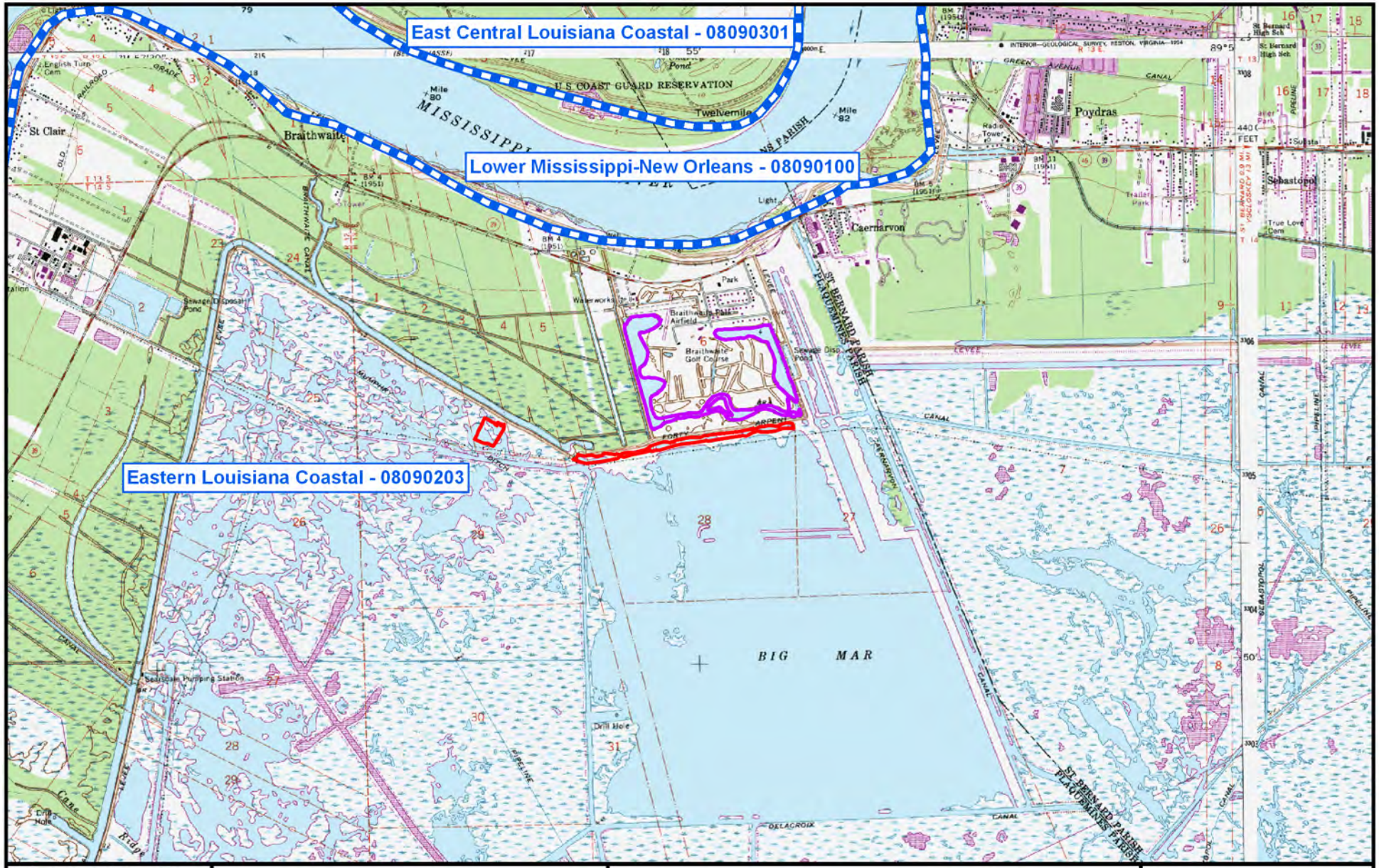


ELOS environmental
43177 East Pleasant Ridge Road
Hammond, Louisiana 70403
P. 985-662-5501, F. 985-662-5504

Figure 1: Vicinity Map

Plaquemines Parish Government
Potential Mitigation Area

Map prepared from public and proprietary spatial data. Elos Environmental, LLC does not warrant its accuracy or completeness. This map should not be used to establish legal boundaries or specific locations.

Legend:

- Proposed Mitigation Area - Approx 21 Acres
- Proposed Borrow Area - Approx 52 Acres
- Hydrologic Units Boundary

N
W E
S

Feet
0 2,100 4,200

F:\KLE\PPG Project Specific Mitigation\GIS Maps\Draft Prospectus Maps\Revised Maps\Figure 1.mxd

ELOS environmental
43177 East Pleasant Ridge Road
Hammond, Louisiana 70403
P. 985-662-5501, F. 985-662-5504

Figure 2: Existing Soils/Habitats Map

Plaquemines Parish Government
Potential Mitigation Area

Map prepared from public and proprietary spatial data. Elos Environmental, LLC does not warrant its accuracy or completeness. This map should not be used to establish legal boundaries or specific locations.

N W E S

Feet
0 600 1,200

F:\KLE\PPG Project Specific Mitigation\GIS Maps\Draft Prospectus Maps\Revised Maps\Figure 2.mxd

ELOS environmental
43177 East Pleasant Ridge Road
Hammond, Louisiana 70403
P. 985-662-5501, F. 985-662-5504

Figure 3: 2010 Aerial

Plaquemines Parish Government
Potential Mitigation Area

Map prepared from public and proprietary spatial data. Elos Environmental, LLC does not warrant its accuracy or completeness. This map should not be used to establish legal boundaries or specific locations.

Legend:

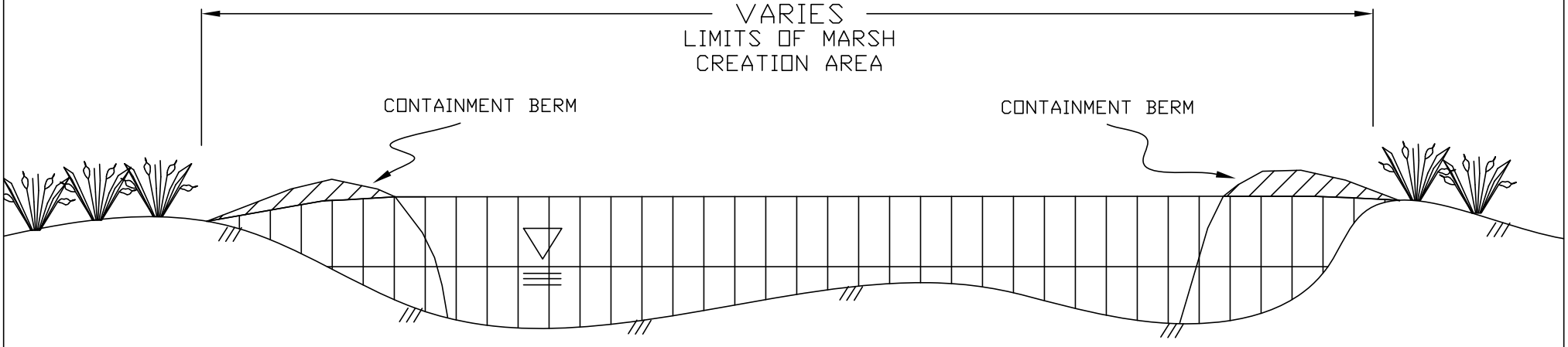
- Proposed Mitigation Area - Approx 21 Acres
- Mitigation Area for MVN 2011-1974
- Mitigation Area for MVN 2011-1195
- Proposed Borrow Area - Approx 52 Acres

N
W E
S

Feet
0 500 1,000

F:\KLE\PPG Project Specific Mitigation\GIS Maps\Draft Prospectus Maps\Revised Maps\Figure 2.mxd

PROPOSED MARSH/ EXISTING CONDITIONS



Existing water estimated to range from 0' to 1.5' in depth.

Proposed marsh creation area is planed to be built to elevation (+) 3' NAVD88 but is expected to subside to target marsh elevation of (+) 2' NAVD88 within 1 year.

LEGEND:

PROPOSED FILL FOR MARSH CREATION

PROPOSED CONTAINMENT BERM
(TO BE REMOVED ONCE MARSH IS ESTABLISHED)

NOTES:

THESE DRAWINGS ARE ONLY INTENDED FOR THE JOINT PERMIT APPLICATION PROCESS.

THESE DRAWINGS ARE NOT INTENDED FOR ENGINEERING, CONTRACTING, SURVEYING, PARISH APPROVAL, OR ANY OTHER USES.

PERMIT DRAWINGS ARE SUBJECT TO FIELD MODIFICATIONS AND CONSTRUCTION DRAWINGS.

NOT TO SCALE

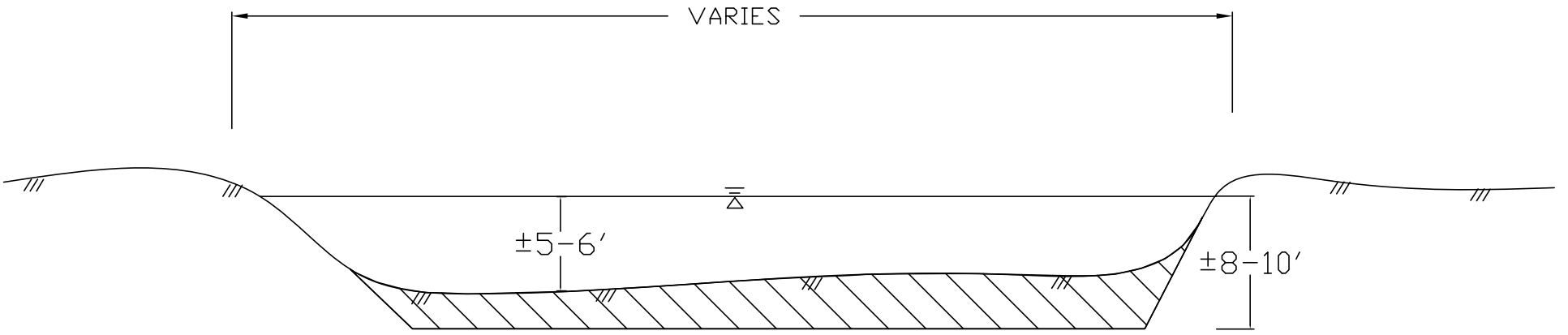
Plaquemines Parish Government
Plaquemines Parish, LA

MARSH CREATION

ELOS ENVIRONMENTAL, LLC
WETLAND DELINEATION · PERMIT APPLICATIONS · ENDANGERED SPECIES SURVEY
FOREST MANAGEMENT · ENVIRONMENTAL MONITORING · MITIGATION CONSULTATION
43177 East Pleasant Ridge Road, Hammond, LA 70403

DATE: 02/14/13	SCALE: N.T.S.	Figure 4
	DRAWN BY: REM	

PROPOSED BORROW AREA
GOLF COURSE PONDS



Existing water depth estimated to range from 5' to 6' in depth.

LEGEND:

PROPOSED BORROW MATERIAL FOR MARSH CREATION

NOTES:

THESE DRAWINGS ARE ONLY INTENDED FOR THE JOINT PERMIT APPLICATION PROCESS.

THESE DRAWINGS ARE NOT INTENDED FOR ENGINEERING, CONTRACTING, SURVEYING, PARISH APPROVAL, OR ANY OTHER USES.

PERMIT DRAWINGS ARE SUBJECT TO FIELD MODIFICATIONS AND CONSTRUCTION DRAWINGS.

NOT TO SCALE

Plaquemines Parish Government
Plaquemines Parish, LA

BORROW AREA

ELOS ENVIRONMENTAL, LLC
WETLAND DELINEATION · PERMIT APPLICATIONS · ENDANGERED SPECIES SURVEY
FOREST MANAGEMENT · ENVIRONMENTAL MONITORING · MITIGATION CONSULTATION
43177 East Pleasant Ridge Road, Hammond, LA 70403

DATE: 02/14/13 | SCALE: N.T.S. | DRAWN BY: REM | Figure 5

F:\KLE\PPG Project Specific Mitigation\AutoCAD\PRMP cross sections.dwg Mar 28, 2013 – 1:37pm

ELOS
environmental
43177 East Pleasant Ridge Road
Hammond, Louisiana 70403
P. 985-662-5501, F. 985-662-5504

2008 Aerial Figure 6

Plaquemines Parish Government
Potential Mitigation Area

Map prepared from public and proprietary spatial data. Elos Environmental, LLC does not warrant its accuracy or completeness. This map should not be used to establish legal boundaries or specific locations.

Legend:

Not A Part

Proposed Waters of the US

These interputations are made from aerials.

N
W E
S

Feet
0 650 1,300

F:\KLE\PPG Project Specific Mitigation\GIS Maps\Proposed JD Figure 26

Permittee-Responsible Mitigation Plan for
MVN-2011-1995-EOO
MVN-2011-1974-EOO

Plaquemines Parish, Louisiana

February 12, 2013
Revised March 20,2013

Plaquemines Parish Government
8056 Hwy. 23, Suite 200
Belle Chasse, Louisiana 70037

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Table of Contents

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List of Figures

Additional Figures may include historical aerials/topos

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1. Introduction

To offset the unavoidable wetland impacts associated with Corps of Engineers Section 10/404 permit applications MVN-2011-1995-EOO and MVN-2011-1974-EOO, Plaquemines Parish Government (PPG) is proposing to implement a Permittee Responsible Mitigation Project (PRMP) near the impact site.

The subject permit applications propose to increase the top elevation of PPG's East Bank Levee from approximately 8' to approximately 12' MSL. The levee is located between Braithwaite and White ditch on the eastern side of the Mississippi River. The Corps has determined that the proposed work will unavoidably impact 10.8 acres of wet bottomland hardwood forest, wet pasture habitat and fresh, intermediate and brackish marsh habitat.

To offset the loss of habitat functions, PPG proposes to hydraulically pump material from existing ponds near the Braithwaite golf course into a ± 21 acre shallow open water location on the floodside of the East Bank Levee to create a platform for marsh creation. Upon final settling, the platform will be planted with appropriate marsh species.

Mitigation Site Owner:

The owner of the property is: The PPG is a large owner of the mitigation area. PPG is currently communicating with the additional landowners.

To develop and operate the proposed mitigation project, the property will be held by long-term lease by:

Plaquemines Parish Government
8056 Hwy. 23, Suite 200
Belle Chasse, Louisiana 70037

Permittee:

Plaquemines Parish Government
8056 Hwy. 23, Suite 200
Belle Chasse, Louisiana 70037

Consultant

ELOS Environmental, L.L.C.
43177 East Pleasant Ridge Road
Hammond, Louisiana 70401

Holder of the Conservation Servitude

Nature Holding

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Attn: Mr. Chris Trepagnier
331 Girod Street
Mandeville, Louisiana 70448

1.1. Responsibilities of Parties

1.1.1. Mitigation Site Owner (Owner)

1.1.1.1. The Owner through the permittee will furnish satisfactory evidence of clear title prior to the execution of this Permittee-Responsible Mitigation Plan (PRMP).

1.1.1.2. The Owner will grant a perpetual conservation servitude over the Mitigation Site in accordance with Louisiana law and La. R. S. 9:1272. Upon execution of the conservation servitude, the Owner will record it with an attached copy of the permit for the impact project and this PRMP in the conveyance records of Plaquemines Parish, unless such conservation servitude was previously executed and properly recorded by a former owner pursuant to this PRMP. Proof of such recordation will be provided to CEMVN, Regulatory Branch, within 15 days of filing.

1.1.1.3. The Owner will not allow any prohibited uses of the Mitigation Site as set forth in the PRMP and the conservation servitude.

1.1.1.4. To avoid the risk of possession by a financial institution, the Owner will not identify the Mitigation Site as collateral for any business transaction.

1.1.1.5. The Owner will allow the permittee or his/responsible party/contractor access to the Property. Any limitations on such access are to be a matter of contract between the Owner and the permittee. The Owner will also allow access to the Mitigation Site to CEMVN and the Holder of the Conservation Servitude in accordance with this PRMP.

1.1.1.6. The Owner will make periodic inspections of the Mitigation Site of not less than once per year to verify that use of the Property is consistent with this PRMP and the conservation servitude.

1.1.1.7. In the event the Owner discovers a prohibited use or any damage to the Mitigation Site, CEMVN, shall be notified in accordance with the provisions of this PRMP.

1.1.1.8. The Owner will be responsible for advising the Permittee and CEMVN of any pending sale of the Mitigation Site or any other change in ownership at least 60 days prior to the effective site.

1.1.2. The Permittee

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1.1.2.1. The Permittee is responsible for the compensatory mitigation requirement in the impact project's DA permit which is associated with this PRMP which includes, but is not limited to 1) the compensatory mitigation project on the Mitigation Site, and 2) the long-term management, maintenance, monitoring, and protection of the Mitigation Site. Upon transfer of the permit the new Permittee will then assume the responsibility of the present Permittee.

1.1.2.2. The Permittee will perform all necessary work to establish, monitor and maintain aquatic habitats and buffers as described in the PRMP.

1.1.2.3. The Permittee will be responsible for maintaining all records, monitoring the Mitigation Site for success, conducting remedial action as necessary to ensure success, and providing this information to CEMVN in reports documenting Mitigation Site usage and the results of monitoring in accordance with provisions in this PRMP.

1.1.2.4. The Permittee will be responsible for advising CEMVN of any pending sale of the Mitigation Site or any other change in ownership at least 60 days prior to the effective site.

1.1.2.5. The Permittee will obtain all appropriate environmental documentation, permits and other authorizations needed to establish and maintain the Mitigation Site. Compliance with this PRMP does not fulfill the requirement, or substitute, for such authorization.

1.1.3. Holder of the Conservation Servitude (Holder)

1.1.3.1. The Holder shall hold and enforce the conservation servitude placed on those lands within the Mitigation Site subject to a recorded perpetual conservation servitude so that the Mitigation Site is protected in perpetuity.

1.1.3.2. The Holder will notify CEMVN within 24 hours of the discovery of any action taken to void or modify the conservation servitude.

1.1.3.3. The Holder shall perform yearly inspections and provide annual reports as to compliance with restricted and approved uses of the Mitigation Site identified in the conservation servitude.

1.1.4 Long Term Steward

Unless otherwise approved by CEMVN, the Permittee is the Long-Term Steward. Should the Permittee choose to designate someone other than himself as Long-Term Steward, the Permittee must notify CEMVN in writing of his intent at least 60 days prior to the effective date of the new Steward's assumption of this position. This notice must include the proposed Steward's name, its qualifications, name of its authorized representative, if different, its address and phone number, the anticipated date of the

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assumption of the position. CEMVN will review the submitted information to determine the competency of the new Steward and provide the Permittee a response within the 60 day time period. However, it is understood by both the Permittee and the Steward that the contractual agreement of responsibilities to be performed by the Steward does not alter the ultimate responsibility of the Permittee for legal responsibility for the compensatory mitigation requirement of the DA permit associated with this PRMP. Unless the permit is transferred with prior CEMVN approval, the Permittee remains responsible for the long-term management, maintenance, monitoring, and protection of the compensatory mitigation project.

2. Impact Site

2.1. Location

The East Bank Levee is a Plaquemines Parish owned (non-Federal) levee which provides tidal and storm protection to residents living along the East Bank of the Mississippi River between the Braithwaite and Belair communities (River miles 81.4 to 64.5). There are three pump stations in the levee to provide interior drainage. There is marsh at the flood-side toe and, generally, a major drainage canal at the landside toe. The levee is located in portions of T14S-R13E, Secs. 1, 2, 3, 4, 5, 6, 27 & 28; T14S-R12E, Secs. 1, 2, 3, 4, 5, 6, 17, 18, 23, 24, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37 & 38; and T15S-R12E, Secs. 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 21, 22, 23 & 24 of Plaquemines Parish, Louisiana. The northern terminus of the levee is located at the intersection of the levee and the Mississippi River & Tributaries Federal Levee (MR&T) north of the Braithwaite Golf Course (approximately 29° 51’ 42.83”N, 89° 54’ 44.94”W) while the southern end point of the levee is located south of the community of Belair (approximately 29° 42’ 44.72”N, 89° 58’ 40.99”W). The total linear extent of the levee is approximately 17.88 miles.

Applications for improvements to the levee were submitted in three parts. Mitigation for unavoidable wetland impacts associated with the northern portion of the levee (MVN-2011-1858-EOO) was previously resolved and the permit issued. This permittee-responsible mitigation project will, therefore, serve to offset the losses associated with the unavoidable wetland impacts caused by the construction of levee improvements in the middle (from Scarsdale Road, 29° 49’ 52.34”N, 89° 57’ 36.65”W) to the southern terminus of the levee.

A vicinity/site location map is included as Figure 1.

2.2. Avoidance and Minimization of Impacts

To the extent practicable, proposed impacts were limited to the existing levee footprint and existing cleared, non-wet areas. The footprint of the expanded levee was reduced to the minimum size possible while still maintaining the stability of

the levee. Where impacts to vegetated wetlands were unavoidable, efforts were made to direct those impacts to the interior, hydrologically altered side of the levee.

2.3. Existing Conditions of the Impact Site

The impact site consists of the footprint of an existing flood protection levee and roadways, narrow corridors adjacent to the existing infrastructure and undeveloped areas that will be used for equipment staging and access. A Jurisdictional Determination (MVN-2011-01809-SY, attached) found the area to be a mix of wetlands, other waters and non-wet habitats.

Wetland habitats include a mix of wet pasture, bottomland hardwoods and fresh, intermediate and brackish marsh.

The flood protection levee and forced drainage system have had great impact on the hydrology and hydroperiod on the protected side of the levee, resulting in a drier habitat than would otherwise be expected. Rainfall is the dominant source of water input into the interior system.

The area on the floodside of the levee is still exposed to daily tidal fluctuations. In addition to rainfall, some fresh water input is realized from the nearby Caernarvon Freshwater Diversion (BS-08), the Bertrandville Siphon (BS-18) and the LCA Medium Diversion at White Ditch (BS-20).

2.4. Impact Details

2.4.1. Description of impacts

The Corps has determined that the proposed work for MVN-2011-1995-EOO will unavoidably impact 3.7 acres of bottomland hardwood habitat and 4.4 acres of fresh/brackish marsh habitat. The Corps also determined for MVN-2011-1974-EOO the proposed work will unavoidably impact 1.7 acres of bottomland hardwood habitat and 1 acre of fresh/brackish marsh habitat. These total 10.8 acres of jurisdictional wetland impacts. The impacted habitats are of low to moderate quality due to their location either within the confines of the forced drainage system or immediate adjacency to the existing levee. These will be permanent habitat losses associated with the increased toe width of the levee and the adjacent clear space required to allow adequate inspections and prevention of tree roots from infiltrating and weakening the levee.

As the levee already exists there are no additional indirect or cumulative effects anticipated from the proposed work.

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2.4.2. Assessment method(s)

The Modified Charleston Method (MCM) developed by the New Orleans District Corps of Engineers was used to quantify the impacts to aquatic resource functions. The MCM evaluation was conducted by Corps' personnel.

2.4.3. Land Use

2.4.3.1. Impact Site Setting

The impact site is located on the east bank of the Mississippi River between approximately river miles 64.5 and 75 in Plaquemines Parish, Louisiana. It includes the footprint of the existing East Bank flood protection levee and adjacent areas protected within a forced drainage system and areas on the floodside of the levee. The levee protects the communities of Braithwaite, Scarsdale, Stella, Dalcour, Promised Land, Linwood, Greenwood, Bertrandville, Wills Point and Belair.

2.4.3.2. Current Land Use

The impact site includes the footprint of an existing flood protection levee and adjacent areas protected within a forced drainage system and areas on the floodside of the East Bank Levee.

The area within the forced drainage system is largely undeveloped and rural/agricultural in nature. Scattered businesses and homes are found adjacent to Hwy. 39.

The area on the floodside of the levee is principally tidally influenced marsh ranging from fresh marsh at the northern end of the levee system to brackish/saline marsh at the southern terminus. Relic distributary ridges transect the area and are vegetated largely with bottomland hardwood species.

2.4.4. Soils

A soils map is provided as Figure 5. All of the area soils are considered to be hydric. Soils along the route of the levee and within the protected levee confines have been impacted by construction activities and forced drainage. The following is a summary description of the soils in the impact area.

Ae—Allemands muck, drained. The Allemands component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes on delta plains. The parent material consists of decomposed

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organic material overlying clayey backswamp deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is very high. Shrink-swell potential is high. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 58 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria.

CE—Clovelly muck. The Clovelly component makes up 80 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes on coastal plains. The parent material consists of herbaceous organic material over very fluid clayey alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 45 percent. Nonirrigated land capability classification is 8w. This soil meets hydric criteria. The soil has a slightly saline horizon within 30 inches of the soil surface. The soil has a slightly sodic horizon within 30 inches of the soil surface.

Cm—Cancienne silt loam. The Cancienne component makes up 70 percent of the map unit. Slopes are 0 to 1 percent. This component is on natural levees on delta plains. The parent material consists of silty alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 33 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

Co—Cancienne silty clay loam. The Cancienne component makes up 95 percent of the map unit. Slopes are 0 to 1 percent. This component is on natural levees on delta plains. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 33 inches during January, February, March, April, December. Organic matter content in the

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surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

GE—Gentilly muck. The Gentilly component makes up 80 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes. The parent material consists of thin herbaceous organic material over semifluid clayey over consolidated clayey alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is high. Shrink-swell potential is very high. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 50 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. The soil has a slightly saline horizon within 30 inches of the soil surface.

Ha—Harahan clay. The Harahan component makes up 90 percent of the map unit. Slopes are 0 to 1 percent. This component is on backswamps on delta plains. The parent material consists of nonfluid over fluid clayey alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is high. Shrink-swell potential is high. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 14 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria.

Ra—Rita mucky clay. The Rita component makes up 90 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes on coastal plains. The parent material consists of nonfluid over fluid clayey alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is high. Shrink-swell potential is moderate. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 14 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria.

Sk—Schriever clay. The Schriever component makes up 95 percent of the map unit. Slopes are 0 to 1 percent. This component is on backswamps on delta plains. The parent material consists of clayey alluvium. Depth to a root restrictive layer is greater than 60 inches. The

natural drainage class is poorly drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is very high. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria.

Ww—Westwego clay. The Westwego component makes up 95 percent of the map unit. Slopes are 0 to 1 percent. This component is on backswamps on delta plains. The parent material consists of nonfluid over fluid clayey alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is very high. Shrink-swell potential is very high. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 14 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria.

W—Water. Soils descriptions are created for major soil components. The Water component is a miscellaneous area.

2.4.5. Hydrology

2.4.5.1. Existing Drainage Patterns

The existing levee has changed the hydrology in this area. As the area inside of the levee now is a part of a maintained forced drainage system. The hydrology inside of the area is received from rain events. The area outside of the existing levee receives tidal and rain inputs.

2.4.6. Vegetation

2.4.6.1. Existing Plant Community

Typical grasses such as bermuda grass and burclover dominant the maintained mowed existing levee. Grass such as shoreline sedge and alligator weed dominant the area between the existing levee and undeveloped flood side. The undeveloped side is mixed between tree, shrubs, and grasses. Common in this area is Chinese tallow, black willow and baccharis.

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3. Goals and Objectives of the Mitigation Plan

The PRMP is designed to restore rapidly disappearing marsh habitat in the vicinity of the impact project by establishing a new marsh platform in shallow open water.

The proposed mitigation site is in the influence areas of and will augment a number of Louisiana's Coastal Master Plan, Water Resource Development Act and Coastal Protection and Restoration Authority projects. These projects include the Caernarvon Freshwater Diversion (BS-08), the Bertrandville Siphon (BS-18) and the LCA Medium Diversion at White Ditch (BS-20).

Successful implementation of the mitigation project will increase the quality and quantity emergent vegetated wetland within the watershed with resultant benefits to fish, resident and migrant birds, alligators and fur-bearing mammals.

The mitigation area for MVN-2011-1995-EOO is shown in figure 3 by hatching angled at 125 degrees and is 16 acres in size, and the mitigation for MVN-2011-1974 EOO is shown as well on figure 3 by hatching angled at 45 degrees and is 5 acres in size.

3.1. Mitigation Site

3.1.1. Property Location

The Property is generally located at latitude 29d 50' 53.98" N and longitude –89d 55' 9.23"W (approximate center point) in Plaquemines Parish, Louisiana (Figure 1). This location includes all or portions of Sections 6,28,5,4 T14S – R13E. The Property is located south of Braithwaite, Louisiana. To reach the Property, from New Orleans take Hwy 46 to Poydras and then take Hwy 39 into Braithwaite, Louisiana.

3.1.2. Property Ownership

The property owners listed below. They have owned the Property for unknown number of years. Currently, the applicant is communicating with the landowners. Landowners are Elevating Boats Inc., Plaquemines Parish Government, Thomas Benge, Thomas Devitt, and Alabama Great Southern Railroad. These landowners are aware of the project and are in favor of it in its preliminary state. Additional research is currently under way to confirm ownerships and willingness to participate.

3.1.3. Property Legal Definition

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A certain parcel of land, together with all buildings and improvements thereon, and all of the rights, ways, privileges, servitudes, prescriptions, advantages and appurtenances thereunto belonging, or in anywise appertaining, situated as stated above and more fully described as follows:

[*INSERT LEGAL DESCRIPTION OF THE PROPERTY TO BE ENCUMBERED BY THE CONSERVATION SERVITUDE HERE*].

The perimeter of the Property is defined by the following coordinates in decimal degrees:

Latitude _____ N and Longitude –_____ W
Latitude _____ N and Longitude –_____ W
Latitude _____ N and Longitude –_____ W
Latitude _____ N and Longitude –_____ W
Latitude _____ N and Longitude –_____ W
Latitude _____ N and Longitude –_____W

3.1.4. Recorded Liens, Encumbrances, Easements, Servitudes or Restrictions

Clear title to the Property has been documented by a title report /opinion Attachment [#] generated by [*Company Name*]. Any exceptions to the real estate title not subordinated to the conservation servitude are listed below:

(*PROVIDE A DETERMINATION AS TO WHETHER OR NOT THERE ARE ANY RECORDED LIENS, ENCUMBRANCES, EASEMENTS, SERVITUDES, OR RESTRICTIONS ON THE PROPERTY THAT CAN NOT BE SUBORDINATED TO THE CONSERVATION SERVITUDE OR WOULD OTHERWISE AFFECT THE RESTORATION/ENHANCEMENT/ PRESERVATION EFFORTS ON THE PROPERTY CONTRARY TO THIS MBI.*)

3.2. Site Selection

Published estimates, though some are dated at this point, suggest the Breton hydrologic basin (east side of the Mississippi River) is experiencing land loss of approximately 832.7 acres/year.

Much of the Plaquemines Parish landmass, especially outside of the river and bayou ridges, is within a few inches of sea level. Subsidence in this part of the Louisiana is in the range of 2.1’ to more than 3.5’ per century. Coupled with projected increases in sea level (±8” by 2050), much of the land in the Breton hydrologic basin is expected to be underwater by 2100. On the East Bank we expect to experience an apparent elevation loss of between 3.02’ (Hopedale) and 4.00’ (Pointe a la Hache) by 2100. If these elevational changes are realized, they will approach or exceed existing land elevations (+1 to +2.5’ at Hopedale, -3.0 to +4.0’ at Point a la Hache [part of the Point a la Hache area is within a forced drainage system]). These numbers clearly demonstrate the dire conditions faced by our Parish.

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The proposed mitigation project will restore an area that has degraded to open water and nourish existing marsh on the site. The mitigation project is also located adjacent to the site of impact.

Factors considered in pursuing and selecting an appropriate site to construct a compensatory mitigation project versus offsite mitigation for the unavoidable wetland impacts associated with the improvement of the Braithwaite to White Ditch hurricane protection levee included:

A. Located in the same hydrologic basin as the impacts to be mitigated.
B. Provides the same or similar habitat as that being impacted.
C. Proximity to the site of impact.
D. Located in Plaquemines Parish.
E. Provides protection for Parish's hurricane protection levees or other infrastructure.
F. Ready access to a sediment source.
G. Sustainability – protected from storm damage, erosion, proximity to Caernarvon diversion, etc.
J. Located in proximity to proposed USACE mitigation project which PPG will be the local sponsor.

The proposed mitigation site is in the influence areas of and will augment a number of Louisiana's Coastal Master Plan, Water Resource Development Act and Coastal Protection and Restoration Authority projects. These projects include the Caernarvon Freshwater Diversion (BS-08), the Bertrandville Siphon (BS-18) and the LCA Medium Diversion at White Ditch (BS-20).
Successful implementation of the mitigation project will increase the quality and quantity emergent vegetated wetland within the watershed with resultant benefits to fish, resident and migrant birds, alligators and fur-bearing mammals.

3.3. Baseline Information

The proposed PRMP site is currently shallow open water (± 3' depth). The area is tidally influenced.

Through the PRMP, PPG will establish a marsh platform, plant it with appropriate species and maintain the newly created marsh to offset the anticipated loss of habitat functions associated with the impact permits.

3.3.1. Land Use

3.3.1.1. Historical Land Use

Use of the mitigation site has largely been limited to traditional marsh user groups – hunters, fishermen and trappers. Some oil and gas related

activities have been undertaken to the south and there are some powerline and pipeline rights-of-way in the area.

3.3.1.2. Current Land Use

The site is currently shallow open water and used primarily by fishermen and general navigation interests.

3.3.2. Soils

A soils map is provided as Figure 2. All of the area soils are considered to be hydric. Soils along the route of the levee and within the protected levee confines have been impacted by construction activities and forced drainage. The following is a summary description of the soils in the impact area.

Fill Area:

Ae—Allemands muck, drained. The Allemands component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes on delta plains. The parent material consists of decomposed organic material overlying clayey backswamp deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is very high. Shrink-swell potential is high. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 58 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria.

CE—Clovelly muck. The Clovelly component makes up 80 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes on coastal plains. The parent material consists of herbaceous organic material over very fluid clayey alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 45 percent. Nonirrigated land capability classification is 8w. This soil meets hydric criteria. The soil has a slightly saline horizon within 30 inches of the soil surface. The soil has a slightly sodic horizon within 30 inches of the soil surface.

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W—Water. Soils descriptions are created for major soil components. The Water component is a miscellaneous area.

Borrow Area:

Ha—Harahan clay. The Harahan component makes up 90 percent of the map unit. Slopes are 0 to 1 percent. This component is on backswamps on delta plains. The parent material consists of nonfluid over fluid clayey alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is high. Shrink-swell potential is high. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 14 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria.

Sk—Schriever clay. The Schriever component makes up 95 percent of the map unit. Slopes are 0 to 1 percent. This component is on backswamps on delta plains. The parent material consists of clayey alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is very high. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria.

Ww—Westwego clay. The Westwego component makes up 95 percent of the map unit. Slopes are 0 to 1 percent. This component is on backswamps on delta plains. The parent material consists of nonfluid over fluid clayey alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is very high. Shrink-swell potential is very high. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 14 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria.

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3.3.3. Hydrology

3.3.3.1. Historical Drainage Patterns

The mitigation site was historically subject to daily tidal fluctuation and rain influences.

3.3.3.2. Existing Drainage Patterns

The general drainage pattern at the site is similar to its historical patterns. General drainage will not be affected by the proposed PRMP. Once the marsh platform is consolidated and successfully revegetated, gaps will be cut into the temporary retaining levees and tidal waters allowed to naturally flow across the site.

3.3.4. Vegetation

3.3.4.1. Historical Plant Community

Fresh/intermediate marsh species likely formed the basis of the historical plant community.

3.3.4.2. Existing Plant Community

Based upon previous field visits there was no to very little existing plant community on the PRMP site as a result of recent storms. During the site visit the following was seen adjacent or in the PRMP, black willow trees, alligator weed, duck potato, water primrose, cattails, and water hyacinth Adjacent marshes are predominated by fresh and intermediate marsh plant species.

4. Assessment Methodology

The required marsh acreage that must be established to adequately offset the loss of wetland habitat values associated with the impact projects was determined using the MCM.

5. Mitigation Work Plan

Marsh Platform Establishment

Work necessary to establish the proposed mitigation Project will include the creation of temporary containment levees and pumping sediments from the parish owned golf course ponds into the project area to nourish existing marsh habitat and re-establish a marsh platform in areas that have become open water. Marsh areas will be initially filled to a + 3’ NGVD elevation to allow adequate material after dewatering and

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compaction. A site plan view (Figure 3) and typical cross-section (Figure 4) are attached. Both the dredge site and fill site have access via existing roads and levees. Marsh buggy excavators will be utilized as necessary to establish/degrade containment dikes, etc. Based on current estimates, approximately 4,991,976 cubic yards of material will need to be pumped from the borrow site to the fill area.

Proposed Vegetative Plantings

Once the site has dewatered and soils compacted, typical fresh marsh vegetation will be planted on the site. Depending on commercial availability at the time of planting, the species assemblage may include: California bulrush (*Schoenoplectus alilfornicus*), needlegrass rush (*Juncus roemerianus*), smooth cordgrass (*Spartina alterniflora*), big cordgrass (*Spartina cynosuroides*), pickerelweed (*Pontederia cordata*), bulltongue arrowhead (*Sagittaria lancifolia*), and common reed (Phragmites australis).

Stock utilized will consist of commercially available multi-stemmed clusters grown from local seed sources planted on 10'x10' spacing.

6. Maintenance Plan

PPG will make periodic inspections of the property of not less than once per year to verify that the use of the property is consistent with the mitigation plan and the conservation servitude and to inspect for any damage caused by flood, fire, storm, wind, accident, vandalism or other factors that have negatively impacted the site. Maintenance activities (e.g., placement of additional fill, replanting) will be performed throughout the life of the Project as necessary to ensure that the Project is functioning as envisioned and that performance standards are met. Discussion of any maintenance activities will be included in the periodic monitoring reports.

7. Performance Standards

The goal of the mitigation project is to establish a suitable platform for emergent, freshwater marsh species.

Year 1

All earth work necessary to restore internal site topography and hydrology is completed.

Marsh area planted with appropriate species and geographic types.

Interim (Year 3) Success Criteria

All temporary retaining levees have been gapped/degraded to allow hydrologic exchange between the restored marsh and adjacent waterbodies.

Vegetative coverage is 80% of marsh mitigation area. The species composition at this time should be similar to adjacent marshes.

Long-term (Year 5 and beyond) Success Criteria

Vegetative coverage should be >95%.

Exotic/invasive species should represent no more than 1% of the vegetative cover.

If performance standards are not met the Corps will be notified and corrective measures will be taken.

8. Monitoring and ReportingRequirements

8.1. Immediately following initial planting, PPG will randomly establish two (2) permanent circular monitoring stations. Each station will have a minimum area of 1/20th acre (26 foot radius). Stations will be permanently marked (e.g., an 8-foot length of PVC pipe over a steel rod) and their GPS coordinates recorded. A map depicting the locations of the monitoring stations and a listing of the station coordinates will be provided to CEMVN and OCM. PPG will document the number and species of each planted specimen within the monitoring station immediately following planting.

8.2. Surveys of the permanent monitoring stations will occur immediately following planting and in Years 1 (planting year), 3 and 5 to ensure the site is progressing as expected. If necessary, additional surveys will be conducted every 2 years until the final success criteria are met. The surveys will include the collection of data to evaluate the survival rate and percent cover of planted vegetation. Information will be collected regarding colonizing plant species. This information will include the species, percent cover by species, wetland plant status (obligate, upland, etc.) and the whether the species are noxious/exotic.

8.3. Observations of the overall site will be made during the monitoring surveys. Any areas that are not revegetating will be noted and appropriate actions taken to ensure success of the mitigation site.

8.4. PPG will provide the Corps and OCM with a report of each survey's findings within 60 days of completion. The monitoring report will include:

A. Ground level digital photographs from each monitoring station and other locations as needed to document the overall condition of the site.
B. A description of the general condition of the plantings, including the number and species of surviving plants at each monitoring station and a discussion of likely causes for mortality.
C. A description of the vegetative community developing at each monitoring station.
D. A description of the general degree and distribution of any exotic/invasive species.
E. A description of any measures taken to eradicate exotic/invasive species and the results of those actions.
F. A general description of the hydrologic conditions at the monitoring stations.
G. A description of any herbivory problems noted on the site.
H. Copies of deposits and general account statements for all financial assurance accounts and the Long-term Maintenance and Protection Fund. If any escrowed funds were used, the report will include a narrative describing that use and supporting documentation (e.g., receipts).

9. Long Term Management Plan

To ensure the long-term sustainability of the site, PPG will conduct annual site examinations to assess the site's condition with respect to the following management needs:

A. Invasion of exotic or deleterious plant species.

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B. Herbivory and nuisance species control.
C. Vandalism.
D. Trash.

Any identified issues will be noted, evaluated and mapped during the annual site visits. Monitoring notes on the type, location and other details about identified issues will be maintained. Actions will be taken to remediate such conditions and to avoid/minimize such situations in the future.

The Permittee will not be responsible for restoring the site should it be destroyed by a severe hurricane or other act of God.

9.1. Conservation Servitude

The Owner of the proposed Mitigation Site shall burden the Property with a 20 year conservation servitude in accordance the Louisiana Conservation Servitude Act, R.S. 9:1271 et seq., Prior to execution of the conservation servitude, the Owner shall provide evidence through the Permittee that the entity proposed to hold the conservation servitude is a CEMVN approved Holder by virtue of being either a governmental body empowered to hold an interest in immovable property under the laws of the State of Louisiana or the United States of America; or a non-profit corporation organized pursuant to Louisiana's Non-Profit Corporation Law, Title 12, Sections 201-269 of the Louisiana Revised Statues, the purposes or powers of which include retaining or protecting the natural, scenic, or open–space values of immovable property; assuring the availability of immovable property for agricultural, forest, recreational of open-space use; protecting natural resources; maintaining or enhancing air or water quality; or preserving the historical, archaeological or cultural aspects of unimproved immovable property. Upon execution of the conservation servitude previously described, the Holder shall hold and enforce the conservation servitude placed on the Mitigation Site and the Mitigation Site shall be protected in perpetuity.

The conservation servitude shall be signed and filed in the Plaquemines Parish office with this PRMP and DE permits attached. The conservation servitude shall be filed prior to performing any work authorized by DA permits MVN-2011-1995-EOO and MVN-2011-1974-EOO. After filing, a copy of the recorded conservation servitude, clearly showing the book, page and date of filing, will be provided to CEMVN. Upon receipt of a copy of the recorded conservation servitude, CEMVN will advise the Permittee in writing that work may proceed.

9.2. Long-term Management Needs

If planted stock survival falls below the target survival criteria, PPG shall address the causes of mortality before replacing the lost stock species, or an appropriate substitute, during the following planting season. Replanting, monitoring and reporting shall occur as needed to achieve and document the required survival rate.

9.3. Annual Cost Estimates for These Needs

Sections 9.3-10.2.3 are to be determined. The Permittee proposes to provide the CEMVN with a formal, documented commitment, as allowed by law, which provides financial assurances that the mitigation project will be constructed, established, managed, monitored, and maintained as described in the PRMP plan.

The cost of long-term management is $18,000 from Year 5 to Year 20. This amounts to $19,000 when adjusted for inflation every five years. Appendix A is a description of the necessary work and an itemized cost to perform the work for long-term management and protection of the Mitigation Site.

9.4. Long-Term Maintenance and Protection Funding Mechanism

To ensure that sufficient funds are available to provide for the perpetual maintenance and protection of the Mitigation Site, the Permittee is establishing the "Long-Term Maintenance and Protection" escrow account. This account will be administered by a federally-insured depository that is "well-capitalized" or "adequately-capitalized" as defined in Section 38 of the Federal Deposit Insurance Act. Documentation that the account is fully funded is a pre-requisite for issuance of the permit. Accrued interest in excess of the value of the fully funded account may only be used for the administration, operation, maintenance and/or other purposes that directly benefit the Mitigation Site. The principal shall not be used and shall remain as part of the Mitigation Site's assets to ensure that sufficient funds are available should perpetual maintenance responsibilities be assumed by a third party. The Permittee or Long-term Stewart may withdraw the accumulated interest only with written approval from CEMVN and only to be used to maintain the Mitigation Site. The Permittee shall provide copies of depository account statements to CEMVN upon request and in their monitoring reports.

10. Financial Assurances

[The applicant must provide a description of the financial assurances that will be used for the mitigation site as well as documentation demonstrating that they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards.CEMVN will review the documentation and determine its appropriateness based on several factors which includes, but is not limited to: the size and complexity of the proposed compensatory mitigation project, the degree of completion of the project at the time of project approval, the likelihood of success, the past performance of the applicant, and any other factors CEMVN deems appropriate. In determining the assurance amount, the district engineer shall consider the cost of providing replacement mitigation, including costs for land acquisition, planning and engineering, legal fees, mobilization, construction, and monitoring.

Financial assurances may be in the form of escrow accounts, letters of credit, legislative appropriations for government Permittee projects, or other appropriate

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instruments, subject to the approval of the CEMVN. The rationale for determining the amount of the required financial assurances must be documented in the administrative record for either the DA permit or the PRMP. The financial assurances must be in place prior to impact project commencement and may be phased out based on achievement of performance standards and the likelihood of adaptive management measure implementation. The DA permit special conditions must clearly specify the conditions under which the financial assurances may be released to the Permittee and/or other financial assurance provider.

The financial assurance must be in a form that ensures that the CEMVN will receive notification at least 120 days in advance of any termination or revocation. For third-party assurance providers, this may take the form of a contractual requirement for the assurance provider to notify the district engineer at least 120 days before the assurance is revoked or terminated. The financial assurances shall be payable at the direction of the district engineer to his designee or to a standby trust agreement. When a standby trust is used (e.g., with performance bonds or letters of credit) all amounts paid by the financial assurance provider shall be deposited directly into the standby trust fund for distribution by the trustee in accordance with the district engineer's instructions.]

10.1. Construction and Establishment Fund

The Permittee agrees to provide Financial Assurances sufficient to ensure satisfactory completion for the work described in the Mitigation Work Plan and the Adaptive Management Plan. The Permittee is establishing the Construction and Establishment (C&E) financial assurance to assure sufficient funds are available to perform work required to construct and maintain the Mitigation Site through successful attainment of long term success criteria. An assessment of the initial and capital costs and ongoing management funds required to manage and monitor the Mitigation Site is included in the Mitigation Work Plan and provides an estimate of work and cost requirements for construction and establishment of the Mitigation Site through achievement of long term success criteria. To fund this account, the Permittee proposes to establish [*performance bonds, escrow accounts, casualty insurance, letters of credit, legislative appropriations for government Permittee projects, or other appropriate instruments, subject to the approval of the district engineer*].

10.1.1 C&E Fund Release Schedule

The Financial assurance shall be reduced as success criteria are achieved and the probability that those funds are no longer needed according to the following schedule:

10.1.1.1. Upon verification by the CEMVN, following consultation with interested resource agencies, that the construction work has been completed, the CEMVN shall advise the Permittee that the C&E financial assurance may be reduced to $[*This value is dependent upon what work has been completed successfully contingencies should remain in place to cover the costs of correcting the initial work should it fail to produce*

the results anticipated, i.e., additional work required to establish wetland hydrology planting failures, exotic control, etc.].

10.1.1.2. Upon verification by the CEMVN, following consultation with interested resource agencies, that the initial success criteria have been attained for all tracts, the CEMVN shall advise the Permittee that the C&E financial assurance may be reduced to $[*Release funds pertaining to monitoring and reporting as well as adaptive management measures to meet the initial success criteria; replanting, exotic control.*].

10.1.1.3. Upon verification by the CEMVN, following consultation with interested resource agencies, that the interim success criteria have been attained for all tracts, the CEMVN shall advise the Permittee that the C&E financial assurance may be reduced to $[*Release funds pertaining to monitoring and reporting, performing a JD as well as adaptive management measures to meet the interim success criteria; replanting, exotic control, hydrologic work.*].

10.1.1.4. Upon verification by the CEMVN, following consultation with interested resource agencies, that the long-term success criteria have been attained for all tracts, the CEMVN shall notify the financial institution that the remaining C&E financial assurance shall be released to the Permittee.

(*Sections 1- 4 above should be amended pursuant to the specifics of each mitigation work plan and should be based on the need to perform adaptive management and or other work necessary to achieve success criteria*)

10.2. Other Requirements

10.2.1. C&E Annual Reports

The Permittee shall provide copies of annual status of the financial assurances to CEMVN upon request and/or in their monitoring reports.

10.2.2. Default Contingency

The financial assurances shall guarantee payment to a third party, as determined appropriate by the CEMVN, in consultation with interested resource agencies, in the event that the Permittee does not fulfill its obligations to perform, as specified in this PRMP.

10.2.3. Notifications to Release Funds

Payment to Permittee, or if necessary, to a third party as identified by CEMVN, of a specified amount of the financial assurances shall be made upon written notification by CEMVN to the financial institution.

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11. Contingencies and Remedial Actions

If planted stock survival falls below the target survival criteria, PPG shall address the causes of mortality before replacing the lost stock species, or an appropriate substitute, during the following planting season. Replanting, monitoring and reporting shall occur as needed to achieve and document the required survival rate.

11.1. Adaptive Management

The Permittee is responsible for implementing an approved Adaptive Management Plan in accordance with 33 CFR 332.4(c)(12). Adaptive management will occur as needed to make sure that success is obtained for project. If the project does not meet success criteria, adaptive management will occur the following growing season.

11.2. Notice of Deficiency

If monitoring discloses that the Mitigation Site does not meet success criteria, the Permittee will provide a Notice of Deficiency to CEMVN that success criteria have not been met. This notice shall be submitted with the monitoring report. Along with the notice the Permittee will provide a detailed explanation of the deficiency and a proposal identifying specific measures to be taken and a timetable to complete the work to correct the deficiency. CEMVN, in consultation with interested resource agencies, shall determine a course of action required to correct deficiencies and then notify the Permittee to engage in corrective actions pursuant to the Adaptive Management Plan or other action as the situation may warrant.

When a disaster (natural or man-induced) adversely affects the Mitigation Site, the Permittee shall provide a Notice of Deficiency to CEMVN of such circumstance within two weeks of the event. The notice will identify the disaster and impacts to the Mitigation Site, specify measures to be taken to correct the impacts and a timetable to complete the work necessary to restore the Mitigation Site. CEMVN shall then notify the Permittee to engage in corrective actions pursuant to the Adaptive Management Plan or other action as the situation may warrant.

11.3. Conditions for Re-evaluation of the Benefits from Mitigation Site

Should the CEMVN determine that the Mitigation Site is not performing according to the standards and criteria set forth in this PRMP, CEMVN will require adaptive management.

If the Permittee fails to implement adaptive management to address any failure in meeting the performance standards within one growing season (November 1 of the following year) after notification, the CEMVN, in consultation with interested resource agencies, will notify the Permittee of the revocation of this mitigation project as

appropriate mitigation for the impact project. The Permitteewill be required to replace the mitigation. Methods of replacement will be determined at that time and could require purchasing mitigation credits at an appropriate mitigation bank. The perpetual conservation servitude will remain in place on the Property to protect accrued credits unless project impacts are fully mitigated elsewhere.

11.4. Natural Disasters[1]

In the event substantial damage to the Mitigation Site caused by a natural or human-caused disaster or a deliberate and unlawful act, the CEMVN, in consultation with the Permittee and interested resource agencies, determines that the disaster was beyond the control of the Permittee, its agents, contractors, or consultants to prevent or mitigate; the Permittee may request, and the CEMVN, in consultation with the interested resource agencies, may approve changes to the construction, operation, project milestones or performance standards. Net improvement (credits) of the mitigation bank will be reassessed.

Should a disaster with substantial damage to the Mitigation Site occur, CEMVN, in consultation with interested resource agencies, will evaluate the degree of impacts and measures necessary to remediate identified impacts to the Mitigation Site. The CEMVN, in consultation with interested resource agencies, will then determine an appropriate adaptive management plan to address the issue.

The Permittee will implement adaptive management measures necessary to remediate identified impacts within one year of receiving the approved adaptive management plan. The Permittee will continue to submit monitoring reports and the success of the adaptive management will be re-evaluated. Additional adaptive management measures may be necessary upon follow-up evaluations.

If identified remedial actions are not taken within one year following receipt of the approved adaptive management plan for that issue, the approval of this Mitigation Site as appropriate mitigation for the impact project will be revoked.

11.5. Financial Responsibilities

Regardless of the cause of the remedial action, the Permittee shall bear the financial responsibility for any and all remedial measures necessary to correct any deficiency caused by any means prior to successful attainment and verification of all

1 A natural catastrophic event includes, but is not limited to, a flood equal to or greater in magnitude than the 100-year flood event, earthquake, drought, debilitating disease, wildfire, depredation, regional pest infestation, or fluviomorphic change. A human-caused catastrophic event includes, but is not limited to, war, insurrection, riot, or other civil disorders, spill of a hazardous or toxic substance, or fire. A deliberate and unlawful act includes, but is not limited to, the dumping of a hazardous or toxic substance, as well as significant acts of vandalism or arson. If any such act occurs the IRT, in consultation with the Permittee, will determine what changes to the Bank and/or this MBI will be in the best interest of the Bank and the aquatic environment.

Long-term Success Criteria by the CEMVN, in consultation with interested resource agencies.

12. Additional Information

13. References

Marshland Holdings, LLC

Date unknown. Draft Mitigation Bank Instrument Chef Menteur Pass Mitigation Bank, Brackish Marsh Restoration Project, Lake Borgne Area, Orleans Parish, LA download from Regional Internet Bank Information Tracking System (RIBITS) (http://ribits.usace.army.mil/) Accessed on February 2013.

Plaquemines Parish Government

2010. Comprehensive Master Plan, Plaquemines Parish, Louisiana. Existing Land Use. June, 2010 (www.plaqueminesparishmasterplan.com). Accessed during February 2013.

U.S. Department of Agriculture. Natural Resource Conservation Service Web Soil Surve. (http://websoilsurveyl.nrcs.usda.gov). Accessed during 2013.

U. S. Department of the Interior, Geological Surveys.

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Attachment A
Long Term Mitigation Site Management

Description	Cost		
Inspection	$1,000.00		
Reporting	$2,500.00		
1% Invasive Species Control	$618.00		
Total Per Event	$4,118.00		
		Reporting Years	
		10	$5,372.00
		15	$6,228.00
		20	$7,220.00
		Total Cost	$ 18,820.00

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SUMMARY WORKSHEET 2011-1995

Mitigation Summary Worksheet For Permit Application # 0
Mitigation will be performed at: (No Bank Selected)
AND/OR Mitigation will be permittee-responsible and performed at:
Big Mar

1. Impacts to be Mitigated

Credits	Acres
71.8	8.1

2. Out of Basin Factor

	Required	Value
Permittee-Responsible Mitigation	No	1.00
Mitigation Bank	No	#N/A

3. Permittee-Responsible Mitigation Credit Summary

Credits	Acres
76.0	16.0

4. Banking Mitigation Credit Summary

Credits	Acres
0.0	0.0

IV. Grand Totals

Credits	Acres
76.0	16.0

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Adverse Impacts Worksheet

CEMVN Permit Number:	2011-1995
Total wetland Area (Acres)	
Impacted by Project:	8.1
Impact HUC:	(HUC)
Impact Basin:	

#N/A

Table 1: Adverse Impacts Worksheet

Factor	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6
Priority Category	Low	Primary	(Select an Option)	(Select an Option)	(Select an Option)	(Select an Option)
Existing Habitat Condition	Condition 4	Condition 4	(Select an Option)	(Select an Option)	(Select an Option)	(Select an Option)
Existing Hydrologic Condition	Condition 1	Condition 1	(Select an Option)	(Select an Option)	(Select an Option)	(Select an Option)
Duration	Over 10	Over 10	(Select an Option)	(Select an Option)	(Select an Option)	(Select an Option)
Dominant Impact	Fill	Fill	(Select an Option)	(Select an Option)	(Select an Option)	(Select an Option)
Cumulative Impact	Low	Low	(Select an Option)	(Select an Option)	(Select an Option)	(Select an Option)

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Adverse Impacts Worksheet

CEMVN Permit Number:	2011-1995
Total wetland Area (Acres)	
Impacted by Project:	8.1
Impact HUC:	(HUC)
Impact Basin:	

#N/A

Table 1: Adverse Impacts Worksheet

Factor	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6
Priority Category	0.5	3.0	0.0	0.0	0.0	0.0
Existing Habitat Condition	0.5	0.5	0.0	0.0	0.0	0.0
Existing Hydrologic Condition	3.0	3.0	0.0	0.0	0.0	0.0
Duration	1.0	1.0	0.0	0.0	0.0	0.0
Dominant Impact	2.5	2.5	0.0	0.0	0.0	0.0
Cumulative Impact	0.0	0.0	0.0	0.0	0.0	0.0
Sum of Factor R=Σr	7.5	10.0	0.0	0.0	0.0	0.0
Size in Acres (AA)	3.7	4.4	0.0	0.0	0.0	0.0
R × AA=	27.8	44.0	0.0	0.0	0.0	0.0

Credits Impacted by Project $= \sum (R \times AA) =$ 71.8

Date: 5/2/2013

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Table 2B: Proposed Restoration/Enhancement Mitigation Worksheet

Mitigation Project Name: Big Mar

Mitigation Project Size (Acres) Include Wetlands, Non-wetlands and Buffer Areas: 30.0

Mitigation Project HUC: 08090203

Mitigation Project Basin: Lake Pontchartrain/Breton Sound/Chandeleur Sound

Impacted HUC: (HUC)

Mitigation Project in the same basin as the impact: Yes

Proximity Factor: 1.0

	Factors	Area 1	Area 2	Area 3	Area 4	Area 5
Net Improvement	Mitigation Type	Re-establishment I	Re-establishment I	(Select an Option)	(Select an Option)	(Select an Option)
	Maintenance/ Management Requirement	Self-Sustaining	Self-Sustaining	(Select an Option)	(Select an Option)	(Select an Option)
	Control	Conservation Servitude	Conservation Servitu	(Select an Option)	(Select an Option)	(Select an Option)
	Temporal Lag	5 to 10	5 to 10	(Select an Option)	(Select an Option)	(Select an Option)
	Credit Schedule	Schedule 3	Schedule 3	(Select an Option)	(Select an Option)	(Select an Option)
	Kind	Category 2	Category 1	(Select an Option)	(Select an Option)	(Select an Option)
	Location	Zone 1	Zone 1	(Select an Option)	(Select an Option)	(Select an Option)
Negative Influences on the mitigation site	Commercial/Residential Development	No Impact	No Impact	No Impact	No Impact	No Impact
	Oil & gas activities	No Impact	No Impact	No Impact	No Impact	No Impact
	Size	Category 3	Category 3	Category 1	Category 1	Category 1
	Corridors	No Impact	No Impact	No Impact	No Impact	No Impact

Version_2013_MVN_MCM_03_2

Table 2B: Proposed Restoration/Enhancement Mitigation Worksheet

Mitigation Project Name: Big Mar

	Factors	Area 1	Area 2	Area 3	Area 4	Area 5
Net Improvement	Mitigation Type * Maintenance/ Management Requirement	4.0	4.0	0.0	0.0	0.0
	Control	0.4	0.4	0.0	0.0	0.0
	Temporal Lag	-0.1	-0.1	0.0	0.0	0.0
	Credit Schedule	0.2	0.2	0.0	0.0	0.0
	Kind	0.3	0.4	0.0	0.0	0.0
	Location	0.4	0.4	0.0	0.0	0.0
	Subtotal	5.2	5.3	0.0	0.0	0.0
Negative Influences on the mitigation site	Commercial/Residential Development	0.0	0.0	0.0	0.0	0.0
	Oil & gas activities	0.0	0.0	0.0	0.0	0.0
	Size	-0.5	-0.5	0.0	0.0	0.0
	Utility Corridors	0.0	0.0	0.0	0.0	0.0
	Sum of negative impacts	-0.5	-0.5	0.0	0.0	0.0
	Sum of m Factors	4.7	4.8	0.0	0.0	0.0
	Size of Area (Acres)	8.0	8.0	0.0	0.0	0.0
	M × A=	37.6	38.4	0.0	0.0	0.0
Acreage required for Permittee-responsible Mitigation project using required credits calculated in Adverse impact Worksheet.		15.3	0.0	0.0	0.0	0.0

Total Restoration/Enhancement Credits = ∑ (M × A) =	76.0
Total Available including buffers	76.0
Average Credit Per Acre =	4.8

	Buffers	Non-hydric inclusions	Hydric Inclusions
Credits per acre (M)	0.2	0.4	0.6
Size in Acres (A)		0.0	
M × A =	0.0	0.0	0.0
Credits added to bank =			0.0

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SUMMARY WORKSHEET 2011-1974

Mitigation Summary Worksheet For Permit Application # 0
Mitigation will be performed at: (No Bank Selected)
AND/OR Mitigation will be permittee-responsible and performed at:
Big Mar

1. Impacts to be Mitigated

Credits	Acres
22.8	2.7

2. Out of Basin Factor

	Required	Value
Permittee-Responsible Mitigation	No	1.00
Mitigation Bank	No	#N/A

3. Permittee-Responsible Mitigation Credit Summary

Credits	Acres
23.8	5.0

4. Banking Mitigation Credit Summary

Credits	Acres
0.0	0.0

IV. Grand Totals

Credits	Acres
23.8	5.0

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Adverse Impacts Worksheet

CEMVN Permit Number:	2011-1974
Total wetland Area (Acres)	
Impacted by Project:	2.7
Impact HUC:	(HUC)
Impact Basin:	

#N/A

Table 1: Adverse Impacts Worksheet

Factor	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6
Priority Category	Low	Primary	(Select an Option)	(Select an Option)	(Select an Option)	(Select an Option)
Existing Habitat Condition	Condition 4	Condition 4	(Select an Option)	(Select an Option)	(Select an Option)	(Select an Option)
Existing Hydrologic Condition	Condition 1	Condition 1	(Select an Option)	(Select an Option)	(Select an Option)	(Select an Option)
Duration	Over 10	Over 10	(Select an Option)	(Select an Option)	(Select an Option)	(Select an Option)
Dominant Impact	Fill	Fill	(Select an Option)	(Select an Option)	(Select an Option)	(Select an Option)
Cumulative Impact	Low	Low	(Select an Option)	(Select an Option)	(Select an Option)	(Select an Option)

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Adverse Impacts Worksheet

CEMVN Permit Number:	2011-1974
Total wetland Area (Acres)	
Impacted by Project:	2.7
Impact HUC:	(HUC)
Impact Basin:	

#N/A

Table 1: Adverse Impacts Worksheet

Factor	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6
Priority Category	0.5	3.0	0.0	0.0	0.0	0.0
Existing Habitat Condition	0.5	0.5	0.0	0.0	0.0	0.0
Existing Hydrologic Condition	3.0	3.0	0.0	0.0	0.0	0.0
Duration	1.0	1.0	0.0	0.0	0.0	0.0
Dominant Impact	2.5	2.5	0.0	0.0	0.0	0.0
Cumulative Impact	0.0	0.0	0.0	0.0	0.0	0.0
Sum of Factor R=Σr	7.5	10.0	0.0	0.0	0.0	0.0
Size in Acres (AA)	1.7	1.0	0.0	0.0	0.0	0.0
R × AA=	12.8	10.0	0.0	0.0	0.0	0.0

Credits Impacted by Project $= \sum (R \times AA) =$ 22.8

Date: 5/2/2013

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Table 2B: Proposed Restoration/Enhancement Mitigation Worksheet

Mitigation Project Name: Big Mar

Mitigation Project Size (Acres) Include Wetlands, Non-wetlands and Buffer Areas: 30.0

Mitigation Project HUC: 08090203

Mitigation Project Basin: Lake Pontchartrain/Breton Sound/Chandeleur Sound

Impacted HUC: (HUC)

Mitigation Project in the same basin as the impact: Yes

Proximity Factor: 1.0

	Factors	Area 1	Area 2	Area 3	Area 4	Area 5
Net Improvement	Mitigation Type	Re-establishment I	Re-establishment I	(Select an Option)	(Select an Option)	(Select an Option)
	Maintenance/ Management Requirement	Self-Sustaining	Self-Sustaining	(Select an Option)	(Select an Option)	(Select an Option)
	Control	Conservation Servitude	Conservation Servitu	(Select an Option)	(Select an Option)	(Select an Option)
	Temporal Lag	5 to 10	5 to 10	(Select an Option)	(Select an Option)	(Select an Option)
	Credit Schedule	Schedule 3	Schedule 3	(Select an Option)	(Select an Option)	(Select an Option)
	Kind	Category 2	Category 1	(Select an Option)	(Select an Option)	(Select an Option)
	Location	Zone 1	Zone 1	(Select an Option)	(Select an Option)	(Select an Option)
Negative Influences on the mitigation site	Commercial/Residential Development	No Impact	No Impact	No Impact	No Impact	No Impact
	Oil & gas activities	No Impact	No Impact	No Impact	No Impact	No Impact
	Size	Category 3	Category 3	Category 1	Category 1	Category 1
	Corridors	No Impact	No Impact	No Impact	No Impact	No Impact

Version_2013_MVN_MCM_03_2

Table 2B: Proposed Restoration/Enhancement Mitigation Worksheet

Mitigation Project Name: Big Mar

	Factors	Area 1	Area 2	Area 3	Area 4	Area 5
Net Improvement	Mitigation Type * Maintenance/ Management Requirement	4.0	4.0	0.0	0.0	0.0
	Control	0.4	0.4	0.0	0.0	0.0
	Temporal Lag	-0.1	-0.1	0.0	0.0	0.0
	Credit Schedule	0.2	0.2	0.0	0.0	0.0
	Kind	0.3	0.4	0.0	0.0	0.0
	Location	0.4	0.4	0.0	0.0	0.0
	Subtotal	5.2	5.3	0.0	0.0	0.0
Negative Influences on the mitigation site	Commercial/Residential Development	0.0	0.0	0.0	0.0	0.0
	Oil & gas activities	0.0	0.0	0.0	0.0	0.0
	Size	-0.5	-0.5	0.0	0.0	0.0
	Utility Corridors	0.0	0.0	0.0	0.0	0.0
	Sum of negative impacts	-0.5	-0.5	0.0	0.0	0.0
	Sum of m Factors	4.7	4.8	0.0	0.0	0.0
	Size of Area (Acres)	2.0	3.0	0.0	0.0	0.0
	M × A=	9.4	14.4	0.0	0.0	0.0
Acreage required for Permittee-responsible Mitigation project using required credits calculated in Adverse impact Worksheet.		4.8	0.0	0.0	0.0	0.0

Total Restoration/Enhancement Credits = ∑ (M × A) =	23.8
Total Available including buffers	23.8
Average Credit Per Acre =	4.8

	Buffers	Non-hydric inclusions	Hydric Inclusions
Credits per acre (M)	0.2	0.4	0.6
Size in Acres (A)		0.0	
M × A =	0.0	0.0	0.0
Credits added to bank =			0.0