JOINT PUBLIC NOTICE

August 27, 2018

United States Army
Corps of Engineers
New Orleans District
Regulatory Branch
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New Orleans, La. 70160-0267
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Project Manager
Jacqueline Farabee
Permit Application Number
MVN-2018-01010 MR

State of Louisiana
Department of Environmental Quality
Post Office Box 4313
Baton Rouge, La. 70821-4313
Attn: Water Quality Certifications
(225) 219-3225 FAX (225) 325-8250
Elizabeth.Hill@la.gov
Project Manager
Elizabeth Hill
WQC Application Number
WQC # 180813-01

Interested parties are hereby notified that a permit application has been received by the New Orleans District of the U.S. Army Corps of Engineers pursuant to: [ ] 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).

Application has also been made to the Louisiana Department of Environmental Quality, for a Water Quality Certification (WQC) in accordance with statutory authority contained in Louisiana Revised Statutes of 1950, Title 30, Chapter 11, Part IV, Section 2074 A(3) and provisions of Section 401 of the Clean Water Act (P.L.95-17).

BAYOU MARINGOUIN UMBRELLA BANK RAMAH SITE IBERVILLE PARISH

NAME OF APPLICANT: Delta Land Services, LLC; Attention: Daniel Bollich; 1090 Cinclare Drive; Port Allen, Louisiana 70767.

LOCATION OF WORK: The 225.0 acre site is located adjacent to the east side of Ramah Road in Iberville Parish, approximately 1.3 miles south of Ramah, Louisiana, as shown on attached drawings (Latitude: 30.380433° N, Longitude:–91.503856° W). The Project is located within the Terrebonne Basin, Hydrologic Unit 08070300.

CHARACTER OF WORK: Removal of existing culverts and interior agricultural drains with the deposition of in-situ earthen material in a beneficial manner. Afforestation activities will include the planting of native bottomland hardwood (BLH) species. All work is being done for the purpose of constructing a mitigation bank with BLH habitat.

The comment period for the Department of the Army Permit and the Louisiana Department of Environmental Quality WQC will close **30 days** from the date of this joint public notice. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this permit and/or this WQC request and must be mailed so as to be received before or by the last day of the comment period. Letters concerning the Corps of Engineers permit application must reference the applicant's name and the Permit Application Number, and be mailed to the Corps of Engineers at the address above, ATTENTION: REGULATORY BRANCH. Similar letters concerning the

Water Quality Certification must reference the applicant's name and the WQC Application number and be mailed to the Louisiana Department of Environmental Quality at the address above.

The application for this proposed project is on file with the Louisiana Department of Environmental Quality and may be examined during weekdays between 8:00 a.m. and 4:30 p.m. Copies may be obtained upon payment of costs of reproduction.

Corps of Engineers Permit Criteria

The decision whether to issue a permit will be based on an evaluation of the probable impacts, 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 which 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, considerations of property ownership and, in general, the needs and welfare of the people.

The U.S. Army 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 U.S. Army Corps of Engineers to determine whether to make, 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 other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an 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.

The New Orleans District is unaware of properties listed on the National Register of Historic Places near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, historical sites, or data. Issuance of this public notice solicits input from the State Archeologist and State Historic Preservation Officer regarding potential impacts to cultural resources. After receipt of comments from this public notice the Corps will evaluate potential impacts and consult with the State Historic Preservation Officer and Native American Tribes in accordance with Section 106 of the national Historic Preservation Act, as appropriate.

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

Utilizing Standard Local Operating Procedure for Endangered Species in Louisiana (SLOPES), dated October 22, 2014, between the U.S. Army Corps of Engineers, New Orleans and U.S. Fish and Wildlife Service, Ecological Services Office, the Corps has determined that the proposed activity would have no effect on any species listed as endangered by the U.S. Department of the Interior.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The applicant's proposal would result in the destruction or alteration of N/A acre(s) 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. Also, a certification that the proposed activity will not violate applicable water quality standards will be required from the Department of Environmental Quality, 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.

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.

for

Martin S. Mayer
Chief, Regulatory Branch

Enclosure

DELTA LAND SERVICES

Bayou Maringouin Umbrella Mitgation Bank

PROSPECTUS FOR PROPOSED RAMAH SITE

Iberville Parish, Louisiana
Sponsored by: Delta Land Services, LLC
July 27, 2018

Prospectus for the Proposed Bayou Maringouin Umbrella Mitigation Banking Instrument – Ramah Site

Iberville Parish, Louisiana

July 27, 2018

PREPARED BY:

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

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Appendices

1. Introduction

Delta Land Services, LLC (DLS) has prepared this prospectus in accordance with 33 CFR § 332.8(d)(2) to establish and operate the Bayou Maringouin Umbrella Mitigation Bank – Ramah Site (Bank). The Bank is a 225.0-acre proposed mitigation bank to provide compensatory mitigation for unavoidable impacts to "Waters of the United States" authorized through the issuance of Department of the Army (DA) Permits by the U.S. Army Corps of Engineers (USACE) New Orleans District (CEMVN) pursuant to Sections 9 and 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act of 1972.

1.1 Site Location

The Bank is located in the Mississippi Alluvial Plain Level III Ecoregion and the Southern Backswamps Level IV Ecoregion (73m; Environmental Protection Agency [EPA] 2003; Omernik 1987), the 29,555-square mile Mississippi Delta Cotton and Feed Grains Region (LRR O), and the Southern Mississippi River Alluvium Major Land Resource Area (MLRA 131A; Natural Resources Conservation Service [NRCS] 2006). The MLRA 131A Ecoregion is typically characterized by fertile soils, smooth topography, abundant moisture, and a long growing season. Such conditions favor agricultural production in this region. Landforms in the area are level or depressional to very gently undulating alluvial plains. Some convex areas exist as natural levees and undulating terraces and spoil banks of the artificial drainage network across the landscape.

The Bank is within the 13-parish Atchafalaya Trace State Heritage Area[1] which comprises the Atchafalaya River Basin, the largest contiguous bottomland hardwood forest in the United States, stretching 140 miles from Simmesport, Louisiana to the Gulf of Mexico. Because of its concentration of significant natural, scenic, cultural, historic, and recreational resources, the region was designated as a National Heritage Area by the National Park Service in 2006 (Atchafalaya National Heritage Area 2012; Atchafalaya Basin Program 2012).

The Bank is approximately 1.3 miles south of Ramah, Louisiana (Figure 1) and is located in Sections 11 and 12 of Township 8 South, Range 9 East in Iberville Parish, Louisiana (Figure 2). The approximate site center is located at Latitude 30.380433°, Longitude -91.503856°[2]. Elevations on the site range from below 6 feet[3] to above 13 feet[4] (Figure 3). The entire site is

[1] As designated by the Louisiana Legislature R.S. 25:1221-1225.
[2] All geographic coordinates are based on North American Datum of 1983 (NAD83)
[3] All vertical elevations are based on North American Vertical Datum of 1988 (NAVD)
[4] All elevations referenced within the report are from digital elevation models (DEM) derived from light detection and ranging (LIDAR) datasets obtained from the Louisiana State University CADGIS Research Laboratory.

located within the 100-year flood zone per the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM; Figure 4).

Iberville Parish has a warm, humid, subtropical climate characterized by relatively high rainfall. The average annual precipitation in this area is 57.2 inches. Most of the rainfall occurs as frontal storms during late fall, winter, and early spring, although an appreciable amount of precipitation also occurs as convective thunderstorms during the early part of the growing season. The average annual daily temperatures range from a minimum 58º to a maximum of 79º Fahrenheit. The growing season lasts year-round as soil temperatures rarely drop below 32º Fahrenheit.

2. Project Goals and Objectives

The goal of the Bank is the re-establishment[5], rehabilitation[6] and preservation[7] of bottomland hardwood (BLH) forested wetland ecosystems within the alluvial floodplain of the Mississippi River. Forested upland will be restored as buffers[8]. Access trails and herbaceous areas will be maintained as non-mitigation acreage within the Bank. The purposes of these features are to provide wildlife openings and to facilitate monitoring/maintenance activities associated with Bank establishment, long-term management and continued recreational use of the property (Figure 5).

The restoration[9] and protection of BLH forest within the 225.0-acre Bank will provide additional wetland functions and values that are not currently realized under existing conditions and land use. The cessation of intensive agricultural activities, afforestation[10] with native wetland tree species, and increasing surface-

[5] 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*.

[6] Rehabilitated 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.*

[7] Preservation is defined in 33 CFR § 332.2 as the *removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.*

[8] Buffers are defined in 33 CFR § 332.2 as *an upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses*.

[9] 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.*

[10] 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 re-establishment 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".

water retention time for vegetative nutrient uptake and sedimentation will provide localized improvement to downstream waters. Wildlife habitat will improve for resident biota and nearctic-neotropical migrating bird species (e.g., staging, resting, feeding, escape cover, etc.) through afforestation with native wetland tree and shrub species. Additionally, afforestation of this site will provide habitat beneficial to the Louisiana black bear (*Ursus americanus luteolus*), a formerly designated threatened species recently classified as recovered by U.S. Fish and Wildlife Service (FWS; Figure 6)[11].

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 225.0-acre Bank through hydrological restoration activities such as backfilling artificial drainages;
- Restoration of native BLH forested wetland (121.2 acres) communities through hydrology restoration and afforestation of native species;
- Improvement of water quality by means of cessation of agricultural activities and reduction of non-point source runoff through hydrological restoration activities;
- Preservation and protection of existing BLH (60.6 acres) forest through the inclusion of these stands in the 225.0-acre perpetual conservation servitude;
- Re-establishment of an upland buffer (12.6 acres) that will provide a valuable upland to the restored BLH forested wetland area, as well as vital habitat to fauna species that utilize both wetland and upland systems throughout their life-cycle;
- Ensuring long-term viability and sustainability of the Bank through active and adaptive management including, but not limited to, invasive species control, appropriate monitoring, and long-term maintenance;
- Establishing financial assurances to achievement of long-term success criteria;

[11] Federal Register Vol. 81, No. 48 titled *Endangered and Threatened Wildlife and Plants; Removal of the Louisiana Black Bear from the Federal List of Endangered and Threatened Wildlife and Removal of Similarity-of-Appearance Protections for the American Black Bear* promulgated as a Final Rule by the US Fish and Wildlife Service on March 11, 2016

- Ensure long-term viability and sustainability by implementing specific management strategies such as
    - active and adaptive management
    - establishment of financial assurances (e.g., construction, establishment) and long-term funding mechanisms
    - initial, intermediate, and long-term monitoring
    - initial, intermediate, and long-term maintenance
    - initial, intermediate, and long-term invasive species control; and
- To provide for the long-term protection through the execution of a perpetual-term conservation servitude and establishment of a long-term fund to cover annual expenditures associated with maintenance and management of the Bank.

- To restoration of forested habitat for aquatic fauna through afforestation of a diversity of indigenous species and control of invasive/noxious species; and
- To afforest and protect land surrounded by large, extant, and contiguous forested habitat which will benefit breeding birds and the Louisiana black bear in accordance with existing bird conservation plans and FWS (2016).

3. Ecological Suitability of the Site/Baseline Conditions

This section describes the ecological suitability of the site to achieve the objectives of the proposed mitigation bank, including the physical, chemical, and biological characteristics of the bank site and how that site will support the planned types of aquatic resources and function, as stated in 33 CFR 332.8(d)(2)(vii)(B). This section provides the baseline/current site conditions on and adjacent to the proposed site.

3.1 Land Use

3.1.1 Historical Land Use

The Bank and adjacent land use was historically forested wetlands. A review of historical aerial photography reveals that a majority of the site and the surrounding area was 100% forested in 1965. Clearing had begun in the area for agricultural purposes prior to 1965 and by 1998 the entire Bank, except for the 77.3 acres of existing forest, was cleared and in agricultural production. In recent history, the project area was agricultural land primarily used cattle grazing (Figures 7-13).

3.1.2 Existing/Current Land Use

The west side of King Ditch and a portion of the east side of King Ditch is used for cattle grazing and hay production (147.7 acres) (Figure 14). The remaining portion of the property on the east side of King Ditch is currently forested wetlands (77.3 acres).

3.2 Soils

The mapped soil units within the project area are Sg: Sharkey clay, 0 to 1% slope, rarely flooded, south and Cl: Commerce silt loam (Figure 15). The Sharkey soil series consists of very deep, poorly and very poorly drained, very slowly permeable soils that formed in clayey alluvium. These soils are on flood plains and low terraces of the Mississippi River. The Commerce soil series consists of deep, somewhat poorly drained, moderately slowly permeable soils that formed in loamy alluvial sediments. These soils are on level to undulating alluvial plains of the Mississippi River and its tributaries. The areas designated to be restored and preserved as bottomland hardwood habitat are mapped as Sg: Sharkey clay, 0 to 1% slopes, rarely flooded, south and Cl: Commerce silt loam, 0 to 1% slopes. The areas designated to be restored as upland hardwood habitat are mapped as Cl: Commerce silt loam, 0 to 1% slopes.

These map units contain varying degrees of hydric soil components. The Sg has a hydric component rating of 93% and Cl: 5% (NRCS 2018[b]). Commerce soils are considered to be problematic soils as they commonly show field indicators of hydric soils when in certain landscape positions[12].

3.3 Hydrology

3.3.1 Contributing Watershed

All drainage is toward King Ditch which drains to the borrow canal of the East Atchafalaya guide levee. This eventually drains into Belle River leading to Lake Palourde and ultimately to the Gulf of Mexico, south of Morgan City, Louisiana. Most upstream, offsite drainage with potential flow onto the Bank is intercepted by artificial conveyances (i.e., agriculture drains) on neighboring properties. Although most of this flow is confined to King Ditch, some overbank flooding may enter the Bank from upstream flash flood events.

[12] Dr. Michael Lindsey, State Soil Scientist for Louisiana, NRCS, personal communication with Mr. Daniel Bollich, Ecological Program Director, Delta Land Services, March 4, 2016.

3.3.2 Historical Hydrology and Drainage Patterns

The historical hydrology of the site, prior to the conversion to agricultural land, was primarily from overbank flooding from the Atchafalaya and Mississippi River Systems, precipitation, and high water tables.

3.3.3 Existing/Current Hydrology and Drainage Patterns

Hydrology is currently influenced naturally by localized rainfall, adjacent runoff, and high water table. King Ditch traverses the middle of the property. During the conversion from a forested wetland to agricultural uses, hydrologic modifications such as ditching, culverts, and channelization of natural swales were implemented for efficiently moving water off the site. These ditches and drains remain in place to move water off-site to limit the horizontal, vertical, and temporal extent of ponding and saturation of the site. These on-site ditches and drains carry water into King Ditch (also referred to as Sparks Canal), a manmade canal used for drainage purposes crossing the back portion of the site.

All drainage is toward King Ditch which drains to the borrow canal of the East Atchafalaya guide levee. This eventually drains into Belle River leading to Lake Palourde and ultimately to the Gulf of Mexico, south of Morgan City, Louisiana. Most upstream, offsite drainage with potential flow onto the Bank is intercepted by artificial conveyances (i.e., agriculture drains) on neighboring properties. Although most of this flow is confined to King Ditch, some overbank flooding may enter the Bank from upstream flash flood events.

The existing bottomland hardwood forests on the eastern portion of the Bank are self-sustaining wetlands. Hydrology indicators observed in these areas were saturation (A3), water marks (B1), drift deposits (B3), algal mat or crust (B4), water-stained leaves (B9), oxidized rhizospheres along living roots (C3), sparsely vegetated concave surface (B8), geomorphic position (D2), and FAC-neutral test (D5) described in the AGCP Regional Supplement (USACE 2010). Additionally, gaps and low areas exist in the spoil bank along the east bank of the Kings Ditch which allow hydrologic exchange with the waterbody.

3.3.4 Jurisdictional Wetlands

On March 15, 2017, DLS submitted a wetland data report and a request for a Preliminary Jurisdictional Determination (PJD) for approximately 117.7 acres that includes all acreage within the Bank. The CEMVN issued a PJD on January 25, 2017 (MVN-2015-01994-1) (Attachment 3). The results of the PJD indicates approximately 92.9 acres of Non Wetlands, 19.4 acres of wetlands, and 5.4 acres of non-wetland waters within the 117.7-acre project area.

On March 15, 2017 DLS submitted a wetland data report and a request for a PJD for 133.0-acres which includes all acreage within the Bank. The CEMVN

issued a PJD on September 22, 2017 (MVN-2017-00378) (Attachment 3). The results of the PJD indicate approximately 58.7 acres of uplands, 68.5 acres of wetlands, and 5.8 acres of non-wetland waters.

3.4 Vegetation

3.4.1 Historical Plant Community

The on-site and surrounding land use was historically forested wetlands. Although the exact date the site was cleared for agricultural purposes is unknown, historic aerials indicate the action occurred between the years 1965 and 1984.

3.4.2 Existing Plant Community

Since conversion, the majority of the Bank is in agricultural production (i.e., cattle grazing and hay production). The eastern portion of the site is forested with native BLH species, which include water oak (*Quercus nigra*), baldcypress, American elm (*Ulmus americana*), Drummond red maple (*Acer rubrum* var. *drummondii*), green ash (*Fraxinus pennsylvanica*), sugarberry (*Celtis laevigata*), palmetto (*Sabal minor*), savannah-panicgrass (*Phanopyrum gymnocarpon*) and lizard's tail (*Saururus cernuus*). Elevated, non-wetlands in the forested area are spoil deposits resulting from clearing for agriculture. These areas are dominated primarily by sugarberry.

3.5 General Need for the Project in this Area

The primary factors considered during site selection were the presence of hydric soils, the evidence of the existence of forested wetlands prior to agricultural conversion, the compatibility with local and regional watershed initiatives and conservation plans, and the proposed restoration's compatibility with existing and anticipated surrounding land uses (Figures 16 and 17).

The Bank is in the Barataria-Terrebonne estuary complex. The Barataria-Terrebonne National Estuary Program (BTNEP) was established in 1990 by the State of Louisiana and the EPA for the purpose of preserving, protecting and restoring this estuary complex. BTNEP, in conjunction with local stakeholders, developed the Comprehensive Conservation and Management Plan (CCMP), which outlined 12 goals to accomplish this objective. The restoration of the Bank is in solidarity with four of these goals, which are: 1) preservation and restoration of wetlands; 2) support for diverse, natural biological communities; 3) to develop and meet water quality standards that protect estuary resources; and 4) to work in conjunction with natural processes (Moore and River 1996).

The restoration and protection of forested wetlands within the proposed Bank will provide additional wetland functions and values that are currently not realized. Improved water quality will be achieved through re-establishing natural drainage patterns and afforestation of native BLH habitat. The cessation of intensive cultivation, reduction in the application of pesticides, and the reduced use of fertilizers will reduce potential, non-point source pollution into local water bodies (e.g., soil erosion and chemical runoff).

The restoration and afforestation of the Bank near larger, extant tracts of bottomland hardwoods will provide benefit to various species of wildlife such as nearctic-neotropical migrant birds and threatened species such as the Louisiana black bear (NRCS 2005). Approximately 107 bird species, excluding wading birds, nest regularly within the MAV with 70 species utilizing bottomland hardwoods as primary habitat (Twedt et al. 1999[1]). The Partners in Flight Bird Conservation Plan for the MAV recommends increasing the interior area of forested fragments to increase habitat for forest-dwelling (silvicolous) bird species (Twedt et al. 1999[1]). Twedt et al. (1999[2]) lists 14 forest breeding species as species of high concern. Three of these species, Swainson's warbler (*Limnothlypis swainsonii)*, Cerulean warbler (*Dendroica creulea*), and swallow-tailed kites (*Elanoides forficatus*), are highest priority species for conservation. The planting of densely-spaced seedlings and the management of such species to provide a diversity of structure in areas within largely forested landscapes is an identified strategy to encourage the recruitment of breeding populations of scrub-dwelling (thamnic) and silvicolous bird species (Twedt et al. 1999[1]; Twedt et al. 2010). Promotion of reforestation efforts and the protection of habitat with conservation easements is a recognized and successful strategy for bird conservation on private lands in the Barataria and Terrebonne basins (Wiedenfield et al. 1996). Using the spatial analysis model developed by Twedt et al. (2006), the Bank is in a high priority area for the restoration of bird habitat (Figure 6).

In addition to the importance to migratory bird species and the Louisiana black bear, the MMNS (2005) purports that old-growth bottomland hardwood forests are critical habitat for 11 of the 18 species of bats known to the Southeast. Southern myotis (*Myotis austroriparius*) and Rafinesque's big-eared bat (*Corynorhinus rafinesquii*) prefer large, hollow trees in mature bottomland hardwood and swamp habitats, respectively (LMRJV 2007; Taylor 2006). Furthermore, the locale of the Bank offers the opportunity to provide habitat with a diversity of hydrological regimes that are critical to the life cycles of many species of reptiles and amphibians. The location of the site in proximity to a larger, extant forested wetland tract coincides with the large home ranges that many herpetofaunal species require (Dundee and Rossman 1989, Waddle 2011; LMRJV 2007).

4. Establishment of a Mitigation Bank

4.1 Site Restoration Plan

This Bank will provide 109.8 acres of re-established BLH, 11.4 acres of rehabilitated BLH, 60.6 acres of preserved BLH, 11.6 acres of forested wetland buffer and 12.6 acres of restored forested hardwood Buffer to compensate for unavoidable wetland impacts for the Terrebonne Basin area. In order to accomplish this task, the Sponsor shall complete the following soils/hydrologic and habitat work.

4.1.1 Soils/Hydrologic Work

Hydrologic restoration will increase surface water retention, increase soil saturation, reduce nonpoint source runoff, and increase water quality through increased nutrient uptake by vegetation. Site preparation will involve disking, ripping, and pre-emergent herbicide treatments. The culverts draining into King Ditch and associated drainage ditches will be removed.

Within the preservation area, the existing gaps within the spoil bank along King Ditch have an average width of 30 feet (range from 22 to 38 feet) and an average depth of 6 feet (range from 4 to 8 feet). The bottom elevation of these existing gaps are at or near the grade of the preservation area and will remain the same upon completion of the project. The pre- and post-project hydrology and the existing berms and gaps within the preservation area will remain the same.

No fill material will be required from offsite sources and all material excavated on site will be redeposited in a beneficial manner. No existing Jurisdictional Wetlands or Waters of the US will be impacted per the Approved Jurisdictional Determination referenced in Section 3.5. All access areas will be maintained at natural grade to maintain natural surface flows across the site.

4.1.2 Vegetative Work

Afforestation activities will include the planting of native BLH species during the first planting season (December 15 through March 15) following site preparation. The species selected for each habitat type will be site-appropriate in terms of habitat design, soil-moisture regime, and species richness. The planting will consist of tree and shrub species as described by Lester et al (2005) and LNHP[13]. Prior to planting, seedlings will be mixed and packaged off-site so that afforested areas do develop as monotypic communities (Twedt and Best 2004).

[13] LNHP Tracking List and Fact Sheets (available URL http://coastal.la.gov/a-common-vision/2012-coastal-master-plan/).

The exact species and quantities for planting will be determined by the availability of such species from commercial nurseries providing localized ecotype seedlings. The final BLH planting assemblage should consist of 10 or more species which is sufficient to insure adequate species richness (Twedt and Best 2004). BLH planting densities will be no less than 538 stems per acre and hard mast species should account for approximately 60% of all plantings. The distribution of species across the Bank landscape will create a mosaic of hard and soft mast species to provide seasonally available forages for a wide range of indigenous and migratory wildlife.

The species planted within the wetland areas will predominately have an indicator status of Obligate (OBL), Facultative Wetland (FACW) or Facultative (FAC) as described by Lichvar et al. (2016). Species planted in the non-wet buffer areas will have an indicator status of OBL, FACW, FAC, or FACU species. Portions of the naturally higher elevation areas along the western portion of the project area will be planted as part of the 12.6-acre upland Buffer Restoration (Figure 5). Generally, areas between 8 and 10 feet elevation will be restored as a Type 1-2 BLH while areas between 10 and 12 feet elevation will be restored as a Type 2-3 BLH as described by LNHP (2009) and Lester et. Al (2005). Areas above 12 feet elevation will be restored as upland buffer.

The afforestation effort utilizes fast-growing soft mast species and 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. 1991; Figure 6). The integration of rapid growth, early successional species mimics early natural succession and provides natural habitat and partial cover for late successional species which exhibit increased growth in partial cover and dappled sunlight exposure (Twedt and Portwood 1997, Gardiner and Hodges 1998). The early successional species create biotic and abiotic environmental conditions that promote seedling emergence and survival of late successional species (Harper et al. 1965, Twedt and Portwood 1997).

4.2 Technical Feasibility

The construction work required to develop the proposed Bank is based on currently-accepted restoration methods and is technically feasible. The construction work will consist of 1) site preparation, 2) afforestation, and 3) the filling artificial drains. The relatively low landscape position and the presence of hydric soils indicate that minimal soil work will be required for successful restoration of wetland hydrology and forested wetlands. The existence of forested wetlands adjacent to the Bank indicates a high potential for successful restoration. Once drainage modifications are rendered ineffective through restoration efforts, a more natural, historic water regime will be restored.

4.3 Current Site Risks

The Sponsor does not foresee any adverse impacts to the mitigation site resulting from the continued existence and operation of the neighboring land uses. Much of the land use and cover type surrounding the Bank are existing palustrine forested wetlands (Figures 16 and 17). These areas have remained in this land use over the past 70 years as evidenced in the historical photographic records (Figures 7 through 13). The surrounding forested areas do not appear to contain noxious species to an extent that it would be a seed-source concern.

4.4 Long-Term Sustainability of the Site

Long-term viability and sustainability of the Bank will be ensured through active and adaptive management including, but not limited to, invasive species control, appropriate monitoring and long-term maintenance. No *long-term* structural management will be required because there are no water control structures to maintain.

5. Proposed Service Area

The Terrebonne Basin will serve as the service area for the Bank (Figure 18). The use of credits outside of the defined service area will be handled on a case specific basis by the CEMVN and is specified as such in the subsequent MBI.

This Basin is comprised of the Lower Grand Subbasin (USGS Hydrologic Unit Code [HUC] 08070300) and the West Central Louisiana Subbasin (USGS HUC 08090302). Although mostly rural, this basin contains many developed areas around communities and municipalities such as New Roads, Brusly, Port Allen, Plaquemine, Donaldsonville and Houma. A major industrial area exists along the Mississippi River between Plaquemine and Donaldsonville and large transportation corridors such as Hwy 190, I-10 and Hwy 90 traverse this basin. Therefore, it is likely that unavoidable impacts associated with this infrastructure such as pipelines, utilities, transportation development could be compensated for at the proposed Bank. The Bank would consolidate the mitigation for these types of impacts within a single, strategic location. This will provide the most benefit to the watershed through the restoration and protection of a larger block of sensitive habitat, offsetting any cumulative effect of smaller, spatially fragmented projects (Figure 18).

6. Operation of the Mitigation Bank

DLS will comply with all conditions of Sponsorship required by the CEMVN. The Bank 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 Bank will be further described in the Draft MBI per 33 CFR § 332.8 (6).

6.1 Project Representatives

Sponsor:	Delta Land Services, LLC 1090 Cinclare Drive1008 Port Allen, LA 70767 Attn: Daniel Bollich Phone: 225-388-5146 Electronic Mail: daniel@deltaland-services.com
Landowner:	Delta Land Services, LLC 1090 Cinclare Drive1008 Port Allen, LA 70767 Attn: D. Winship Songy Phone: 225-343-3900 Electronic Mail: win@deltaland-services.com

6.2 Qualifications of the Sponsor

Per 33 CFR § 332.8(d) (2) (vi.), this section describes the Sponsor's qualifications to successfully complete all work associated with establishment and operation of the proposed Bank. DLS will serve as the Sponsor and 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 experienced in wetland construction activities such as heavy equipment operation, vegetation establishment, herbicide application, and contractor management. The biographies of DLS personnel are available at www.deltaland-services.com.

DLS currently operates 19 approved wetland and/or stream mitigation banks within the CEMVN, CEMVK, CESWG and CESWF totaling 8,349.0 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), Ponderosa Ranch of Pointe Coupee Mitigation Bank Amendment One (MVN-2015-00393), Danza del Rio Mitigation Bank (SWG-2011-00566), Moss Lake Mitigation Bank (MVN-2012-02652), Phillips Creek Mitigation Bank (SWF-2012-00417), Graham Creek Mitigation Bank (SWF-2011-00309), Bayou Fisher Mitigation Bank (MVN-2013-02342), Bayou Fisher Mitigation Bank Amendment One (MVN-2014-02764), Little Bayou Pierre Mitigation Bank (MVK-2012-00555), Laurel Valley Coastal Mitigation Bank (MVN-2013-02798), Laurel Valley Coastal Mitigation Bank Amendment One (MVN-2015-0149), Belle Pointe Coastal Mitigation Bank (MVN-2014-02764), South Fork Coastal Mitigation Bank (MVN-2014-01888), and

Bayou Maringouin Umbrella Mitigation Bank (MVN-2015-01994). DLS currently has 5 pending mitigation banks that are under review with the CEMVN, CEMVK and CESWG totaling 3,020.9 acres. These include the proposed Long Island Cove Mitigation Bank (SWG-2014-00210), Crooked Bayou Mitigation Bank (MVK-2015-00527), Cane River Mitigation Bank (MVK-2015-00472), and the Bayou La Carpe Coastal Mitigation Bank (MVN-2016-00147). In addition to mitigation banking, DLS serves as the responsible party for the establishment and maintenance of 3,936.6 acres of approved Permittee-Responsible Mitigation (PRM) wetland and stream projects.

6.3 Proposed Long-Term Ownership and Management Representatives

DLS will own Bank and will be the long-term manager but may appoint a Long-term Steward in accordance with 33 CFR § 332.7 (d) and approval from the CEMVN.

6.4 Site Protection

In order to provide for such protection, DLS 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 Bank and record it in the Mortgage and Conveyances Records Office of Iberville Parish. DLS will utilize a not-for-profit conservation group as the entity that will hold the servitude.

6.5 Long-Term Strategy

Long-term management will consist of monitoring, vegetation management, invasive species control, boundary maintenance, site protection and funding of such activities. Invasive species control will include control of nuisance wildlife species such as feral hogs (*Sus scrofa*). The forest will be managed to maintain or increase the biological, chemical and physical wetland functions this site and to achieve and maintain the desired forest conditions which will provide forested habitat capable of supporting populations for priority wildlife species. The desired forest conditions are defined by the LMVJV (2007). A long-term management plan will be included with the MBI which will detail long-term management needs, costs and identify a funding mechanism in accordance with 33 CFR § 332.7 (d). The Sponsor (or Long-term Steward) and the Owner (or its heirs, assigns or purchasers) shall be responsible protecting lands contained within the Bank in perpetuity.

7. Conclusion

In summary, the proposed 225.0-acre Bank has a high potential for successfully restoring 121.2 acres of bottomland hardwood, 12.6 acres of upland afforested/herbaceous/scrub-shrub/forest mosaic buffer as well as protecting 60.6 acres of existing bottomland hardwood wetlands. The cessation of the

current agricultural land use, re-establishment of forested cover and restoration of a more natural hydrologic water regime will result in improved water quality through a reduction in non-point source storm runoff, increased ecological diversity and an increase in viable habitat for resident, migratory, and threatened wildlife species. The project is compatible with adjacent land uses and will function in concert with an adjacent mitigation and restoration project. The restoration of the Bank coincides and works in conjunction with current initiatives to restore and improve the aquatic conditions and overall ecological functions of the larger watershed.

8. REFERENCES

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TABLES

Table 1. Baseline Conditions and Proposed Mitigation Habitat Types

Baseline Condition[1]	Proposed Mitigation and Habitat Type	Acreage
Nonwetlands	Bottomland Hardwood Re-establishment	109.8
Wetlands	Bottomland Hardwood Rehabilitation	11.4
Wetlands	Bottomland Hardwood Preservation	60.6
	Total Bottomland Hardwood Restoration Acreage	*121.2*
	Total Bottomland Hardwood Preservation Acreage	*60.6*
	Total Direct Mitigation Credit Acreage	**181.8**
Nonwetlands	Buffer Restoration	12.6
	Total Indirect Mitigation Credit Acreage	**12.6**
Wetlands	Buffer Inclusion	11.6
Other Waters	Water	8.8
Prior-Converted/ Nonwetlands	Access Area	8.6
Nonwetland/Wetland	Pipeline Right-of-Way	1.6
	Total Non-Mitigation Credit Acreage	**30.6**
	Total Conservation Servitude Acreage	***225.0***

[1] Baseline determination based on jurisdictional determinations issued by CEMVN to DLS on January 25, 2017 (MVN-2015-01994-1-SG) and September 22, 2017 (MVN-2017-00378-SB).

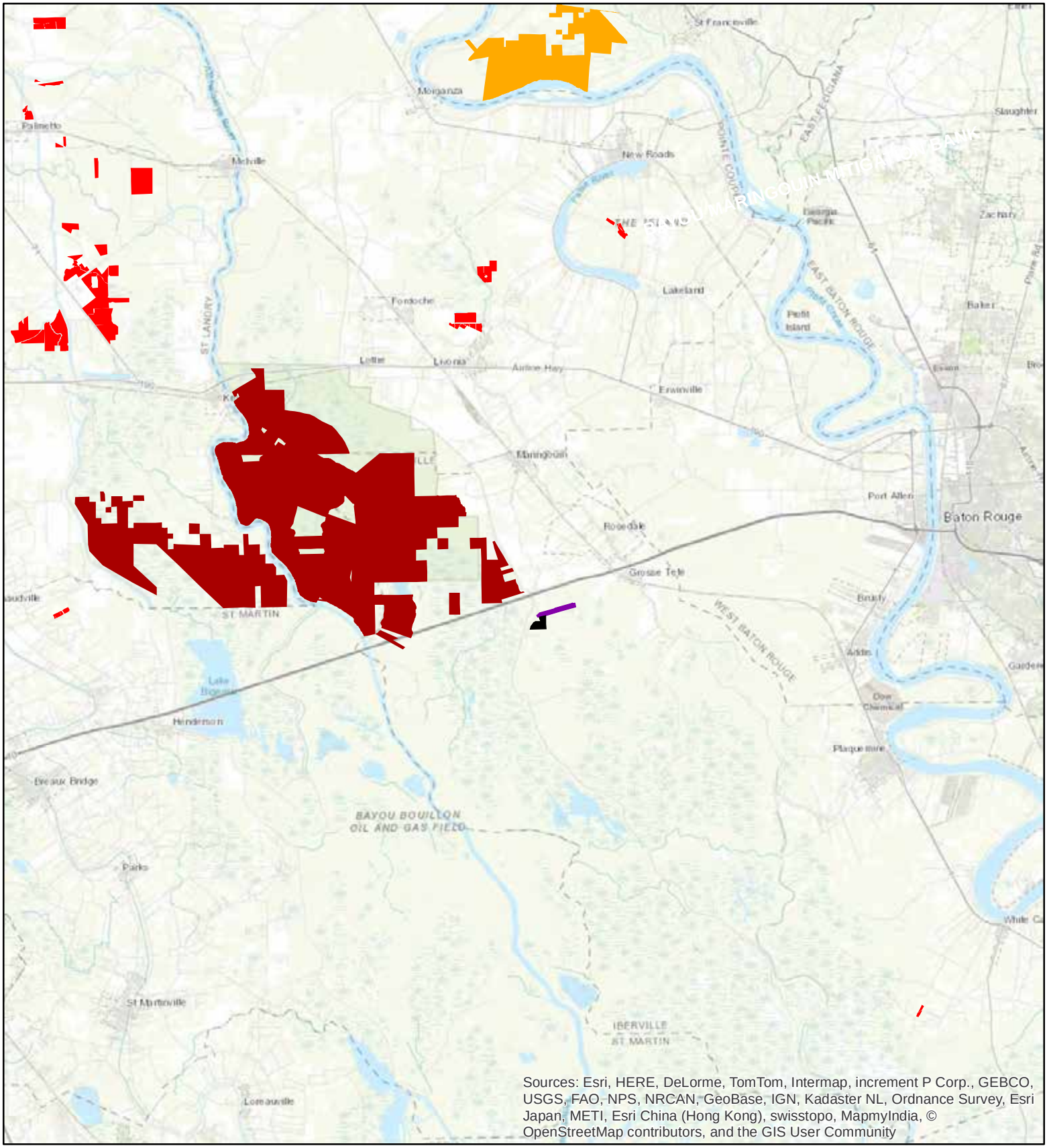
Table 2. Planting Composition of the Type 2-3 BLH Restoration Area (approximately 60% hard mast* and 40% soft mast).

Common Name	Scientific Name	Indicator Status	Composition
cow oak*	*Quercus michauxii*	FACW	10%
cherrybark oak*	*Quercus pagoda*	FACW	10%
willow oak*	*Quercus phellos*	FACW	10%
Nuttall oak*	*Quercus texana*	FACW	10%
water oak*	*Quercus nigra*	FAC	10%
sweet pecan*	*Carya illinoinensis*	FACU	10%
water hickory*	*Carya aquatica*	OBL	15%
sugarberry	*Celtis laevigata*	FACW	8%
common persimmon	*Diospyros virginiana*	FAC	8%
green ash	*Fraxinus pennsylvanica*	FACW	8%
American sycamore	*Platanus occidentalis*	FACW	8%
American elm	*Ulmus americana*	FAC	8%

Table 3. Planting Composition of Upland Hardwood Restoration Area (approximately 60% hard mast* and 40% soft mast).

Common Name	Scientific Name	Indicator Status	Composition
cow oak*	*Quercus michauxii*	FACW	10%
cherrybark oak*	*Quercus pagoda*	FACW	10%
willow oak*	*Quercus phellos*	FACW	10%
Nuttall oak*	*Quercus texana*	FACW	10%
sweet pecan*	*Carya illinoinensis*	FACU	10%
live oak*	*Quercus virginiana*	FACU	8%
sugarberry	*Celtis laevigata*	FACW	8%
common persimmon	*Diospyros virginiana*	FAC	8%
green ash	*Fraxinus pennsylvanica*	FACW	8%
American sycamore	*Platanus occidentalis*	FACW	8%
American elm	*Ulmus americana*	FAC	8%
water oak*	*Quercus nigra*	FAC	2%

FIGURES



Legend

- ProjectArea
- Bayou Maringouin Mitigation Bank
- Wetland Reserve Program Tracts
- State Wildlife Management Areas
- National Wildlife Refuges

0 3 6 12

Miles

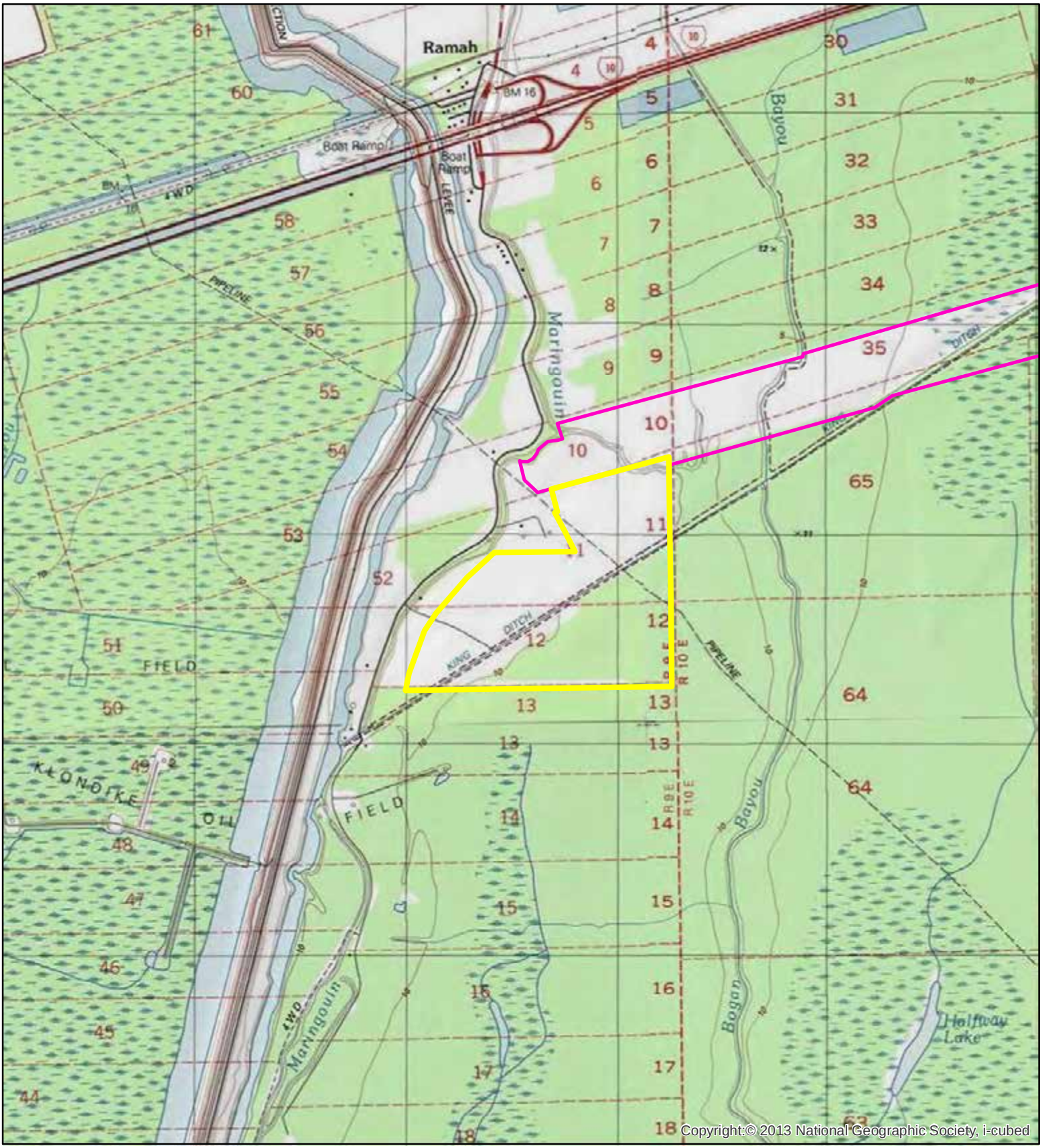
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

VICINITY AND CONSERVATION MAP

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/1/2018	
Map No. : F01_VicinityConservat	

FIGURE 1



Legend

- Project Area (225.0 ac.)
- Bayou Maringouin Umbrella - Maringouin Site

0 1,000 2,000 4,000

Feet

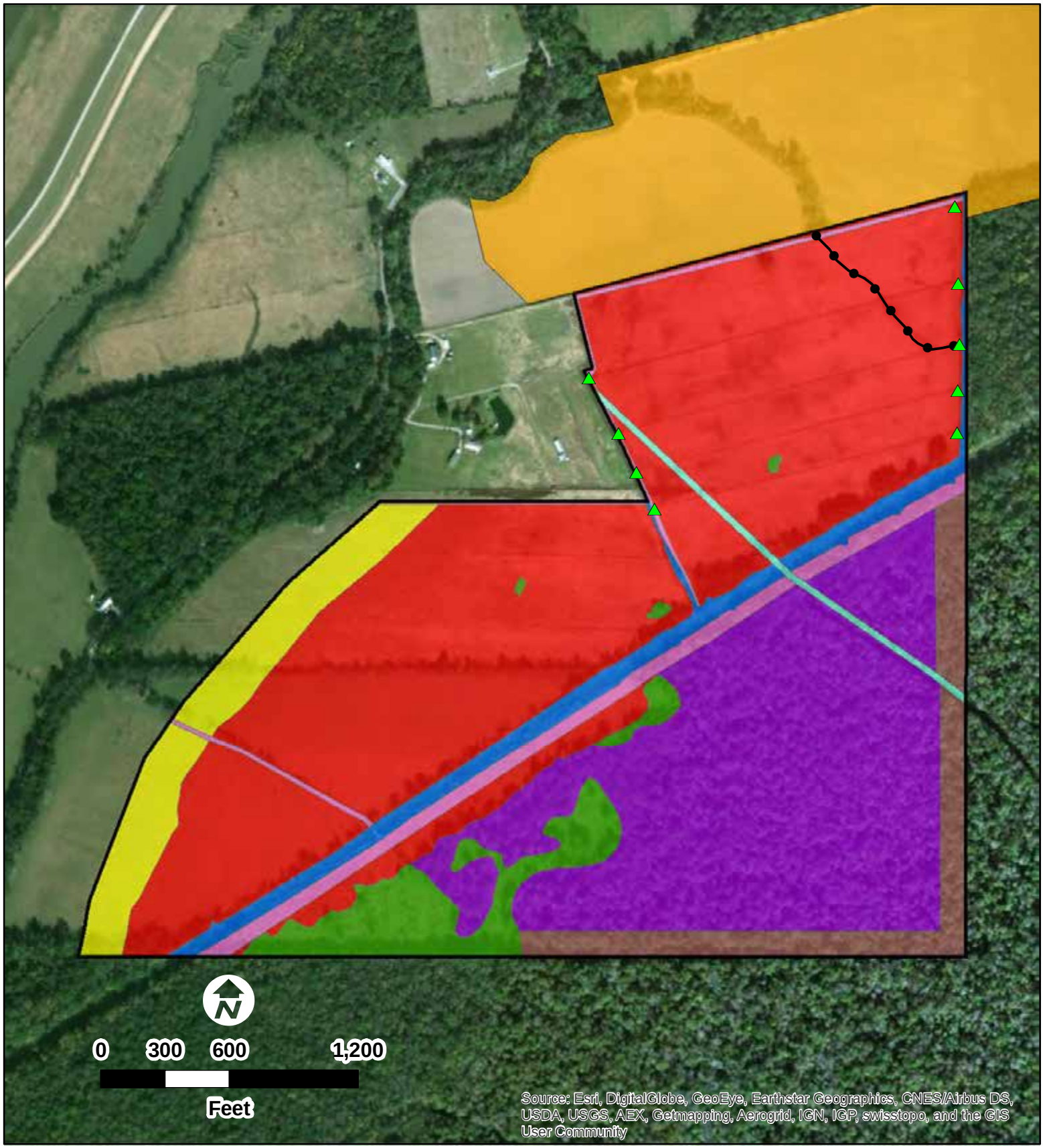
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

USGS 7.5' QUADRANGLE MAP

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/1/2018	
Map No. : F02_QuadMap	

FIGURE 2



- Bayou Maringouin Umbrella Mitigation Bank - Maringouin Site
- Project Area (225.0 ac.)
- Culverts to be Removed
- Restored Natural Drain (923 ft.)
- Type 1-2 BLH Re-establishment (109.8 ac.)
- Type 1-2 BLH Rehabilitation (11.4 ac.)
- Type 1-2 BLH Preservation (60.6 ac.)
- Buffer Restoration (12.6 ac.)
- Wetland Buffer (11.6 ac.)
- Other Waters to Remain (8.8 ac.)
- Rights-of-Way (1.6 ac.)
- Access Trail (8.6 ac.)

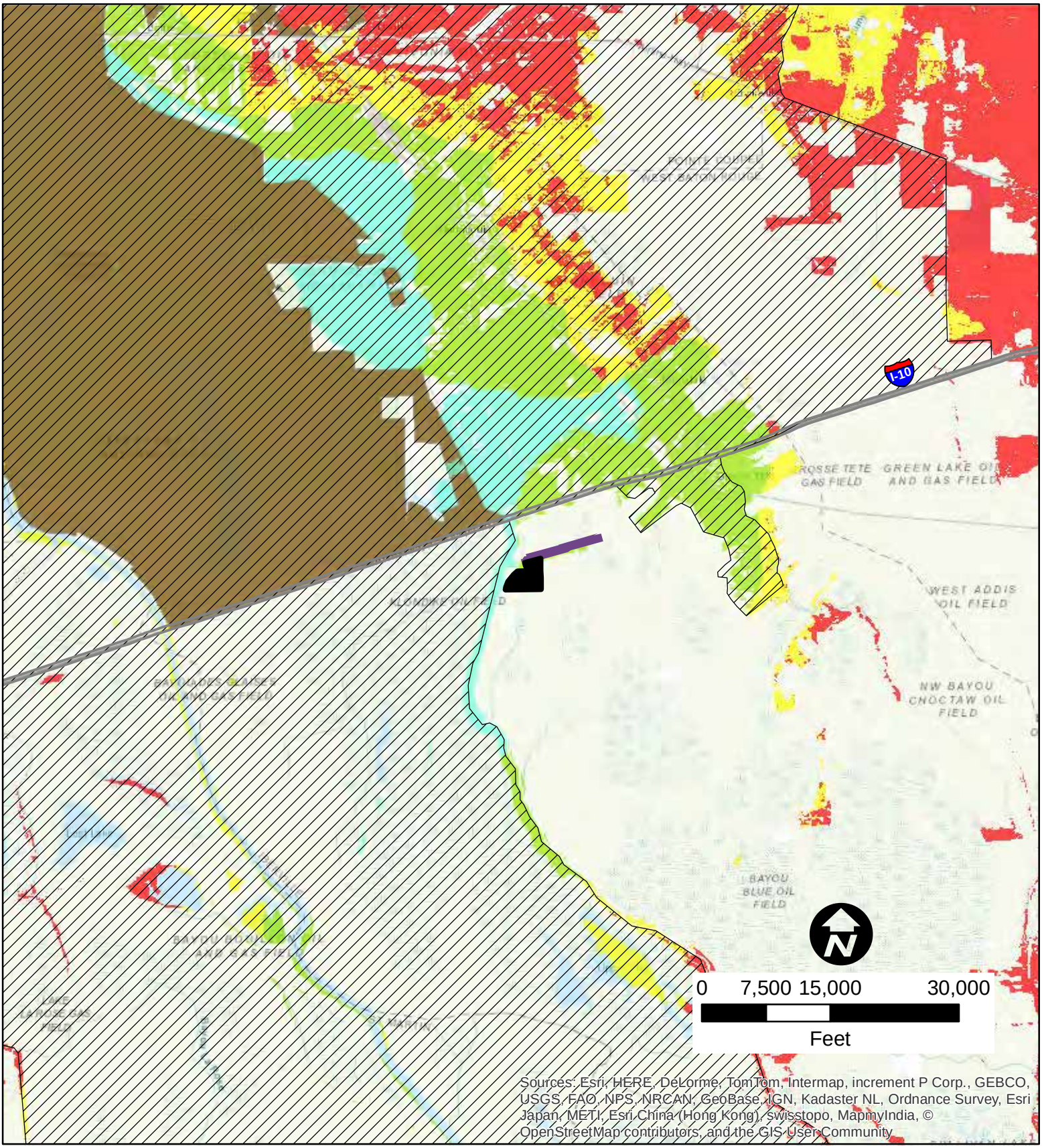
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

MITIGATION FEATURES

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/1/2018	
Map No. : F03_MitFeatures	

FIGURE 3



Legend

- Project Area (250.7 ac.)
- Bayou Maringouin Mitigation Bank
- Louisiana Black Bear Habitat Restoration Planning Area
- Louisiana Black Bear Breeding Habitat (2014)

Forest Bird Priority Restoration

- 60th percentile
- 70th percentile
- 80th percentile
- 90th percentile

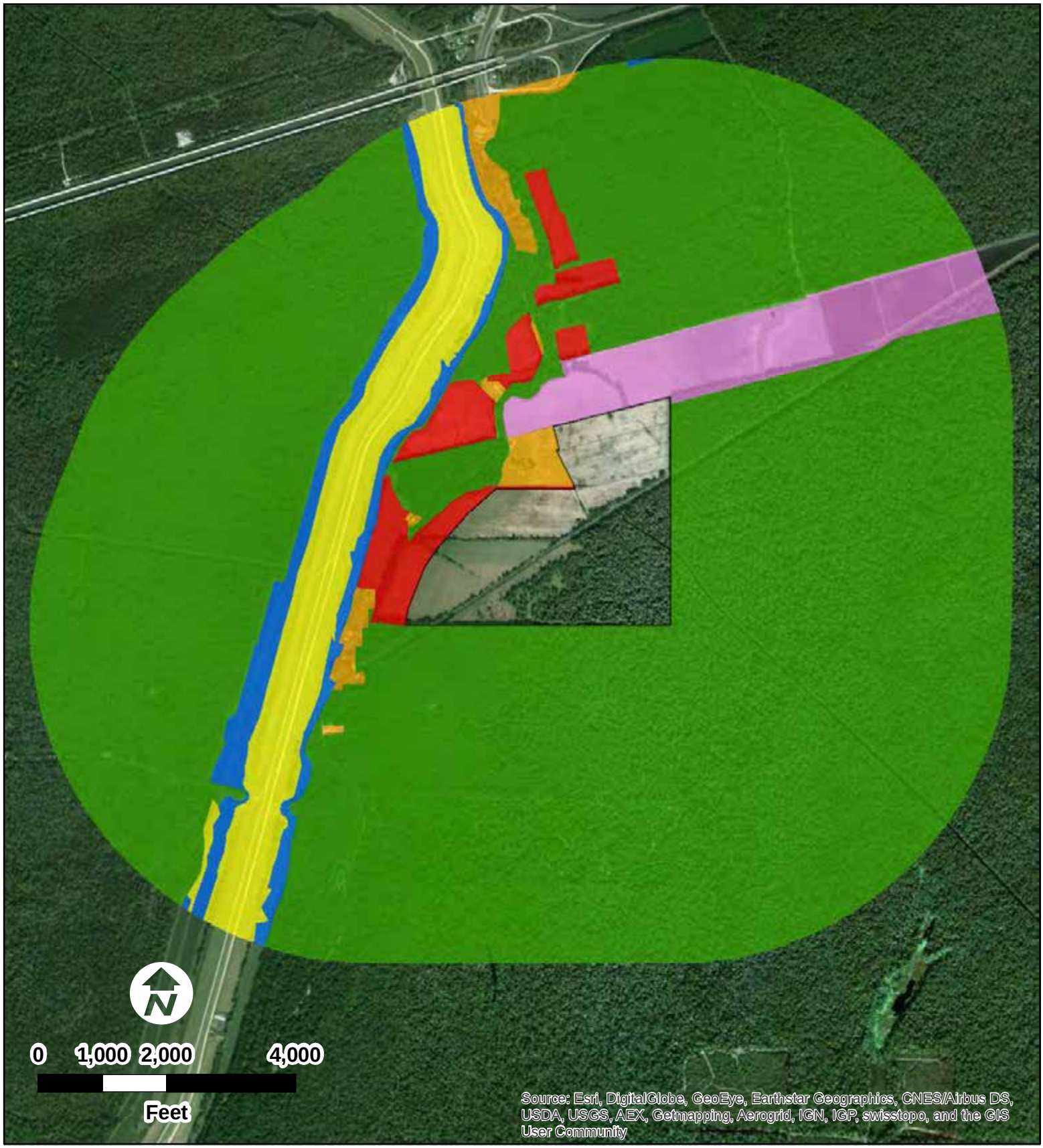
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

PRIORITY SITES FOR BREEDING BIRD HABITAT RESTORATION AND BLACK BEAR CONSERVATION

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F04_BirdBearConserv	

FIGURE 4



Legend

- Project Area (225.0 ac.)
- Forested (81%)
- Maintained Herbaceuous (7%)
- Bayou Maringouin Mitigation Bank (5%)
- Hay/Pasture (3%)
- Open Water (3%)
- Developed (2%)

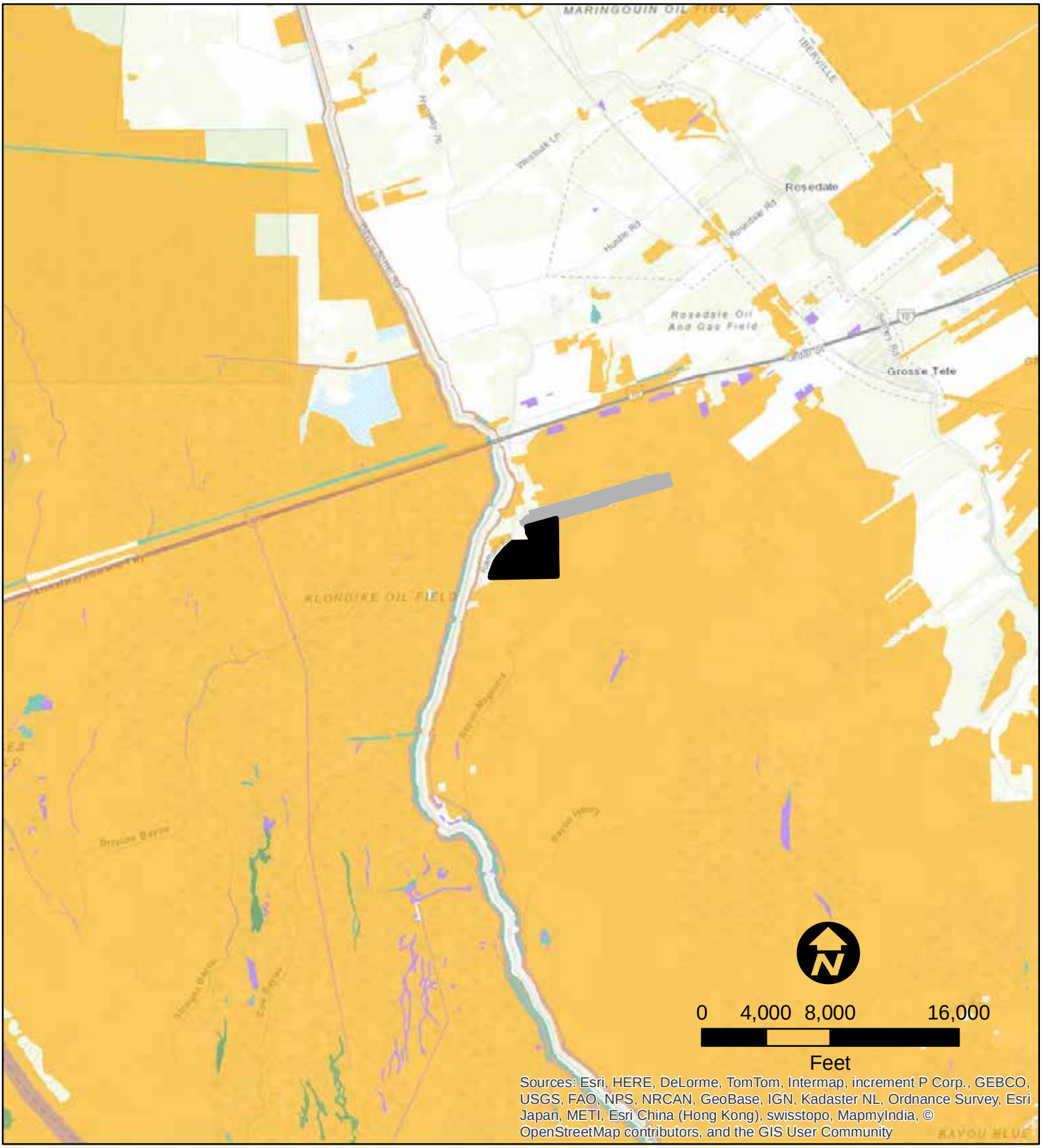
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

SURROUNDING LAND USE WITHIN ONE MILE PERIMETER

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F05_SurroundingLand	

FIGURE 5



Legend

- Project Area (225.0 ac.)
- Bayou Maringouin Umbrella Mitigation Bank - Maringouin Site
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Source: National Wetland Inventory data acquired from USFWS Wetlands Mapper (http://www.fws.gov/wetlands/Data/Mapper.html) .

BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

NATIONAL WETLAND INVENTORY

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F06_NWI	

FIGURE 6

Legend

- Project Area (225.0 ac.)
- Bayou Maringouin Umbrella Mitigation Bank - Maringouin Site
- 100-Year Flood Zone

N

0 3,000 6,000 12,000

Feet

Note: Flood Zone dreived from FEMA FIRM Map 22047C_0065D (effective date November 11, 2013) and FIRM Map 22047C0045D (effective date November 8, 2013).

BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

FEMA FLOOD ZONE MAP

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F07_FEMA	

FIGURE 7

Legend

Project Area (225.0 ac.)

0 350 700 1,400

Feet

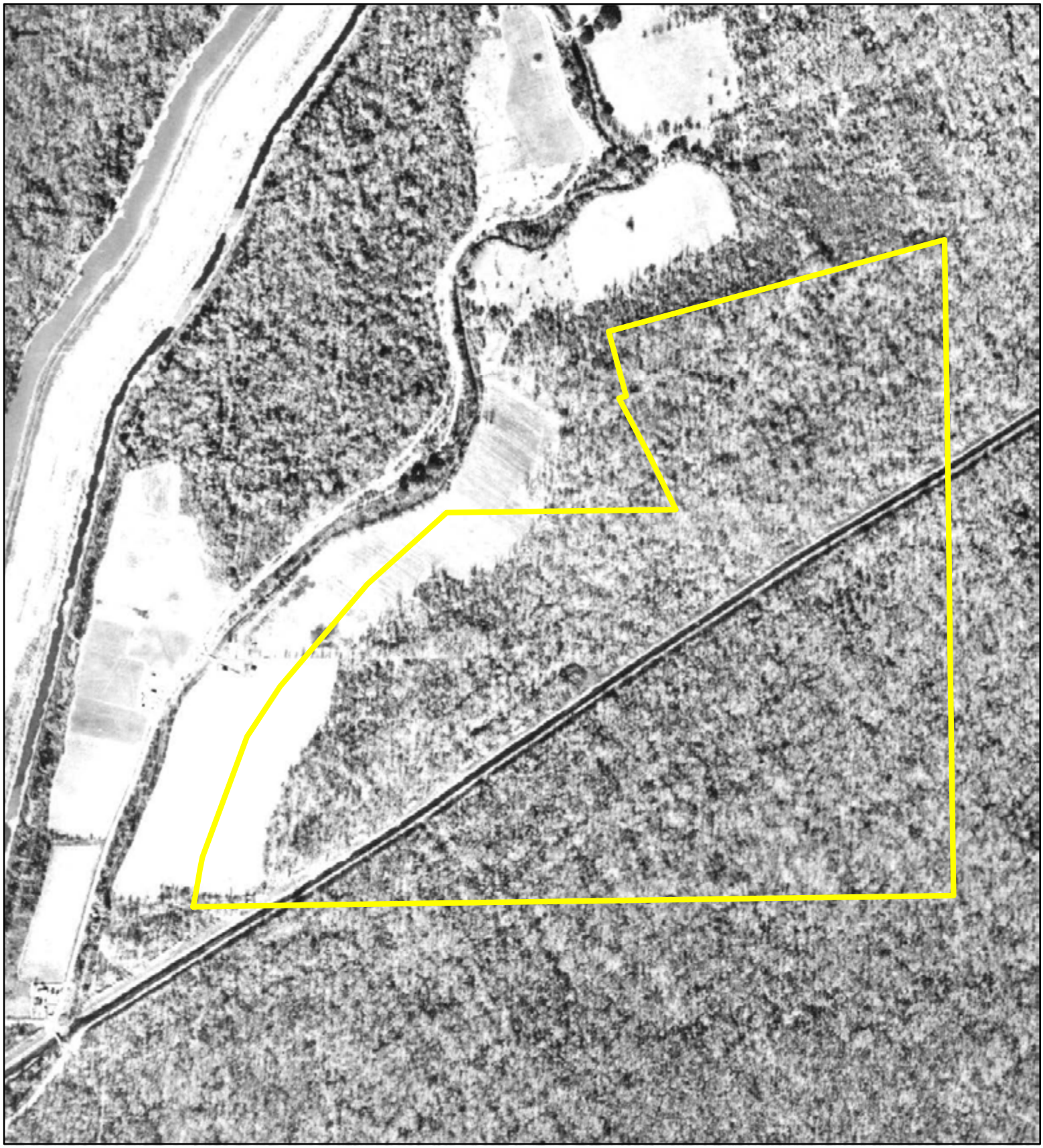
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

1941 AERIAL PHOTOGRAPH

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F08_1941	

FIGURE 8



Legend

Project Area (225.0 ac.)

0 350 700 1,400

Feet

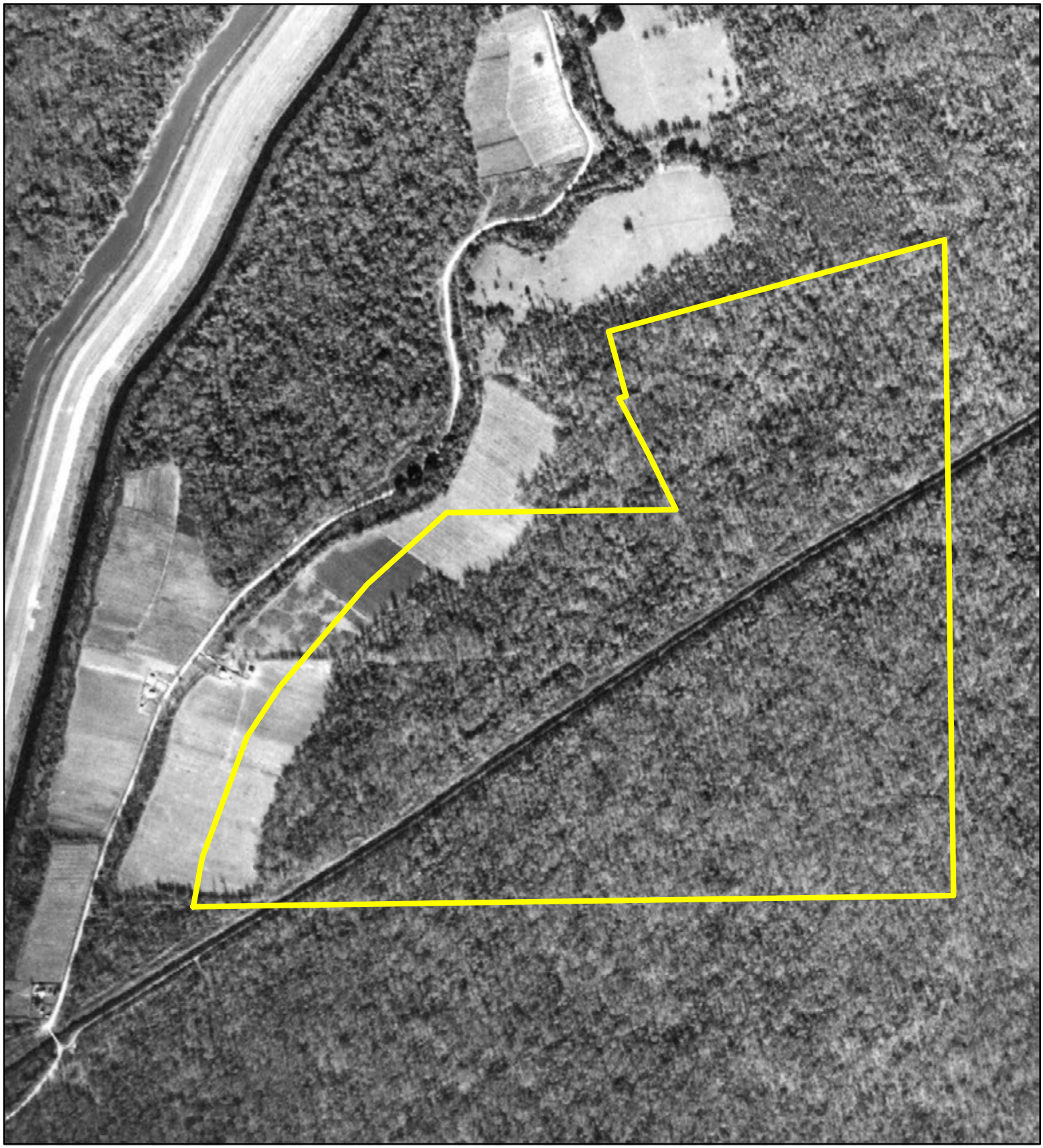
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

1953 AERIAL PHOTOGRAPHY

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F09_1953	

FIGURE 9



Legend

Project Area (225.0 ac.)

0 350 700 1,400

Feet

BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

1957 AERIAL PHOTOGRAPHY

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F10_1957	

FIGURE 10

Legend

Project Area (225.0 ac.)

0 350 700 1,400

Feet

BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

1965 AERIAL PHOTOGRAPHY

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
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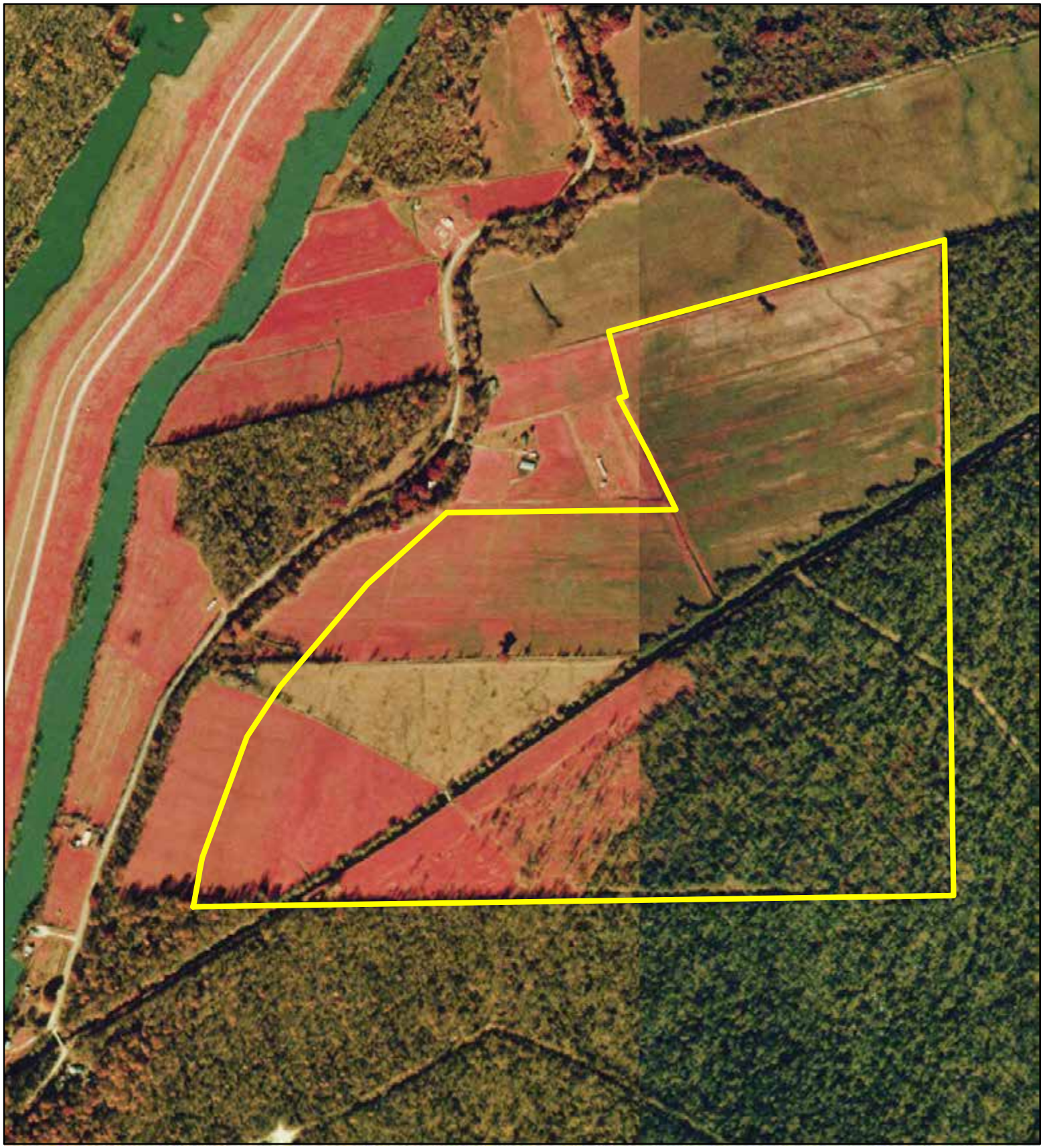
FIGURE 11



Legend

Project Area (225.0 ac.)

N

0 350 700 1,400

Feet

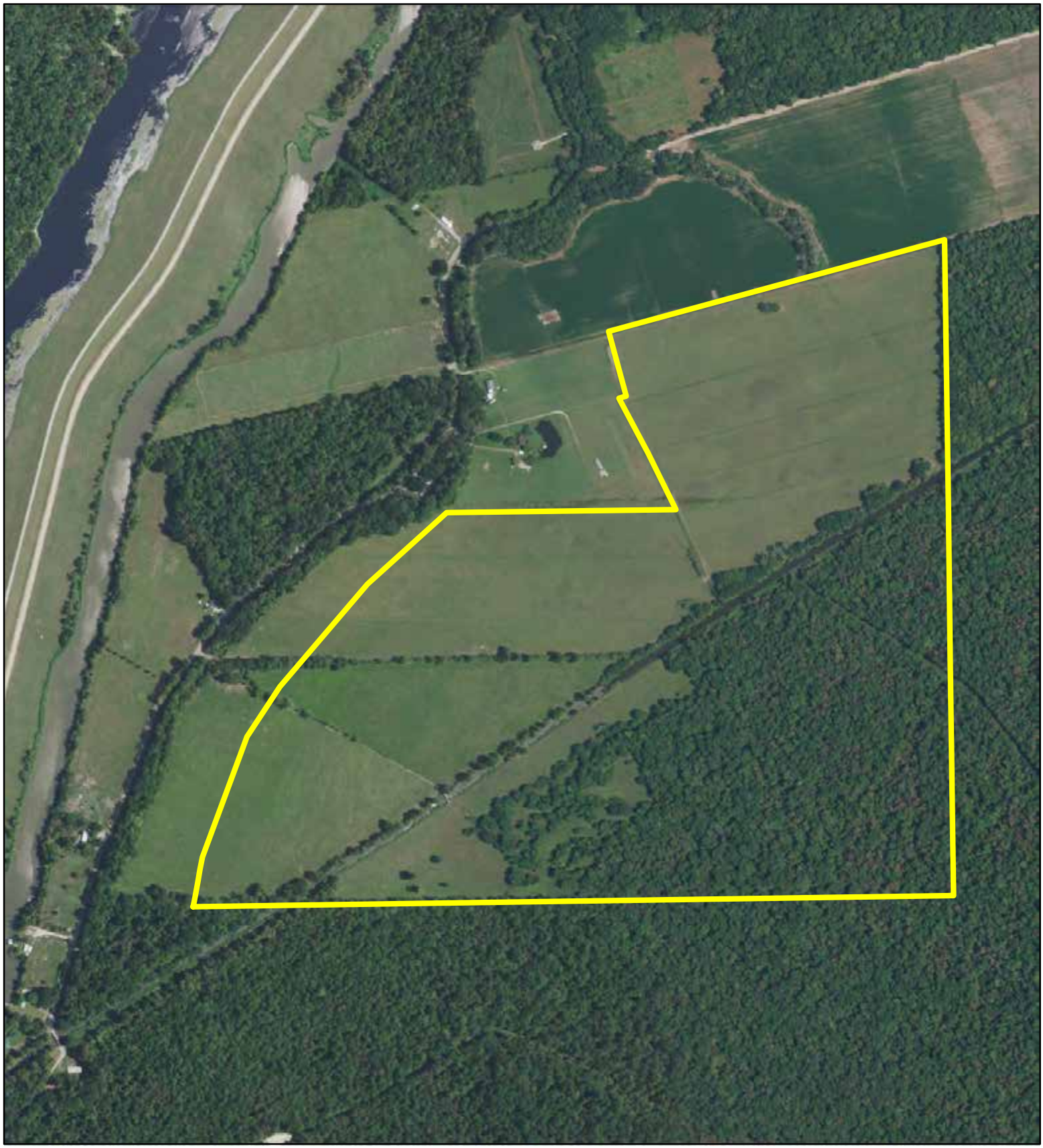
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

1998 AERIAL PHOTOGRAPHY

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F12_1998	

FIGURE 12



Legend

Project Area (225.0 ac.)

0 350 700 1,400

Feet

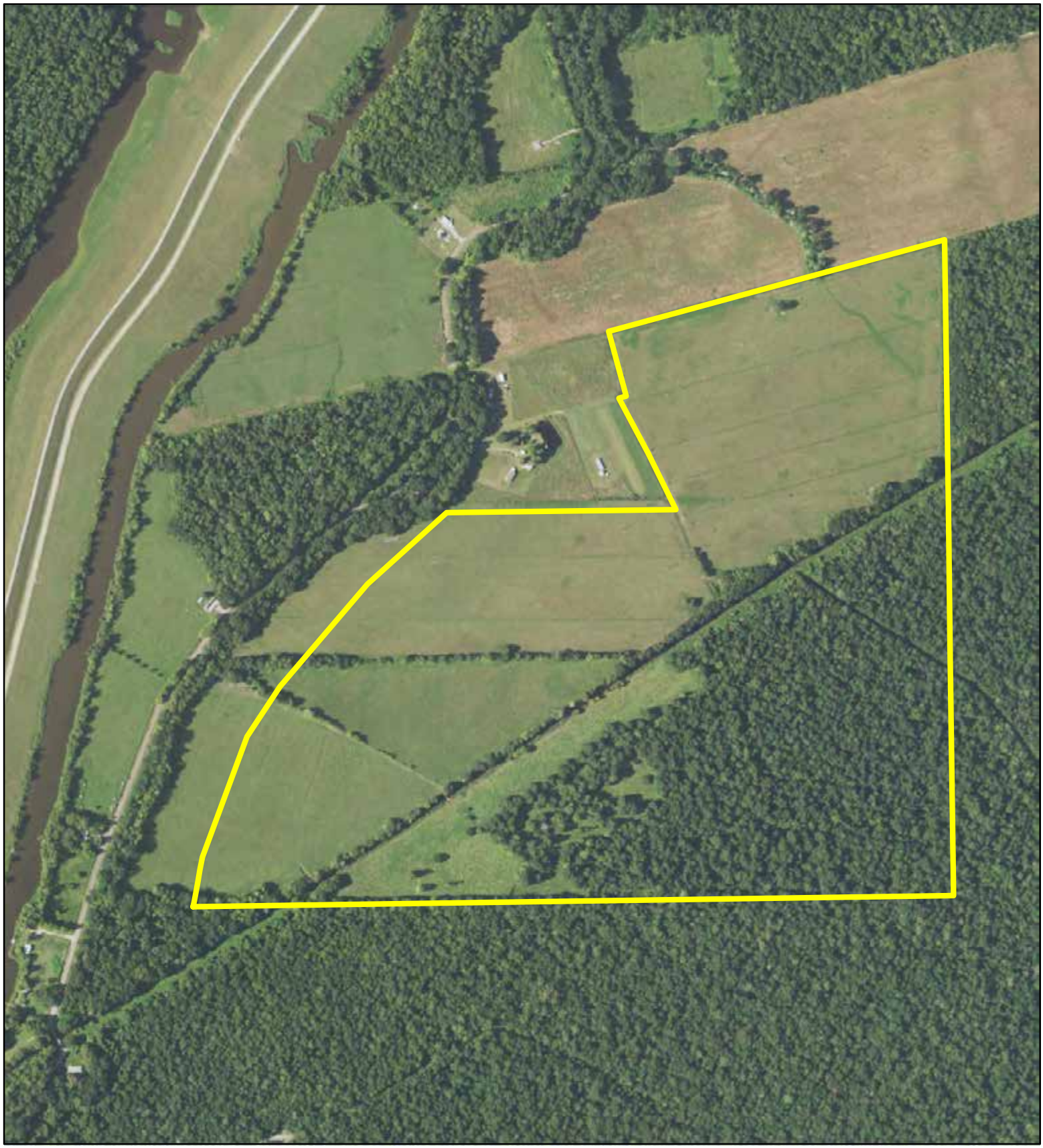
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

2015 AERIAL PHOTOGRAPHY

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F13_2015	

FIGURE 13



Legend

Project Area (225.0 ac.)

0 350 700 1,400

Feet

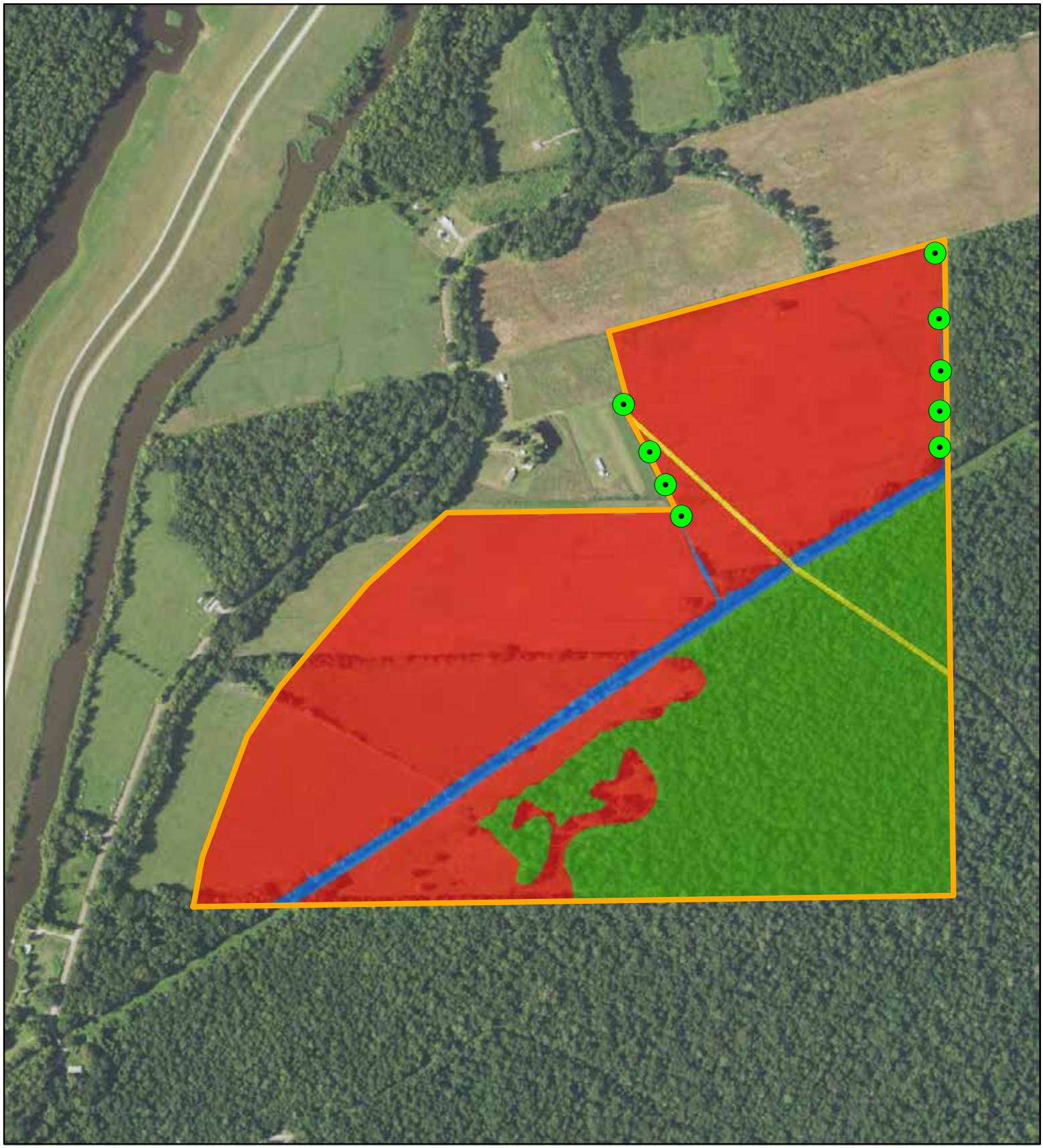
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

2017 AERIAL PHOTOGRAPH

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F14_2017	

FIGURE 14



Legend

- Project Area (225.0.7 ac.)
- Hay/Pasture
- Forested
- Other Waters
- Right-of-Way
- Existing culverts

N

0 350 700 1,400

Feet

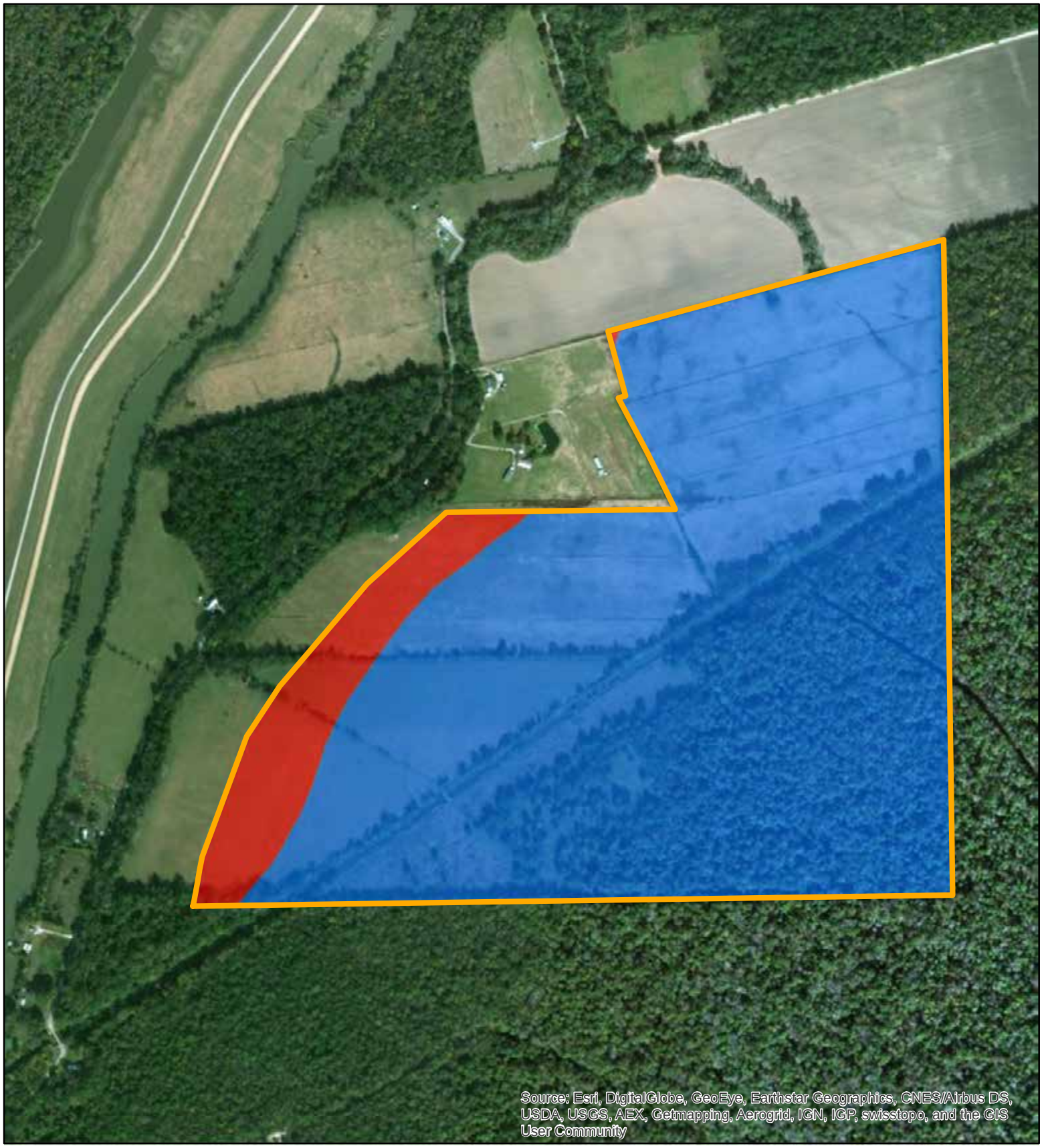
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

EXISTING CONDITIONS

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F15_ExistingCondition	

FIGURE 15



Project Area (225.0 ac.)

Cl: Commerce silt loam, 0 to 1 % slopes

Sg: Sharkey clay, 0 to 1 % slopes, rarely flooded, south

N

0 350 700 1,400

Feet

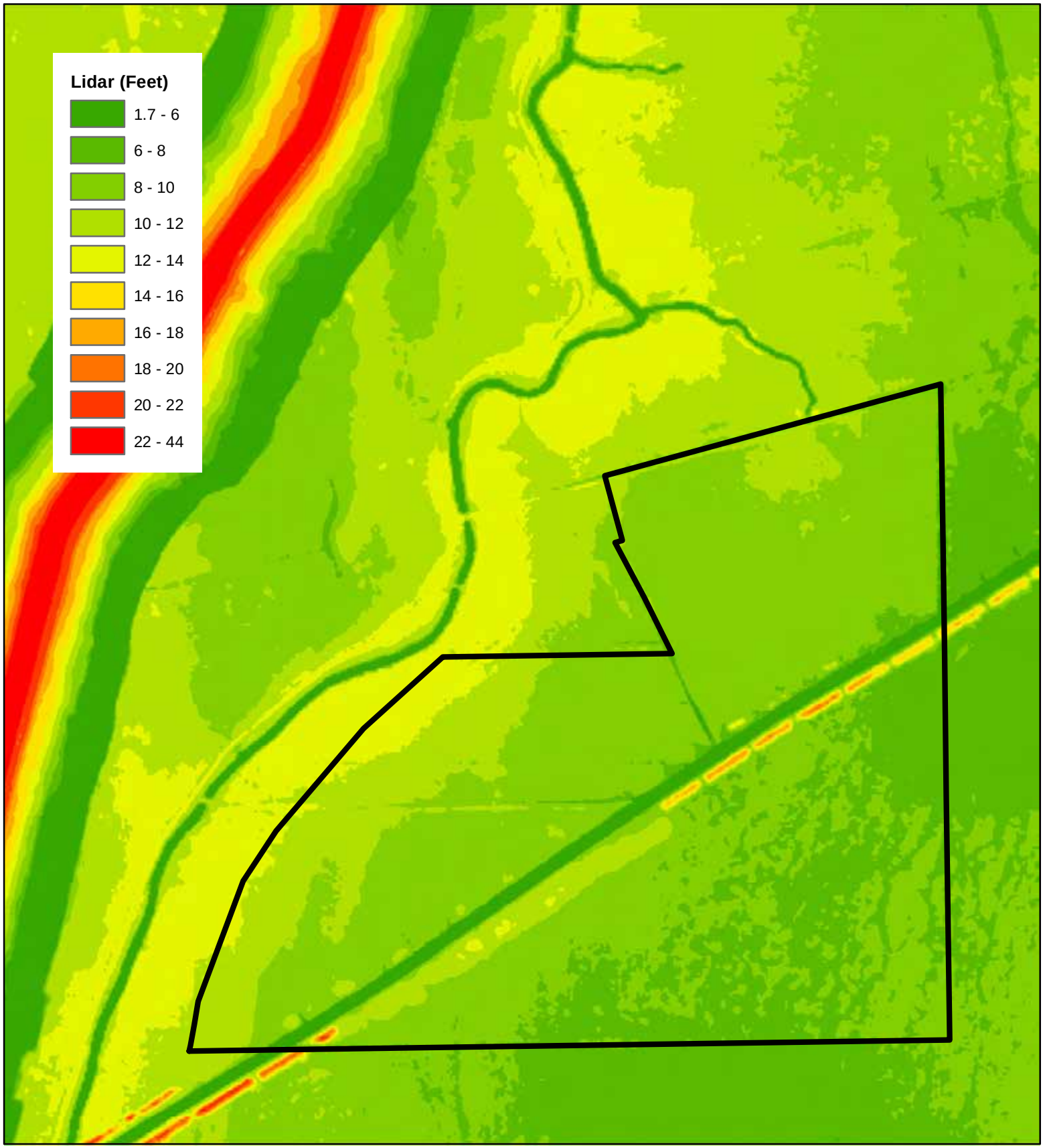
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

SOIL MAP UNITS

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F16_Soils	

FIGURE 16



Legend

Project Area (225.0 ac.)

0 350 700 1,400

Feet

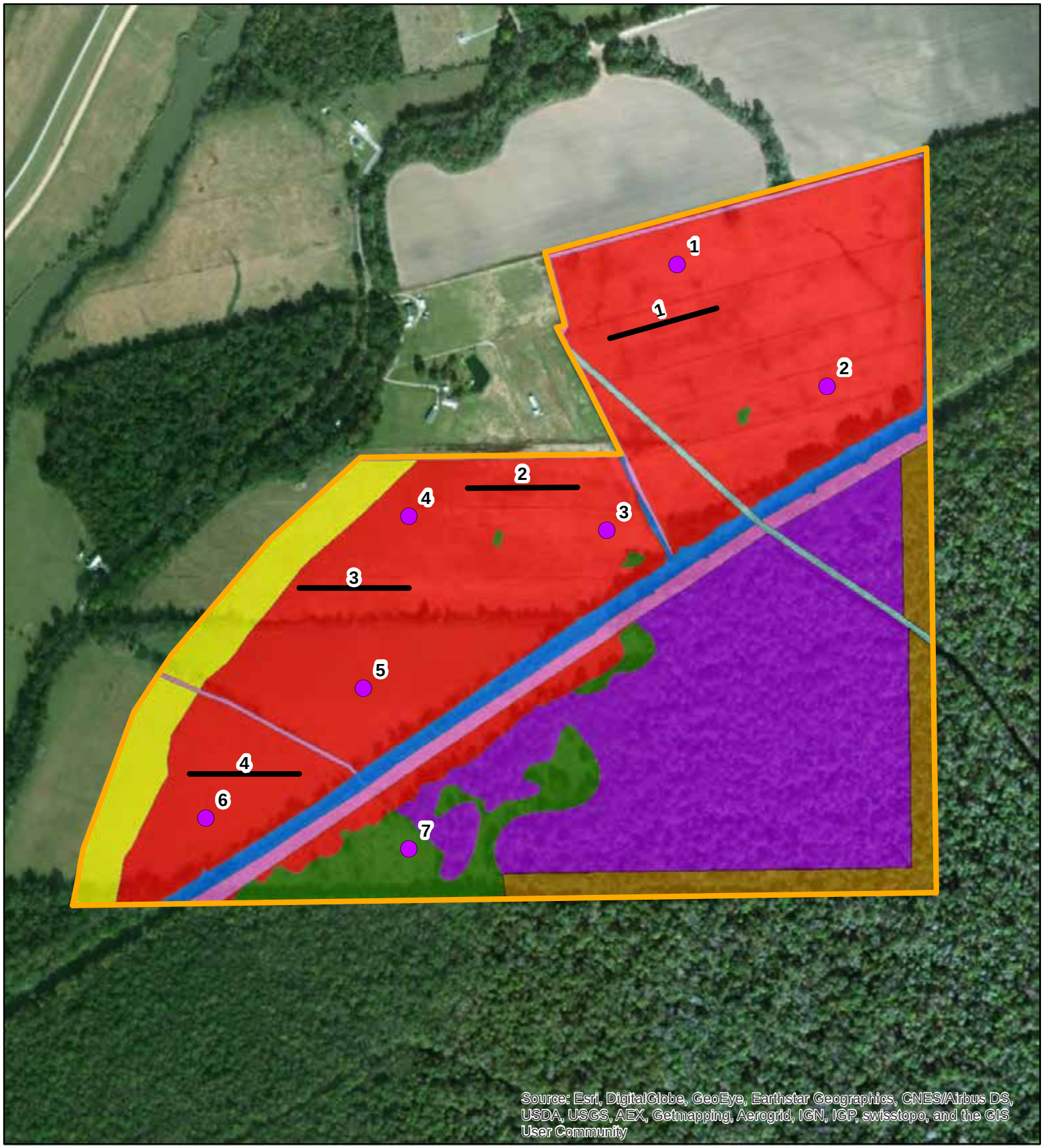
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

DIGITAL ELEVATION MAP

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/ 1/2018	
Map No. : F17_Elevation	

FIGURE 17



Legend

- Project Area (225.0 ac.)
- Preliminary Monitoring Plot Location
- Preliminary Monitoring Row Location

0 350 700 1,400

Feet

BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

PRELIMINARY MONITORING LOCATIONS

Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/1/2018	
Map No. : F18_Monitoring	

FIGURE 18

Legend

Terrebonne Basin

14 7 0 14

Miles

Note: Service area defined by the USGS 8-digit HUC Lower Grand Watershed (08070300) and West Central Louisiana Coastal (08090302).

Bayou Maringouin Umbrella Mitigation Bank
Ramah Site

BANK SERVICE AREA

Iberville Parish, LA

Created : TSC/ArcView	
Approved : DEB	
Date : 5/2/2018	
Map No. : F18_ServiceArea.mxd	

FIGURE 19

Appendix A: Preliminary Jurisdictional Determination

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVENUE
NEW ORLEANS, LOUISIANA 70118

REPLY TO
ATTENTION OF
Operations Division
Surveillance and Enforcement Section

January 25, 2017

Mr. Jace Jarreau
Delta Land Services
1090 Cinclare Dr.
Port Allen, LA 70767

Dear Mr. Jarreau:

Reference is made to your request for a U.S. Army Corps of Engineers' jurisdictional determination on property located in Sections 35, 55, 56, and 65, Township 8 South, Range 10 East, Iberville Parish, Louisiana (enclosed map). Specifically, this property is identified as an 8.36-acre addition to Bayou Maringouin Mitigation Bank, south of I-10 and west of Ramah Road.

A field inspection of the property was conducted on 28 December 2016. Based on the results of this investigation and 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 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.

You are advised that you must obtain a permit from a local assuring agency, usually a Levee Board or Parish Council, for any work within 1500 feet of a federal flood control structure such as a levee. You must apply by letter to the appropriate agency including full-size construction plans, cross sections, and details of the proposed work. Concurrently with your application to the assuring agency, you must also forward a copy of your letter and plans to Ms. Amy Powell, Operations Manager for Completed Works of the Corps, the Coastal Protection and Restoration Authority, and/or the Louisiana Department of Transportation and Development for their review and comments concerning the proposed work. The assuring agency will not issue a permit for the work to proceed until they have obtained letters of no objection from these reviewing agencies. For additional information, please contact Ms. Powell at (504) 862-2241.

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.

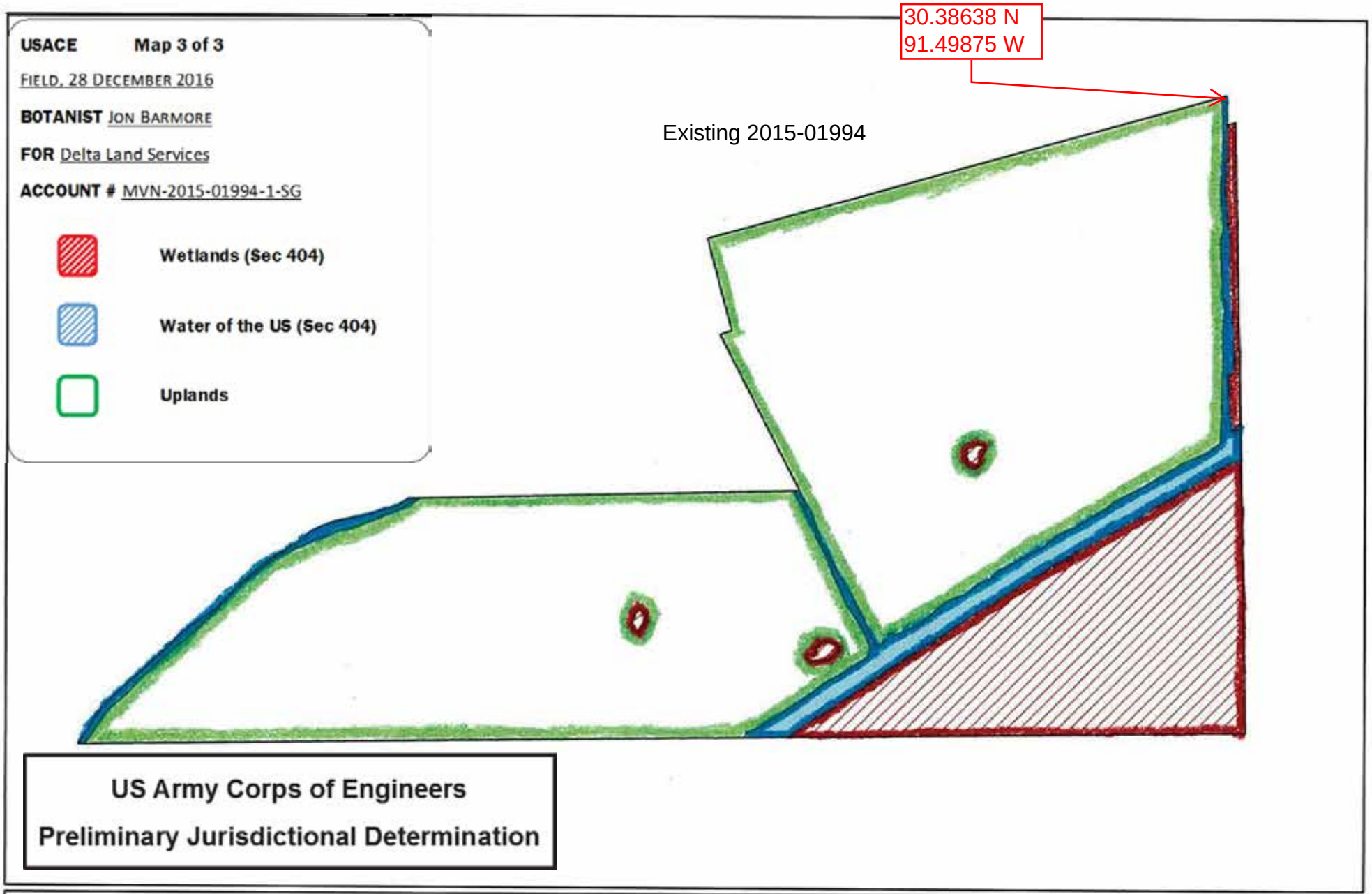
You are advised that this preliminary jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision prior to the expiration date or the District Commander has identified, after public notice and comment, that specific geographic areas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

Should there be any questions concerning these matters, please contact at (504) 862-1704 and reference our Account No. MVN-2015-01994-1-SG. If you have specific questions regarding the permit process or permit applications, please contact our Central Evaluation Section at (504) 862-1581.

Sincerely,

for Martin S. Mayer
Chief, Regulatory Branch

Enclosures


30.38638 N
91.49875 W
Existing 2015-01994
USACE Map 3 of 3
FIELD, 28 DECEMBER 2016
BOTANIST JON BARMORE
FOR Delta Land Services
ACCOUNT # MVN-2015-01994-1-SG
Wetlands (Sec 404)
Water of the US (Sec 404)
Uplands
US Army Corps of Engineers
Preliminary Jurisdictional Determination
Project Area (117.7 ac.)
Wetlands (19.4 ac)
Uplands (Sec. 404) (92.9 ac)
Non-wetland Waters (Sec. 404) (5.4 ac)
N
0 225 450 900
Feet
BAYOU MARINGOUIN
SOUTH
WETLAND DELINEATION MAP
Iberville Parish, LA
Created : TSC/ARCVIEW
Approved : JMJ
Date : 12/28/2016
Map No. BMMB_WLD_COMP
FIGURE 4

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVENUE
NEW ORLEANS, LOUISIANA 70118-03651

REPLY TO
ATTENTION OF

September 22, 2017

Operations Division
Surveillance and Enforcement Section

Mr. Jace Jarreau
Delta Land Services, LLC
1090 Cinclare Drive
Port Allen, LA 70767

Dear Mr. Jarreau:

Reference is made to your request for a U.S. Army Corps of Engineers' (Corps) jurisdictional determination on property located in Section 12, Township 8 South, Range 9 East, Iberville Parish, Louisiana (enclosed map). Specifically, this property is identified as the 133 acre Hurdle Tract on and east of Ramah Road.

Based on review of recent maps, aerial photography, soils data, 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 non-wetland waters subject to Corps' jurisdiction. Non-wetland waters that may be subject to Corps' jurisdiction are indicated in blue on the map. Furthermore, non-wetland waters and a portion of the wetland may be subject to Section 10 of the Rivers and Harbors Act (RHA). A DA Section 10 permit will be required prior to any work in waters subject to Corps' jurisdiction under Section 10 of the RHA.

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.

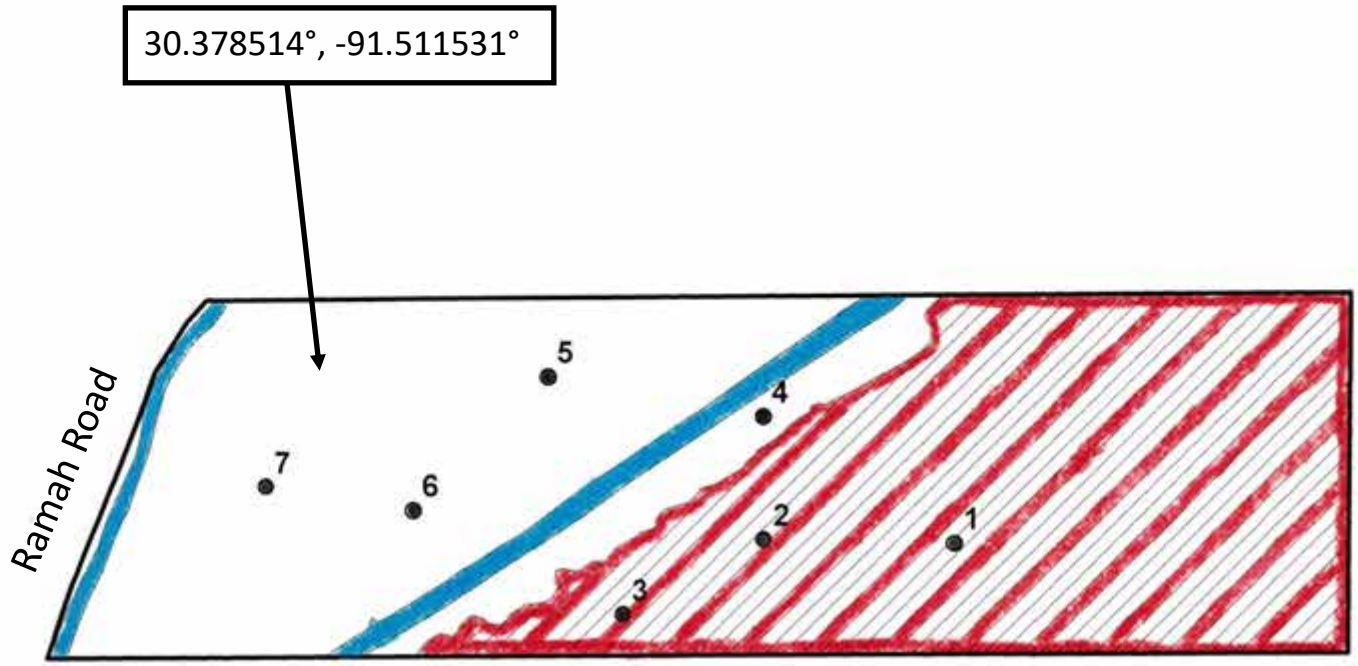
You are advised that you must obtain a permit from a local assuring agency, usually a Levee Board or Parish Council, for any work within 1500 feet of a federal flood control structure such as a levee. You must apply by letter to the appropriate agency including full-size construction plans, cross sections, and details of the proposed work. Concurrently with your application to the assuring agency, you must also forward a copy of your letter and plans to Ms. Amy Powell, Operations Manager for Completed Works of the Corps, the Coastal Protection and Restoration Authority (CPRA), and/or the Louisiana Department of Transportation and Development (LADOTD) for their review and comments concerning the proposed work. The assuring agency will not issue a permit for the work to proceed until they have obtained letters of no objection from these reviewing agencies. For additional information, please contact Ms. Powell at (504) 862-2241.

Should there be any questions concerning these matters, please contact Mr. Brad Guarisco at (504) 862-2274 and reference our Account No. MVN-2017-00378-SB. If you have specific questions regarding the permit process or permit applications, please contact our Central Evaluation Section at (504) 862-1581.

Sincerely,

for Martin S. Mayer
Chief, Regulatory Branch

Enclosures



USACE IH 9/22/2017

By: Brad Guarisco

For: Jarreau

(MVN-2017-00378-SB)

=NON-WETLAND WATERS

=WETLAND

=JD REVIEW AREA

U.S. ARMY CORPS OF ENGINEERS

PRELIMINARY

JURISDICTIONAL DETERMINATION

0 250 500 1,000

Feet

BAYOU MARINGOUIN HURDLE TRACT

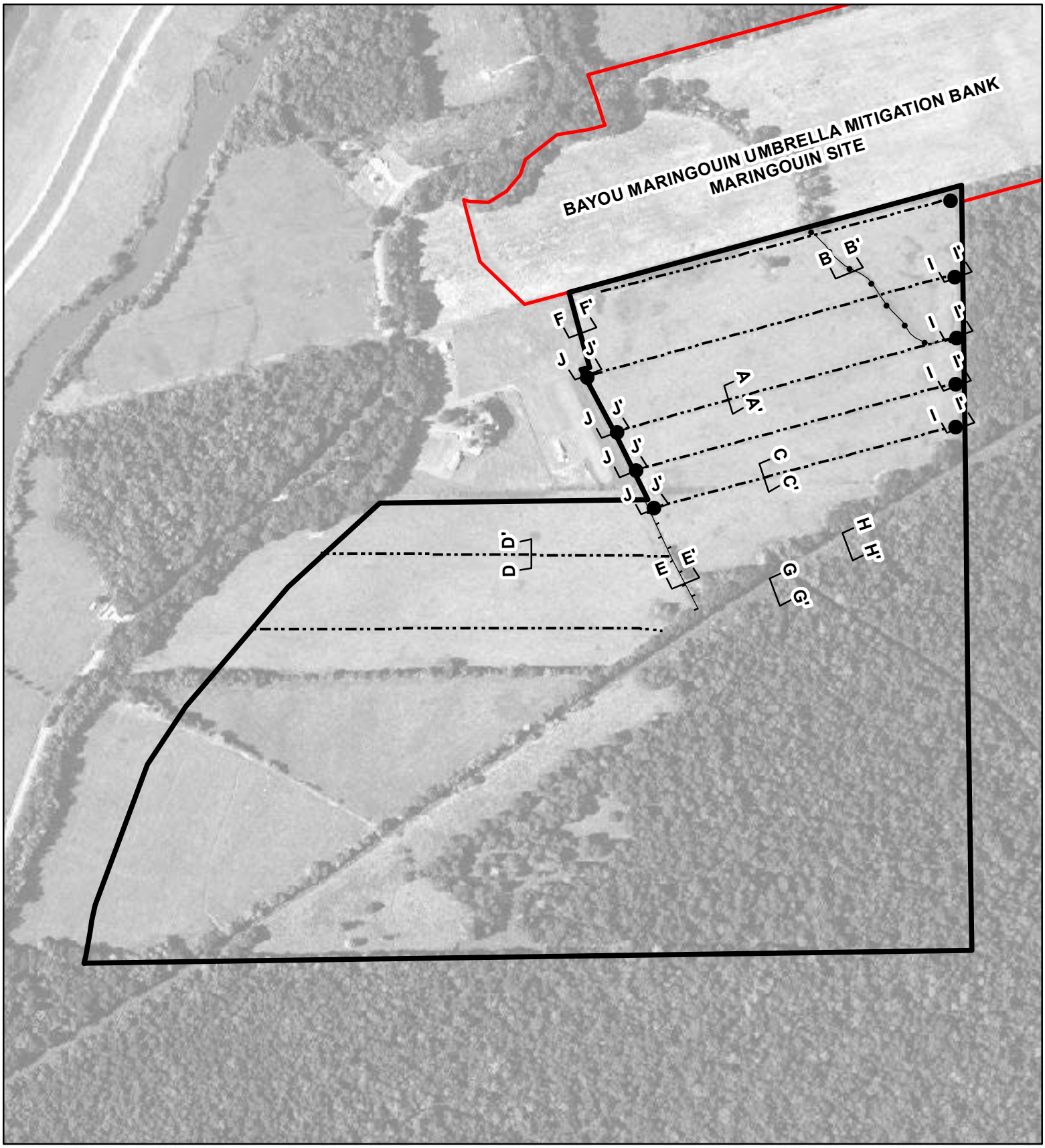
DELINEATION MAP

Iberville Parish, LA

Created :	TSC/ARCVIEW
Approved :	JMJ
Date :	03/08/2017
Map No. :	F03_LidarMap

FIGURE 6

Appendix B: Hydrology Restoration Typical Drawings



Legend

- Project Area (225.0 ac)
- Restored Natural Swale (922 ft.)
- Drain to Remain (569 ft.)
- Drains to be Swaled (11,692 ft.)
- Culverts to be Removed

N

0 300 600 1,200

Feet

BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

PLAN VIEW MAP

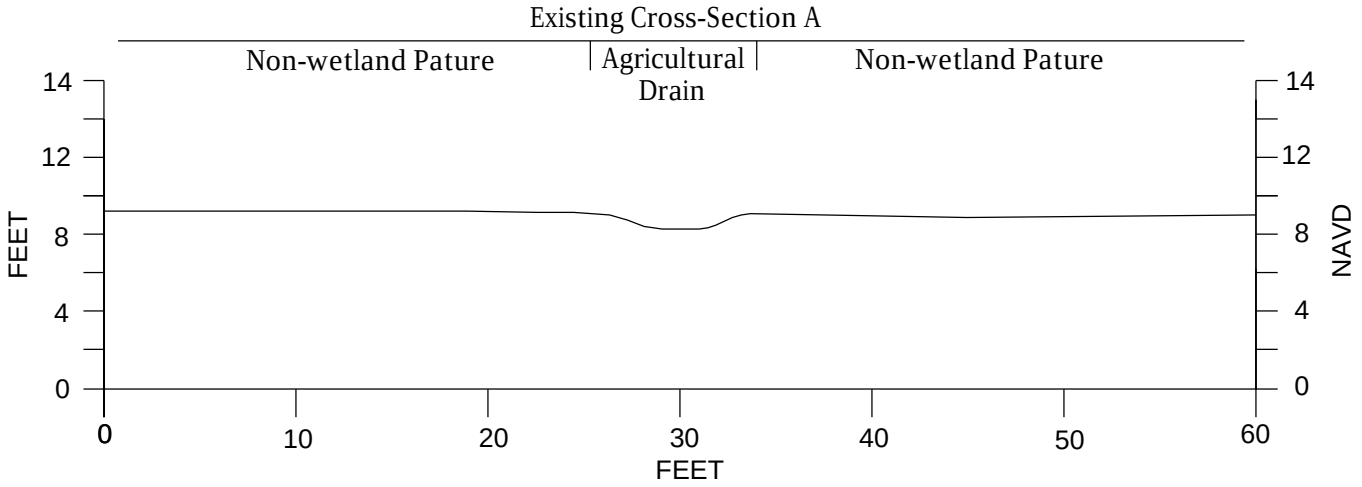
Iberville Parish, LA

Created : TSC/ARCVIEW	
Approved : LJW	
Date : 5/2/2018	
Map No. : F01 _PlanView	

FIGURE A4-1

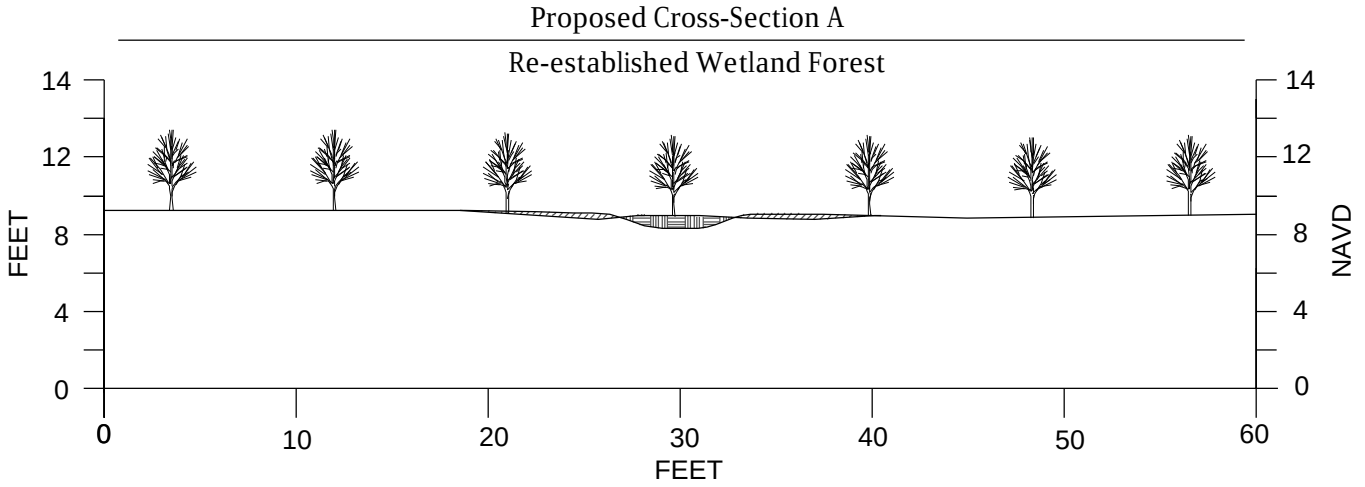
A

A'



A

A'



PROPOSED EARTHEN FILL

PROPOSED EXCAVATION

Note: Proposed fill material obtained from non-wet agriculture field.

BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

CROSS-SECTION A

IBERVILLE PARISH, LA

Created:	LJW/AutoCAD
Approved:	
Date:	05/04/2018
Dwg. No.:	BM_ADDENDUM_xsections.dwg

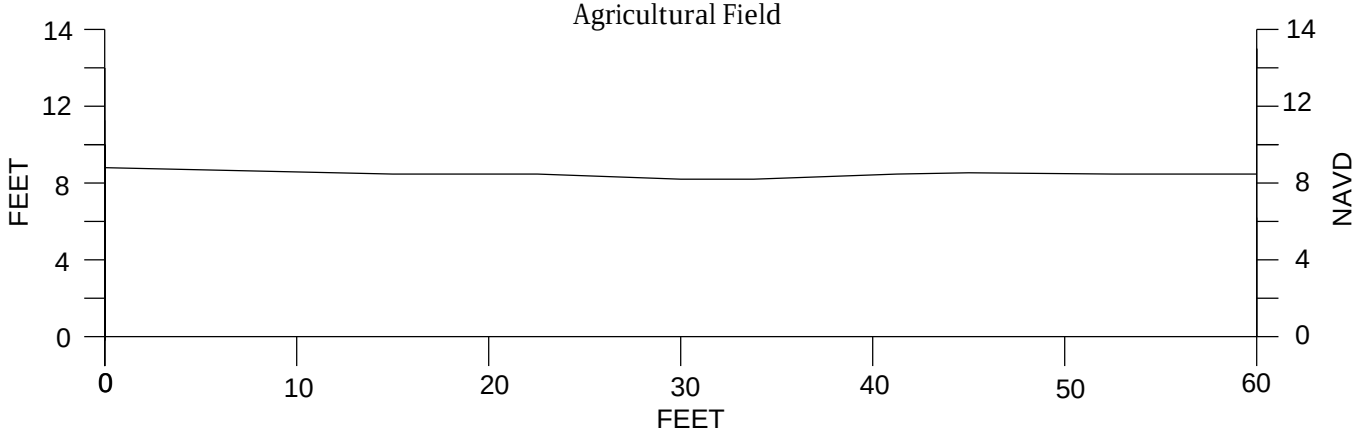
FIGURE A4-2

B

B'

Existing Cross-Section B

Agricultural Field

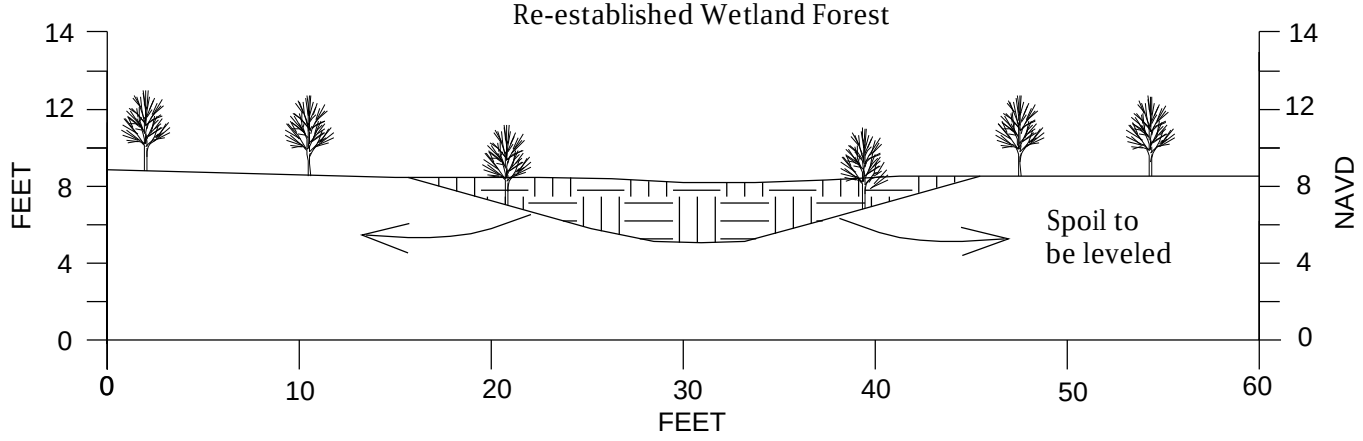


B

B'

Proposed Cross-Section B

Re-established Wetland Forest



PROPOSED EXCAVATION

BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

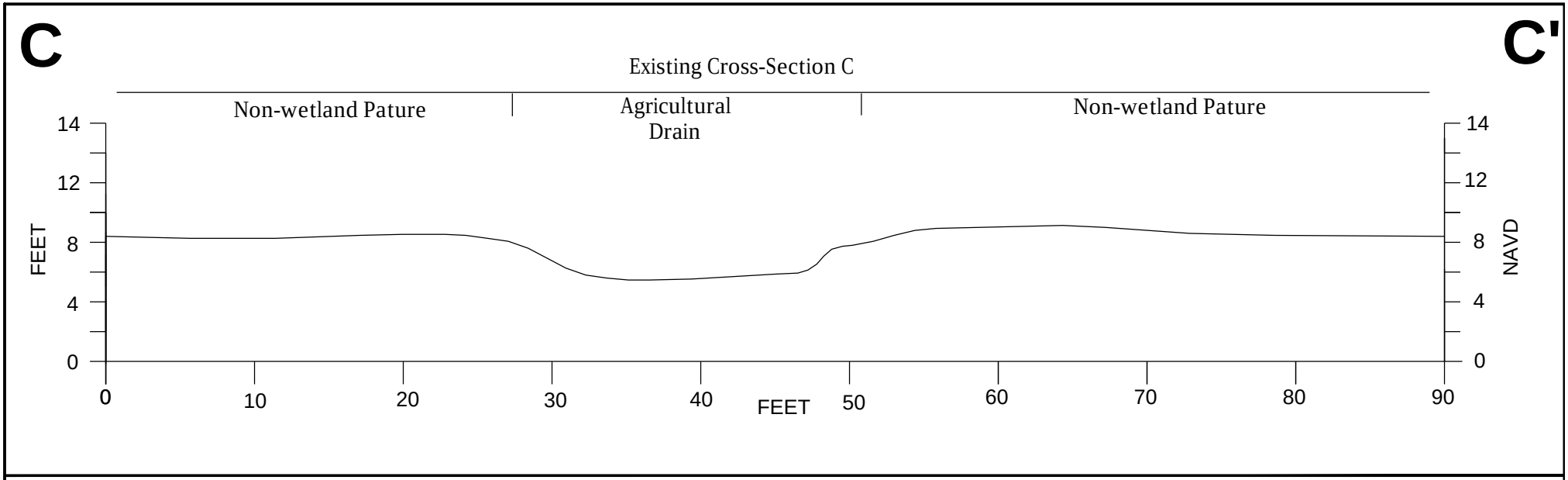
CROSS-SECTION B

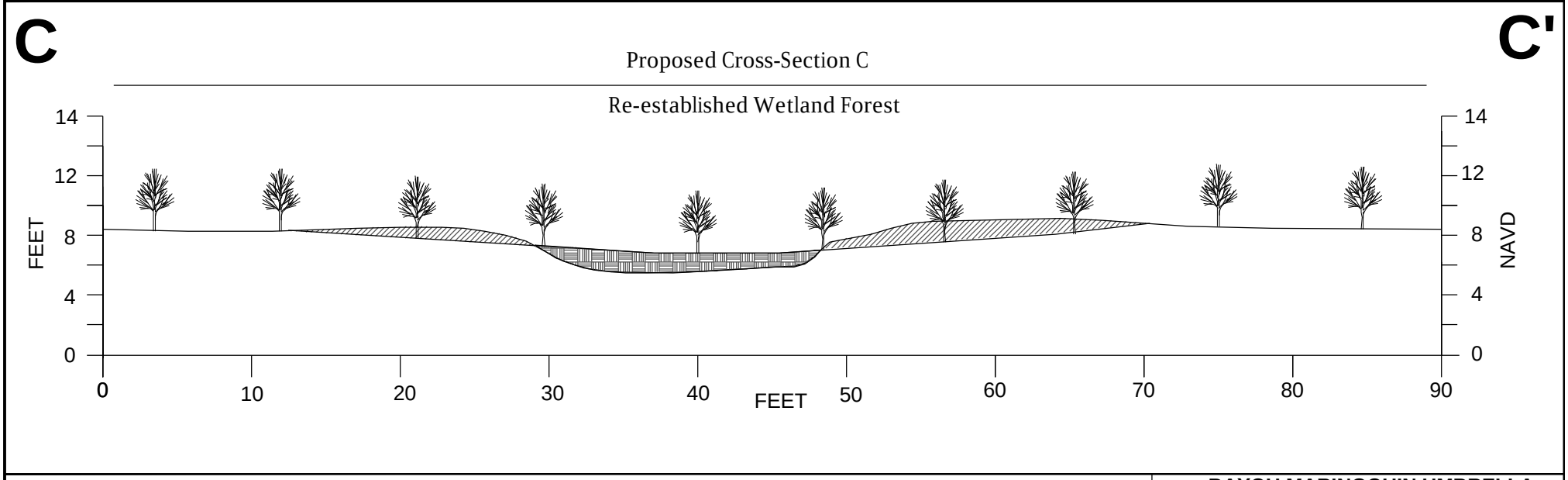
IBERVILLE PARISH, LA

Created:	LJW/AutoCAD
Approved:	
Date:	05/04/2018
Dwg. No.:	BM_ADDENDUM_xsections.dwg

FIGURE A4-3

Note: Proposed excavation material to be placed in non-wet agriculture field.





PROPOSED EARTHEN FILL

PROPOSED EXCAVATION

Note: Proposed fill material obtained from non-wet agriculture field.

BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

CROSS-SECTION C

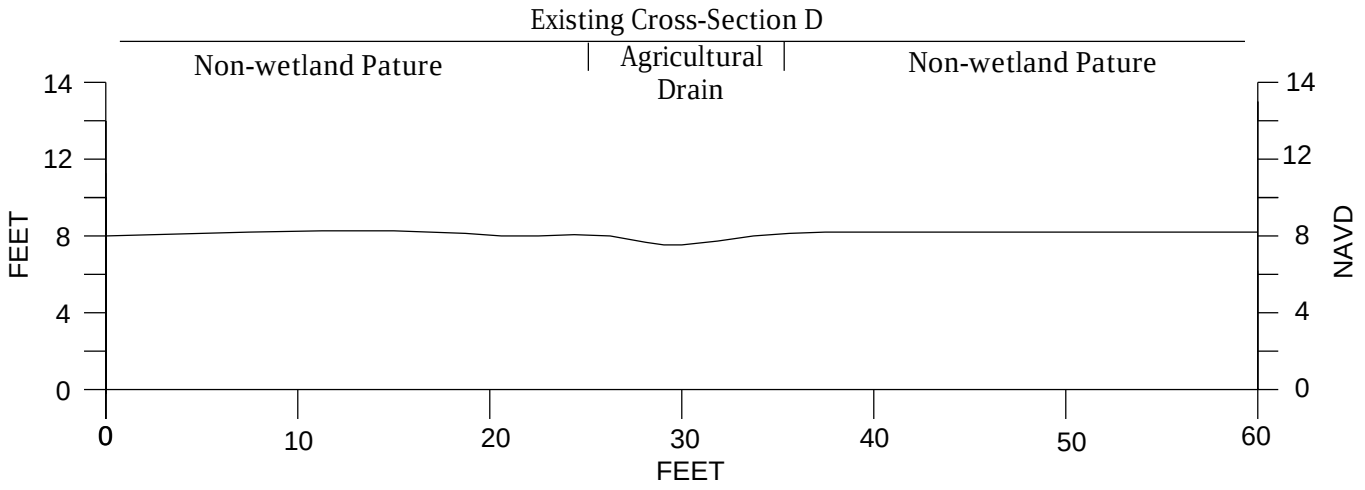
IBERVILLE PARISH, LA

Created:	LJW/AutoCAD
Approved:	
Date:	05/4/2018
Dwg. No.:	BM_ADDENDUM_xsections.dwg

FIGURE A4-4

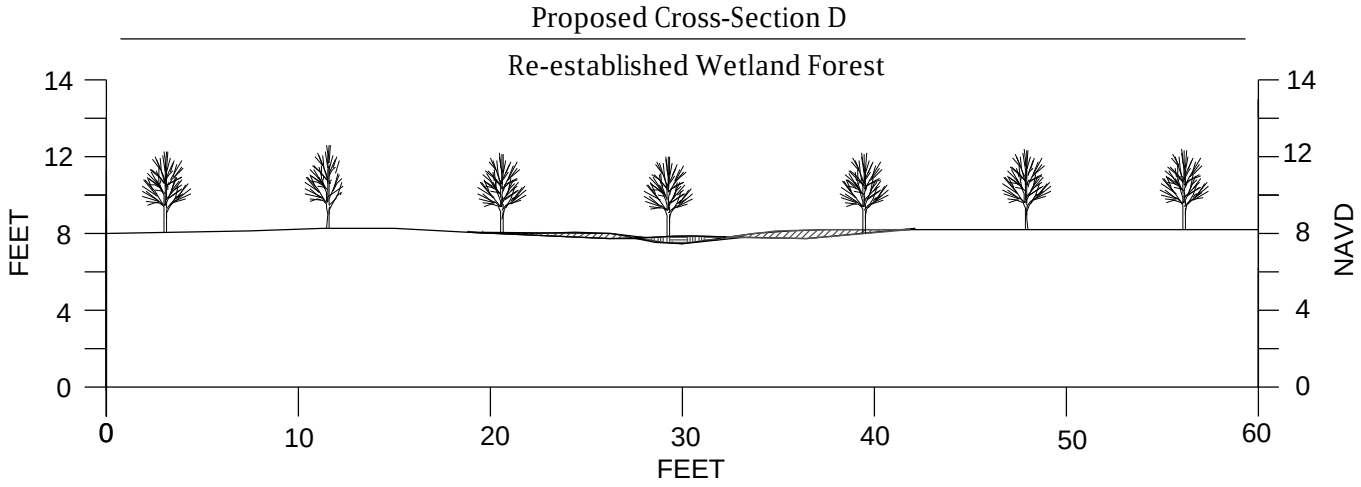
D

D'



D

D'



PROPOSED EARTHEN FILL

PROPOSED EXCAVATION

Note: Proposed fill material obtained from non-wet agriculture field.

BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

CROSS-SECTION D

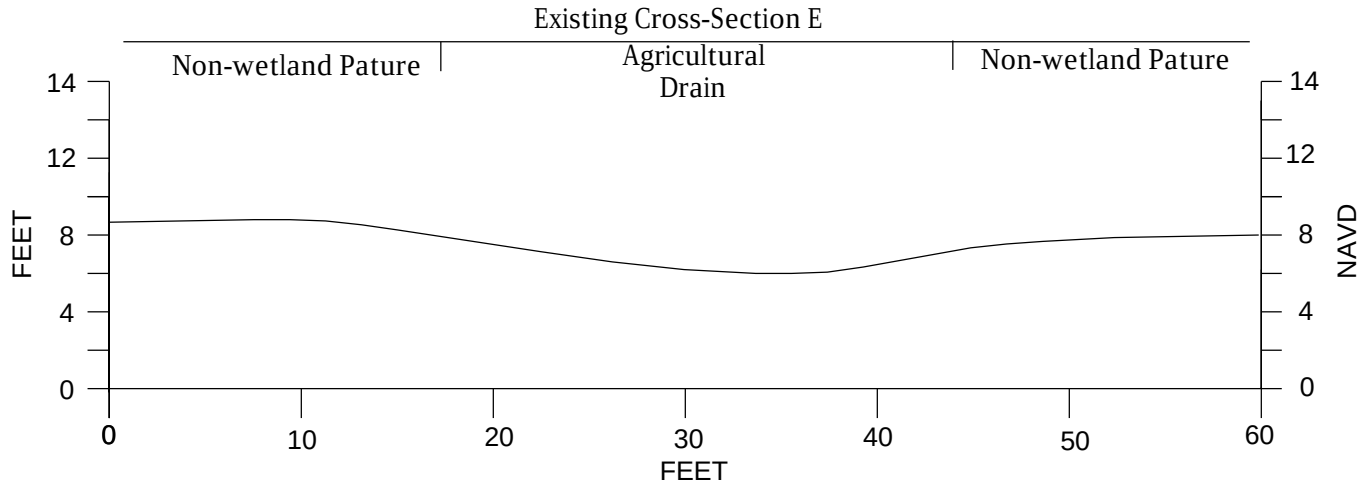
IBERVILLE PARISH, LA

Created:	LJW/AutoCAD
Approved:	
Date:	05/4/2018
Dwg. No.:	BM_ADDENDUM_xsections.dwg

FIGURE A4-5

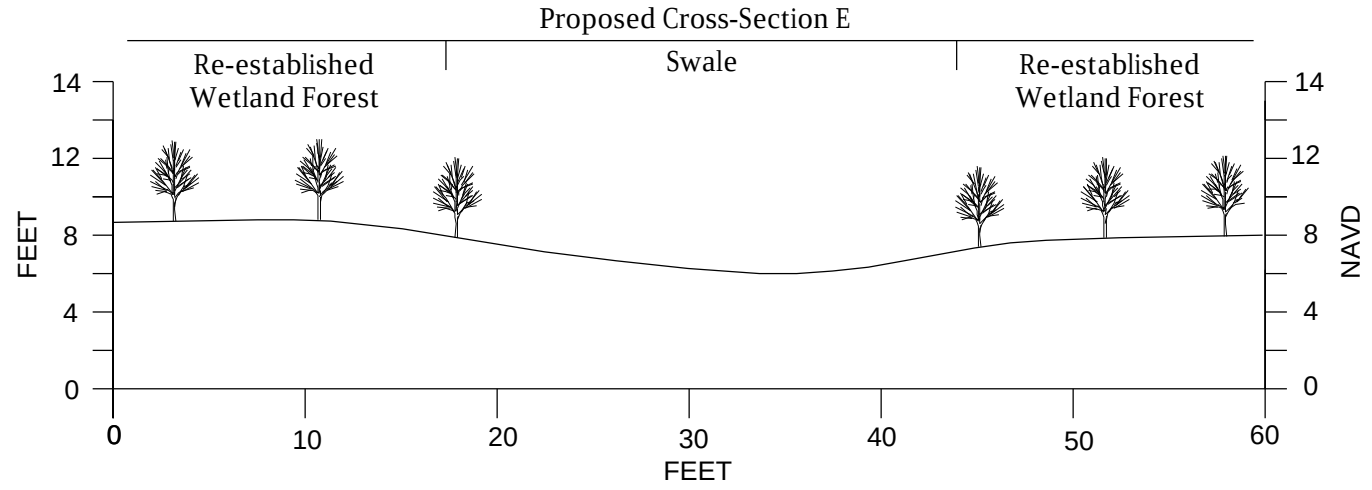
E

E'



E

E'



BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

CROSS-SECTION E

IBERVILLE PARISH, LA

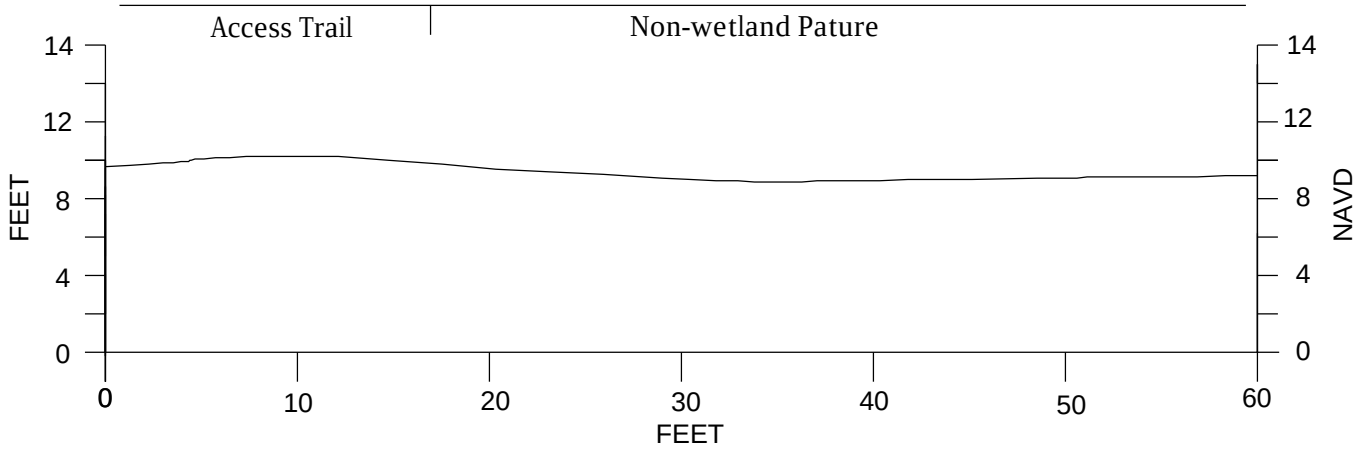
Created:	LJW/AutoCAD
Approved:	
Date:	05/4/2018
Dwg. No.:	BM_ADDENDUM_xsections.dwg

FIGURE A4-6

F

F'

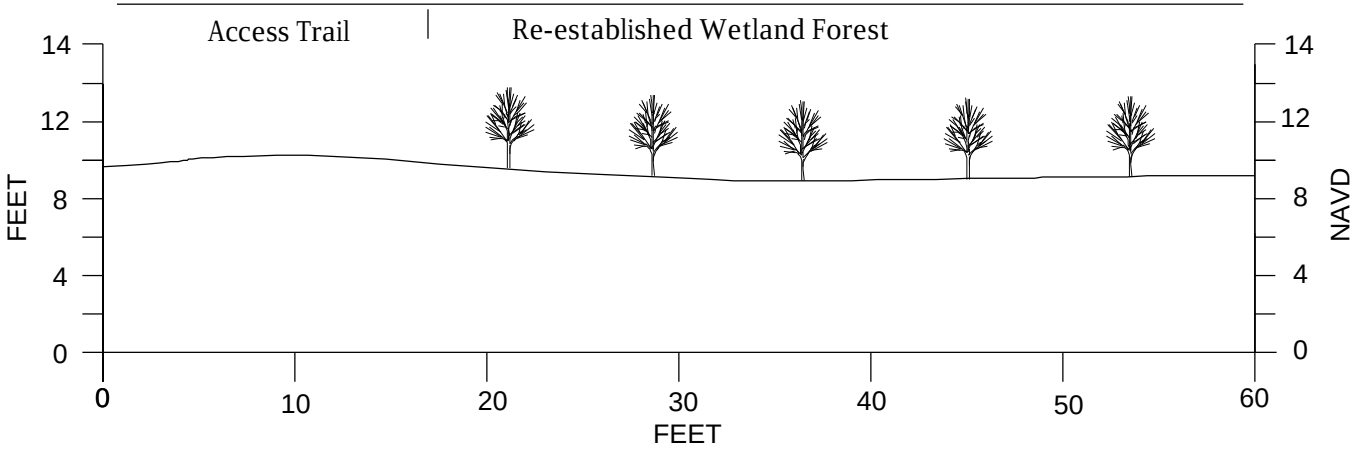
Existing Cross-Section F



F

F'

Proposed Cross-Section F



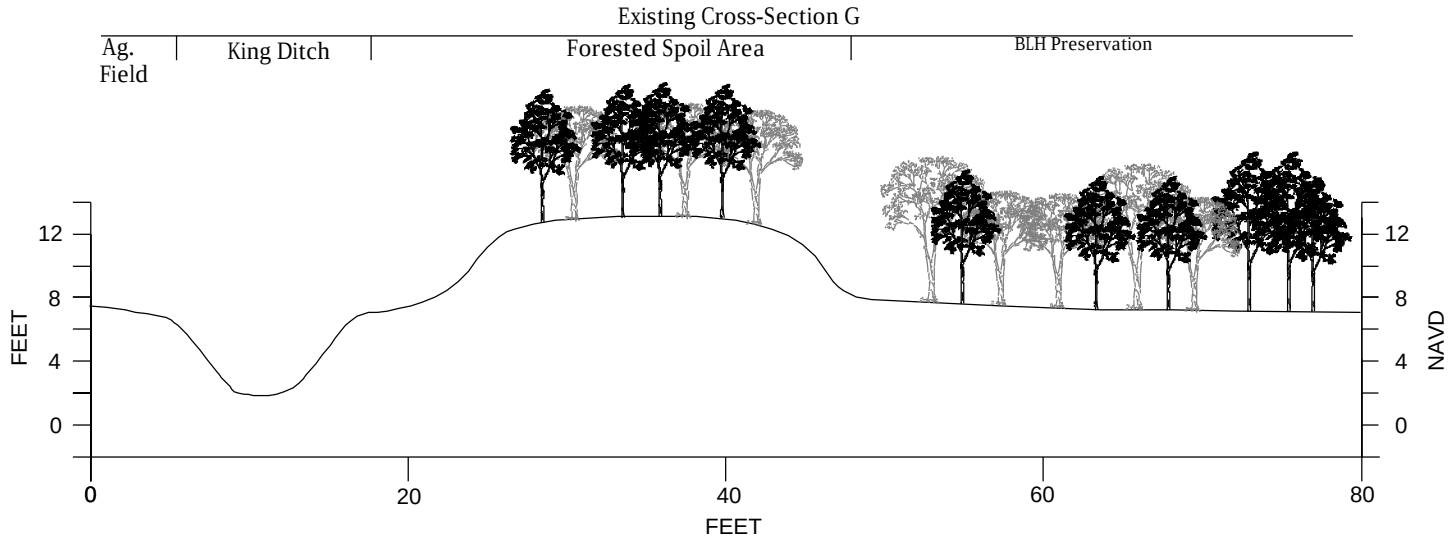
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

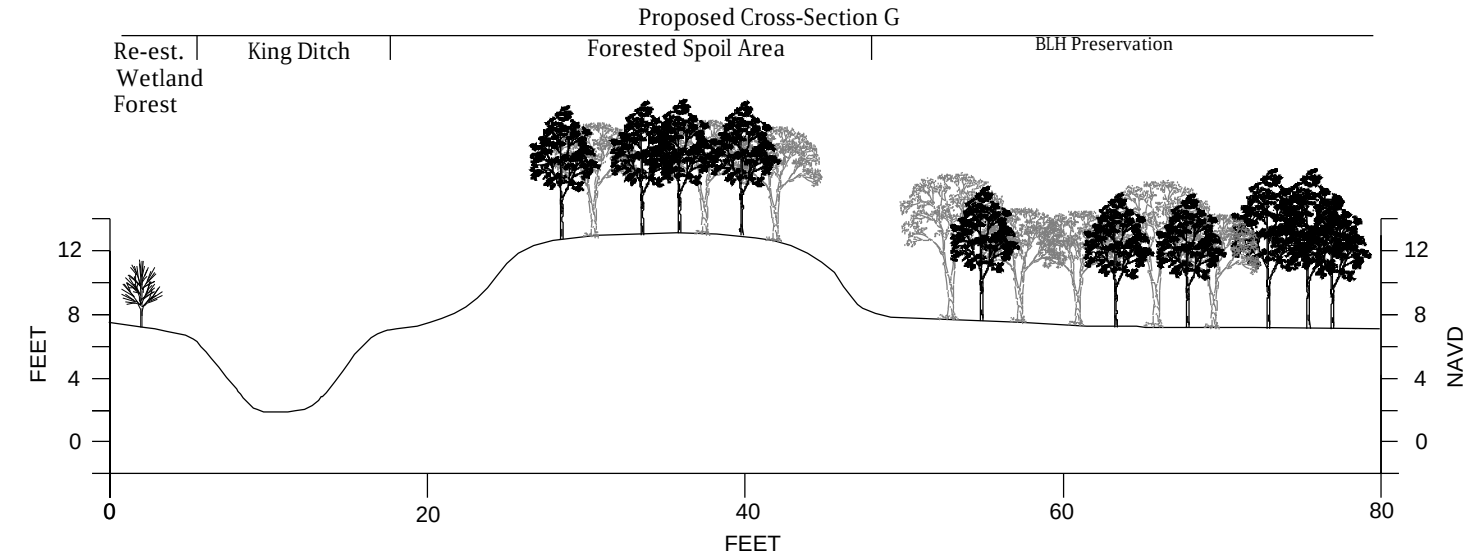
CROSS-SECTION F

IBERVILLE PARISH, LA

Created:	LJW/AutoCAD
Approved:	
Date:	05/4/2018
Dwg. No.:	BM_ADDENDUM_xsections.dwg

FIGURE A4-7





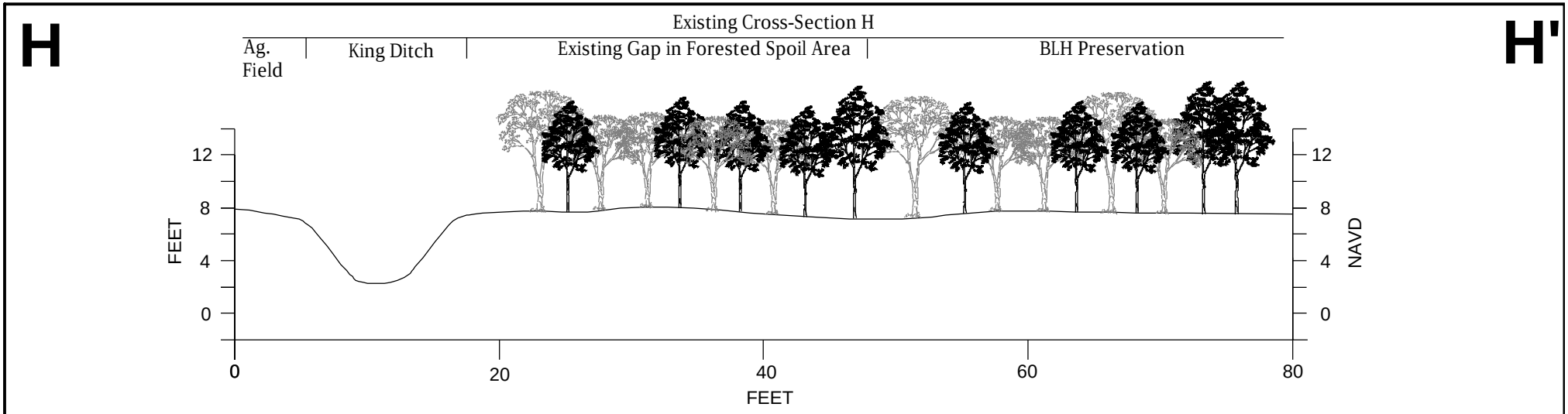
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

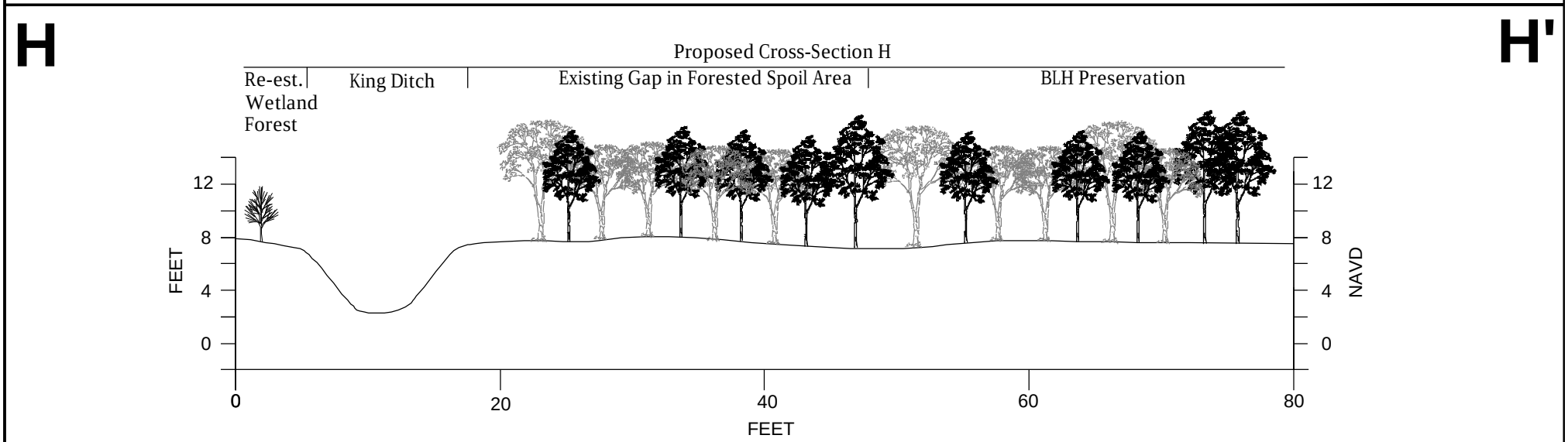
CROSS-SECTION G

IBERVILLE PARISH, LA

Created:	LJW/AutoCAD
Approved:	
Date:	05/4/2018
Dwg. No.:	BM_ADDENDUM_xsections.dwg

FIGURE A4-8





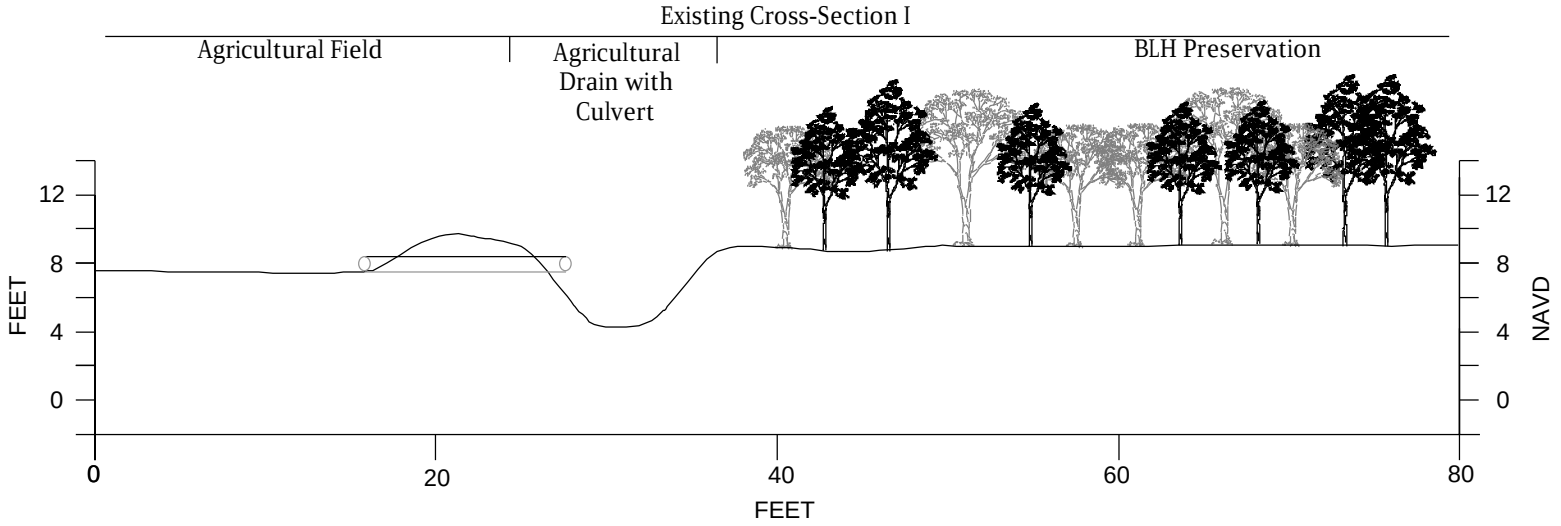
BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

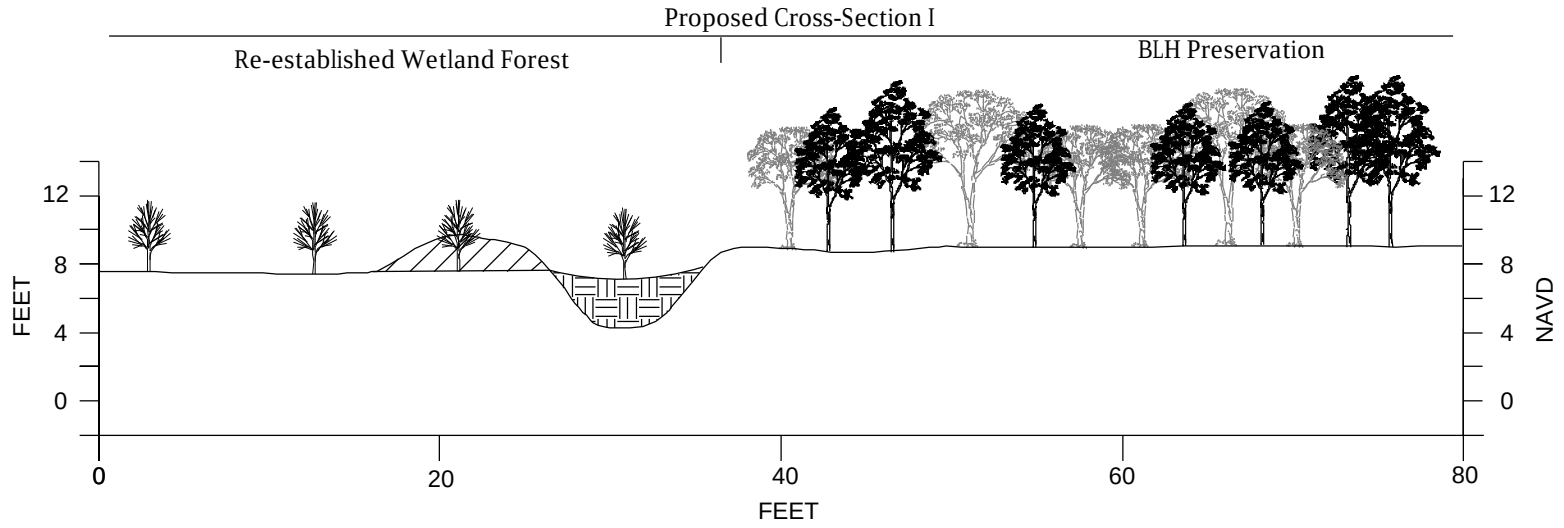
CROSS-SECTION H

IBERVILLE PARISH, LA

Created:	LJW/AutoCAD
Approved:	
Date:	05/4/2018
Dwg. No.:	BM_ADDENDUM_xsections.dwg

FIGURE A4-9





PROPOSED EARTHEN FILL

PROPOSED EXCAVATION

Note: Proposed fill material obtained from non-wet agriculture field.

BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

CROSS-SECTION I

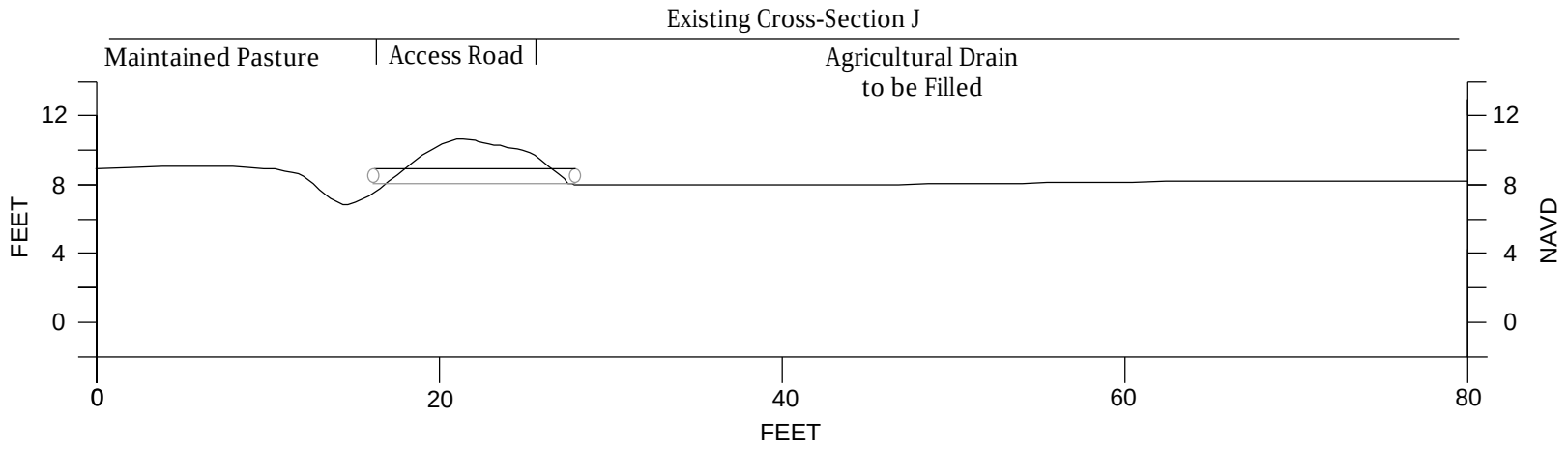
IBERVILLE PARISH, LA

Created:	LJW/AutoCAD
Approved:	
Date:	05/4/2018
Dwg. No.:	BM_ADDENDUM_xsections.dwg

FIGURE A4-10

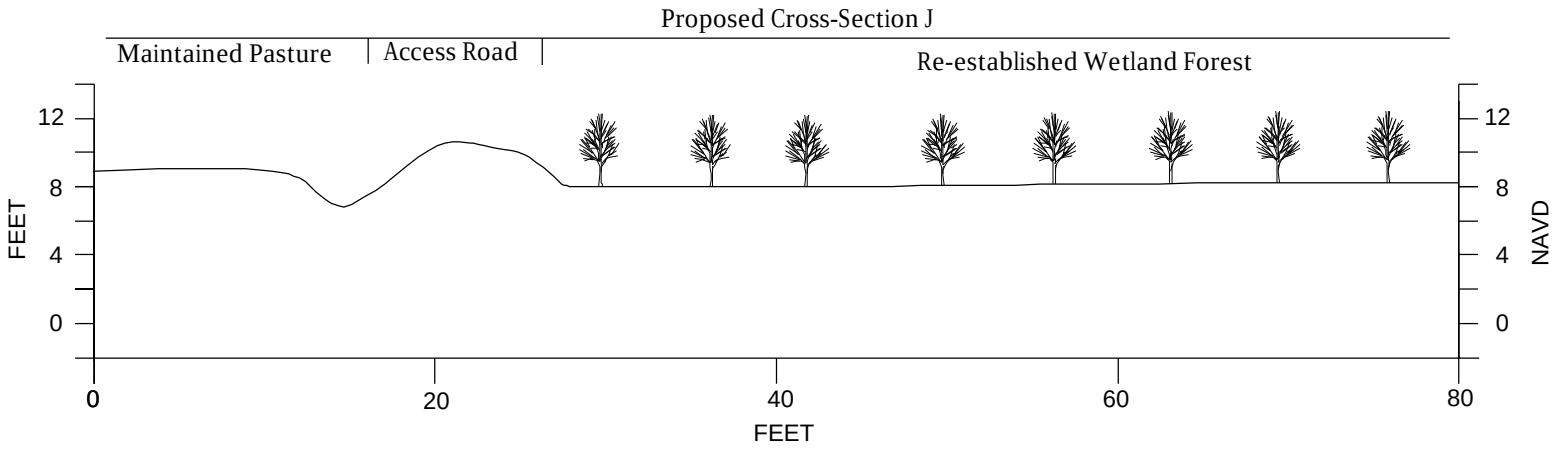
J

J'



J

J'



BAYOU MARINGOUIN UMBRELLA MITIGATION BANK - RAMAH SITE

CROSS-SECTION J

IBERVILLE PARISH, LA

Created:	LJW/AutoCAD
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FIGURE A4-11

Appendix C: Preliminary Louisiana Rapid Assessment Method Calculations

Louisiana Wetland Rapid Assessment Method (LRAM)

CEMVN Acct #	MVN-2015-01994	Bank Name	
Acres Mitigation	181.8	Ramah Site (BLH)	
Watershed Basin	Terrebonne		

		Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
Mitigation Factors	Mitigation Type	Re-Est	Rehab	Preser	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		6.0	5.0	0.4	0.0	0.0	0.0	0.0	0.0
	Management	None	None	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Negative Influences	Low	Low	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Size	500 : 100	500 : 100	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Buffer / Upland	Restored	Restored	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
	Sum:	6.5	5.5	0.4	0.0	0.0	0.0	0.0	0.0
	Area:	109.8	11.4	60.6					
	Sum x Area Affected:	713.7	62.7	24.2	0.0	0.0	0.0	0.0	0.0

∑ Mitigation:	800.6
Mitigation Potential:	4.4

COMMENTS

Mitigation Type	Both re-establishment and rehabilitation areas will be planted with a BLH mixture
Management	
Negative Influences	
Size	Project adjoins the approved Bayou Maringouin Umbrella Mitigation Bank - Maringouin Site (227.4 acres)
Buffer/Upland	10.4 acre of restored upland forested buffer