would benefit 56 acres, and the project would also include 27 acres of terracing and 194 acres of marsh creation south of the freshwater diversion. The borrow site would be Madison Bay. The parish has demonstrated the ability to build terraces in this area on the Wildlife Management Area (WMA), and these terraces have shown phenomenal results with just the intermittent operation of the pumps during rain events. These effects could be multiplied with dedicated restoration pumps. The construction cost including a 25% contingency is $15 million. Mr. Brown stated that the freshwater introduction component of the project is broadly consistent with the Master Plan. When the project was initially reviewed, it did not have marsh creation or terracing features. Mr. Brown allowed the project to compete at the RPT as consistent with the Master Plan, and stated that the final project would likely be very similar to what is proposed. Ms. Leslie Suazo, Ducks Unlimited, stated that this is an opportunity to get freshwater into a part of the Terrebonne Basin that is hydrologically isolated from natural freshwater inputs. This project provides a lot of benefits and works synergistically with Ducks Unlimited projects in the WMA. Mr. Black stated that the Parish has discussed this project internally, and that this project helps an area of the parish that is deteriorating rapidly. Most of the infrastructure for this project is in place now and just needs to be built upon. It also ties into another project that is currently in E&D, which is expected to bring additional water from the Atchafalaya into the GIWW, and since that facility crosses Bayou Terrebonne, that effort would also benefit this project. Terrebonne Parish wholeheartedly supports this project.

#13 – South Bayou Pointe aux Chenes Marsh Creation and Terraces. This project was presented by Mr. Ron Boustany, NRCS. This project is consistent with the Master Plan, but Mr. Boustany noted that the Master Plan includes such a large area of marsh creation that it would likely be cost prohibitive to completely fill. The project features 231 acres of marsh creation and 26,000 LF of terraces, but the area of impact is several thousand acres. There are remnants of marsh islands in this area, and the marsh creation cells would be designed as islands with terraces surrounding them for protection. Each island with terraces works synergistically to protect the others and the whole area could become more stable. It would reduce erosion in the area and improve habitat edge. This proposal would still allow for tidal movement. The construction cost including a 25% contingency is $19.2 million. Mr. Schouest stated that the State does not have the money to do everything, and he supported this project because it is out of the box. This project could impact two to three thousand acres of open water with just a few hundred acres of marsh creation.

#14 – North Bayou Decade Ridge and Marsh Creation. This project was presented by Mr. Ron Boustany, NRCS. There has been a lot of investment in Bayou Decade, with both USFWS and NOAA contributing ideas to restore the ridge in this area. This proposal would continue that effort. The area experiences significant freshwater flow from the local canals, which results in an incredible response in aquatic vegetation. The plant production is based on the finer sediments settling on the south side of the bayou. The proposed project includes 12,000 LF of ridge on the north bank of Bayou Decade and 247 acres of marsh creation in a large open water area where the marsh is currently deteriorated. The landowner is Apache. The project has a construction cost including a 25% contingency of $19 million and would use borrow from the north side of Lake Mechant. Mr. Boustany noted that the project could also potentially include terraces.

#15 – South Catfish Lake Marsh Creation. This project was presented by Mr. Ron Boustany, NRCS. The project includes 225 acres of marsh creation and 150 acres of marsh nourishment in four cells located north and south of the Twin Pipelines along the southern shore of Catfish Lake. It would maintain the integrity of the lake rim and adjacent marshes. The project could potentially use the same borrow source as the North Catfish Lake Marsh Creation (TE-112) project, but if there is not enough material, another source could probably be found within Catfish Lake. The acreage has been reduced because of what the borrow source will likely allow, and because no other borrow sites are feasible. The construction cost including a 25% contingency is $18 million. Ms. Voisin thanked Mr. Boustany for proposing this project. This area is a priority for Lafourche Parish. Cells 1 & 3 are part of the proposal for Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economics for the Gulf Coast States (RESTORE) Act funds. Mr. Porter noted that there are oyster leases in this area, but the low salinity impedes actual oyster production.

#16 – Grand Bayou Freshwater Enhancement. This project was presented by Mr. Robert Dubois, USFWS. This project is located in Lafourche Parish, south of the GIWW near the Point au Chien WMA. Problems in the area include increasing salinities due to the increasing loss of marshes to the south, altered hydrology, dredged canals, and saltwater intrusion that is expanding further north into the project area. The source of the freshwater would be the GIWW. The GIWW carries, on average, over 2,000 cubic feet per second (cfs) of water. Grand Bayou Canal

has small cross sections, which would be expanded to increase the freshwater flow. The project proposes to increase the flow of freshwater in Grand Bayou Canal from approximately 600 cfs to 1,600 cfs. Mr. Dubois has coordinated with the Louisiana Department of Transportation and Development (LDOTD), who has determined that the Highway 24 Bridge would not have to be replaced. Instead, they would use helper pilings to prevent scour. This has contributed to reducing the cost of this project compared to prior years' proposals, leading to a construction cost including a 25% contingency of $7.4 million. Dredged material would be placed along the shoreline embankment. The project would also include replacing a rock plug on the west side of Grand Bayou Canal with flap-gate culverts, increasing the flow in Bayou Blue, removing the earthen plug on the east at Margaret's Bayou, and adding a weir with a barge bay on the south bank of Margaret's Bayou. This project is currently not part of the Convey Atchafalaya River Water East project.

Nominations were closed for the Terrebonne Basin.

c. Mr. Boustany opened the floor for nominations for coastwide projects.

Nominations were closed for coastwide projects.

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

#1 – Sediment Accretion and Marsh Restoration Using Modified ReefBlk Design. This project was presented by Dr. Taylor Sloey, Coastal Environments, Inc. ReefBlk is an oyster breakwater with a triangular design filled with either limestone or oyster shell. It has been deployed in saline environments to attenuate wave energy and promote oyster growth. In sediment-rich areas it can also be used to accrete sediment. This demonstration project would focus on the relocation and repurposing of structures and deploying them in combination with vegetative plantings. The proposed demonstration project would deploy three different shoreline protection methods: ReefBlk with vegetative plantings; ReefBlk without vegetation plantings; and just vegetative plantings. These methods would be deployed parallel to the shoreline with spacing to allow for ingress and egress of aquatic species. The project proposes eight replicates of 100-foot segments for a total of 3,000 LF of shoreline protection. The expected results would include marsh sediment accretion and land building, and the project would protect 3,000 LF of marsh. The estimated project cost of $1.5 million includes scientific monitoring to analyze plant survival and growth.

#2 – Enhancing Restoration Transplant Survival via Stress Acclimation. This project was presented by Dr. Taylor Sloey, Coastal Environments, Inc. This project proposes to test whether the robustness of plants commonly used in vegetative planting schemes could be increased. The Trinity/New Cut Barrier Island Restoration was completed in 2010, but vegetative planting was delayed due to the BP oil spill. There was a four week draught after plantings occurred, which negative affected the survival of the plants. Since it is difficult to plan planting efforts around rain events, this project would attempt to increase the tolerance of plants to salinity and drought by exposing them to these conditions early in their life. The project proposes ten replicates of three salt conditional treatments and three hydrologic regimes on five marsh and dune plant species. After the conditioning, the plants would be transplanted to either an ambient controlled

greenhouse or a stressful controlled greenhouse, and then to two different barrier islands. Ideally the demonstration project could be part of another planting effort that is underway for another project. This project would improve the scientific community's knowledge of stress physiology of several common restoration plant species. The estimated project cost of $1.25 million includes four years of monitoring.

#3 – EcoBale Containment Barrier for Shoreline Protection and Marsh Creation. This project was presented by Mr. Ted Martin, Martin Ecosystems. This product is a lightweight material that can be used as a containment barrier for shoreline protection and marsh creation projects. The material is made out of recycled polyethylene terephthalate (PET), serves as insulation from the cold, and has high tensile and tear strength (greater than 25 pounds per square inch in both directions). It is non-toxic to fish, water permeable, root friendly, and tolerant to both fresh and salt water. The material is assembled into a cylindrical shape with tubing and uses the same anchor system that Entergy uses to anchor their power poles through the marsh. The material can be pre-vegetated to encourage certain types of vegetation. This product has the potential to work for three different site types: navigation channels; inland lakes, bays, and marshes; and failing berms and levees. Specific sites that could be explored for this demonstration project include the GIWW where CIAP rocks have subsided and several holes need to be plugged; areas of marsh creation where the marsh is exposed to high fetch in the Leeville area; and at Raccoon Point where gaps have formed in the existing shoreline protection feature. The standard diameter roll is 4.5 feet, but the cylinders can be manufactured anywhere from 2- to 7- feet in diameter based on the water depth where it will be placed. The estimated cost for 2,500 feet of EcoBale on the GIWW is $1 million.

#4 – Shore-links. This project was presented by Mr. Tyler Ortego, ORA Estuaries. Shore-links Erosion Control Solutions is a product manufactured by Delta Land Service. It consists of articulated lobe mesh bags filled with lightweight aggregate and formed into a revetment mat, a breakwater log, or a tile. The ideal application is anywhere where soft or exposed sediments interact with the water. Advantages and strengths of Shore-links are that the articulated lobes conform to the marsh surface and the tiling mats weigh only 25 pounds, enabling them to be installed by hand. This demonstration project would deploy Shore-links for four specific uses: a containment dike exposed to fetch; a stabilization system behind sinking rock dike features; armored earthen berms or terraces; and a stabilization system for cut banks.

#5 – Novel Techniques for the Efficient Use of Spoil Material in the Backfilling of Canals. This project was presented by Dr. Mark Hester, ULL. This project was developed in associated with EPA. Canals and associated spoil banks account for an estimated 22% of the direct loss of wetlands in Louisiana. The canals are too deep for emergent marsh and SAV, and spoil banks hinder hydrologic exchange with adjacent marshes. Backfilling typically involves dragging or pushing the spoil into the canal, but there is generally not a sufficient amount of spoil material to completely fill the canal to create emergent marsh. Shallow open water habitat is the most common result. This demonstration project proposes to develop novel techniques to use spoil material more effectively and maximize the creation of quality emergent marsh and SAV habitat. The goal is to optimally reconfigure local sediments to create new areas of marsh and improve the health of the existing marsh adjacent to the project area. The project would likely be in a brackish environment. It would include both before and after backfilling monitoring. The spoil

banks would be sculpted to maximize the created marsh and plantings would be targeted to enhance the adjacent marsh health. Natural tidal channels would be expected to form. The estimated project cost of $2.4 million includes about two miles of canal restored over four to six sites using different techniques and four years of monitoring.

#6 – Explosive Ditching. This project was presented by Mr. Darin Lee, CPRA. This project proposes to use explosives to cut gaps to improve hydrologic restoration. The USACE has performed considerable engineering to determine exactly how much explosives are required in various types of material to produce the size ditch that is desired for military applications. This method could minimize the environmental impact, time, and cost required to excavate material. This demonstration project could be compared to a hydrologic restoration project using traditional methods, such as the Hydrologic Restoration and Vegetative Planting in the des Allemands Swamp (BA-34-2) project, which has a goal of improving hydrologic restoration via gapping spoil banks. The BA-34-2 project has a construction cost estimate of $1.7 million, plus $1.1 million for O&M. Using explosive ditching, there would be no need for excavated material placement, plantings, or tallow control. Other potential uses for this technique include containment dike breaching and tidal channel development. This demonstration project proposes to implement this methodology at five or six locations, which would be coordinated with existing projects. The costs and environmental impacts would be compared to existing projects. The estimated project cost of a few thousand dollars would include 800 feet of channel at 20 locations.

Nominations were closed for demonstration projects.

5. Agenda Item #6, Adjourn. The meeting was adjourned at 2:55 pm.

CEMVN-PM-C (10-1-7a) 26 Jan 16

MEMORANDUM FOR RECORD

SUBJECT: Regional Planning Team (RPT) Region 4, Lafayette, LA, 26 Jan 16, 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. Mr. Clark announced that the RPT process began in 1998, making 2016 the 18th occurrence of the Region 4 RPT meeting. The purpose of the RPT meeting is to receive nominations and public comments for projects in Region 4. Region 4 consists of two basins: Calcasieu-Sabine and Mermentau. Mr. Clark welcomed Mr. Ralph Libersat, Vermillion Parish. Mr. Clark added that Mr. Ryan Bourriaque, Cameron Parish Administrator, Ms. Laurie Cormier, Calcasieu Parish Policy Jury, and Mr. Kevin Sagrera, Vermilion Parish Police Jury, were experiencing traffic problems and would arrive after the start of the meeting. Dr. John Foret, National Marine Fisheries Service (NMFS), welcomed everyone to the Estuarine Fisheries and Habitat Center. Mr. Clark asked all attendees to introduce themselves. Mr. Clark introduced Ms. Kylie Ford, AECOM, who recorded the minutes; Ms. Kaitlyn Carriere, U.S. Army Corps of Engineers (USACE) CWPPRA Program Coordinator; and Ms. Michelle Fischer, U.S. Geological Survey (USGS), who provided geographic information system (GIS) mapping of the 2012 State Master Plan. Mr. Clark introduced CWPPRA Technical Committee, Planning and Evaluation (P&E) Subcommittee, and Engineering and Environmental Work Group members Mr. Brad Inman, USACE CWPPRA Program Administrator; Mr. John Petitbon, USACE; Ms. Karen McCormick, Environmental Protection Agency (EPA); Mr. Kevin Roy, USFWS; Mr. Stuart Brown, Louisiana Coastal Protection and Restoration Authority (CPRA); Mr. Brad Crawford, EPA; Dr. Sharon Osowski, EPA; Mr. Eric Swenson, Louisiana State University (LSU); and Ms. Jane Watson, EPA. He also acknowledged Ms. Nedra Davis, Director of the Chenier Plain Coastal Restoration & Protection Authority (CPA), who was attending via conference call.

2. Agenda Item #2, Project Priority List (PPL) 26 Selection Process Brief Overview and Ground Rules for PPL 26 Nomination Meeting. Mr. Clark delivered a PowerPoint presentation which is available online at the CWPPRA website. He announced that copies of the agenda and PPL 26 selection process were available at the sign-in table. Mr. Clark announced that there will be a Region 3 meeting on January 27, 2016 at the Terrebonne Parish North Branch Library in Gray, Louisiana at 10:00 am; a Region 1 meeting on January 28, 2016 at the USFWS Big Branch Refuge in Lacombe, Louisiana at 8:00 am; and a Region 2 meeting immediately following the Region 1 meeting. Mr. Clark asked that the parish-designated voters fill out a voting registration form and provide their contact information to Mr. Scott Wandell, USACE. Parishes eligible to vote for nominees 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 coastwide projects. If a project crosses multiple basins, excluding coastwide projects, it should be nominated in one basin only, based on the majority area of project influence. Coastwide projects apply across basin boundaries; their benefits are

not tied to one basin. Coastwide 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, if a factsheet was not provided. Mr. Clark announced that Mr. Wandell could help attendees complete this form if they required 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 17, 2016. Written comments should be sent to Mr. Inman. Mr. Clark asked that attendees limit comments and questions to the PPL 26 proposals and processes.

Coastwide projects propose a technique applicable across the entire coast. An example of this is the Coastwide Vegetative Plantings (LA-39) project, which is used throughout the coast. Each parish and Federal agency is eligible to vote for all coastwide projects and only one coastwide nominee may be selected during the Coastwide Electronic Voting on February 23, 2016. The Technical Committee may or may not select a coastwide 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 Standard Operating Procedures (SOP) criteria. The RPT will select up to six demonstration projects; the Technical Committee may select up to three demonstration projects at the April 5, 2016 meeting. The Work Groups may recommend that no demonstration projects move into the candidate stage. Previous demonstration projects must be re-nominated to be considered for PPL 26.

3. Agenda Item #3, Explanation of Coastwide Voting Process. The Coastwide Electronic Voting will be held on February 23, 2016. 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 Mermentau, Teche-Vermilion, and Calcasieu-Sabine Basins; and one project in the Atchafalaya Basin. If proposed, one coastwide 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 prior to the end of the meeting. Public comments will be accepted at the RPT meetings and written comments can be submitted to Mr. Inman until February 17, 2016.

Mr. Clark explained the voting process. Excel spreadsheets and portable document format (pdf) documents will be provided to the voting representatives one week prior to the vote. Voters will receive voting sheets for the basins for which they are eligible to vote, and the column on which they need to mark their vote will be highlighted. Voters must email or fax their votes to Ms. Carriere by 10:30 am on February 23, 2016.

Following the Coastwide Electronic Voting, an agency will be assigned to each project to prepare a factsheet and map if one is not already prepared. The Engineering and Environmental Work Groups will then review the draft features and assign preliminary costs and benefits. They will also verify that the coastwide and demonstration projects meet PPL 26 requirements.

Mr. Clark reviewed the remaining steps in the PPL 26 process. Ten candidate projects and up to three demonstration projects will be selected at the April 5, 2016 Technical Committee Meeting. Written public comments should be submitted to Mr. Inman at the addresses in the agenda by April 5, 2016. 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 and Design (E&D) on December 7, 2016. In 2015, five projects were moved into Phase I E&D. The Task Force will make the final decision in January 2017.

Mr. Clark stated that CWPPRA Program authorization is a two-part process. The first portion of the process involves the authorization of the USFWS Sport Fish Restoration and Boating Trust Fund and the second portion involves CWPPRA authorization within that trust fund. Mr. Clark announced that the Sport Fish Restoration and Boat Trust Fund was reauthorized until 2020 in December 2015 as part of the Fixing America's Surface Transportation (FAST) Act.

Mr. Clark congratulated the Federal agencies, CPRA, and the Parishes for projects recently approved by the Task Force. Mr. Clark announced that projects funded in PPL 25 from Region 4 include the Oyster Lake Marsh Creation and Nourish project, which was approved for Phase I E&D funding, and the Rockefeller Refuge Gulf Shoreline Stabilization (ME-18) project, which was approved for Phase II Construction funding. Projects approved from other regions include the Fritchie Marsh Creation & Terracing, Barataria Bay Rim Marsh Creation, Caminada Headlands Back Barrier Marsh Creation – Increment 2, and East Leeville Marsh Creation and Nourishment projects for Phase I E&D, the Cole's Bayou Marsh Restoration (TV-63) and Hydrologic Restoration and Plantings in Les Dac Allemandes Swamp (BA-32-2) for Phase II Construction, and the Shoreline Protection, Preservation, and Restoration (SPPR) Panel project as a demonstration.

4. Agenda Item #4, PPL 26 Project Nominations (Entire RPT).

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

#1 – Sweeney Tract Marsh Creation and Nourishment. This project was nominated by Dr. John Foret, NMFS. It is located east of the Rockefeller Wildlife Refuge. Problems in the project area include significant land loss, salinity increases, altered hydrology, and storm losses from the 2005 and 2008 hurricanes. There are two existing projects near the project area, South Grand Chenier Marsh Creation (ME-20) and South Grand Chenier Marsh Creation – Baker Tract (ME-32), which provide an existing conveyance channel from a Gulf of Mexico borrow site. Based on experience with the ME-20 and ME-32 projects, there is a dilapidated pipe structure in the southeast corner of the project area. Due to this discovery, replacement culverts have been added to this project to allow drainage into Second Lake, Hog Bayou, and to the Gulf of Mexico. The project includes approximately 13,000 linear feet (LF) of tidal creeks and ponds within 730 acres of marsh creation

and nourishment, as well as two barrel drainage structures. The project is very cost effective and additional marsh creation cells have been identified that would allow for expansion if the project receives favorable construction bids. The construction cost including a 25% contingency is $21.2 million.

#2 – Chenier at Alligator Lake and Marsh Nourishment. This project was presented by Dr. John Foret, NMFS. The project is located at the edge of the recently funded Rockefeller Refuge Gulf Shoreline Stabilization project (ME-18), immediately south of Rockefeller Price Lake Road, and adjacent to the Gulf of Mexico. Breaching has occurred in the project area, resulting in rivulets forming in the Price Lake Unit. To combat the existing breaching, the project proposes to construct an approximately 90-acre chenier that ties into the southern boundary of the ME-20 project. North of the chenier, the project would create or nourish an additional 450 acres of marsh in an area that is experiencing scalloping and marsh breakup. It may be necessary to increase or decrease the amounts of marsh creation or nourishment to properly restore the area. The material would be sourced from the Gulf of Mexico. The project reestablishes a marsh platform including tidal ponds and channels and protects LA-82 and the ME-20 project. The construction cost including a 25% contingency is $15.7 million. Mr. Bourriaque added that this project addresses the major issues that Cameron Parish is experiencing. The shoreline protection feature is consistent with the Cameron Parish Master Plan for Coastal Restoration and Protection. Mr. Clark stated that some nearby areas may be included within the ME-20 project, depending on the funds available as construction proceeds. Ms. Angela Trahan, USFWS, asked Dr. Foret why there is a breach in this area and if filling that breach will create an additional breach elsewhere along the shoreline. Dr. Foret answered that there is a 45 degree elbow along the project shoreline where the breach is located. He added that some of the rivulets are 300 to 400 feet wide and are likely too extensive to close on their own.

#3 – Umbrella Bay Bankline Stabilization. This project was presented by Mr. Ronny Paille, USFWS. This project was proposed in prior PPLs but the project has been altered by removing a rock-armored berm to comply with the Master Plan. The project will mimic the South Lake Lery Shoreline and Marsh Restoration (BS-16) project, which created an earthen berm along the shoreline. The project proposes a 60-foot wide earthen berm, which is the maximum width a single piece of equipment can create, as well as vegetative plantings. Due to the land loss rate of approximately five feet per year within the area, the earthen berm will erode slightly over time. The construction cost including 25% contingency is $5.5 million. Mr. Roy added that if this project is implemented, it would greatly help with the *Salvinia* expansion in Grand Lake. The project will tie into an existing shoreline project at the Grand Lake-White Lake Land Bridge, and expand to the north. This area has many small lakes close to shoreline. The project hopes to avoid breaching in these areas by strengthening the shoreline.

#4 – Gulf Shoreline Protection at Hog Bayou. This project was presented by Mr. Ronny Paille, USFWS. The project is located within Hog Bayou, which serves as a drainage feature for the marsh south of Grand Chenier. The area experiences an average erosion rate of 42 feet per year near Beach Prong. By 2050, it is anticipated that the shoreline will have eroded to form a breach into Hog Bayou, reducing the functionality of the bayou. The project proposes two sections of Gulf shoreline armoring and the dredging of Hog Bayou. The material dredged from Hog Bayou will be used beneficially to create marsh in the open water areas if the cost is viable. As

the project area currently exists, water levels are elevated above the marsh during high water events. This causes rotten marsh and opens the beach front, allowing saltwater intrusion. The shoreline protection feature alone will protect 254 net acres, with a construction cost including a 25% contingency of $36 million. Mr. Clark asked if a spray dredge was considered. Mr. Paille responded that a spray dredge was considered; however, the marsh directly adjacent to the bayou does not need nourishment and the material would be used more beneficially elsewhere. Mr. Ron Boustany, NRCS, asked for clarification on whether the $36 million construction cost estimate includes only the shoreline protection feature. Mr. Paille answered that Dr. Foret's previous shoreline protection construction cost estimates were inflated by 25% to determine this cost estimate. He added that the western area of the project could be reduced to make the project more viable. Dr. Foret stated that the there is uncertainty with the cost estimate due to poor quality soils. To limit maintenance and sinking for this type of soil conditions, the cost estimate was based on a three foot contour.

#5 – East Pecan Island Marsh Creation This project was presented by Dr. Sharon Osowski, EPA. The project is cosponsored by EPA and USACE. It is consistent with the Master Plan and has been proposed in previous PPLs. Problems include marsh loss and altered hydrology due to subsidence, saltwater intrusion, and the enlargement of Freshwater Bayou, which has increased the tidal exchange within the interior marshes. The project includes 506 acres of marsh creation, which will include some tidal creeks and ponds, utilizing approximately 3.5 million cubic yards of material from an offshore borrow site. The project will retain 14 acres of historical ponds and add creeks for functionality. It has support from the area stakeholders. The construction cost including a 25% contingency is $27 million. Mr. Wandell added that existing projects located along the bayou have been in the form of hard structures. The Freshwater Bayou Marsh Creation (ME-31) project is also located adjacent to the project. If there is enough material available, the project would consider using borrow material from Freshwater Bayou. Mr. Ralph Libersat, Vermilion Parish, stated that Vermilion Parish appreciates the project and that it fits within the Parishes' strategy. The Parish would prefer a combination of borrow materials from both Freshwater Bayou and the Gulf of Mexico, if it is an option. He added that Vermillion Bay self-restores nearly overnight and it would be a great borrow resource if it is a viable option.

#6 – Price Lake Marsh Creation. This project was presented by Dr. Sharon Osowski, EPA. The project is located east of the PPL 25 Sweeney Tract Marsh Creation project. The project is consistent with Master Plan. Problems in the area include stress due to limited freshwater input, seasonal salinity increases, subsidence, compaction, erosion, large open water areas, degraded areas of wetland vegetation, low organic production, and some nutria herbivory damage. From 1946 to today, the area has converted from marsh to open water. The project will nourish or create 416 acres of emergent marsh utilizing material from a Gulf of Mexico borrow site. The construction cost including a 25% contingency is $24 million

#7 – North Big Marsh Restoration Project This project was presented by Mr. Darryl Clark, USFWS. The project is located on land owned by the Vermilion Corporation, who approves of the project. The area lost significant marsh from 1956 to 1979 after construction of the Freshwater Bayou Canal. The Coast 2050 Feasibility Study predicted another 10 percent loss; however the area has already surpassed that prediction due to damage during Hurricanes Rita and Ike. From 1988 to 2005, the area converted entirely to a large open water area. The project

includes 360 acres of marsh creation and 90 acres of nourishment of fresh and intermediate marsh in the Big Marsh Unit and will introduce freshwater to the area from White Lake. The freshwater introduction feature will come from the Freshwater Bayou Canal to the west near LA-82. The feature will introduce approximately 100 cubic feet per second (cfs) of freshwater via three 48-inch culverts from White Lake. Considering a land loss rate of 0.27% per year, the project will produce a benefit of 353 net acres while restoring the northern portion of the Big Marsh and protecting nearby marshes. The construction cost including a 25% contingency is $20 to $25 million. Mr. Billy Broussard, Vermilion Corporation, stated that the land loss rate in the project area is substantial. He added that the project will be sustainable due to other projects within the area, and that the project is endorsed by the Vermilion Corporation.

#8 – South Pecan Island Marsh Creation. This project was nominated by Mr. Darryl Clark, USFWS. The project is located near the Gulf of Mexico shoreline southwest of Pecan Island on land owned by the Vermilion Corporation. Problems include wetland loss caused by impoundment, saltwater intrusion, and storm events. Approximately 25%, or 11,520 acres, of the 34,850 acre marsh near Pecan Island has been converted to open water area from 1932 to 1990. An additional 2% or 6,980 acres is predicted to be lost by 2050. From 1985 to 2009, the land loss rate was 0.43% per year. The project will restore and nourish 630 acres of intermediate and brackish marsh utilizing Gulf of Mexico borrow material. The construction costs including a 25% contingency are $18 to $20 million.

This project was combined with R4-ME-9 Mulberry Island West marsh Creation and Terracing. The new project is the South Pecan-Mulberry Island West Marsh Creation and Terracing. Features include: 331 acres of marsh creation, 45,000 linear feet (36 acres) of earthen terraces, and the installation of seven water control structures. The construction cost including a 25% contingency is $22.3 million.

#9 – Mulberry Island West Marsh Creation and Terracing. This project was nominated by Mr. Troy Mallach, NRCS. This project is consistent with the Master Plan. It is located on the western side of a 6,000 acre area of open water and marsh remnants. The project proposes to address as much open water as possible by creating smaller islands of marsh creation surrounded by terracing. The project will address a total of 2,000 acres using this method. It will also include flag gates, which will let water in from the north and out to the south. Mr. Mallach added that the project is expandable with favorable bids. The construction costs including a 25% contingency are $22 million. Mr. Broussard responded favorably to the project.

This project was combined with R4-ME-8 South Pecan Island Marsh Creation. The new project is the South Pecan-Mulberry Island West Marsh Creation and Terracing. Features include: 331 acres of marsh creation, 45,000 linear feet (36 acres) of earthen terraces, and the installation of seven water control structures. The construction cost including a 25% contingency is $22.3 million.

#10 – Southeast Pecan Island Marsh Creation and Terracing. This project was presented by Mr. Troy Mallach, NRCS. The project is located within the 6,000 acres of open water and marsh remnants on the eastern side of the Master Plan 004.MC.16 project. The project features smaller islands of marsh creation surrounded by terraces. The project totals 253 acres of marsh creation

and 55,000 LF of terracing. The project is expandable in the event that there are favorable construction bids. Mr. Roy asked why the freshwater introduction feature was removed. Mr. Mallach answered that the project has not been approved for funding for the last four to five years. The freshwater introduction feature is still recommended; however, the project may have a better chance of approval without it. He added that the landowners in the project area are also looking at other options within the area that may no longer be cohesive with the freshwater introduction feature. Dr. Foret asked for the costs of the project. Mr. Mallach responded that the construction cost including a 25% contingency is approximately $22.8 million.

#11 – East End Lock Modification/Replacement This project was presented by Mr. Phillip "Scooter" Trosclair, Program Manager of the Rockefeller Wildlife Refuge. It is located at the East End Locks. The project has been proposed previously, but has been simplified compared to prior proposals. The East End Locks are in very poor condition. The locks are used to move water during flood events. When the locks remain open due to *Giant Salvinia* problems the salinity increases substantially. The project proposes to modify the structure to expand it from 39 feet to 80 feet. The project will benefit approximately 100,000 acres of the 600,000-acre marsh directly north of the project continuing towards Grand Lake, including the outlets through the highway. The project would also benefit areas affected by *Giant Salvinia*. Mr. Chad Courville, Miami Corporation, added that every acre from the East End Channel would benefit from this project. Dr. Foret asked for a project cost estimate. Mr. Trosclair responded that several options have been evaluated. It would cost approximately $20 million to rebuild an entirely new lock, or it would cost approximately $7 to 8 million to refurbish the existing lock. Mr. Clark asked if the Rockefeller Wildlife Refuge would be contributing funds to the project and Mr. Trosclair responded affirmatively. He added that the project has been submitted to the State of Louisiana Capital Outlay program. Mr. Bourriaque thanked Mr. Trosclair for nominating this project. Hydrologic restoration is the second most important goal under the Cameron Parish Master Plan for Coastal Restoration and Protection.

Nominations were closed for the Mermentau Basin.

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

#1 – East Holly Beach Shoreline Protection. This project was presented by Mr. Ryan Bourriaque, Cameron Parish Administrator. The Cameron Parish Police Jury has recently completed the Cameron Parish Master Plan for Coastal Restoration and Protection, which established shoreline protection as the number one goal of the Parish. This the third time that this project has been nominated, and it would be complementary to the existing State (CPRA) surplus funding project, as well as approximately $80 million worth of CWPPRA projects in the area. The project would also protect several large industrial facilities currently undergoing permitting and construction in the area. The area is a critical habitat for the piping plover and it is predicted that, without interference, all of the sand previously placed in this area will be lost over the next 20 years. The construction cost including a 25% contingency is estimated between $30 and $35 million, which includes approximately 15,000 LF of breakwaters. However, if the Engineering and Environmental Work Groups or P&E Subcommittee determine that alternative construction types would better suit the area, it would be well accepted. Ms. Cormier added that Calcasieu Parish understands that when Cameron Parish is protected, Calcasieu Parish is protected. It is

vitally important to protect Lake Charles, which has been identified as one of the two areas in Louisiana that most need support at the 500-year level.

#2 – No Name Bayou East Marsh Creation and Nourishment. This project was presented by Dr. John Foret, NMFS. Landowners at the Cameron-Prairie National Wildlife Refuge (NWR) have identified several areas that need marsh creation. This project proposes to address one of these areas. Problems include high land loss rates and ultra-high salinities, which lead to rapid marsh loss. Borrow material would be sourced from Calcasieu Lake. The borrow site is located approximately three miles from the project location, and the borrow would be used to create approximately 500 acres of marsh and nourish an additional 25 acres. The marsh creation would feature tidal creeks and ponds and would result in approximately 440 net acres of marsh. The construction cost including a 25% contingency is $21.2 million. Ms. Cormier asked if there would be a beneficial use component to this project. Dr. Foret responded that there is a viable plan to accommodate beneficial dredged material, if it is available. Mr. Courville added that there is a historic lake in the marsh creation area, which would likely refill after being pumped; however, the main area surrounding the historic lake would be preserved

#3 – North Mud Lake Marsh Creation and Nourishment. This project was presented by Dr. John Foret, NMFS. The project is consistent with the Master Plan. The Rabbit Island portion of the project, approximately 146 acres of marsh creation, has been designed and permitted, but does not have the funding to proceed towards construction. Problems in the area include very shallow open water with a hard surface, created by rapid fluid extraction. The project would mine an upland disposal area known as Long Island from +15 to 18 feet to +2 feet, and utilize that material to create marsh elsewhere within the project area. There are some oyster leases within Calcasieu Lake; however, a path to avoid these leases has been delineated to Rabbit Island. The project would restore and nourish a total of 865 acres including 10,000 linear feet of tidal channels; the total acreage consists of approximately 665 acres of newly created emergent marsh and another 200 acres of marsh created by mining the upland disposal area. The area has an expandable footprint, which would allow for additional marsh creation if favorable bids are received. The project would reestablish a historic land bridge feature between LA-28 and Calcasieu Lake/West Cove. It would also reestablish a pelican nesting area on Rabbit Island and provide protection to the Hackberry and Lake Charles area. The construction cost including a 25% contingency is $25 million. Ms. Davis expressed her support for the Rabbit Island portion of the project.

Mr. Brown expressed his concerns that the Rabbit Island portion of the project is not consistent with the 2012 State Master Plan. Mr. Brown clarified that the Master Plan includes a shoreline protection project around Rabbit Island, but does not include marsh creation. Mr. Brown later evaluated the project at CPRA and determined the portion of the project on Rabbit Island is not consistent with the Master Plan. The project has been reduced and only the eligible components will be voted upon. The revised project features include: 450 acres of marsh creation in placement areas, 50 acres of marsh nourishment in placement areas, and 200 acres of marsh creation from mining an upland disposal site. The construction cost including a 25% contingency is $22.9 million.

#4 – East Prong - Grand Bayou Marsh Creation and Terracing. This project was presented by Ms. Angela Trahan, USFWS. This project is a continuation of efforts to recreate marsh in the Cameron-Creole watershed and near the Cameron Prairie NWR. This project will complement other projects in the area by reestablishing the area from East Prong to the north of the Refuge. Problems in the area include saltwater intrusion form the Calcasieu Ship Channel, growth of large interior ponds, and shoreline erosion. The Cameron-Creole watershed also experiences periods of prolonged inundation resulting in marsh and sediment loss via the bayou system. The project will restore sustainable marsh and reinforce the bayou system by creating 435 acres of marsh in a contained cell. It would also include splay mud flats to benefit shore birds, as well as 25,000 LF of terracing. Approximately 55,308 LF of natural bayous would be spray dredged to restore the storage capacity of the waterways, which would benefit an additional 127 acres of marsh along the bank line and restore the natural tidal hydrologic pattern. The project could utilize borrow material from a site in Calcasieu Lake previously identified by the CS-54 project. The construction cost including a 25% contingency is approximately $23 million

#5 – West Cove Bank Stabilization and Marsh Creation. This project was presented by Dr. Sharon Osowski, EPA, and Mr. Scott Wandell, USACE. The project is consistent with the Master Plan. It consists of a bank stabilization feature with some supporting marsh creation components. EPA has proposed this project in prior PPLs and has recently partnered with USACE to continue forward. Problems in the area include shoreline erosion, wetland losses, subsidence, storm losses, sea level rise, and human intervention. Erosion has resulted in breaching along the shoreline, exposing areas to water exchange. The area was historically solid land and marsh, but now consists of several open water areas. The project includes approximately 33,000 LF of earthen bank stabilization along the northern shoreline of West Cove and 642 acres of marsh creation using either material obtained from dredging the Calcasieu Ship Channel or material from mining an upland disposal site on the Calcasieu River. The construction cost including a 25% contingency is $19 million, and the fully-funded cost estimate is $25 to 30 million. Mr. Wandell added that a bucket dredge option would also be considered, as well as other options such as the rich sediment sources on the Calcasieu Ship Channel, to establish the most cost effective procedure for creating marsh. The project is not included in either the USACE Dredged Material Management Plan or the Southwest Cove Feasibility Study. It will protect LA-27, which is a hurricane evacuation route and is located on the NWR. Mr. Roy asked what the existing erosion rates are along the shoreline. Ms. McCormick responded that it is approximately 5.9 to 6 feet per year.

#6 – East Cameron Meadows Marsh Creation. This project was presented by Dr. Sharon Osowski, EPA. The project is consistent with the Master Plan. Problems in the area include marsh loss, altered hydrology, sediment deprivation, storm losses, and saltwater intrusion, which have resulted in very shallow open water areas. The project includes two potential marsh creation cells totaling 1,175 acres, and the project would create and nourish approximately 500 acres of emergent marsh within these two areas utilizing sediment from a Gulf of Mexico borrow site. The construction cost including a 25% contingency is $25 million. Mr. Brown asked if Dr. Foret had previously evaluated this area. Dr. Foret responded that CPRA and NMFS evaluated this area during the Cameron Meadows Marsh Creation & Terracing (CS-66) project, and chose to complete the western side due to the results of the hydrology report.

#7 – Southwest Calcasieu Lake Marsh Creation This project was presented by Dr. Sharon Osowski, EPA. The project is consistent with the Master Plan. Problems in the area include wetlands loss, altered hydrology, subsidence, navigation features, and saltwater intrusion near Calcasieu Lake. The area includes two polygons totaling 1,172 acres, and the project would create and nourish approximately 500 acres within these areas. The construction cost including a 25% contingency is $27.5 million and the fully-funded cost estimate is $30 to 35 million.

Nominations were closed for the Calcasieu-Sabine Basin.

c. Mr. Clark opened the floor for nominations for coastwide projects.

#1 – Southwest Louisiana Salvinia Weevil Propagation. This project was presented by Mr. Ronald Paille, USFWS. *Giant Salvinia* is an invasive fern from Brazil that is prominent in south Louisiana. LSU and LDWF have been cultivating weevils from ponds in Houma, Louisiana, but their facility has recently closed. LSU is looking to established at least one new pond, tentatively located in St. Gabriel, Louisiana. Due to the growing need for weevils in south Louisiana, at least two centers will be needed to control the *Salvinia* population. Weevils are very small insects that have been used as a successful biocontrol agent in 13 countries and three continents. The weevil has been released in Louisiana since the early 2000s. Mr. Randy Moertle, Delta Farms, has previously utilized weevils to control *Salvinia*. Within three years, weevils provided *Salvinia* control to his land. The LDWF Aquatic Plant Control Program has tested the control of *Salvinia* across Louisiana using both chemical treatments and weevils and concluded that the chemicals are extremely expensive and do not work as well as the weevils. *Salvinia* has a hairy-top surface, making it difficult for chemicals to penetrate the leaf. In the past, LSU has produced the weevils and provided them to the public free of charge. Individuals would collect weevil-infested *Salvinia* from the Houma facility, place the infested *Salvinia* throughout their property, and allow the weevils to spread. There is an LSU Agricultural Center pond that could be used to create a new facility in Jeanerette, Louisiana with CWPPRA funding. LSU has tested this location and has determined that it is suitable for weevil propagation. The project would include little to no construction costs, but would include the cost of supplies, such as fertilizer, and staff. An estimated $1.6 million in CWPPRA funding would allow LSU to operate the facility for 20 years. Weevils are a safe biocontrol agent that have been released and analyzed within National Environmental Policy Act (NEPA) documents.

Nominations were closed for coastwide projects.

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

#1 – Shore-links. This project was presented by Mr. Tyler Ortego, ORA Estuaries. Shore-links is a product made by Delta Land Services located in Port Allen, Louisiana. It provides a light-weight option to stabilize soft and eroding sediment while allowing plant penetration. The basis of the design is a lobed, mesh bag. It is filled with a light-weight aggregate, similar to those used by the USACE for breakwater construction. The mat is very porous and almost buoyant in the water. The product can be used in any location experiencing erosion with very soft sediments. The advantage is that the lobes will mold to the surface and can be placed upon freshly disturbed sediments. The mat weighs approximately 25 pounds and can be placed by hand. There are four

concept uses relevant to the CWPPRA Program: previously constructed projects could use Shore-links to armor containment dikes that are already constructed; shoreline protection features that have settled could be elevated; new terracing or berms could be built in areas with poor soils; undercut banks could be stabilized. Ms. Trahan asked about the cost of the demonstration project. Mr. Ortego responded that the product is approximately $55 per foot of materials, or an estimated $100 per foot fully-funded. Ms. McCormick asked if the material stays in place after vegetation has taken over. Mr. Ortego responded that the product is made of a UV-stabilized material and that it can remain as a permanent hardened surface. Mr. Roy asked if the material needed to be anchored. Mr. Ortego responded that previous applications have pinned the product using rebar cables. He added that one lobe would be left empty on large mats to be used for pinning, and the small mats would be pinned by the corners.

#2 – Enhancing Restoration Transplant Survival via Stress Acclimation This project was presented by Dr. Taylor Sloey, Coastal Environments Incorporated (CEI). The proposed demonstration project will enhance restoration efforts by increasing the transplant survival rate of vegetation. Barrier islands are important to Louisiana as the first line of defense against coastal storms and as protection to migrant birds, and agencies have recently contributed approximately $1 billion towards shoreline and barrier island projects. However, the true success of these projects depends on the successful reestablishment of marsh vegetation. There are five common species of marsh vegetation including bitter panicum, sea oats, seashore paspalum, black mangrove, and smooth cordgrass. During the Trinity/New Cut Barrier Island Restoration, it did not rain for four weeks after vegetative plantings. This resulted in a mass die-off of vegetation. This demonstration project would work to prevent this from happening by making the plants more tolerant of stressful situations prior to transplanting them. By requiring the plants to cope with exposure to stress early in their lives, the plants would be able to tolerate these conditions. Nurseries have been practicing salt conditioning for years, and the agricultural industry also uses progressive draughts for many species. The demonstration project would use a greenhouse study to use these methodologies on the five common marsh vegetation species. The five species would be exposed to three salt conditioning treatments and three hydrology regimes that would represent draught, ambient conditions, and inundation. The species would then be transplanted to four scenarios: controlled ambient, controlled stressful, and on two different barrier islands. The study would be replicated ten times for a total of 1,800 plants analyzed. The cost of the demonstration project would be $1,250,000, which would cover materials, greenhouses, transportation, travel and salary for staff, monitoring, analysis, and reports for four years. Ms. Cormier asked if this demonstration project would also be done on some interior shoreline protection areas as it is a coastwide project. Dr. Sloey responded that some of the species would have applicability along shorelines.

#3 – Sediment Accretion and Marsh Restoration Using Modified Reefblk Design. This project was presented by Dr. Taylor Sloey, CEI. Many agencies and landowners prefer living shorelines over hard structures due to the possibilities of reduced maintenance and liability. One of the living shoreline options is an oyster breakwater, also known as a Reefblk. Reefblk has been successfully used in saline environments to promote oyster growth. It has been deployed in nine different areas from Texas to Florida and is currently being utilized in the PO-148 Project. When in sediment rich water, Reefblk is also very successful at accreting sediment and allowing vegetative plantings. The proposed demonstration project would analyze three different shoreline

types: one that deploys only Reefblk, one that deploys both Reefblk and vegetative plantings, and one that deploys only plantings. Each location type would be within a freshwater area, mostly near river outlets. There is also potential for applicability of this project in other inland areas. The basic design would include 100-foot long sections that are placed 30 feet from the shoreline with 20 feet of spacing to allow for ingress and egress in between each section. The project would include eight replicates, as well as monitoring events at six months, one year, two years, three years, and four years. The total demonstration project cost would be approximately $1.5 million and is estimated to create approximately two acres of marsh and vegetation. Mr. Clark asked Dr. Sloey if she knew which CWPPRA Project had already deployed Reefblk. Dr. Sloey responded that many projects have utilized Reefblk in the past; however, this is a demonstration project as it would deploy Reefblk in an area where it is not typically utilized, freshwater.

Nominations were closed for demonstration projects.

5. Agenda Item #5, Announcement of Upcoming PPL 26, Task Force, Technical Committee and Other Program Meetings. Mr. Clark announced that the Coastwide Electronic Voting will be held on February 24, 2016 and that comments should be sent to Mr. Inman prior to February 17, 2016. Mr. Inman stated that the Region 1 and 2 meetings will take place on Thursday, with Region 2 immediately following Region 1. He added that the January Task Force Meeting was cancelled due to the high water event, and the Colonel was not able to reschedule. A CWPPRA Newsflash was issued with the results of the Task Force's electronic votes. Mr. Inman stated that there have been several requests to move the Region 4 meeting further west. He added that there were ice storms in the area two to three years ago, requiring the Region 4 meeting to be moved from the original venue in Abbeville, Louisiana to the current venue in Lafayette, Louisiana. This location has been convenient; however, additional venues, such as the one in Abbeville or at the Rockefeller Wildlife Refuge, will be evaluated and pursued for future meetings, as requested.

6. Agenda Item #6, Adjourn. The meeting was adjourned at 2:09 pm.