

DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT, CORPS OF ENGINEERS P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

April 20, 2015

REPLY TO ATTENTION OF:

Operations Division Regulatory Branch Project Manager Brian W. Breaux (504) 862-1938

SUBJECT: MVN-2014-02764-MB

PUBLIC NOTICE

Interested parties are hereby notified that an application has been received by the District engineer for a Department of the Army permit to authorize the following pursuant to (X) Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 USC 403); and/or (X) Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344).

BELLE POINTE COASTAL MITIGATION BANK IN ST. JOHN the BAPTIST PARISH

<u>NAME OF APPLICANT</u>: Delta Land Services, LLC, 1090 Cinclare Drive, Port Allen, Louisiana 70767 ATTN: Daniel Bollich.

LOCATION OF WORK: The proposed project area is located in Sections 17, 77, 78, 79, 81 & 100, Township 11 South, Range 7 East, westerly of LaPlace, in St. John the Baptist Parish, Louisiana. (Lat. 30.085994, Long. -90.532747)

<u>CHARACTER OF WORK</u>: The proposed bank property totals approximately 387.6 acres of existing agricultural fields, associated infrastructure, and existing forest. The applicant/sponsor proposes to restore 223.2 acres of bottomland hardwood and 128.8 acres of cypress swamp ecosystem. Aspects of the proposed restoration plan include degrading berms and backfilling canals and field ditches to restore surface hydrology and planting appropriate vegetation. Specific details of the proposed restoration plan can be found in the attached prospectus.

The comment period will close <u>30 days</u> from the date of this public notice advertisement. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons therefore, are being solicited from anyone having interest in this permit request.

Letters must reference the applicant's name and the subject number, be addressed and mailed to the above address, ATTENTION: REGULATORY BRANCH.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit that reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

No properties listed in the National Register of Historic Places are near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, pre-historical or historical sites or data. Copies of this notice are being sent to the State Archeologist and the State Historic Preservation Officer.

Our initial finding is that the proposed work would neither affect any species listed as endangered by the U.S. Department of Interior nor affect any habitat designated as critical to the survival and recovery of any endangered species.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnus-Stevens Fishery Conservation and Management Act. The applicant's proposal would result in the alteration of <u>N/A</u> acres of EFH utilized by various life stages of red drum and penaeid shrimp. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries in the Gulf of Mexico. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

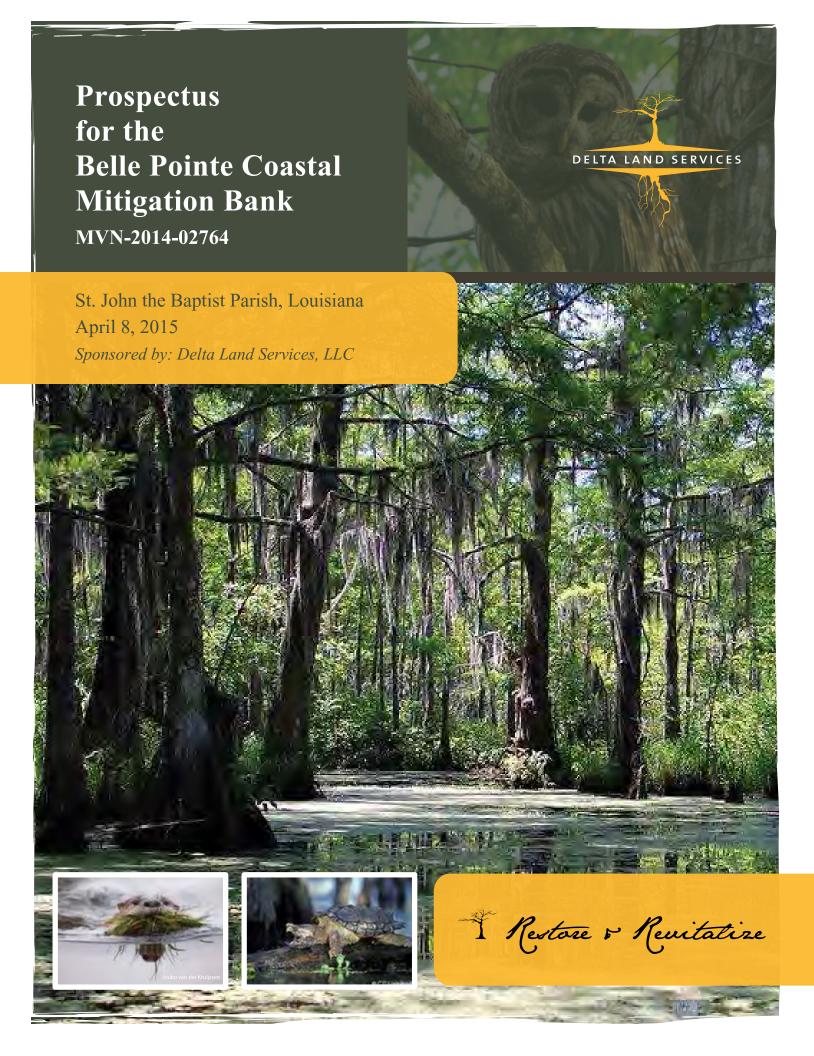
If the proposed work involves deposits of dredged or fill material into navigable waters, the evaluation of the probable impacts will include the application of guidelines established by the Administrator of the Environmental Protection Agency and certification that the proposed activity will not violate applicable water quality standards will be required from the Louisiana Department of Environmental Quality, Office of Water Resources, before a permit is issued.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

The applicant has certified that the proposed activity described in the application complies with and will be conducted in a manner that is consistent with the Louisiana Coastal Resources Program. The Department of the Army permit will not be issued unless the applicant received approval or a waiver of the Coastal Use Permit by the Department of Natural Resources.

You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have interest in the matter.

Martin S. Mayer Chief, Regulatory Branch



PROSPECTUS FOR THE PROPOSED

BELLE POINTE COASTAL MITIGATION BANK ST. JOHN THE BAPTIST PARISH, LOUISIANA

MVN-2014-02764



April 8, 2015

PREPARED BY:

DELTA LAND SERVICES, LLC 1090 CINCLARE DRIVE PORT ALLEN, LOUISIANA 70767

Table of Contents

1.0 1.1 2.0 3.0 3.1 3.2 3.3 3.4 4.0 4.1 4.2 4.3 5.0 6.0	Current Ecological Characteristics of the Site				
6.1		epresentatives			
6.2		ons of the Sponsor			
6.3	Proposed Long-Term Ownership and Management Representatives 18				
6.4		ction			
6.5 7.0		n Strategy ES			
7.0	INCI LINCING	LO	. 13		
		List of Attachments			
Attach	ment A: Map	Figures			
	Fig 4	Minimite a Mana			
	Figure 1 Figure 2	Vicinity Map USGS 7.5-Minute Quadrangle			
	Figure 3	Coastal Zone and Coastal Wetlands Conservation Plan			
	r igure o	Boundary			
	Figure 4	Elevation Map			
	Figure 5	Flood Zone Map			
	Figure 6	Existing Conditions			
	Figure 7	Mitigation Features			
	Figure 8	1940 Aerial Photograph			
	Figure 9	1953 Aerial Photograph			
	Figure 10 Figure 11	1957 Aerial Photograph 1982 Aerial Photograph			
	Figure 12	2005 Aerial Photograph			
	Figure 13	2013 Aerial Photograph			
	Figure 14	Surrounding Habitat			
	Figure 15	Soils Map			
	Figure 16	Existing Hydrology Conditions			
	Figure 17	Existing Contributing Drainage Area			
	Figure 18	Potential Tidal Area Connection			

Table of Contents

Figure 19	Proposed Hydrology Conditions
Figure 20	Proposed Geographic Service Area

Attachment B: Tables

Table 1	Pre-Restoration Condition and Post-Restoration Mitigation
	Habitat Types
Table 2	Planting Composition of Restored Bottomland Hardwood
	and Baldcypress/Tupelo Swamp

Attachment C: Water Level and Salinity Figures

Figure 1	Adjacent Swamp Water Levels from CRMS 0059-W01
Figure 2	Adjacent Swamp Water Levels from CRMS 0059-H02
Figure 3	Reserve Relief Canal Water Levels from CRMS 0059-H01
Figure 4	Combined Water Levels from CRMS 0059-W01, CRMS
_	0059-H01 and CRMS 0059-H02
Figure 5	Salinity Levels from CRMS 0059-H01 and CRMS 0059-H02

Attachment D: Hydrology Restoration Drawings

Figure 1	Location Map
Figure 2	Plan View
Figure 3	Cross Section A
Figure 4	Cross Section B
Figure 5	Cross Section C
Figure 6	Cross Section D
Figure 7	Cross Section E
Figure 8	Cross Section F

Attachment E: Preliminary Jurisdictional Determination

1.0 INTRODUCTION

Delta Land Services, LLC (DLS) has prepared this prospectus in accordance with 33 CFR § 332.8(d) (2)¹ to establish and operate the proposed Belle Pointe Coastal Mitigation Bank (BPCMB). The BPCMB is a 387.6-acre proposed mitigation bank to provide compensatory mitigation for unavoidable impacts to "Waters of the United States²" if determined appropriate per 33 CFR § 332.3 (1)(a) and 33 CFR § 332.3 (1)(b)³. Additionally, the BPCMB may provide compensatory mitigation for unavoidable impacts to coastal wetland resources under the Louisiana Coastal Resources Program (LCRP)⁴ per the provisions of LAC 43:724 and RS 49:214.22 (8)⁵. The BPCMB is approximately 1.5 miles west of Laplace, Louisiana (Attachment A: Figure 1). The BPCMB is located on the United States Geological Survey (USGS) 7.5-minute quadrangle "Reserve, LA" (Attachment A: Figure 2).

1.1 Site Location

The BPCMB is within the approximate 713.2-square mile Lake Maurepas Subregion defined as the United States Geological Survey (USGS) Hydrologic Unit Code [HUC] 08070204. The nearest named water body is the Reserve Relief Canal which discharges into Lake Maurepas. The site is in the Mississippi Alluvial Plain (73) Level III Ecoregion and the Southern Holocene Meander Belts (73k) Level IV Ecoregion. The BPCMB is also within the Mississippi Delta Cotton and Feed Grains Land Resource Region (LRR O) and the Southern Mississippi River Alluvium Major Land Resource Area (MLRA 131A) (Natural Resources Conservation Service [NRCS] 2006). The site is within the geographic limits of the Louisiana Coastal Zone Boundary (Attachment A: Figure 3).

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¹ 33 CFR § 332.8(d)(2) summarizes the information regarding a proposed mitigation bank at a sufficient level of detail to support informed public and IRT comment. Information included (but not limited too) in a prospectus are the objectives, establishment, operation, service area, general need, technical feasibility, ownership, long-term management, sponsor qualifications, ecological suitability, and water rights.

² 33 CFR § 328 defines waters of the United States as it applies to the jurisdictional limits of the authority of the Corps of Engineers under the Clean Water Act. Waters of the United States include those waters listed in 33 CFR § 328(a). The lateral limits of jurisdiction in those waters may be divided into three categories (i.e., territorial seas, tidal wasters, and non-tidal waters, which are further described in 33 CFR § 328.4 (a), (b), and (c).

³ 33 CFR § 332.3 (1)(a) and 33 CFR § 332.3 (1)(b) described general compensatory mitigation requirements; resource types and location of compensatory mitigation; and watershed approach.
⁴ The Office of Coastal Management (OCM) of the Louisiana Department of Natural Resources (LDNR) is the agency responsible for implementing the LCRP under the authority of the Louisiana State and Local Coastal Resources Management Act of 1978, as amended (Act 361, La. R.S. 49:214.21 et seg).

⁵ RS 49:214.22 (8) was added by Act 548 of the 2006 Louisiana Legislative Session to "support sustainable development in the coastal zone that accounts for potential impacts from hurricanes and other natural disasters and avoids environmental degradation resulting from damage to infrastructure caused by natural disasters".

The BPCMB is located in Sections 17, 77, 78, 79, 81, 100, and 101 of Township 11 South, Range 7 East in St. John the Baptist Parish, Louisiana. More specifically, the site is bordered on the south by U.S. Highway 61 (Airline Highway), East St. John High School and the Belle Pointe Subdivision near Reserve, LA (Attachment A: Figures 1 and 2). The approximate site center is located at Latitude 30.085994° North and Longitude 90.532747° West⁶. The site is generally flat with elevations trending lower from south to north. Natural elevation ranges from zero feet to approximately five feet however levees/berms do occur within the LVCMB which exceed five feet (Attachment A: Figure 4)⁷. Much of the site lies within the Flood Insurance Zone AE which is designated by the Federal Emergency Management Agency (FEMA) as a floodplain having a 1% annual chance of flooding with a designated whole-foot base flood elevation determined. The base flood elevation for this zone at this site is four feet (Attachment A: Figure 5)⁸.

As the existing land use and current management regime differ within the project area, the BPCMB is separated into two separate areas, Area A and Area B. Area A consists of the western portion and consists of 134.1 acres of range land, 15.6 acres of pasture/grassland pasture, 1.5 acres of perimeter levee/berm, and 3.2 acres of forest. Area B consists of the eastern portion and consists of 189.5 acres of prior-converted agricultural field, 7.7 acres of pasture/grassland pasture, 30.2 acres of forest, 3.4 acres of perimeter levee/berm with an associated 2.3 acres of borrow canal and 0.1 acres of shell/gravel road (Attachment A: Figure 6; Attachment B: Table 1).

2.0 PROJECT GOALS AND OBJECTIVES

The goal of the BPCMB is the re-establishment⁹ and rehabilitation¹⁰ of 223.2 acres of bottomland hardwood (BLH) and 128.8 acres of southern baldcypress/tupelo swamp (Swamp) forested wetland ecosystems within the alluvial plain of the Mississippi River (Attachment A: Figure 7; Attachment B: Table 1). The restoration¹¹ of BLH and Swamp within the 387.6-acre BPCMB will

⁶ All spatial coordinates are based on the North American Datum of 1983 (NAD83).

⁷ All elevations are based on North American Vertical Datum of 1988 (NAVD)

⁸ Flood Insurance Rate Map (FIRM) Community Panel Number 22095C0210D (effective November 4, 2010).

⁹ Re-establishment is defined in 33 CFR 332.2 as the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

¹⁰ Rehabilitation is defined in 33 CFR 332.2 as the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

¹¹ Restoration is defined in 33 CFR 332.2 as the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

provide additional wetland functions and values that are not currently realized under existing conditions and land use. Localized and downstream water quality will increase by removing livestock, afforestation with native wetland tree species, and increasing surface-water retention time for vegetative nutrient uptake and sedimentation. The re-establishment of a forested ecosystem will increase organic matter deposition, decrease soil bulk density, increase hydraulic conductivity, increase soil saturation potential, and increase the formation of redoximorphic features (Collins and Kuehl 2001). Soil organic carbon is critical to soil reduction which will increase as soil organic material increases from the deposition of leaf litter, coarse woody debris, and decaying root material (Collins and Kuehl 2001).

Table 1 (Attachment B) summarizes the existing habitat and the proposed mitigation habitats following restoration and is depicted on Figures 6 and 7 (Attachment A), respectively. Specifically, the project objectives are to improve and protect the physical, chemical and biological functions of a forested wetland system as follows:

- Restoration and protection of historic and self-sustaining surface hydrology within the 387.6-acre BPCMB through hydrology restoration activities such as levee degradation and backfilling artificial drainages;
- Restoration of 352.0 acres through the re-establishment (256.7 acres) and rehabilitation (95.3 acres) of native BLH and Swamp communities through hydrology restoration and afforestation of native species;
- The inclusion and protection of 17.0 acres of existing BLH wetland forest and 18.5 acres of afforested bottomland hardwood wetland forest (35.5 acres total);
- Improvement of water quality by means of livestock removal and reduction of non-point source runoff through hydrology restoration activities;
- Restoration of forested habitat for aquatic fauna through afforestation of a diversity of indigenous species and control of invasive/noxious species;
- Afforestation and protection of existing nonforested land located next to larger, contiguous forested habitat which will benefit breeding birds in accordance with existing bird conservation plans;
- Ensuring long-term viability and sustainability of the BPCMB through active and adaptive management including, but not limited to, invasive species control, appropriate monitoring, and long-term maintenance;

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¹² The SAF (2011) defines afforestation as "the establishment of a forest or stand in an area where the preceding vegetation or land use was not forest whereas reforestation is the reestablishment of forest cover either naturally (by natural seeding, coppice, or root suckers) or artificially (by direct seeding or planting) —*note* reforestation usually maintains the same forest type and is done promptly after the previous stand or forest was removed —*synonym* regeneration".

- Establishing financial assurances to achieve long-term success criteria;
- Providing long-term protection utilizing a perpetual term conservation servitude on the 387.6-acre BPCMB and provide sufficient long-term funds to cover annual expenditures associated with maintenance and management of the BPCMB; and
- Implementing a project in accordance with recommendations per the Conservation, Protection and Utilization of Louisiana's Coastal Wetland Forest (CWFSWG 2005).

3.0 ECOLOGICAL SUITABILITY OF THE SITE

3.1 Historical Ecological Characteristics of the Site

The historical land use of the project area was agricultural land primarily used for livestock grazing within Area A and the production of sugarcane within Area B. The surrounding land use was historically forested wetlands. It is unknown when the tracts within the project area proposed for the BPCMB were initially cleared for agriculture but reviews of the 1940 aerial photographs reveal that the eastern portions of the site had been cleared and were in agricultural production while the range lands on the western portion of the project area appear to have once been utilized for crop production as relict crop rows and agricultural drains are evident and are still present today. The perimeter berm and the associated canal system are evident on the 1940 aerial. Given the high degree of wetness on this particular site, crop production was likely abandoned in favor of its current use as range land (i.e., no reported commodities per FSA-578 forms). The historical hydrology of the site prior to the conversion to agricultural land was primarily from direct input from precipitation, runoff from the adjacent natural ridges of the Mississippi River, tidal flooding from the surrounding Lake Maurepas swamps, and high water tables. Figures 8-13 (Attachment A) show the historical aerial sequence of the BPCMB.

3.2 Current Ecological Characteristics of the Site

Area A mainly consists of rangeland primarily utilized for livestock grazing/foraging, pasture utilized for grass production, perimeter levee and forest. Area B of the BPCMB mainly consists of prior-converted agricultural fields primarily used for sugarcane production, hardwood forest, perimeter levee and pasture. The remainder is comprised of hardwood forest (Attachment A: Figure 6). The surrounding land use is primarily wooded (semi-permanently to seasonally flooded forested and scrub-shrub wetlands), agricultural (cultivated crops, hay/pasture), and urbanized development (commercial and residential) (Attachment A: Figures 14).

3.2.1 Soils

A majority of the soils mapped within the project area are listed as Schriever clay, 0-1 percent slopes (SkA), with the remainder mapped as Gramercy silty clay, 0-1 percent slopes (GrA), and Cancienne silt loam, 0 to 1 percent slopes (CmA) (NRCS 2014) (Attachment A: Figure 15). The SkA soil series consist of very deep, poorly drained, very slowly permeable soils that formed in clayey alluvium. These soils are on the lower parts of natural levees and in backswamp positions on the lower Mississippi River alluvial plain. The GrA soil series consists of very deep, poorly drained, very slowly permeable soils that formed in clayey over fine-silty alluvium. The soils are on alluvial flats and on the lower parts of natural levees on the alluvial plain of the Mississippi River and its distributaries. The CmA soil series consists of very deep, level to gently undulating, somewhat poorly drained mineral soils that are moderately slowly permeable. The CmA soils formed in loamy and clayey alluvium and are on high and intermediate positions on natural levees and deltaic fans of the Mississippi River and its distributaries.

Shriever clay and Gramercy silty clay are listed as predominately hydric soils by the NRCS (2014) with a 98 and 92 percent hydric component, respectively. Cancienne is listed as predominately nonhydric soil with a 2% hydric component. During the wetland delineation all areas regardless of the soil map unit were found to have field indicators sufficient to be considered a hydric soil in accordance with USACE 2010.

3.2.2 Vegetation

The portion of the project area in Area A designated as prior-converted which is utilized as improved pasture (along Airline Highway frontage) is dominated by bermudagrass (Cynodon dactylon (L.) Pers). The range land is mostly dominated by common rush (Juncus effusus L.), Chinese tallow (Triadica sebifera (L.) Small), swamp sawgrass (Cladium mariscus (L.) Pohl), St. Andrew's cross (Hypericum hypericoides (L.) Crantz), savannah-panicgrass (Phanopyrum gymnocarpon (Elliott) Nash), swamp smartweed (Polygonum hydropiperoides Michx.) and sawtooth blackberry (Rubus argutus Link) in the herbaceous strata with black willow (Salix nigra Marshall) and buttonbush (Cephalanthus occidentalis L.) in the scrub-shrub strata. The range land is actively grazed by livestock and appears to be maintained by occasional mowing/shredding or clipping, both of which prevent excessive shrub and tree strata development. The 3.2 acres of existing bottomland hardwood forests consists of sugarberry, sweetgum, water oak, Nuttall oak, water hickory, green ash and Drummond red maple within the tree strata. The scrub-shrub strata consists of sugarberry, Drummond red maple, water oak, mayhaw (Crataegus opaca) and stiff dogwood (Cornus foemina).

The vegetation within Area B designated as prior-converted and currently utilized for crop production is comprised almost entirely of sugarcane (Saccharum officinarum L.). According to the Report of Commodities obtained from the FSA (FSA-578 forms), sugarcane has been the commodity crop reported from this area during the past five years (2010-2014). The 30.1 acres of existing non-wet and wetland forest in the Area B consists of sugarberry (Celtis laevigata Willd.), sweetgum (Liquidambar styraciflua L.), water oak (Quercus nigra L.), Nuttall oak (Quercus texana Buckley), water hickory (Carya aquatic (Michx. f.) Nutt.) green ash (Fraxinus pennsylvanica Marshall) and Drummond red maple (Acer rubrum L. var. drummondii (Hook. & Arn. ex Nutt.) Sarg.) within the tree strata.

3.2.3 Hydrology

Hydrology is primarily driven from high water tables and precipitation. However, the property has a perimeter berm on three sides (west, north, and east) which currently serve to protect the agricultural and range lands from routine tidal flooding common to the adjacent swamps. Onsite hydrology within Area A has been altered to drain the rangeland and improved pasture through lateral field ditches that flow east into Belle Pointe Canal. Onsite hydrology within Area B has been altered to improve surface drainage within the agriculture fields through a series of lateral drainage ditches that flow west leading to the central drain ditch known as the Belle Pointe Canal which leads to a structure/pump house on the north side of the property (Attachment A: Figure 16). The drainage into adjacent swamp is primarily by gravity but in the event of high water levels in the adjacent swamp impede such drainage, this structure can be closed and water drained via a lift pump located at the structure. An analysis of aerial photography reveals that these drainages have existed throughout the project area from 1940 to present. The current pump was constructed around 1991 but it appears from historical aerials that a pump or some type of drainage structure was constructed at this location between 1940 and 1953. The pump is owned and operated by the landowner and exists for the sole purpose of draining the agriculture fields (i.e., not a publicly-controlled forced drainage system)¹³.

The surrounding forests outside (north) of the perimeter berm are mostly semi-permanently flooded swamps and seasonally flooded bottomland hardwoods (Attachment A: Figure 14). The levels of flood water are tidally influenced. According to hydrological data from a nearby Coastwide Reference Monitoring System (CRMS) station¹⁴, the water level in the adjacent swamp north of the BPCMB ranged from a high of 2.5 feet (NAVD) to a low of 1.3 feet over a

¹³ Personal communication with Mr. Pat Sellars, Riverlands Residential and Industrial Properties Company on December 12, 2013.

¹⁴ CRMS Station ID 0059

period from February 14, 2013 to July 22, 2014 (average 1.6 feet)¹⁵. Data from the adjacent swamp covering an earlier period of June 21, 2007 to January 17, 2012 show water levels during that period ranged from a high of 4.7 feet to a low of -0.5 feet (average 1.1 feet)¹⁶. The period of June 21, 2007 to January 17, 2012 included two named tropical cyclone events which were Hurricane Gustav (September 1, 2008) and Tropical Storm Lee (September 3, 2011). When these events are not factored, the water level ranged from 2.7 feet to -0.5 feet (average 1.1 feet).

Water levels from the Reserve Relief Canal just west of the CRMS station ranged from a high of 6.3 feet to a low of -0.2 feet over a period of January 7, 2012 through February 14, 2013 (average 1.4 feet NAVD)¹⁷. The Reserve Relief Canal water elevations include records from August 29, 2012 through September 8, 2012 which are associated with Hurricane Isaac. When factoring out the storm-surge associated with Hurricane Isaac, which inundated many residential and commercially developed areas of St. John the Baptist Parish east of the Mississippi River, the water level on the Reserve Relief Canal had a high of 2.9 feet over this same period (average of 1.4 feet). The average salinity measured at the various CRMS data sonds from January 17, 2012 to July 22, 2014 was 0.3 ppt with a minimum of 0.0 ppt and a maximum of 1.1 ppt. Figures 1 through 5 (Attachment C) illustrate the water and salinity levels from the CRMS data.

The pump is currently utilized by the landowner to drain the property for agricultural use and is not part of any local, state or federal drainage or flood protection system. The current contributing drainage area is confined within the existing perimeter levee system (Attachment A: Figure 17). Much of the storm water flow from the neighboring development is directed into a storm water drainage system therefore runoff from these areas into the site is limited. The potential contributing drainage area would include portions of the surrounding forests following berm degradation and restoration of tidally-influenced hydrology (Attachment A: Figure 18).

3.2.4 Existing Jurisdictional Wetland Status

On June 19, 2013, DLS submitted a request a Wetland Data Report for a Preliminary Jurisdictional Determination (PJD) for an approximate 396.9-acre tract that encompasses the entire BPCMB. The CEMVN issued a PJD on April 1, 2015 (MVN-2014-02867) (Attachment E). The results of the PJD shows

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¹⁵ Based upon data retrieved and analyzed from a data sond identified as CRMS0059-H02 located at latitude 30.0931254464° North and longitude 90.5430595718° West which records water levels on an hourly basis (7,605 records).

¹⁶ Based upon data retrieved and analyzed from a data sond identified as CRMS0059-H02 located at latitude 30.0931346571° North and longitude 90.5430697178° West which records water levels on an hourly basis (35,735 records).

¹⁷ Based upon data retrieved and analyzed from a data sond identified as CRMS0059-H01 located at latitude 30.0962418304° North and longitude 90.546187897° West which records water levels on an hourly basis (9,260 records).

approximately 129.3 acres of wetlands, 22.9 acres of nonwetlands, and 2.1 acres of other waters within Area A. Area B contains approximately 189.1 acres of prior-converted cropland (non-wetlands), 5.5 acres of nonwetland, 36.5 acres of wetlands, 2.2 acres of other waters within Area B. A CPA-026 determination was made in 1992 by the NRCS (then the Soil Conservation Service [SCS]).

3.3 General Need for the Project in this Area

The restoration and protection of the BPCMB supports the recommendation of the Coastal Wetland Forest Science Working Group (CWFSWG) 2005 as follows:

- Place priority on conserving, restoring and managing coastal wetland forests to ensure their functions and ecosystem services will be available to citizens;
- Actively pursue the restoration of degraded wetland forests;
- Enhance wetland forest ecosystem functions and values as part of hydrologic management decisions;
- Establish and maintaining long-term monitoring of coastal wetland forest conditions which supplement other monitoring programs such as the CRMS and the Forest Inventory Analysis (FIA); and
- Insure mitigation of impacts on coastal wetland forests are of similar resource type and occur within a proper watershed approach.

The Partners in Flight (PIF) Bird Conservation Plan for the Mississippi Alluvial Valley recommends increasing the interior area of forested fragments to increase habitat for forest-dwelling, or silvicolous, bird species (Twedt et al. 1999). The planting of densely-spaced seedlings in areas within largely forested landscapes encourage the recruitment of breeding populations of thamnic and silvicolous bird species (Twedt et al. 2010). Swallow-tailed kites (Elanoides forficatus) are a particular species of concern which would benefit through increased forested wetland acreage within the Barataria-Terrebonne basins as these species requires vast amounts of bottomland hardwood and swamp forest (DeMay et al 2007). Large expanses of bottomland hardwoods are vital for the management of Mallards (Anas platyrhynchos), wood ducks (Aix sponsa) and American woodcock (Scolopax minor) (North American Waterfowl Management Plan 2004, Kelly and Rau 2006). The Mississippi Museum of Natural Science (MMNS 2005) purports that old-growth bottomland hardwood forests are critical habitat for 11 of the 18 species of bats known to the Southeast. Two of these species, the Southeastern myotis (Myotis austroriparius) and Rafinesque's bigeared bat (Corynorhinus rafinesquii) prefer large, hollow trees in mature bottomland hardwood and swamp habitats, respectively (LMRJV 2007; Taylor 2006).

Restoration of the site is consistent with the Coastal Protection and Restoration Authority of Louisiana (CPRA) Louisiana's Comprehensive Master

Plan for a Sustainable Coast (Master Plan) in that the project will restore natural hydrologic patterns by conveying freshwater, tidal flow into areas that have been cut off by anthropogenic features. Some of the natural ridges on which portions of the pasture are situated will be afforested with hardwood species. The increase in forested wetlands, particularly freshwater swamp, can potentially reduce the effects of tropical storm surges and wind speed through attenuation and abatement thereby protecting the local community and valuable agricultural lands. The project would provide ecosystem services in the form of nutrient uptake and provide increased habitat for alligators (*Alligator mississippiensis*) (CPRA Master Plan 2012). Protection of this coastal forested site with a conservation servitude is consistent with the goals of the Coastal Forest Conservation Initiative (CFCI) administered by the Office of Coastal Protection and Restoration (OCPR) (Louisiana Department of Natural Resources [LDNR] Office of Coastal Management [OCM] 2010).

A federal hurricane and storm levee is proposed to follow an existing pipeline transmission corridor which traverses the swamp about one mile north of the project site. This is described in the Environmental Impact Statement (EIS) for the West Lake Shore Pontchartrain (WSLP) Hurricane and Storm Damage Risk Reduction Study (HSDRSS). This proposed 18.27-mile alignment, identified as Alternative C in the EIS, includes approximately 300 linear feet of flood gates, 200 linear feet of drainage gates, and 2 pump systems. This alignment is proposed to enclose approximately 47 square miles which of which 15 square miles consists of wetlands. The BPCMB would be included in the enclosed area. The presence of wetlands on the protected side of the levee is described as beneficial as these areas have the potential to absorb flood waters from storm surges which may overtop the levee and thereby potentially minimizing the potential for such an event to inundate developed areas¹⁸.

The restoration and long-term protection of the BPCMB would meet some of the goals and policy objectives identified in the Comprehensive Future Land Use Plan for St. John the Baptist Parish. Given much of the site is within a high risk flood zone (AE), the implementation of the BPCMB would provide for a land use limited to passive recreational use thereby minimizing the potential for flood damage to any structural development which may otherwise occur on the property. This development and implementation of the BPCMB would meet the policy objective of maintaining the quality of life through protecting the natural environment and preserving the rural landscape. The restoration of natural habitat wetlands would integrate conservation of natural habitats and natural aquatic systems which provide corridors for wildlife movement and protect the sustainability and resilience of parish's natural environment. The restoration and management of the BPCMB would meet the stated goal of utilizing native plants

¹⁸ The benefits of protection side wetlands are described in Section 3.7 of the WSLP HSDRRS EIS.

and controlling invasive species to insure and improve the health of the parish's plant community, resilience, and value for wildlife.¹⁹

3.4 Technical Feasibility

The construction work required to complete restoration is routine in nature and feasible, consisting primarily of altering the improved drainage system in order to return the site to its pre-conversion hydrologic conditions to the extent practicable and implementing the appropriate vegetative plantings of native forested wetland species. The mapped soil types are historically supportive of the native forested communities which are proposed for restoration. The soils are hydric indicating the site formed under hydric conditions and therefore historically supported wetlands. The concept and feasibility of afforestation of agricultural lands associated with the establishment of the BPCMB have received much support in recent years. The restoration of historic, forested lands which were cleared and drained for agricultural uses has been successfully performed in numerous forested wetland restoration projects.

4.0 ESTABLISHMENT OF THE MITIGATION BANK

The BPCMB will be established per 33 CFR §332.8(d)(2) (ii) and is the technical feasibility per 33 CFR §332.8(d)(2) (iv). Sufficient water rights to support the long-term sustainability of the mitigation bank are insured per 33 CFR §332.8(d)(2)(vii)(A). Overall, the approximately 387.6-acre proposed BPCMB will be protected by a perpetual conservation servitude, will be retired from agricultural production in 2015, and reforested with bottomland hardwoods and baldcypress during the winter of 2015.

4.1 Site Restoration Plan

The proposed mitigation work plan involves the cessation of livestock grazing, afforestation, surface hydrology restoration, and the implementation of effective short-term, interim, and long-term management strategies. The BPCMB will re-establish a total of 256.7 acres, comprised of BLH (211.2 acres) and Swamp forest (45.5 acres) and will rehabilitate a total of 95.3 acres, comprised of BLH (12.0 acres) and Swamp (83.3 acres) habitat by planting selected tree species as described by the Louisiana Natural Heritage (LNH 2009), Lester et al. (2005), and Barrow et al. (2005) (Attachment A: Figure 7). Specifically, areas above three feet will be restored as a sugarberry-American elm-green ash-sweetgum-water oak (Type 2 and Type 3 BLH) while areas between one and three feet will be restored as an overcup-water hickory BLH (Type 1 BLH). Areas below one foot will be restored to Swamp wetlands. According to the CRMS hydrological data within the adjacent swamp, 1.1 to 1.6 feet is the average surface water level in the adjacent swamp. Therefore, areas within the BPCMB

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¹⁹ The land use plan for St. John the Baptist Parish was obtained from the following URL accessed on December 11, 2014 (http://www.sjbparish.com/zoning_general.php?id=325).

that are within this elevation range feet or less could be expected to have surface inundation for approximately 50 percent of the time. These elevation ranges appear to coincide closely with the composition of the surrounding wetland forest per the National Wetland Inventory (NWI) (Attachment A: Figure 14). Additionally, approximately 18.5 acres of existing range land will be afforested with BLH/Swamp species and incorporated into the project as hydric inclusion along with the 33.3 acres of existing BLH stands (i.e. non restoration or enhancement credit). Of the 387.4 acres of restoration and inclusion area, all but 7.7 acres of BLH re-establishment (Type 2-3 BLH) is below 5.0 feet.

All livestock will be removed from the BPCMB prior to site preparation activities in late summer and early fall. Site preparation for planting will be accomplished by applying herbicide, cultivating the soil surface as needed, and sub-soiling (ripping) at equidistant intervals to a depth of approximately 18 inches (Allen et al. 2001). Site preparation will include the removal and control of any invasive species through herbicide treatments, mechanized clearing, cutting, shredding, or a combination thereof. Invasive species control will be implemented within the 33.3 acres of existing BLH stands. Such efforts will consist of herbicide treatment of invasive and noxious tree species through individual stem treatments, specifically Chinese tallow (*Triadica sebifera*).

Afforestation activities will include the planting of native BLH and Swamp species during the first planting season (December 15 through March 15) following site preparation. The species selected will be site-appropriate in terms of habitat design, soil-moisture regime, and species richness. Within the BLH restoration areas, hard mast species should account for at least 60 percent of all plantings. The distribution of stems will create a mosaic of hard and soft mast species that will provide seasonally available forages for a wide range of indigenous wildlife. The majority of the plantings within the Swamp restoration area will be baldcypress. The exact species and quantities for planting will be determined by the availability of such species from commercial nurseries providing localized ecotype seedlings. However, the final assemblage should consist of ten or more species which is sufficient to insure adequate species richness (Twedt and Best 2004). Seedlings will be mixed prior to planting so that areas are not afforested with a monotypic species community (Twedt and Best 2004). Planting densities will be no less than 538 stems per acre within BLH restoration areas and no less than 302 stems per acre within Swamp restoration areas. All species selected for afforestation have a designated growth habit of a tree²⁰ or combination tree/shrub²¹ per NRCS 2014¹ (Attachment B: Table 2).

²⁰ Trees are defined as perennial, woody plant with a single stem (trunk), normally greater than 13 to 16 feet in height; under certain environmental conditions, some tree species may develop a multi-stemmed or short growth form (less than 13 feet in height).

²¹ Shrubs are defined as perennial, multi-stemmed woody plant that is usually less than 13 to 16 feet in height. Shrubs typically have several stems arising from or near the ground, but may be taller than 16 feet or single-stemmed under certain environmental conditions.

The species selected for planting within the Swamp and Type 1 BLH restoration areas will have flood tolerance classes ranging from constant inundation for up to one year (Class I) to long-term seasonal flooding (Class III) as purported by Shankman (1996)²². The afforestation effort within the Type 2-3 BLH areas will integrate the utilization of fast-growing soft mast species with slower-growing hard mast species to allow for greater vertical structural diversity, which is necessary habitat for forest breeding birds of highest conservation importance (Twedt et al. 1999). This will create a scrub-shrub habitat to form early in succession which will be juxtaposed to mature forest thus allowing more thamnic species to be present with higher nest success rates (i.e., source habitat). Additionally, the presence of adjacent habitat types creates ecotones (transition zones) that increase the nesting success of silvicolous bird species such as Acadian flycatchers (Empidonax virescens) as these species are not forced deeper into the forest interior (NRCS 2005) such as when there is a drastic shift from one habitat type to another (i.e., forested area to grassland). The integration of rapid growth early successional species mimics early successional seral stages that provide nursery habitat for late successional forest species which exhibit increased growth in partial cover and dappled sunlight exposure (Twedt and Portwood 2003, Gardiner and Hodges 1998). The early successional community creates abiotic and biotic environmental conditions that promote seedling emergence and survival of late successional species (Harper et al. 1965, Twedt and Portwood 2003).

Hydrology restoration will include backfilling approximately 23,334 linear feet of field drains within existing crop, rangeland and grassland areas utilizing approximately 29,366 cubic yards of in-situ material from adjacent berms/spoilage which will be cut to natural grade. Of this approximately 3,380 linear feet of the northern perimeter berm will be degraded and the adjacent borrow-canals back-filled (7.2-acre total footprint)²³. The berm degradation will provide natural ingress and egress of water in equilibrium with the water levels of the adjacent, tidally-influenced forested areas (Attachment A: Figure 19). The 7.2-acre footprint will be allowed to naturally regenerate following completion of this activity as Twedt (2004) documented that natural recruitment within 300 feet of an existing forestland interface is sufficient without incorporating artificial regeneration methods. Hydrology restoration will re-establish wetland hydrology to 224.7 acres of re-established forested areas that were historically wetland. The restoration will restore tidally-influenced hydrology to the 162.7 acres of rehabilitated and inclusion areas. This effort will increase the duration of surface water retention and soil saturation; reduce nonpoint source runoff, and improve water quality through nutrient immobilization (uptake) by vegetation.

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²² Flood tolerance classes are constant inundation for up to one year (Class I); constant inundation for a large part of the growing season (Class II); long-term seasonal flooding (Class III); and occasional seasonal flooding (Class IV).

²³ The 3,380-foot section is the cumulative of two sections comprised of 2090 linear feet north of the east tract and 1290 linear feet north of the west tract.

The Sponsor anticipates no long-term structural management requirements will be needed to assure sustained hydrology. The re-establishment of a forested wetland plant community will reduce runoff by canopy and leaf litter interception of rainfall and increased stem density will reduce surface water sheet flow velocities. The result is a reduction in erosion runoff and an increase in soil infiltration (Richardson et al. 2001).

The Sponsor will maintain the site following construction and throughout the initial, interim and long-term monitoring periods. The Sponsor will use all prudent efforts, physical, chemical, or mechanical, to eliminate existing noxious and/or invasive vegetation present such as Chinese tallowtree on the site during site preparation activities. Following completion of construction activities, the BPCMB will be monitored and inspected annually for invasive species colonization and biotic and abiotic factors which may affect tree growth. This includes insect infestations and climate affects. Monitoring will determine if adaptive management measures, such as replanting, short-term irrigation, etc., need to be considered. The Sponsor anticipates that invasive species control measures will be implemented as-needed over the first 5 years following construction and again at Year 10. The Sponsor will continue to monitor the Bank through annual inspections to document the following:

- the effectiveness of control efforts;
- the extent and degree of invasive species present;
- the extent and degree of any herbivory or insect damage;
- the extent and degree of adverse climate impacts (i.e. drought), and
- the condition and functionality of any hydrological structures (i.e. plugs or other fill).

Following such monitoring, invasive species control will be implemented as necessary, and hydrological structures will be replaced if determined necessary. The boundaries will be inspected and it is anticipated that boundary maintenance, such as signage or marking paint, will take place at Year 10 and Year 15.

4.2 Current Site Risks

Based upon title review and survey work conducted to date, no encumbrances have been identified within the BPCMB project boundary. A title opinion and survey plat will be provided with the anticipated Draft MBI submittal for this project. The BPCMB project boundary was specifically selected to avoid utility rights-of-way which have recorded instruments. DLS also avoided utility areas which do not have recorded encumbrances but serve to function neighboring utilities. Specifically, these include a sewer lift station, sewer lines and associated electrical lines which service the nearby Belle Pointe residential area and are operated by the St. John the Baptist Parish Utilities Department.

Officials with the Department were contacted to verify the location of unmarked. underground utilities associated with the lift station. An approximate 40-foot buffer was left between the Belle Pointe residential area and the BPCMB to allow for any access within this area as there are various utilities along the perimeter of the residential area. This buffer was excluded and is not part of the 387.6-acre BPCMB boundary. A review of the Louisiana Department of Natural Resources (LDNR) Strategic Online Natural Resources Information System (SONRIS) revealed no current or previous oil and gas well locations on the BPCMB. The nearest well site was one mile north of the BPCMB which was dry and subsequently plugged and abandoned in 1983²⁴.

The surrounding land use is primarily forested (60%), emergent (2%) or scrub-shrub wetlands (2%) within a one mile perimeter of the proposed BPCMB and therefore has a low probability of being developed (Attachment A: Figure 14)²⁵. The Sponsor does not foresee any adverse impacts on neighboring developed properties as a result of this project. All storm water will continue to drain to the Belle Pointe canal which discharges to the existing swamp north of the BPCMB. The BPCMB project will not affect this canal and the Sponsor anticipates it will continue to be maintained by the parish so storm drainage is not impeded. Consequentially, the continued existence of this canal will not affect the hydrology of the BPCMB as the project will be hydrology isolated from this canal and reconnected to the coastal forests north of the project area as described in Section 4.1. The structure/pump identified in Section 3.2.3 will remain in place but will not be operated by DLS. DLS may allow parish operation of the pump as needed to facilitate drainage within the Belle Pointe Canal during high water events. This would be a very limited use and not anticipated to be a frequent or routine activity. Additionally, should the parish wish to use the pump for such purposes DLS will request a written operations and criteria plan for CEMVN review and subsequent approval. Given the BPCMB will be hydrologically isolated from the Belle Pointe Canal as described above (i.e. all field drains leading to the canal/structure will be closed post-restoration), the continued existence and potential limited operation of the pump will have no adverse effect on the BPCMB restoration.

The highest water levels recorded from the adjacent swamps and the Reserve Relief Canal occurred during named tropical storm events. The highest water level recorded was 6.25 feet on the Reserve Relief Canal which was during Hurricane Isaac on August 30, 2012²⁶. The surge from Hurricane Isaac caused approximately 8 inches of flooding in portions of East St. John High School which sits at an approximate elevation of 4.5 feet indicating the a storm surge height at

²⁴ Well Serial Number 186550

²⁵ The term "wetland" as used in this description indicates these habitats are mapped as wetlands per the NWI map and does not imply that these area have a CEMVN-issued jurisdictional determination.

²⁶ Based upon data retrieved and analyzed from a data sond identified as CRMS0059-H01 located on the Reserve Relief Canal at latitude 30.0962418304° North and longitude 90.546187897° West which records water levels on an hourly basis.

this location of approximately five feet. Outside of named storm systems, the highest water level elevation on the Reserve Relief Canal within the past three years was 2.9 feet while that of the adjacent swamp ranged from 2.5 to 2.7 feet since 2007 (see Section 3.2.3). Given the base height of the surrounding development, no increased flooding or flood risk is anticipated on the surrounding developed areas following restoration activities. The light detection and ranging (lidar)-based digital elevation model (dem) shows the residential areas of the Belle Pointe subdivision are at an elevation of five feet or higher and the Belle Terre treatment facility is above an elevation of four feet which above the FEMA-designated base flood elevation of 4 feet and above the Reserve Relief Canal and adjacent swamp's normal (i.e. non-named storm) high water level range of 2.5 to 2.9 feet. The average height of the access road leading to the treatment facility is 2.8 feet with a max of 4.0 feet and a minimum of 2.3 feet²⁷. The road is adjacent to a central drain canal which will continue to provide drainage along this road.

Following Hurricane Isaac, flood control measures to protect East St. John High School from a 100-year flood event were approved and are currently under construction. These measures include an earthen levee and floodwall constructed to an elevation of eight feet and a pump-out system which will discharge to the central canal (FEMA 2014).

4.3 Long-Term Sustainability of the Site

Long-term viability and sustainability of the BPCMB will be ensured through active and adaptive management including, but not limited to, invasive species control, appropriate monitoring and long-term maintenance. With regard to water rights, Article 490 of the Louisiana Civil Code treats water resources under the theory of absolute ownership and rule of capture provided that such capture does not result in harm to neighboring properties. The BPCMB will depend primarily on surface inundation from the adjacent wetland forest and precipitation. As such, long-term hydrology maintenance will not depend on the utilization of water captured from irrigation wells; therefore, sufficient water rights are ensured for such purposes.

A concern over the enclosure of these wetlands by the proposed WLP levee and storm protection project described in Section 3.3 is the potential for a decrease or cessation in tidal exchange between the interior, or protected, side of the proposed levee and the unprotected side of the proposed levee. However, the operation plan per the EIS calls for the structures within the proposed levee to remain open to allow for existing gravity drainage which also allows for normal tidal exchange between the wetlands enclosed by the levee (protected side) and the surrounding tidal swamps on the unprotected side. It is anticipated that

²⁷ Based on elevation points collected with a Trimble® R10 real-time kinematic (RTK) global navigation satellite system (GNSS) utilizing corrections from the Louisiana State University (LSU) Center for GeoInformatics (C4G) real-time network.

structures would be closed and pumps operated, on an average, for about 8.5 days per year²⁸. Preliminary tidal hydrologic modeling suggests that daily water stages would be similar to present conditions with the exception of periods during storm events when structures would be closed and pumps operating. Given these projections and operation plan, it is not anticipated that the construction and operation of the levee and drainage system will negatively affect the hydrologic functioning of the BPCMB²⁹.

The CWFSWG (2005) indicates that chronic soil salinity levels of four parts per thousand (ppt) would have negative affect on baldcypress and two ppt would have a negative effect on water tupelo. Given the low salinity levels described in Section 3.2.3 (average 0.3 ppt with maximum of 1.1 ppt), the Sponsor does not anticipate any negative effects from saltwater intrusion in the foreseeable future.

5.0 PROPOSED SERVICE AREA

The primary service area is the Lake Maurepas Watershed (HUC 08070204) (Attachment A: Figure 20). The secondary Service area will be the Lake Pontchartrain/ Breton Sound/ Chandeleur Sound as defined by USGS accounting units 080902 and 080702, excepting cataloging unit 08070201. These watersheds collectively comprise the Pontchartrain Basin as defined by the Louisiana Department of Environmental Quality (LDEQ 1999). DLS notes that geographic service area changes are currently being proposed by the CEMVN therefor the proposed service area presented may be subject to modification³⁰.

6.0 OPERATION OF THE MITIGATION BANK

The Sponsor will comply with all conditions required of a mitigation bank sponsor by the CEMVN. The BPCMB will be established and operated through mitigation bank procedures outlined in 33 CFR § 332.8. This includes, but is not limited to, review process, modifications, permit coordination, project implementation, financial assurance determination and mechanisms, credit determination, accounting procedures, credit withdrawals, and the use of credits. Details on the operation of the BPCMB will be further described in the Draft MBI per 33 CFR § 332.8 (6).

²⁹ The potential environmental consequences of the proposed project as it relates to the hydrologic conditions are described in Section 4.1.1 of the WSLP HSDRRS EIS.

²⁸ This is based on an estimated 1.7 storm events per year.

³⁰ CEMVN Special Public Notice "New Orleans District Modified Charleston Method for Assessing Adverse Wetland Impacts and Compensation Requirements" dated December 8, 2014 (MVN-2014-02751-MS).

6.1 Project Representatives

Sponsor/ Owner: Delta Land Services, LLC 1090 Cinclare Drive1008 Port Allen, LA 70767

Attn: Daniel Bollich (Sponsor Point of Contact [POC])

Phone: 225.388.5146

Electronic Mail: daniel@deltaland-services.com /

Win Songy (Ownership POC)

Phone: 225.388.5187

win@deltaland-services.com

6.2 Qualifications of the Sponsor

DLS will serve as the Sponsor. DLS is a land management and restoration company whose technical staff includes Certified Wildlife Biologists, Professional Wetland Scientists, and Certified Foresters. In addition, DLS has construction specialists on staff experienced in wetland construction activities such as heavy equipment operation, vegetation establishment, herbicide application, and contractor management. Mr. Daniel Bollich is the lead project manager for DLS. Mr. Bollich is a certified Professional Wetland Scientist (PWS) through the Society of Wetland Scientists (SWS); a Certified Wildlife Biologist (CWB) through the Wildlife Society (TWS); and a Certified Forester through the Society of American Foresters (SAF). He has over 15 years of experience in wetlands, wildlife and forest management. This experience includes the development of over fourteen approved banks within the CEMVN, Vicksburg District (CEMVK), Galveston District (CESWG), Fort Worth District (CESWF), and the Little Rock District (CESWL). Dr. Bill DeLany and Mr. Lee Walters will serve as assistant managers to the project. Dr. Bill DeLany is a senior restoration ecologist for DLS and serves as an assistant manager to the project. Dr. DeLany is also a PWS with over 25 years of experience with federal resource agencies, private land holdings, academia, and environmental consulting. His experience includes employment with the U.S. Fish and Wildlife Service (USFWS), Miami Corporation, and McNeese State University as well as service in the United States Marine Corps (USMC). Mr. Walters has over 11 years of experience in natural resource management and environmental consulting including wetlands, wildlife and forest management and has been involved with the development of over 10 approved mitigation banks with the CEMVN and CEMVK. The biographies of DLS personnel are available at www.deltaland-services.com.

DLS currently operates 11 approved wetland and/or stream mitigation banks within the CEMVN, CEMVK, CESWG and CESWF totaling 4,743 acres. These are the Bayou Conway Mitigation Bank (MVN-2010-01111), Roseland Refuge Mitigation Bank (MVK-2010-01423), Oak Land Mitigation Bank (MVK-2011-00308), Bayou Choupique Mitigation Bank (MVN-2011-00824), Ponderosa

Ranch of Pointe Coupee Mitigation Bank (MVN-2011-03213), Moss Lake Mitigation Bank (MVN-2012-02652), Bayou Fisher Mitigation Bank (MVN-2013-02342), Phillips Creek Mitigation Bank (SWF-2012-00417), Graham Creek Mitigation Bank (SWF-2011-00309), Danza del Rio Mitigation Bank (SWG-2011-00566) and Little Bayou Pierre Mitigation Bank (MVK-2012-00555). DLS currently has 6 pending mitigation banks that are under review with the CEMVN and CESWG totaling 4,939 acres. These include the proposed Ponderosa Ranch of Pointe Coupee Mitigation Bank Amendment One (MVN-2011-03213), Laurel Valley Coastal Mitigation Bank (MVN-2013-02798), Long Island Cove Mitigation Bank (SWG-2014-00210), Belle Pointe Coastal Mitigation Bank, Bayou Fisher Mitigation Bank Amendment One (MVN-2014-02764) and South Fork Coastal Mitigation Bank (MVN-2014-01888). In addition to mitigation banking, DLS serves as the responsible party for the establishment and maintenance of 3,632 acres of approved Permittee-Responsible Mitigation (PRM) wetland and stream projects.

6.3 Proposed Long-Term Ownership and Management Representatives

DLS will serve as the long-term owner, bank sponsor, long-term manager, and steward of the Bank. However, DLS may appoint a long-term steward if such appointment is approved by the CEMVN. The anticipated long-term management will consist of monitoring, invasive species control, forest management, boundary maintenance, and site protection.

6.4 Site Protection

DLS (or Long-term Steward) / Owner, or its heirs, assigns or purchasers shall be responsible for protecting lands contained within the mitigation area in perpetuity. In order to provide for such protection, the Owner shall execute a perpetual conservation servitude (pursuant to the Louisiana Conservation Servitude Act, R.S. 9:1271 et seq.) on all acreage identified as the BPCMB and record it in the Mortgage and Conveyances Records Office of St. John the Baptist Parish. The conservation servitude will be held by a qualified, non-profit organization whose mission is to retain or protect the land's natural habitat, open space, scenic, educational, recreational, historical, or cultural values.

6.5 Long-Term Strategy

Long-term management will consist of monitoring, vegetation management, invasive species control, boundary maintenance, site protection, and the funding of such activities. The forest wetland habitat will be managed to increase and maintain the biological, chemical, and physical wetland functions of the BPCMB, which will provide forested habitat capable of supporting populations for priority wildlife species (e.g., native wildlife and Nearctic-Neotropical migrants). Invasive species control will include control of nuisance invasive species such as Chinese

tallow, nutria (*Myocastor coypus*) and feral hogs (*Sus scrofa*). A long-term management plan will be included with the mitigation banking instrument which will detail long-term management needs, costs and identify a funding mechanism in accordance with 33 CFR § 332.7 (d). DLS (or Long-term Steward) and the Owner (or its heirs, assigns or purchasers) shall be responsible protecting lands contained within the SFBPCMB in perpetuity.

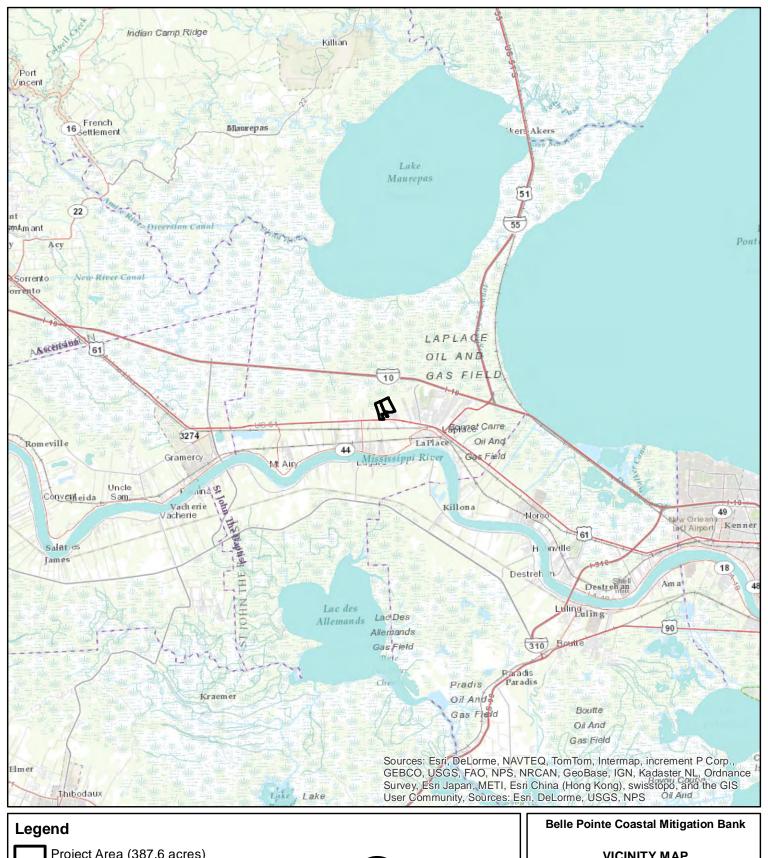
7.0 REFERENCES

- Coastal Protection and Restoration Authority of Louisiana (2012) Louisiana's Comprehensive Master Plan for a Sustainable Coast. Coastal Protection and Restoration Authority of Louisiana. Baton Rouge, LA.
- Coastal Wetland Forest Science Working Group (2005) Conservation, Protection and Utilization of Louisiana's Coastal Wetland Forests. A final report to the Governor of Louisiana from the Coastal Wetland Forest Science Working Group. April 30, 2005. 102 pp.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe (1979) Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service, Office of Biological Services, FWS/OBS-79/31, Washington, DC.
- DeMay, R., R. Condrey, J. McBride, C. Brantley and C. Riley (2007) The Habitats of Barataria-Terrebonne: Their Importance to Migratory and Resident Birds. A publication of the Barataria-Terrebonne National Estuary Program. 64pp.
- Federal Emergency Management Agency (2014) *Draft Environmental Assessment for the St. John the Baptist School Board Flood Protection Project*; FEMA-4080-DR-LA, PWs 566 and 606, St. John the Baptist Parish, LA, August 2014.
- Kelly, J.R., Jr. and R.D. Rau (2006) American Woodcock Population Status, 2006. U.S. Fish and Wildlife Service, Laurel, Maryland. 15 pp.
- Louisiana Department of Natural Resources Office of Coastal Management (2010) Evaluation of Louisiana's Mitigation Program for Impacts to Coastal Habitats. White Paper, September 17, 2010.
- Loeb, S. (2013) Conservation and Management of Declining Bat Populations in Eastern Forests [PowerPoint®Slides]. Webinar Presentation, July 24, 2013.
- Lower Mississippi Valley Joint Venture (2007) Restoration, Management and Monitoring of Forest Resources in the Mississippi Alluvial Valley: Recommendations for Enhancing Wildlife Habitat, Version 5.2 (FINAL REPORT). Wilson, R., K. Ribbeck, S. King, and D. Twedt. Lower Mississippi Valley Joint Venture Forest Resource Conservation Working Group.

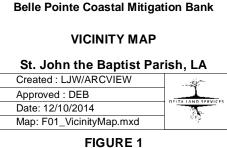
- Mississippi Museum of Natural Science (2005) Mississippi's Comprehensive Wildlife Conservation Strategy. Mississippi Department of Wildlife, Fisheries and Parks, Mississippi Museum of Natural Sciences, Jackson, Mississippi.
- Natural Resources Conservation Service (2014)¹ The PLANTS Database [website]. U.S. Department of Agriculture, Natural Resources Conservation Service, National Plant Data Center. Accessed November 3, 2014. Available URL: http://plants.usda.gov
- Natural Resources Conservation Service (2014)² Web Soil Survey [website]. U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Staff. Accessed November 4, 2014. Available URL: http://websoilsurvey.nrcs.usda.gov/app/
- North American Waterfowl Management Plan (2004) North American Waterflowl Management Plan 2004. Implementation framework: strengthening the biological foundation. Canadian Wildlife Service, U.S. Fish and Wildlife Service, Secretaria de Medio Ambientey Recursos Naturales, 106 pp.
- Shankman, D. (1996) Stream channelization and changing vegetation patterns in the U.S. Coastal Plain <u>IN</u> Geographical Review, Vol. 86, No. 2 (April 1996), pp. 216-232.
- Society of American Foresters (2012) The Dictionary of Forestry [website]. Copyright 1988 by the Society of American Foresters. Accessed November 30, 2012. Available URL: http://dictionaryofforestry.org
- Taylor, D. (2006) Forest Management and Bats. Bat Conservation International Publication.
- Twedt, D., D. Pashley, C. Hunter, A. Mueller, C. Brown and B. Ford (1999)

 Partners in Flight Bird Conservation Plan for the Mississippi Alluvial Valley,
 Version 1.0.
- Twedt, D.J. (2004) Stand development on reforested bottom lands in the Mississippi Alluvial Valley. *Plant Ecology* 172: 251-263
- Twedt, D.J, S.G. Somershoe, K.R. Hazler, R.J. Cooper (2010) Landscape and vegetation effects on avian reproduction on bottomland forest restorations. *Journal of Wildlife Management* 74(3): 423-436, 2010; DOI: 10.2193/2008-563.
- U.S. Army Corps of Engineers (1987) Corps of Engineers Wetland Delineation Manual. USACE Waterways Experiment Station Technical Report Y-87-1.

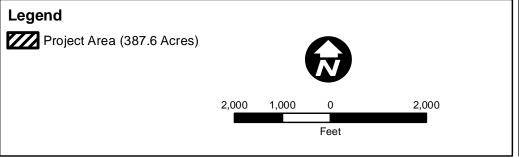










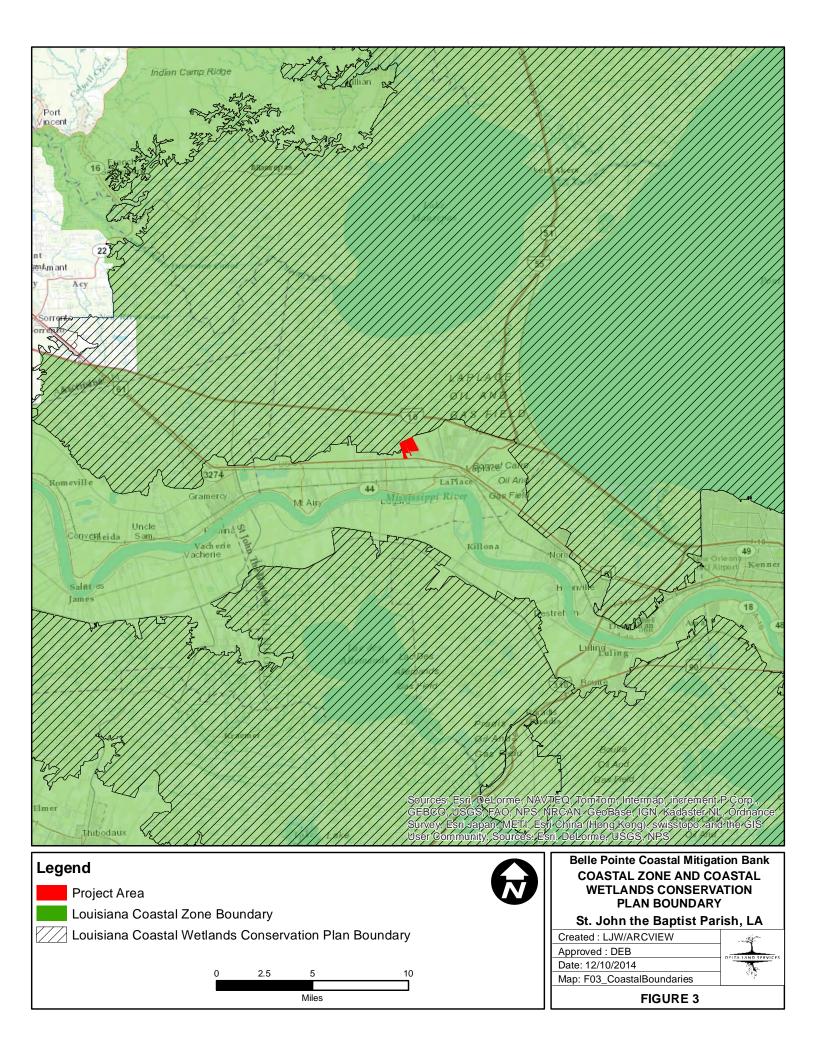


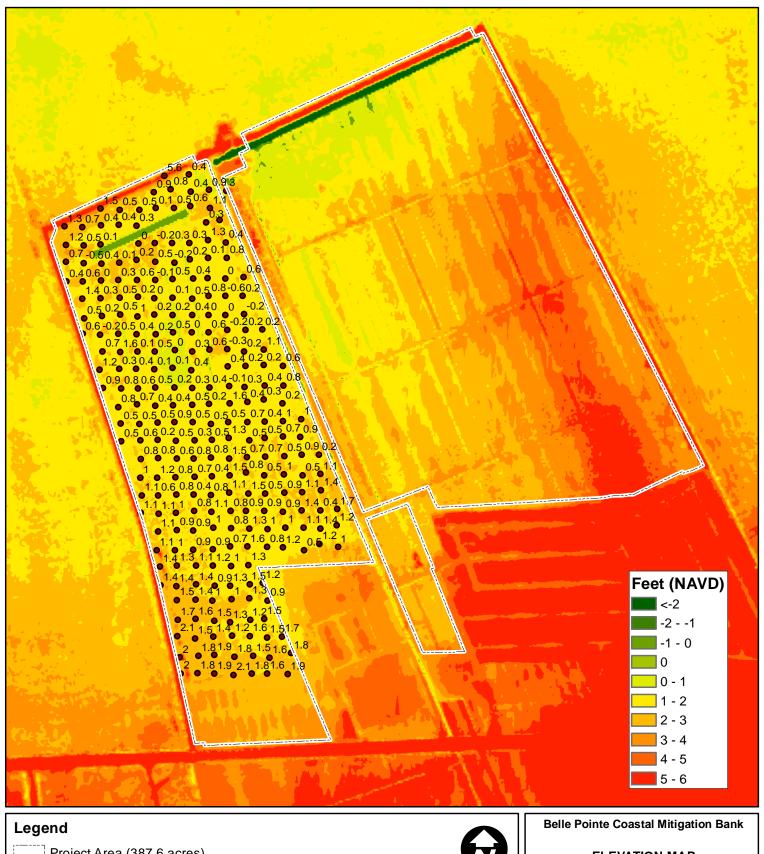
QUADRANGLE MAP

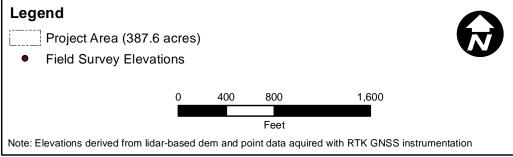
St. John the Baptist Parish, LA

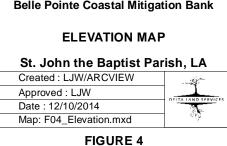
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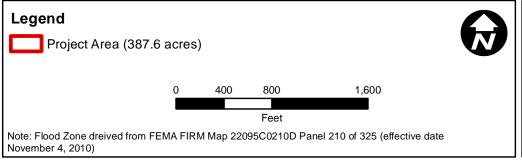






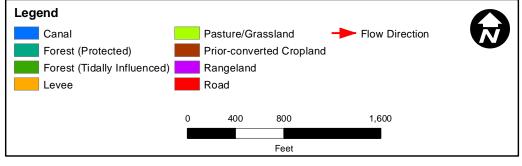






Belle Pointe Coastal Mitigation Bank FLOOD ZONE MAP St. John the Baptist Parish, LA Created: LJW/ARCVIEW Approved: LJW Date: 12/10/2014 Map: F05_FIRM.mxd





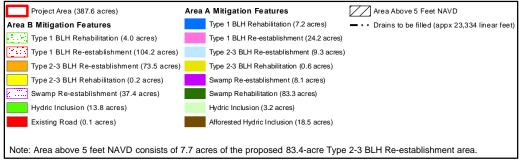
EXISTING CONDITIONS

St. John the Baptist Parish, LA

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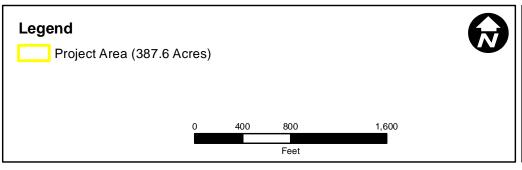
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St. John the Baptist Parish, LA

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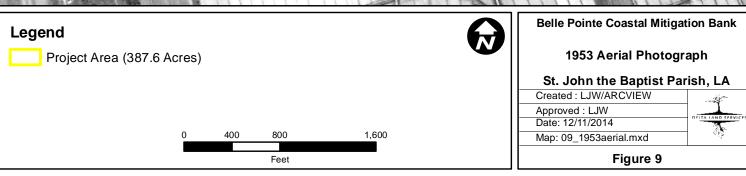
Belle Pointe Coastal Mitigation Bank 1940 Aerial Photography

St. John the Baptist Parish, LA

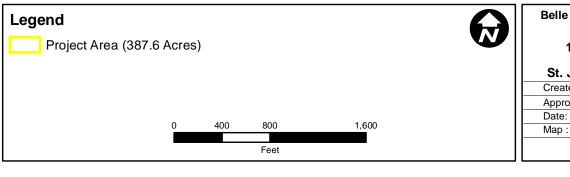
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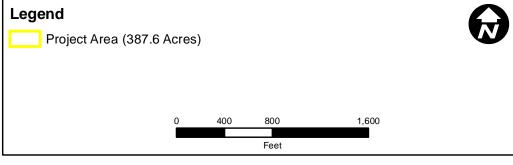
1957 Aerial Photography

St. John the Baptist Parish, LA

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Date: 12/11/2014
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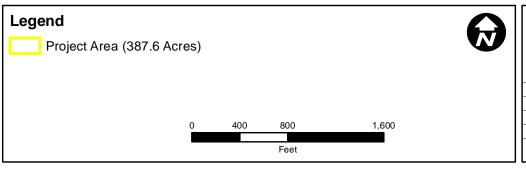


St. John the Baptist Parish, LA
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Date: 12/11/2014
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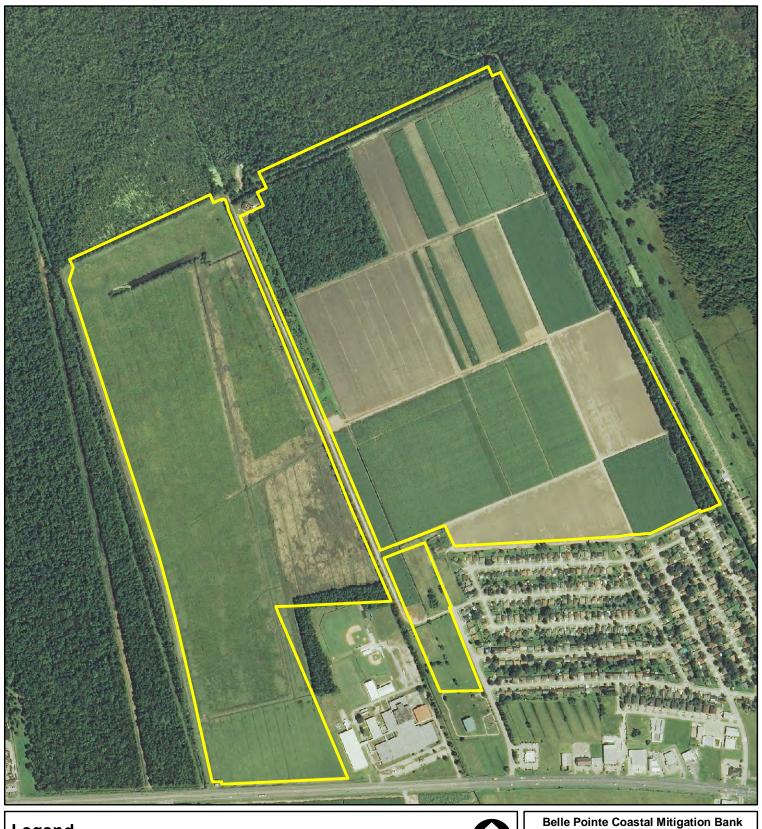


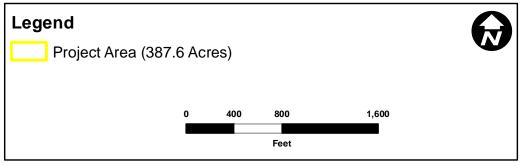
2005 Aerial Photograph

St. John the Baptist Parish, LA

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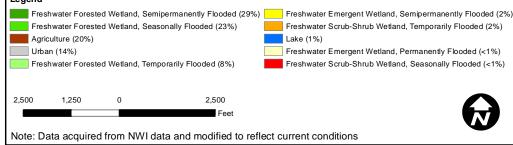
Belle Pointe Coastal Mitigation Bank 2013 AERIAL PHOTOGRAPHY

St. John the Baptist Parish, LA

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Approved : LJW
Date: 12/11/2014
Map: F13_2013.mxd



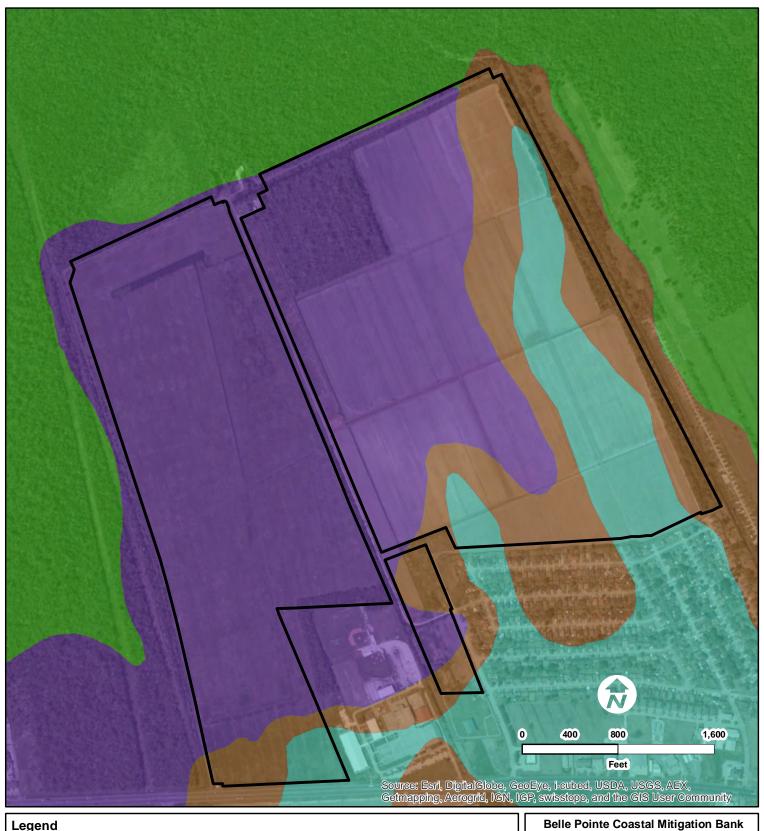


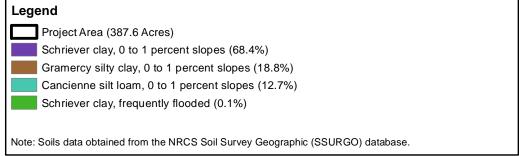


St. John the Baptist Parish, LA

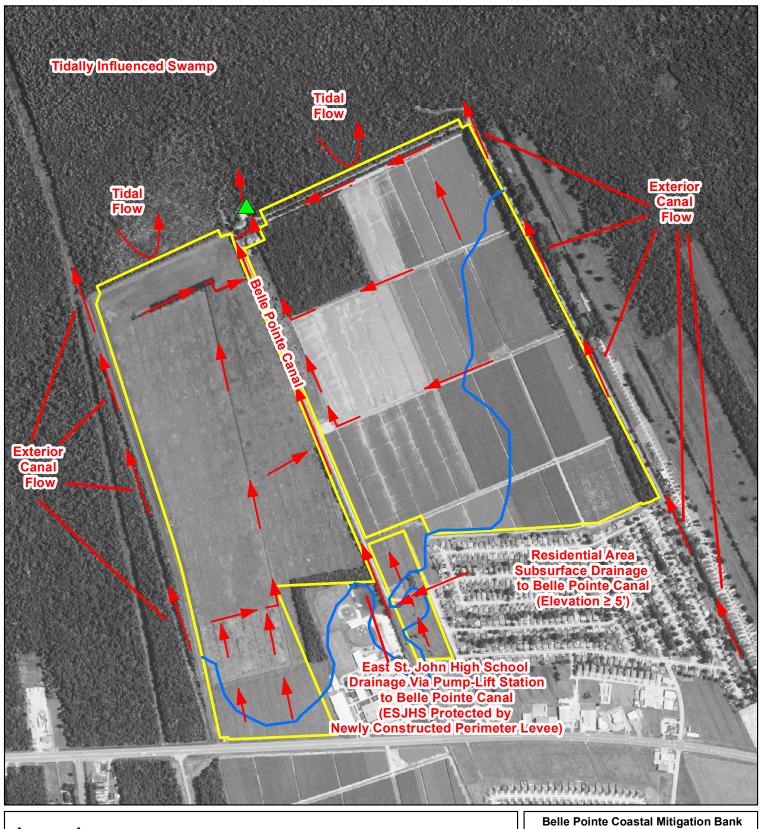
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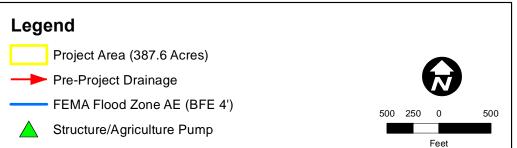






Soils Map St. John the Baptist Parish, LA Created: LJW/ARCVIEW Approved: BWD Date: 12/11/2014 Map: F15_Soils.mxd



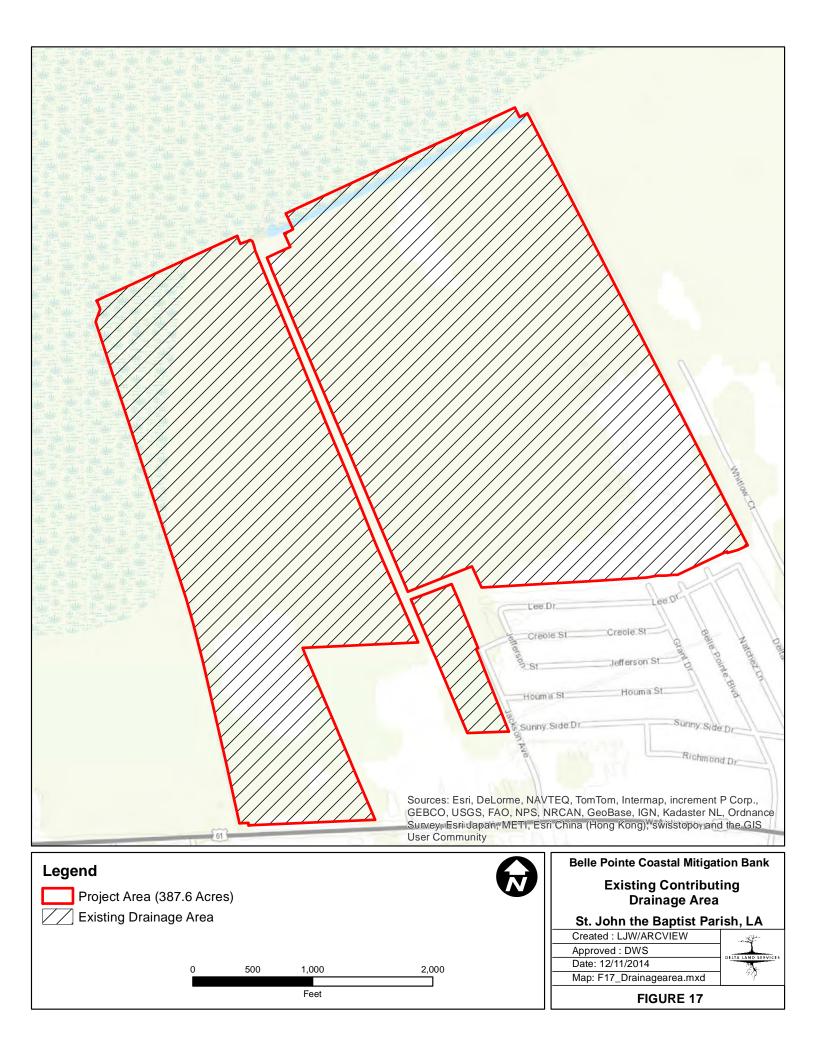


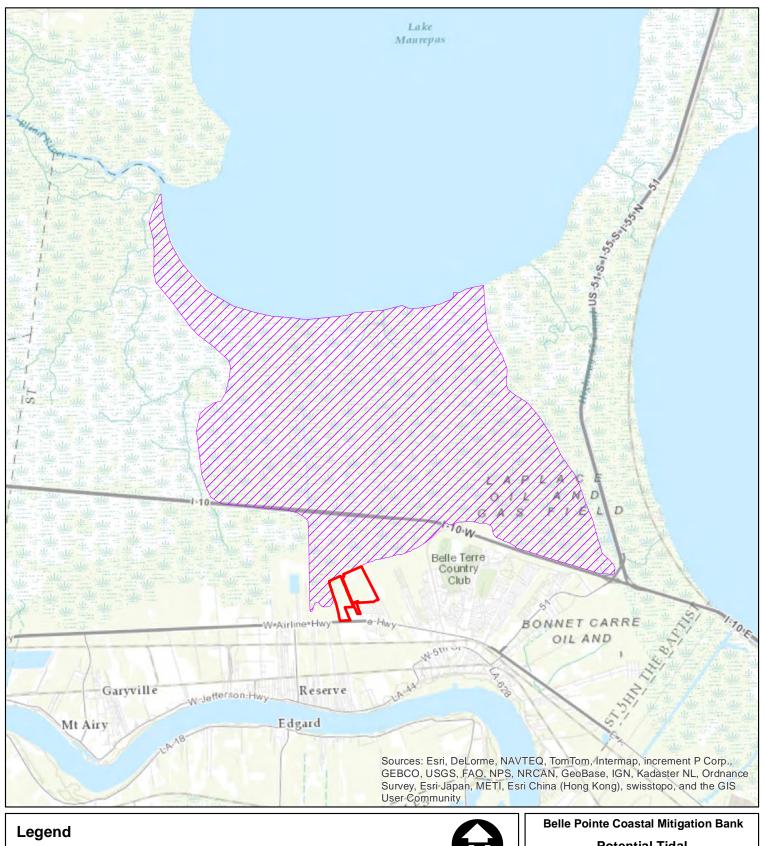
Belle Pointe Coastal Mitigation Bank EXISTING HYDROLOGY CONDITIONS St. John the Bentist Barish J.A.

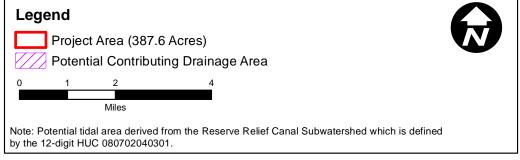
St. John the Baptist Parish, LA

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Approved : DEB
Date: 1/13/2015
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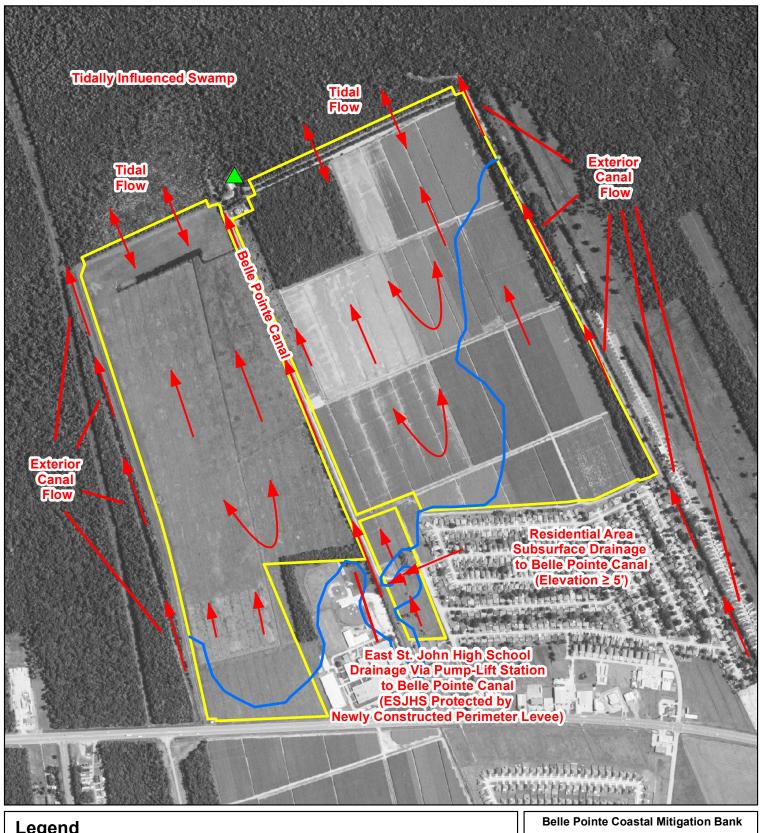
Potential Tidal Area Connection

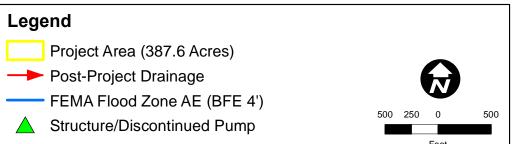
St. John the Baptist Parish, LA

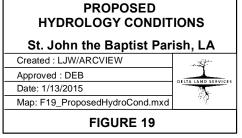
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Date: 12/11/2014

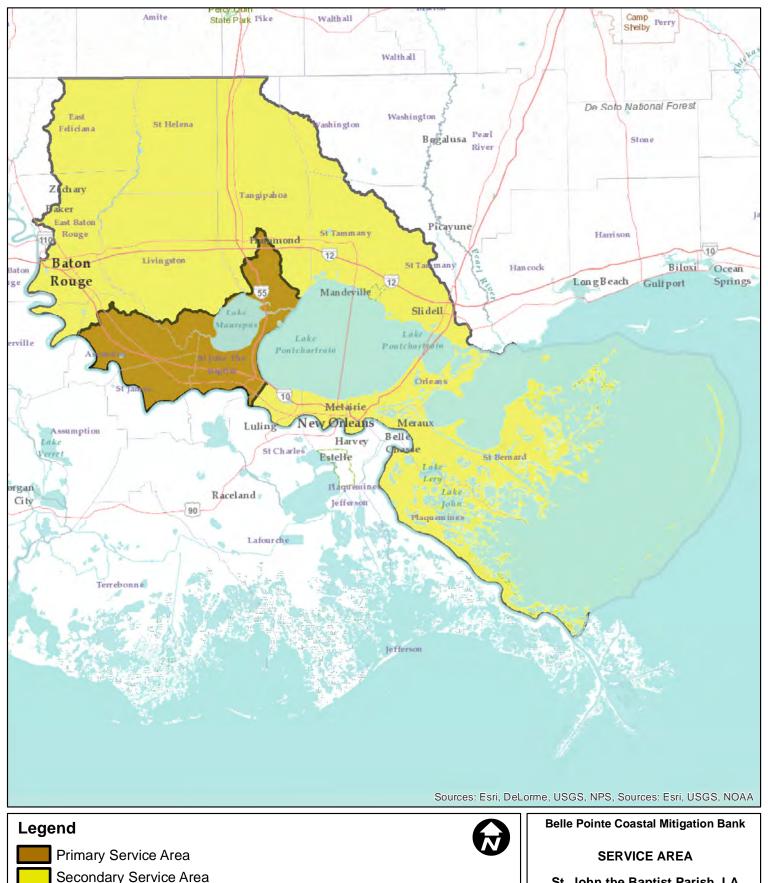
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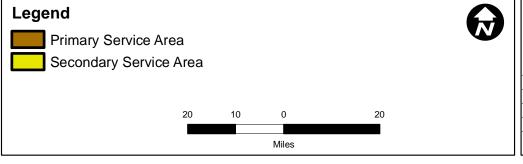












SERVICE AREA St. John the Baptist Parish, LA Created: LJW/ARCVIEW Approved: DEB Date: 12/11/2014 Map: F20_ServiceArea.mxd FIGURE 20

Attachment B: Tables

Table 1. Pre-Restoration Condition and Post-Restoration Mitigation Habitat Types at the Belle Pointe Coastal Mitigation Bank in St. John the Baptist Parish, Louisiana.

Area A Baseline Condition	Mitigation Habitat and Type	Acres
Wetland Rangeland	Swamp Rehabilitation (<1.0 foot NAVD)	83.3
	Area A Swamp Rehabilitation (<1.0 foot NAVD)	83.3
Non-wetland Rangeland	Swamp Re-establishment (<1.0-foot NAVD)	5.1
Non-wetland Perimeter Berm/Levee	Swamp Re-establishment (<1.0-foot NAVD)	0.9
Borrow Canal	Swamp Re-establishment (<1.0-foot NAVD)	2.1
	Area A Swamp Re-establishment (<1.0-foot NAVD)	8.1
Non-wetland Pasture	Type 2 and 3 BLH Re-establishment (>4.0 feet NAVD)	9.3
	Area A Type 2 and 3 BLH Re-establishment (>4.0 feet NAVD)	9.3
Wetland Pasture	Type 2 and 3 BLH Rehabilitation (>4.0 feet NAVD)	0.6
	Area A Type 2 and 3 BLH Rehabilitation (>4.0 feet NAVD)	0.6
Wetland Pasture	Type 1 BLH Re-establishment (1.0 to 2.0 feet NAVD)	0.8
Wetland Rangeland	Type 1 BLH Re-establishment (1.0 to 2.0 feet NAVD)	23.4
	Area A Type 1 BLH Re-establishment (1.0 to 2.0 feet NAVD)	24.2
Non-wetland Pasture	Type 1 BLH Rehabilitation (1.0 to 2.0 feet NAVD)	4.8
Non-wetland Rangeland	Type 1 BLH Rehabilitation (1.0 to 2.0 feet NAVD)	1.8
Non-wetland Perimeter Berm/Levee	Type 1 BLH Rehabilitation (1.0 to 2.0 feet NAVD)	0.6
	Area A Type 1 BLH Rehabilitation (1.0 to 2.0 feet NAVD)	7.2
Wetland Rangeland	Afforested Hydric Inclusion	18.5
Wetland Forest	Hydric Inclusion	3.2
	Area A Hydric Inclusion	21.7
	Area A Subtotals	
	Area A Subtotal Restoration Credit Acreage	132.7
	Area A Subtotal Inclusion Acreage	21.7
	Area A Subtotal Acreage	154.4
Area B Baseline Condition	Mitigation Habitat and Type	Acres
Non-wetland Perimeter Berm/Levee	Swamp Re-establishment (<1.0-foot NAVD)	1.8
Non-wetland Forest	Swamp Re-establishment (<1.0-foot NAVD)	11.7
Prior-converted Cropland/Other Waters	Swamp Re-establishment (<1.0-foot NAVD)	23.9
	Area B Swamp Re-establishment (<1.0-foot NAVD)	37.4
Prior-converted Cropland/Other Waters	Type 2 and 3 BLH Re-establishment (>4.0 feet NAVD)	73.0
Non-wetland Pasture	Type 2 and 3 BLH Re-establishment (>4.0 feet NAVD)	0.5
	Area B Type 2 and 3 BLH Re-establishment (>4.0 feet NAVD)	73.5
Wetland Pasture	Type 2 and 3 BLH Rehabilitation (>4.0 feet NAVD)	0.2
	Area B Type 2 and 3 BLH Rehabilitation (>4.0 feet NAVD)	0.2

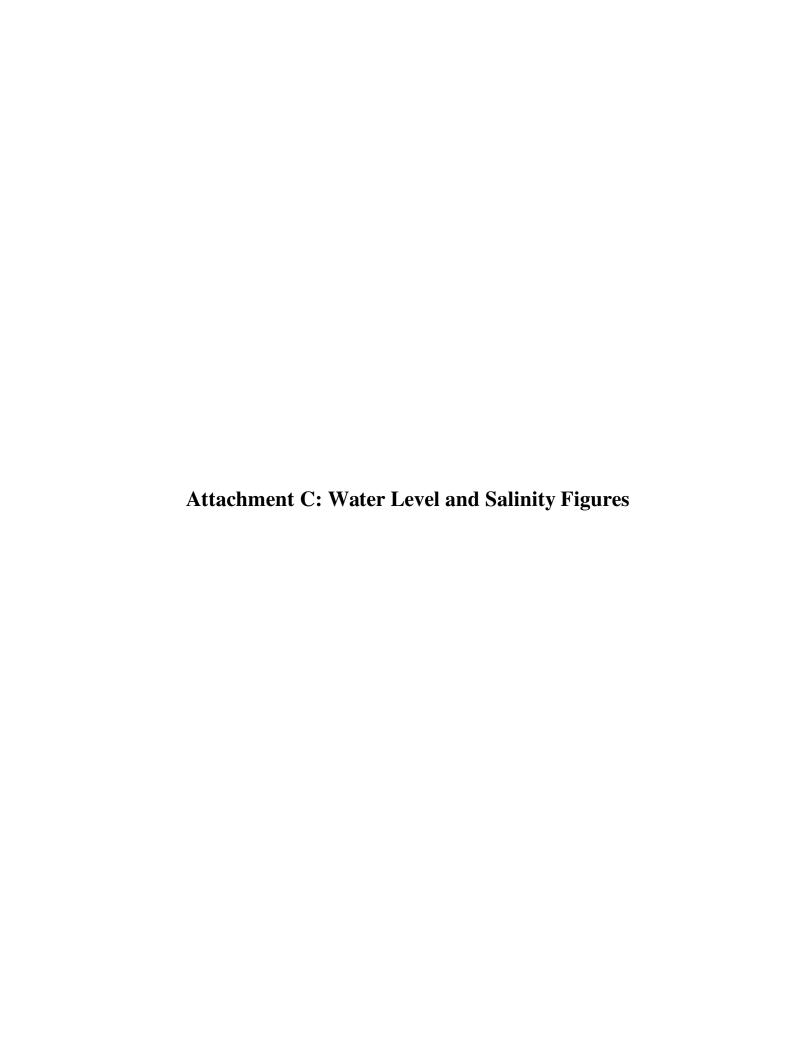
Type 1 BLH Re-establishment (1.0 to 2.0 feet NAVD)	94.5
Type 1 BLH Re-establishment (1.0 to 2.0 feet NAVD)	3.1
Type 1 BLH Re-establishment (1.0 to 2.0 feet NAVD)	6.6
Area B Type 1 BLH Re-establishment (1.0 to 2.0 feet NAVD)	104.2
Type 1 BLH Rehabilitation (1.0 to 2.0 feet NAVD)	4.0
Area B Type 1 BLH Rehabilitation (1.0 to 2.0 feet NAVD)	4.0
Hydric Inclusion	13.8
Area B Hydric Inclusion	13.8
Road	0.1
Area B Non-mitigation Acreage	0.1
Area B Subtotals	
Area B Subtotal Restoration Credit Acreage	219.3
Area B Subtotal Inclusion Acreage	13.8
Area B Subtotal Non-mitigation Acreage	0.1
Area B Subtotal Acreage	233.2
Totals	
Total Restoration Credit Acreage	352.0
Total Inclusion Acreage	35.5
Total Non-mitigation Acreage	0.1
Total Conservation Servitude Acreage	387.6
	Type 1 BLH Re-establishment (1.0 to 2.0 feet NAVD) Type 1 BLH Re-establishment (1.0 to 2.0 feet NAVD) Area B Type 1 BLH Re-establishment (1.0 to 2.0 feet NAVD) Type 1 BLH Rehabilitation (1.0 to 2.0 feet NAVD) Area B Type 1 BLH Rehabilitation (1.0 to 2.0 feet NAVD) Hydric Inclusion Area B Hydric Inclusion Road Area B Non-mitigation Acreage Area B Subtotal Restoration Credit Acreage Area B Subtotal Inclusion Acreage Area B Subtotal Non-mitigation Acreage Totals Total Restoration Credit Acreage Total Inclusion Acreage Total Non-mitigation Acreage

Table 2. Planting Composition of Restored Bottomland Hardwood Forest and Baldcypress/Tupelo Swamp at the Belle Pointe Coastal Mitigation Bank in St. John the Baptist Parish, Louisiana1.

Common Name	Scientific Name	Indicator Status ²	Composition ³	Growth Habit ⁴
baldcypress	Taxodium distichum	OBL	50-80%	Tree
swamp tupelo	Nyssa biflora	OBL	<20%	Tree
overcup oak	Quercus lyrata	OBL	<25%	Tree
Nuttall oak	Quercus texana	FACW	< <u>25</u> %	Shrub/Tree
mayhaw	Crataegus opaca	OBL	<10%	Shrub/Tree
planer tree	Planera aquatica	OBL	<10%	Tree
Drummond red maple	Acer rubrum var. drummondii	OBL ⁵	<u>-</u> 5%	Tree
buttonbush	Cephalanthus occidentalis	OBL	<u><</u> 5%	Shrub/Tree
Carolina ash	Fraxinus caroliniana	OBL	<5%	Shrub/Tree
eastern swampprivet	Forestiera acuminata	OBL	<5%	Shrub/Tree
pumpkin ash	Fraxinus profunda	OBL	<u><</u> 5%	Tree
	dwood Species (minimum 60% Hai			
Common Name	Scientific Name	Indicator Status	Composition	Growth Habit
overcup oak	Quercus lyrata	OBL	<u><</u> 25%	Tree
Nuttall oak	Quercus texana	FACW	<u><</u> 25%	Shrub/Tree
willow oak	Quercus phellos	FACW	<u><</u> 25%	Tree
water hickory	Carya aquatica	OBL	<u><</u> 25%	Tree
baldcypress	Taxodium distichum	OBL	<u><</u> 20%	Tree
mayhaw	Crataegus opaca	OBL	<u><</u> 10%	Shrub/Tree
eastern swampprivet	Forestiera acuminata	OBL	<u><</u> 10%	Shrub/Tree
redbay	Persea borbonia	FACW	<u><</u> 10%	Shrub/Tree
Drummond red maple	Acer rubrum var. drummondii	OBL ⁵	<u><</u> 5%	Tree
buttonbush	Cephalanthus occidentalis	OBL	<u><</u> 5%	Shrub/Tree
green ash	Fraxinus pennsylvanica	FACW	<u><</u> 5%	Tree
Type 2 and 3 Bottomlar	nd Hardwood Species (minimum 60)% Hard Mast)		
Common Name	Scientific Name	Indicator Status	Composition	Growth Habit
cow oak	Quercus michauxii	FACW	<20%	Tree
willow oak	Quercus phellos	FACW	- 20%	Tree
Nuttall oak	Quercus texana	FACW	<20%	Shrub/Tree
Delta post oak	Quercus similis	FACW	<u><</u> 20%	Tree
water oak	Quercus nigra	FAC	<u><</u> 20%	Tree
red maple	Acer rubrum	FAC	<u>-</u> <10%	Tree
pawpaw	Asimina triloba	FAC	<u><</u> 10%	Shrub/Tree
sugarberry	Celtis laevigata	FACW	<u><</u> 10%	Shrub/Tree
green hawthorne	Crataegus viridis	FACW	<u><</u> 10%	Shrub/Tree
green ash	Fraxinus pennsylvanica	FACW	<u><</u> 10%	Tree
sweetgum	Liquidambar styraciflua	FAC	<u><</u> 10%	Tree
red mulberry	Morus rubra	FACU ⁶	<u><</u> 10%	Tree
	Nyssa sylvatica	FAC	<u><</u> 10%	Tree
blackgum		FACW	- 10%	Tree
	Platanus occidentalis	FACW	<u>- 10 / 0</u>	1100
American sycamore	Platanus occidentalis Persea borbonia	FACW	<u>=10%</u> <u><10%</u>	Shrub/Tree
blackgum American sycamore redbay eastern cottonwood				

All species selected for baldcypress –tupelo swamp and type 1 bottomland hardwood have flood tolerances of Class I, II, or III as described in Shankman 1996. Indicator status from 2013 National Wetland Plant List (Lichvar and Kortesz 2009)

Indicator status from 2013 National Wetland Plant List (Lichvar and Kortesz 2009)
 Exact species and quantities to be determined by seedling availability from commercial sources providing seedlings grown from localized ecotypes.
 Growth habitat per the Plants Database, available at http://plants.usda.gov and accessed on January 23, 2015.
 Indicator status from 1988 National Wetland Plant List, Region 2
 These species are designated as UPL on the 2013 National Wetland Plant List but were FAC species on the 1988 National Wetland Plant List for Region 2. Although potentially upland species, these are native to the site and will provide increased habitat value given the goals of the project. The occurrence of the species at the specified composition will not affect the targeted plant community from being classified as a hydrophytic plant community in accordance with the methodology prescribed in the Atlantic and Gulf Coastal Plain Regional Supplement (USACE 2010).



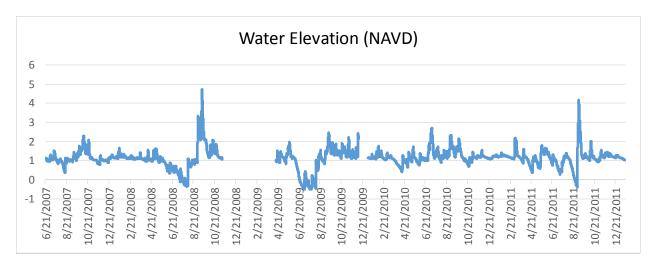


Figure 1. Adjacent Swamp Water Levels from CRMS 0059-W01

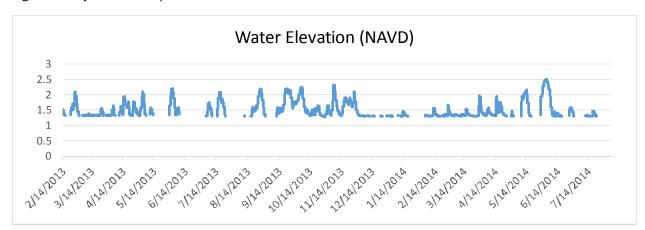


Figure 2. Adjacent Swamp Water Levels from CRMS 0059-H02

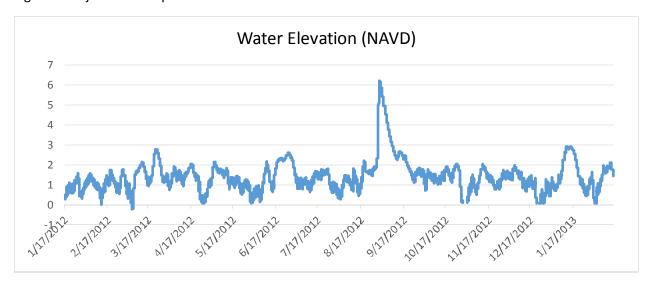


Figure 3. Reserve Relief Canal Water Levels from CRMS 0059-H01

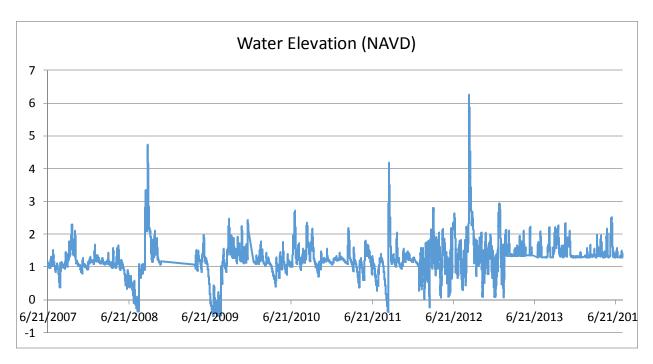


Figure 4. Combined Water Levels from CRMS 0059-W01, CRMS 0059-H01 and CRMS 0059-H02

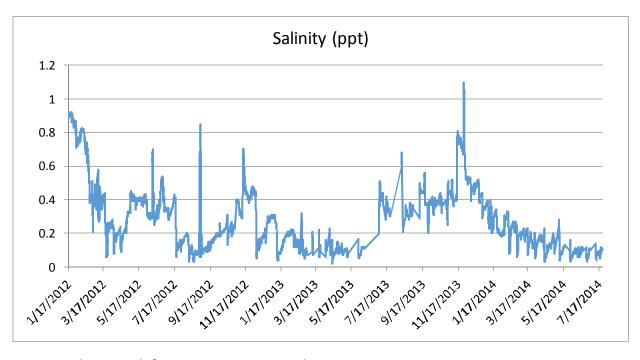
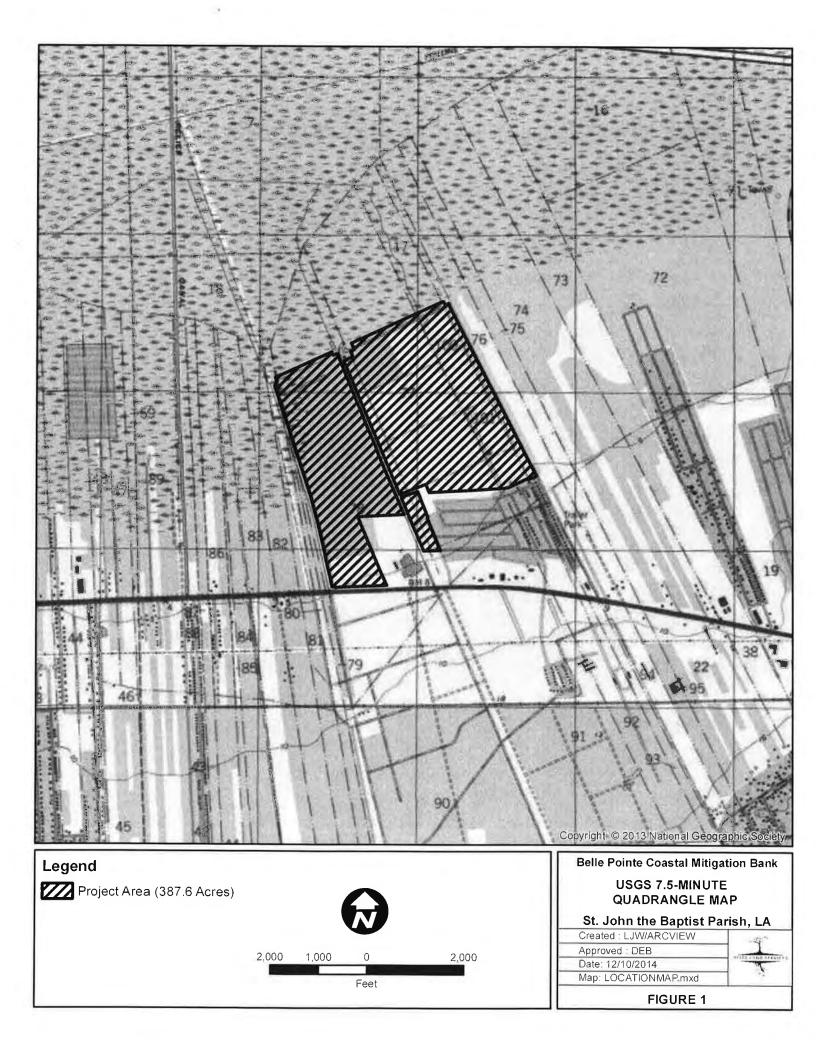
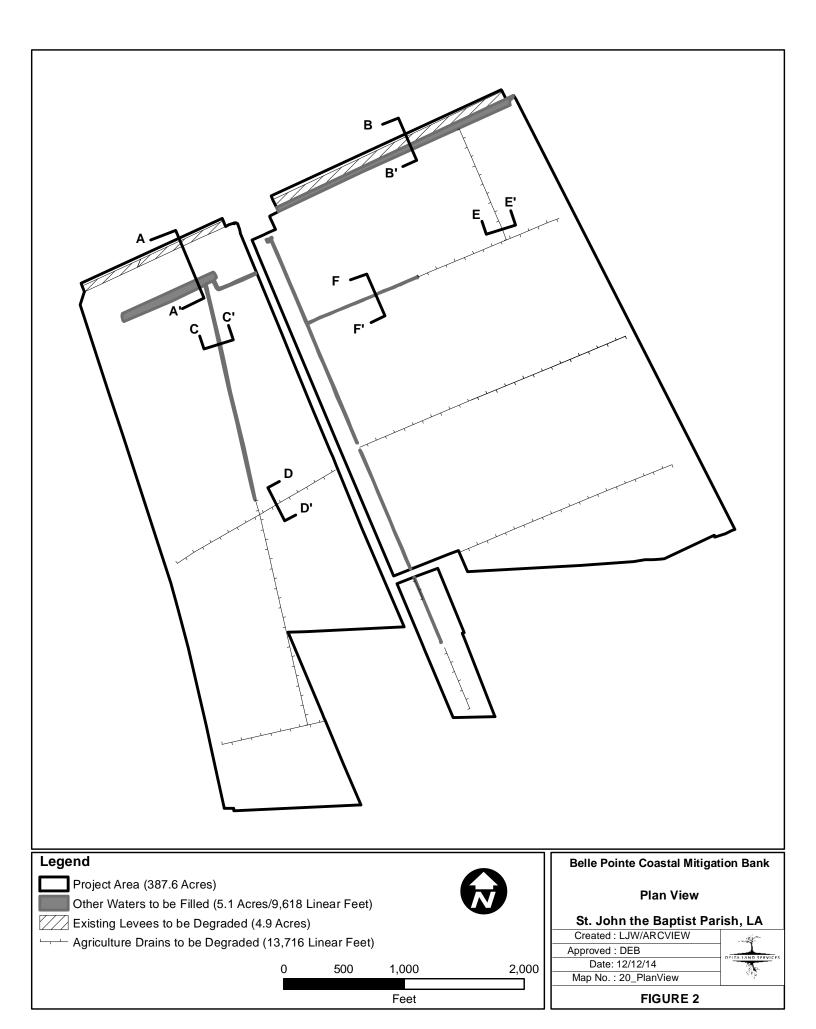


Figure 5. Salinity Levels from CRMS 0059-H01 and CRMS 0059-H02







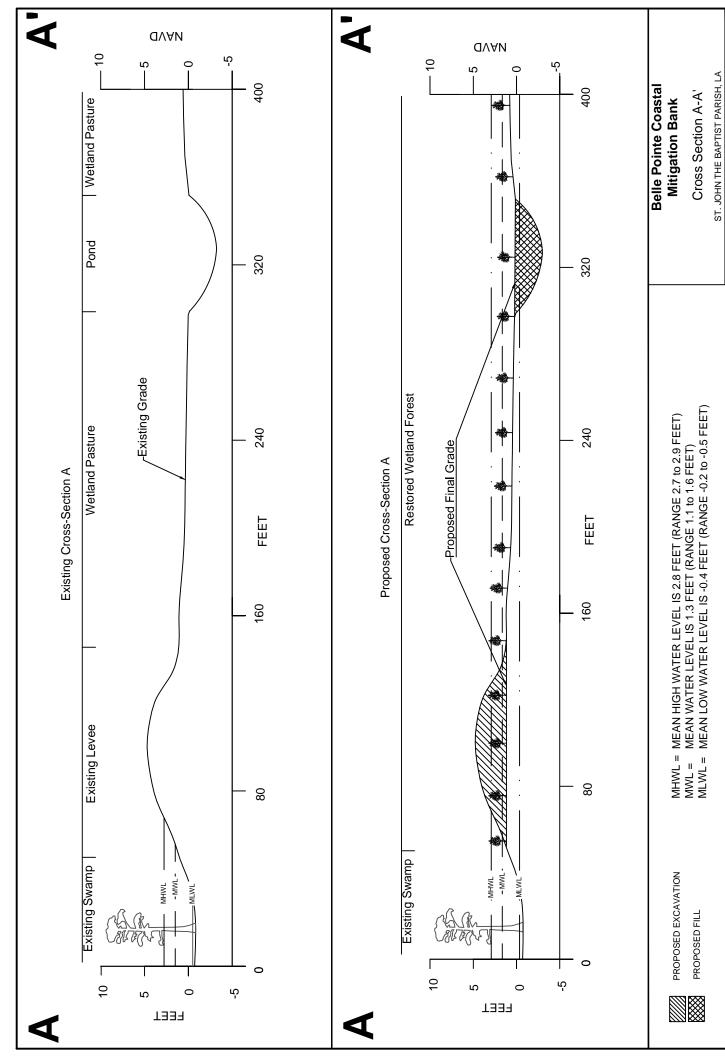


FIGURE 3

XsectionA-F.dwg

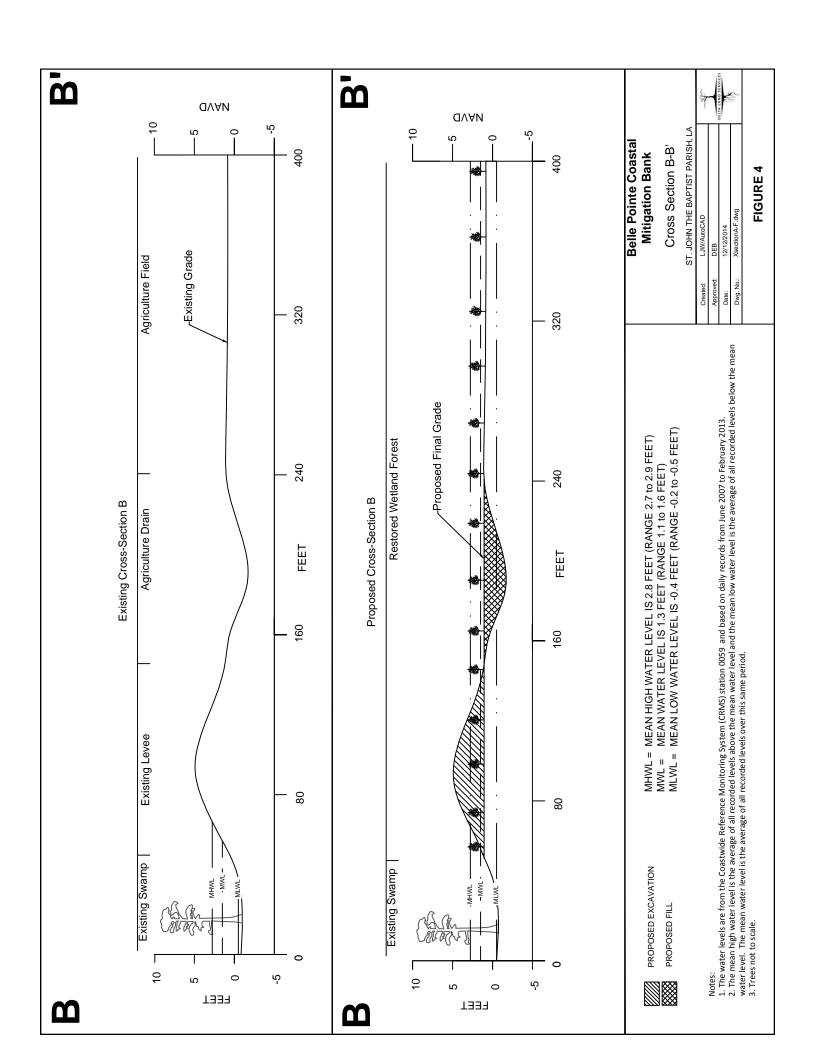
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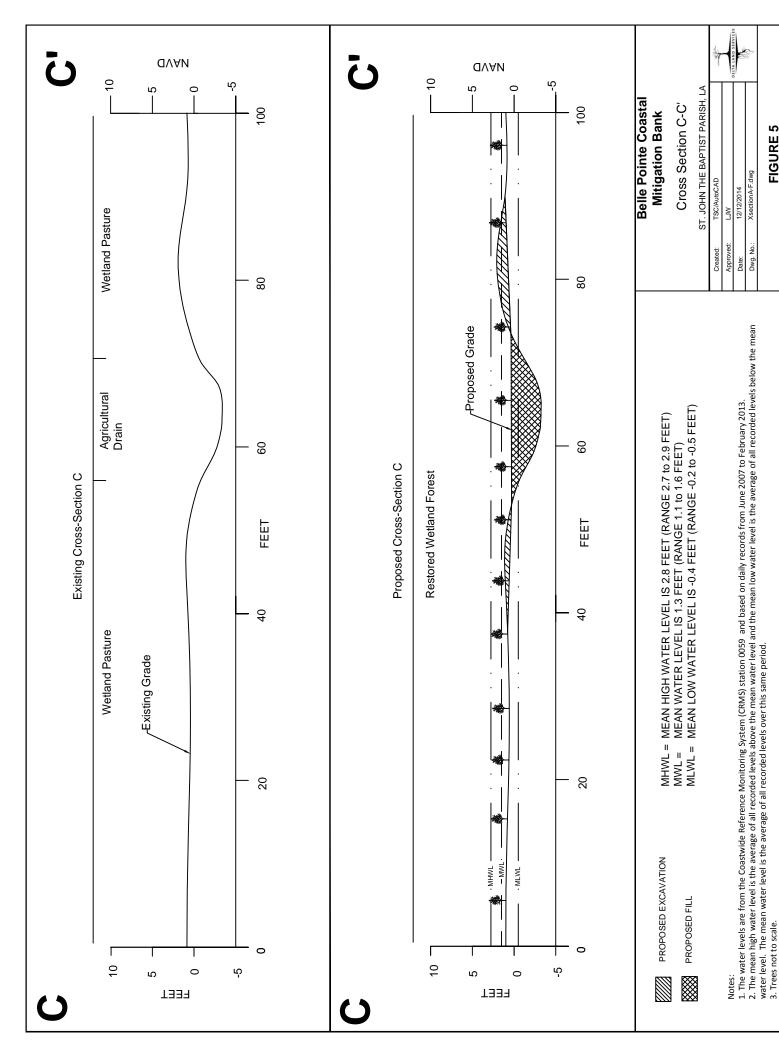
The water levels are from the Coastwide Reference Monitoring System (CRMS) station 0059 and based on daily records from June 2007 to February 2013.
 The mean high water level is the average of all recorded levels above the mean water level and the mean low water level is the average of all recorded levels over this same period.
 Trees not to scale.

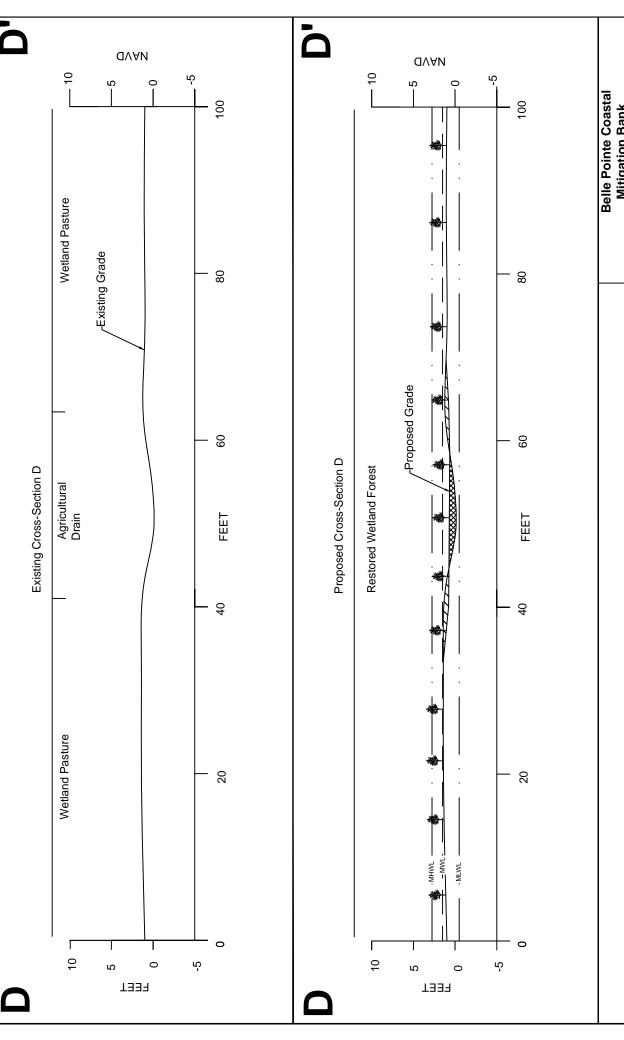
Notes:

LJW/AutoCAD DEB 12/12/2014

Created: Approved Date:







Belle Pointe Coastal Mitigation Bank

Cross Section D-D'

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ST. JOHN THE BAPTIST PARISH, LA	Created: LJW/AutoCAD	Approved: DEB	Date: 12/12/2014	Dwg. No.: Xsection A-F.dwg

FIGURE 6

MHWL = MEAN HIGH WATER LEVEL IS 2.8 FEET (RANGE 2.7 to 2.9 FEET)
MWL = MEAN WATER LEVEL IS 1.3 FEET (RANGE 1.1 to 1.6 FEET)
MLWL = MEAN LOW WATER LEVEL IS -0.4 FEET (RANGE -0.2 to -0.5 FEET)

PROPOSED EXCAVATION

PROPOSED FILL

1. The water levels are from the Coastwide Reference Monitoring System (CRMS) station 0059 and based on daily records from June 2007 to February 2013.

2. The mean high water level is the average of all recorded levels above the mean water level and the mean low water level is the average of all recorded levels below the mean water level. The mean water level is the average of all recorded levels over this same period.

Trees not to scale

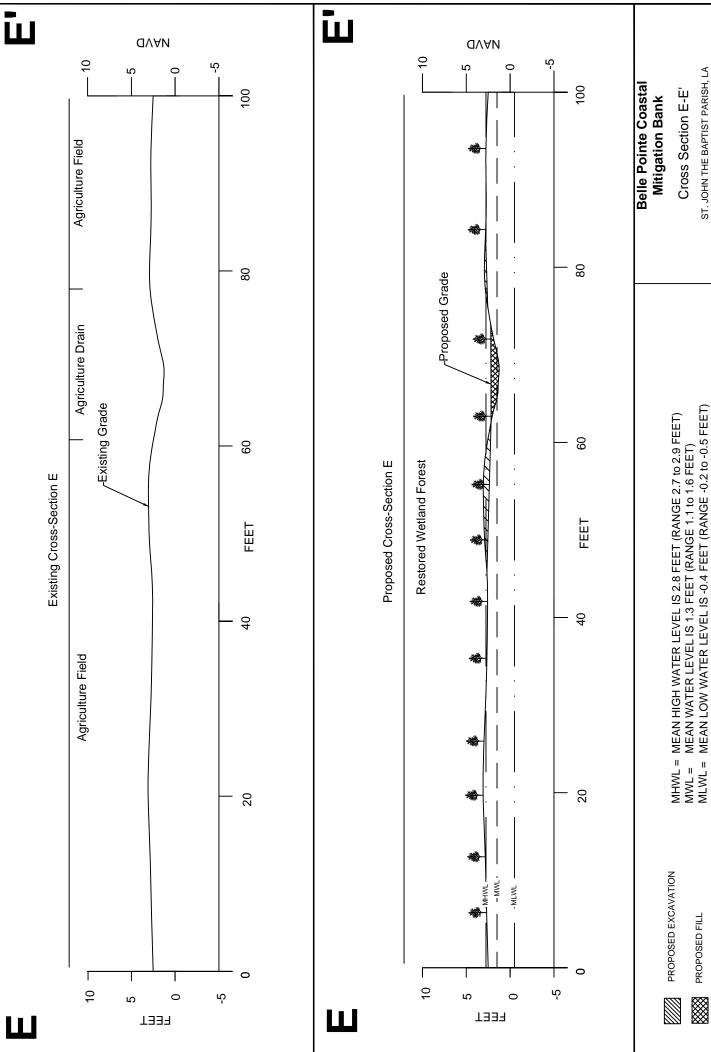
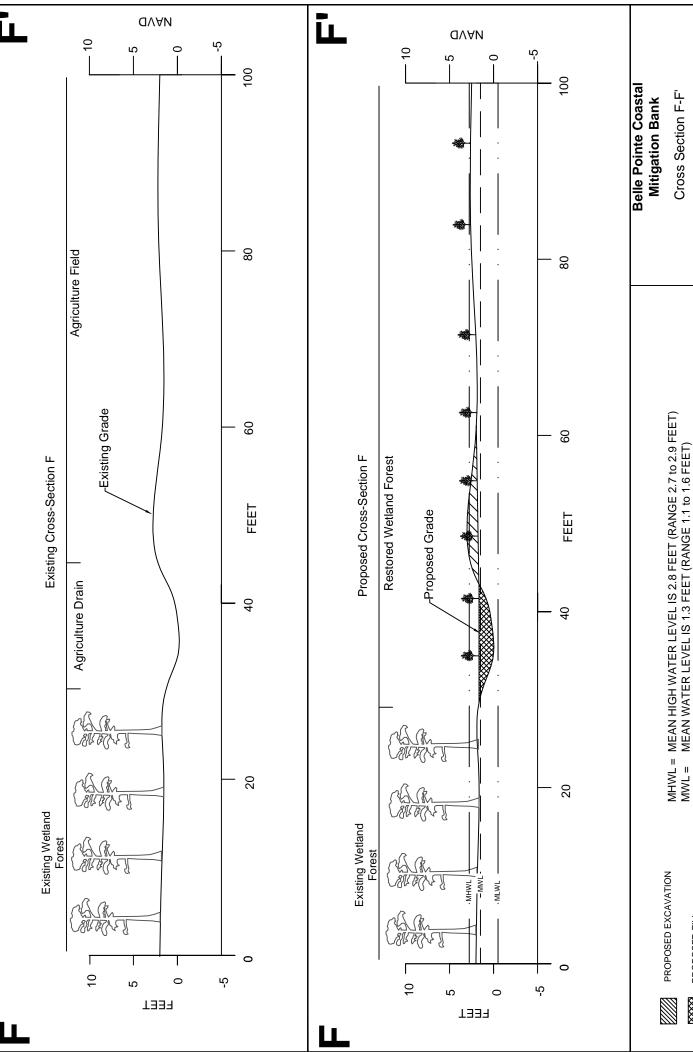


	FIGURE 7	
dia	XsectionA-F.dwg	Dwg. No.:
	12/12/2014	Date:
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*	LJW/AutoCAD	Created:
	ST. JOHN THE BAPTIST PARISH, LA	
	Cross Section E-E'	

The water levels are from the Coastwide Reference Monitoring System (CRMS) station 0059 and based on daily records from June 2007 to February 2013.
 The mean high water level is the average of all recorded levels above the mean water level and the mean low water level is the average of all recorded levels over this same period.
 Trees not to scale.

PROPOSED FILL

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Cross Section F-F' ST. JOHIN THE BAPTIST PARISH, LA Created: LJW/AutoCAD Approved: DEB 12/12/2014	
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FIGURE 8	

The water levels are from the Coastwide Reference Monitoring System (CRMS) station 0059 and based on daily records from June 2007 to February 2013.
 The mean high water level is the average of all recorded levels above the mean water level and the mean low water level is the average of all recorded levels over this same period.
 Trees not to scale.

MWVL = MEAN WATER LEVEL IS 1.3 FEET (RANGE 1.1 to 1.6 FEET)
MLWL = MEAN LOW WATER LEVEL IS -0.4 FEET (RANGE -0.2 to -0.5 FEET)

PROPOSED FILL

Notes:

Attachment E: Preliminary Jurisdictional Determination



DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

APR 0 1 2015

Operations Division
Surveillance and Enforcement Section

Mr. Daniel Bollich Delta Land Services, LLC 1090 Cinclare Drive Port Allen, LA 70767

Dear Mr. Bollich:

Reference is made to your request for a U.S. Army Corps of Engineers' (Corps) jurisdictional determination on property located in Sections 77, 78, and 101, Township 11 South, Range 7 East, St. John the Baptist Parish, Louisiana (enclosed map). Specifically, this property is identified as the 396.9 acre Belle Point Mitigation Area north of US 61.

A field inspection of the property was conducted on March 3, 2015. Based on the results of this investigation and the information provided with your request, we have determined that part of the property is wetland and may be subject to Corps' jurisdiction. The approximate limits of the wetland are designated in red on the map. A Department of the Army (DA) permit under Section 404 of the Clean Water Act will be required prior to the deposition or redistribution of dredged or fill material into wetlands that are waters of the United States. Additionally, a DA permit will be required if you propose to deposit dredged or fill material into other waters subject to Corps' jurisdiction. Other waters that may be subject to Corps' jurisdiction are indicated in blue on the map.

This delineation/determination has been conducted to identify the limits of the Corps' Clean Water Act jurisdiction for the particular site identified in your request. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If the property owner or tenant is a USDA farm participant, or anticipates participation in USDA programs, a certified wetland determination should be requested from the local office of the Natural Resources Conservation Service prior to starting work.

Please be advised that this property is in the Louisiana Coastal Zone and a Coastal Use Permit may be required prior to initiation of any activities on this site. For additional information, contact Ms. Christine Charrier, Office of Coastal Management, Louisiana Department of Natural Resources at (225) 342-7953.

You are advised that this preliminary jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision prior to the expiration date or the District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

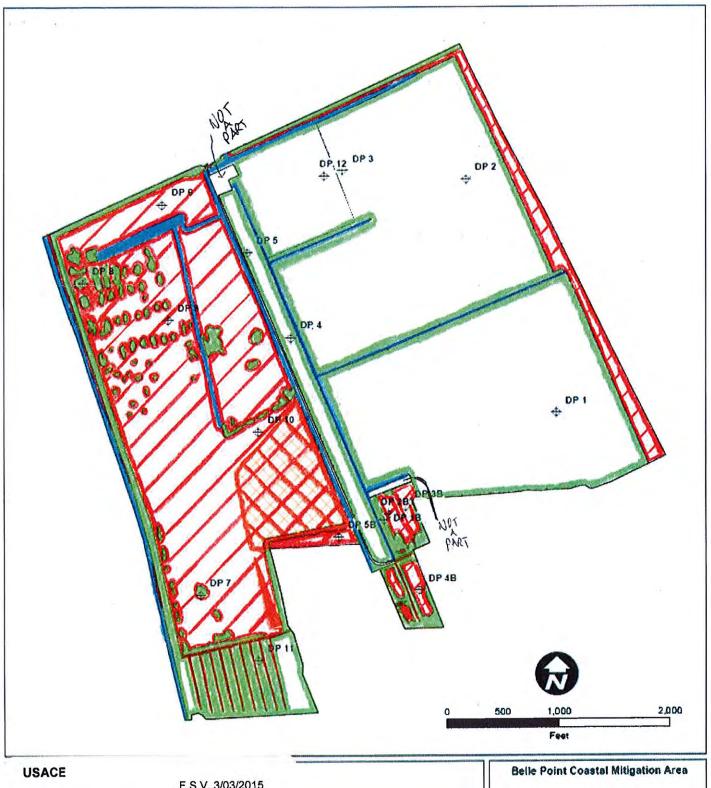
Should there be any questions concerning these matters, please contact Mr. Brad Guarisco (504) 862-2274 and reference our Account No. MVN-2014-02867-SB. If you have specific questions regarding the permit process or permit applications, please contact our Eastern Evaluation Section at (504) 862-2292.

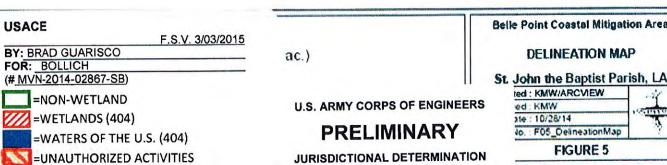
Sincerely,

Martin S. Mayer
Chief, Regulatory Branch

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Enclosures





PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office New Orleans District File/ORM #	MVN-2014-02867-SB PJD Date: Mar 31, 2015
State LA City/County St. John the Baptist	Name/ Name/
Nearest Waterbody: Unnamed tributary	Address of Person Perso
Location: TRS, LatLong or UTM: 30.086565°; -90.532426°	Requesting PJD 1090 Cinclare Drive Port Allen, LA 70767
Identify (Estimate) Amount of Waters in the Review Area: Non-Wetland Waters: Stream Flow: Perennial	Name of Any Water Bodies Tidal: on the Site Identified as Section 10 Waters; Non-Tidal:
Wetlands: 171.3 acre(s) Cowardin Class: Palustrine, scrub-shrub	☐ Office (Desk) Determination ☐ Field Determination: ☐ Date of Field Trip: Mar 3, 2015
Maps, plans, plots or plat submitted by or on behalf of the Data sheets prepared/submitted by or on behalf of the Office concurs with data sheets/delineation office does not concur with data sheets/delineation of Data sheets prepared by the Corps of Corps navigable waters' study: Data sheets prepared by the Corps of Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: Data Sheets Puscal Area of Uscal Study: Data Sheets Previous Study: Data Sheets Prepared by the Corps of Conservation Service Soil of Uscal Natural Resources Conservation Service Soil of National wetlands inventory map(s). Cite name: Data Sheets Prepared by the Corps of Conservation Service Soil of National wetlands inventory map(s). Cite name: Data Sheets Prepared by the Corps of Uscal Sheets of Conservation Service Soil of National wetlands inventory map(s). Cite name: Data Sheets Office of Conservation Service Soil of National wetlands inventory map(s). Cite name: Data Sheets Prepared by the Corps of Uscal Sheets of Conservation Service Soil of National Water o	e applicant/consultant. report. ineation report. 24,000 Reserve Survey. Citation: Soil Survey of St. John the Baptist Parish, Louisiant Cand PSS1C 04, '05, '08, '10, '12 1PRO, Consultant photos Inse letter:
Signature and Date of Regulatory Project Manager (REQUIRED)	Requested by letter on October 30, 2014 Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)
EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL D	ETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the pennit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN). or requests verification for a non-reporting NWP or other general pennit, and the pennit applicant has not requested an approved JD for the activity, the pennit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual pennit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliauce upon the subject pennit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary ID constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual pennit (and all terms and conditions contained therein), or individual pennit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

NOTIFICATION OF	ADMINISTRATIVE APPEAL OPTIONS AND REQUEST FOR APPEAL	D PROCESS	
Applicant: Mr. Daniel Bollich	File No.: MVN-2014-02867-SB	Date:	APR 0 1 2015
Attached is:			See Section below
INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
PROFFERED PERMIT (Standard)	Permit or Letter of permission)		В
PERMIT DENIAL			С
APPROVED JURISDICTIONAL I	DETERMINATION		D
✓ PRELIMINARY JURISDICTIONAL	AL DETERMINATION		Е

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

- A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.
- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final
 authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your
 signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights
 to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.
- B: PROFFERED PERMIT: You may accept or appeal the permit
- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final
 authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your
 signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights
 to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you
 may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this
 form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the
 date of this notice.
- C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.
- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO A	N INITIAL PROFFERED PERM	T	
REASONS FOR APPEAL OR OBJECTIONS: (Describe your re proffered permit in clear concise statements. You may attach add objections are addressed in the administrative record.)	asons for appealing the decision or	your objections to an initial	
ADDITIONAL INFORMATION: The appeal is limited to a revier record of the appeal conference or meeting, and any supplemental clarify the administrative record. Neither the appellant nor the Co you may provide additional information to clarify the location of i	information that the review officer rps may add new information or an nformation that is already in the ac	has determined is needed to halyses to the record. However,	
POINT OF CONTACT FOR QUESTIONS OR INFORMATION			
If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regard also contact the Division Engine		
Mr. Rob Heffner Chief, Surveillance and Enforcement Section U.S. Army Corps of Engineers, New Orleans District P.O. Box 60267 New Orleans, LA 70160-0267 504-862-1288	Mr. Thomas McCabe Administrative Appeals Review Officer Mississippi Valley Division P.O. Box 80 (1400 Walnut Street) Vicksburg, MS 39181-0080 601-634-5820 FAX: 601-634-5816		
RIGHT OF ENTRY: Your signature below grants the right of ent			
consultants, to conduct investigations of the project site during the notice of any site investigation, and will have the opportunity to pa		will be provided a 15 day	
	Date:	Telephone number:	
Signature of appellant or agent.			