

Appendix I

Agency Coordination

ESA MEMO

From: Tammy Gilmore
Tel: (504) 862-1002
Date: August 15, 2019

AUG 19 2019

Subject: ESA coordination for BBA Construction Projects Mitigation, Louisiana

Dear Mr. Ranson:

Attention: David Walther

The U.S. Army Corps of Engineers (USACE), Mississippi Valley Division, New Orleans District (CEMVN), has prepared Environmental Assessment (EA) #576 to evaluate alternatives for mitigating the impacts associated with the construction of the West Shore Lake Pontchartrain (WSLP), Comite Diversion, and East Baton Rouge Flood (EBR) Risk Management projects; collectively known as the BBA Construction Projects.

Project Description

Each project in the final array was evaluated to determine the general construction elements that would be required for the conversion of habitat type. General construction elements similar among all projects converting agricultural land to forested wetlands included work items such as construction of new gravel access roads, reduction of site elevations, backfilling of existing ponds/ditches, demolition of onsite structures, harrowing soil to receive planting, and planting of canopy and mid-story plant species required to establish BLH and/or swamp habitat. For all mitigation projects, it was assumed that degraded earthen material will be used to achieve target elevations throughout the site or hauled off by a Contractor to a Government approved disposal area.

Projects that would convert open water to forested wetlands would require such construction activities as hydraulic dredging and pumping of material, construction of containment dikes, placement of rip-rap for shoreline protection, planting of canopy and mid-story plant species required to establish BLH and/or swamp habitat, and gapping or degrading of containment dikes.

Project converting low quality degraded habitats to forested wetlands would require such construction elements as clearing and grubbing, surface alterations and planting of canopy and mid-story plant species required to establish BLH and/or swamp habitat.

Further detail for each project including site specific components such as quantities, access duration and staging are presented in attachment 1.

Occurrence of Protected, Threatened and Endangered Species

Based on a parish search conducted on the USFWS endangered species website in March 2019, and verbal communication with USFWS on July 23, 2019, the only species under USFWS jurisdiction that are expected to be found in any of the project areas are the West Indian manatee and Gulf sturgeon. (<https://ecos.fws.gov/ecp0/reports/species-by-current-range-county?fips=22057>).

Bald eagles may be present within the project areas; however, no known nests exist at this time. If bald eagle nests are discovered near the site, the National Bald Eagle Management Guidelines would be followed during construction to avoid and minimize impacts to this species.

No listed species are found within any of the project areas converting agricultural lands to forested wetlands.

The West Indian manatee and Gulf sturgeon have potential to occur at the Pine Island site. No listed species are expected to be directly impacted within the proposed swamp mitigation area since their utilization of the shallow water depths in the site (typically less than two feet) is unlikely and access is extremely limited. However, as a precaution, implementation of standard protection measures and construction conditions for manatees and sturgeon would be implemented to ensure any potential impacts are avoided.

The borrow area could potentially be utilized by manatees and sturgeon, however, the presence of construction-related activity, machinery, and noise is expected to cause these species to avoid the project area during the construction period. Additionally, direct impacts to Gulf sturgeon from construction related activities are not anticipated as hydraulic cutterhead dredges are slow moving and use of them is not known to impact these species. Manatee could potentially be affected by dredging operations, but the impacts would be avoided by implementation of standard manatee protection measures developed by the USFWS.

Potential indirect impacts from the proposed action would primarily consist of effects from dredging operations, notably noise and turbidity, and the loss of foraging habitat. Although the rise in turbidity could immediately reduce water quality in the project area, those effects would be temporary and would be reduced by movement of the tides. Any manatees or sturgeon in the area could relocate during construction since the project area encompasses only a small section of Lake Pontchartrain. The indirect impacts resulting from the loss of the borrow area as foraging habitat would be insignificant given the small size of the project area compared to the overall size and similar habitat within Lake Pontchartrain. Additionally, the depth of material being removed from the borrow area is not anticipated to result in exposure of a different substrate type. Future recolonization of the forage species used by Gulf sturgeon is anticipated in the borrow site. As such, the indirect impacts to manatees and sturgeon are anticipated to be minimal.

Conclusion and Determination

For the reasons discussed above, we believe that the project, as planned, may affect but would not likely adversely affect the manatee and Gulf sturgeon. Please review this plan and inform us whether or not you agree with our determination. If you have any questions about the project or need additional information please telephone me at (504) 862-1002.

Literature Cited

U.S. Fish & Wildlife Service (USFWS). Endangered Species Program. 2015.
http://www.fws.gov/lafayette/pdf/LA_T&E_Species_List.pdf

Sincerely,

Marshall K. Harper

Marshall K. Harper
Chief, New Orleans District
Environmental Branch

**PROJECT: BBA Mitigation, Pine Island Swamp Creation, St. Tammany Parish,
Louisiana**

GENERAL SOW:

The proposed project involves creation of up to a total of approximately 1,965 acres of swamp habitat over eight separate mitigation areas as compensatory mitigation for some of the swamp impacts resulting from construction of BBA projects. The swamp creation areas (mitigation areas) would be located in open water areas around Milton Island on the north shore of Lake Pontchartrain. This site is located southwest of the town of Madisonville adjacent to the Tchefuncte River in St. Tammany Parish.

Required earthwork prior to dredging would first consist of containment dike construction or rehabilitation around the perimeter of each of the eight mitigation areas. The crest elevation of these dikes would be approximately 5.0 feet NAVD88 and each dike would have a 5-ft wide crown. Existing material within each mitigation area would be used to construct or rehabilitate the containment dikes. Temporary submerged pipelines would be placed on the bottom of the canals that run between the mitigation areas as well as underneath the roads separating them as indicated on the attached drawing. Following dike construction and installation of the temporary pipelines, a cutterhead dredge would hydraulically place material (sediment) from within the borrow area indicated on the attached drawing into the mitigation areas using the shown pipeline routes. After filling the mitigation areas is complete, a one-year settlement period would pass prior to dike degrading the containment dikes and planting the mitigation areas. The temporary pipelines would be removed after pumping of dredged materials into the mitigation areas is complete.

Earthwork would also include building a permanent shoreline protection rip-rap feature along an approximately 2,420-ft stretch of Lake Pontchartrain shoreline adjacent to Mitigation Area 7 which will be underlain with separator geotextile fabric.

After the end of the fill settlement period in the 8 mitigation areas and after the containment dikes are degraded to match the average fill elevation in each mitigation area, native canopy and midstory plants typical of swamp habitats would be installed in mitigation Areas 1 – 8 .

The approximate maximum planted acreage within the proposed mitigation areas would be as follows:

Mitigation Area	Area (Acres)
Area 1	218
Area 2	262
Area 3	524
Area 4	226

Pine Island Mitigation Site

Mitigation Area	Area (Acres)
Area 5	72
Area 6	337
Area 7	142
Area 8	184
Total	1,965

PROPOSED PLANTING:

Assumed total plantings within the swamp mitigation areas (approximate):

Mitigation Area	Canopy Seedlings	Midstory Seedlings
Area 1	118,810	29,648
Area 2	142,790	35,632
Area 3	285,580	71,264
Area 4	123,170	30,736
Area 5	39,240	9,792
Area 6	183,665	45,832
Area 7	77,390	19,312
Area 8	100,280	25,024
Total	1,070,925	267,240

Assume swamp canopy plant species would be installed on an 8ft by 10ft grid (545 seedlings per acre)

Assume swamp midstory plant species would be installed on a 16ft by 20ft grid (136 seedlings per acre)

Mowing poles (PVC pipes extending roughly 6 feet above grade) would be installed on each planted row every 50' to 100' to guide mowing operations.

Dike Construction/Rehabilitation:

Total perimeter retention would be required to retain dredged material and to allow for vertical accretion. The total length of each mitigation area which would require dike construction, rehabilitation, or lifting would be as follows:

Pine Island Mitigation Site

Mitigation Area	Perimeter (ft)
Area 1	14,925
Area 2	22,366
Area 3	22,132
Area 4	19,090
Area 5	9,050
Area 6	16,948
Area 7	12,343
Area 8	30,628
Total	147,482

Any existing features such as existing perimeter dikes, access roads, and or ridges would be used for retention of dredged material. If dike rehabilitation is required, material for dike maintenance would come from within the proposed footprint of the swamp sites.

Existing dikes would be used to the extent practical. The retention dikes would be constructed to elevation 5.0 feet NAVD88, with a 5'-wide crown to assure dike integrity. The borrow ditch in each mitigation area used to obtain material for the retention (containment) dikes would be offset a minimum of 40' from each dike to assure dike stability. The borrow ditches would be on the interior side of the dikes (e.g. within the limits of the mitigation areas).`

Plugs would be left in the borrow ditch at 1,000- foot intervals to minimize water flow and material loss during pumping operations. Spill boxes and/or weirs would be constructed at locations along the northern and western retention dikes as necessary to allow for effluent water release from within the swamp creation areas for approximately one year after construction, when the perimeter dikes are breached and degraded. If deemed necessary by the construction contractor, a low-level interior weir or baffle dikes would be constructed to assist in vertical stacking of dredged material. The gaps would be spaced with care being taken to locate gaps at existing natural bayous, canals, or other openings. The gaps would require a 25-foot bottom at approximately elevation 0.0 feet NAVD88 (lower limit of existing nearby marsh platform) to assure water interchange with the existing marsh.

Rip-Rap Construction:

On the Lake Pontchartrain shoreline of Mitigation Area 7, a 2,240-ft long stretch of shoreline covering approximately 0.93 acres would be reinforced with a stone bank rip-rap. This rip-rap would be two feet thick and be placed on the graded shoreline from elevation 0' up to elevation 4.5'. This two-foot thick rip-rap would be underlain with a 200 pound separator geotextile fabric. Total estimated geotextile fabric quantity for this

Pine Island Mitigation Site

rip-rap construction is 4,575 square yards and the estimated stone quantity is 5,700 tons or 2,940 cubic yards.

Dredging:

A hydraulic cutterhead dredge would be used to pump approximately 8.9 million cubic yards of material via a pipeline from the proposed borrow site in Lake Pontchartrain to the swamp creation sites. Initial elevation for dredge fill within each mitigation area would be to approximate elevation 2.5 feet NAVD88, with the goal of ultimately resulting in a final target swamp elevation of approximately 2.0 feet. The maximum allowable dredging depth within the borrow site would be -19 feet NAVD88 plus a 1-foot allowable overdepth to account for inaccuracies in the dredging process.

Three 75-ft corridors are indicated on the drawing and run from the borrow site into Mitigation Areas 4 and 7 have been established to place subline for pumping material from the proposed borrow site to the mitigation areas. The first pipeline corridor runs down the middle of the entrance channel to the east of Milton Island and to the east of an area indicated to be a shell reef site. All activities related to this proposed work would avoid this area. All pipeline corridors would be placed and located in a manner which does not impact existing wetlands.

The estimated quantities required to achieve the initial target fill elevation of 2.5ft NAVD88 within the eight mitigation areas are as follows:

Mitigation Area	Fill Quantity (Cubic Yards)
Area 1	1,809,900
Area 2	2,205,053
Area 3	4,257,765
Area 4	1,900,702
Area 5	625,541
Area 6	2,756,592
Area 7	1,196,595
Area 8	1,649,163
Total	16,401,310

DURATION:

Per the PDT, the assumed start date for construction is 1 June 2020. Necessary dike construction and initial pumping of sediment into the mitigation areas would be completed around June 2021. After a year-long settlement period, degrading of dike would begin in June 2022 and be completed no sooner than March 2023. Initial planting activities would likely be conducted in November 2023 through mid-March

Pine Island Mitigation Site

2024. Notice of Construction Completion (NCC) would be issued soon after completion of the initial planting event.

Monitoring to determine success of the initial plantings would likely occur in October 2024 with the report submitted in December 2024. If this monitoring showed success criteria had been satisfied, a second monitoring event would likely occur in October 2025 with the report submitted in December 2025. Assuming this latter report showed applicable success criteria had been satisfied, the overall project would be turned over to the Non-Federal Sponsor in approximately March 2026.

SITE ACCESS:

Access to the project site would be as follows:

From the north, Guste Island Road runs between Areas 1 and 8. This road then splits into Grand Rue Port Louis Road which runs between Areas 4, 5, and 7. South Chenier Drive runs between Area 2 and Area 3. Access to the mitigation areas can also be made via the many canals that run between all the areas.

STAGING:

Staging of equipment for initial dike construction activities and riprap construction would be via barge(s) on or near the Lake Pontchartrain shoreline as indicated on the attached drawing. The proposed staging areas would first be submitted for Government approval. Staging of materials for the initial planting event would be within the mitigation areas themselves most likely.

MAINTENANCE/MANAGEMENT ACTIVITIES:

After completion of all dike construction, dredge pumping, and soil preparation activities but prior to initial plantings, herbicides may be applied to the mitigation areas to help control invasive and nuisance plant species. Mowing may also be performed in the mitigation area during this time period. After the mitigation area is initially planted and before the success of these plantings is evaluated (monitored), herbicide applications and/or mowing may also occur to help suppress undesirable vegetation. Throughout this period, access/maintenance roads would be maintained as necessary as would be any new drainage features established.

The first monitoring event would occur in the fall of the year of the initial plantings. This report could show additional plantings are needed or it may not. Regardless, various mowing events and herbicide application events would take place during the period from the first monitoring event to the second monitoring event performed the next year. It is assumed that the second monitoring event would show success criteria for the plantings had been achieved as were success criteria about control of invasive and nuisance plants. It is also assumed this monitoring event would show the success criterion established for the final soil surface elevation in the mitigation areas had been

Pine Island Mitigation Site

achieved. In this case, the Non-Federal Sponsor would take over the project including all management and maintenance work.

EQUIPMENT:

Equipment to be used for the respective work is assumed as follows:

Dike Construction: Excavators, marsh buggies, airboats

Dredge Pumping: Cutterhead dredge, tugs, crewboats, pipeline (steel, and rubber), derricks, barges, up to D-8 dozers, excavators, front-end loaders, marsh buggies, airboats, marsh masters

Rip-rap Construction: Excavators, scows, barges, up to D-8 dozers, front-end wheel loaders, marsh buggies

Planting Preparation: Tractor with harrow and scarifier, bulldozers, and backhoe.

Planting: Pickup trucks, ATVs and/or UTVs, and marsh buggies.



SHEET LEGEND

- PROPERTY LIMITS
- SWAMP MITIGATION LIMITS
- ACCESS ROAD
- TRANSMISSION LINE
- TYPICAL PIPELINE CORRIDOR
- 75-FT PIPELINE CORRIDOR

PROPOSED MITIGATION AREAS CONSIST OF EIGHT SEPARATE AREAS OF SWAMP RESTORATION UP TO APPROXIMATELY 1,965 ACRES.

Area	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
Area	218 AC	252 AC	72 AC	218 AC	142 AC	194 AC	142 AC	142 AC

ESTIMATED PROPOSED PLANTINGS:

Mitigation Area	Canopy	Mastody
Area 1	119,810	29,648
Area 2	142,790	35,632
Area 3	295,580	71,364
Area 4	123,170	30,796
Area 5	39,240	9,792
Area 6	183,665	45,832
Area 7	77,890	19,312
Area 8	100,290	25,024
Total	1,070,925	267,240

NOTES:

- PROPOSED MITIGATION AREAS CONSIST OF EIGHT SEPARATE AREAS OF SWAMP RESTORATION UP TO APPROXIMATELY 1,965 ACRES.
- ESTIMATED PROPOSED PLANTINGS:
- ASSUME SWAMP CANOPY PLANTS SPECIES WILL BE INSTALLED ON A 6 FT BY 10 FT GRID. ASSUME SWAMP MASTODY PLANTS SPECIES WILL BE INSTALLED ON A 16 FT BY 20 FT GRID.
- SITE ACCESS:
 - ACCESS TO THE MITIGATION AREAS IS AS FOLLOWS:
 - FROM THE NORTH, GUSTE ISLAND ROAD RUNS BETWEEN AREAS 1 AND 8. THIS ROAD THEN SPLITS INTO GRAND RUE PORT LOUIS ROAD WHICH RUNS BETWEEN AREAS 1 AND 2, AND S. CHENIER DRIVE WHICH RUNS BETWEEN AREAS 2 AND 3.
 - STAGING WOULD BE IN THE GENERAL AREA INDICATED. ALL STAGING OF EQUIPMENT WOULD BE IN SWAMP.
 - PIPELINE ROUTES INDICATED WOULD BE USED TO TRANSPORT DREDGED MATERIAL TO THE MITIGATION AREAS. ACTUAL LOCATION OF PIPELINES WITHIN THE MITIGATION AREA WOULD BE DETERMINED BY THE CONTRACTOR. PIPELINES WOULD BE PLACED UNDERNEATH ROADS IN THE AREAS INDICATED.
 - SAIL ROUTE INDICATED ON THE DRAWING DEMOTES GENERAL ROUTES BOATS WOULD TAKE TO TRAVEL TO THE PROPOSED BORROW SITE.
 - PRIOR TO PLACEMENT OF DREDGE MATERIAL, CONTAINMENT DIVERSIONS WOULD BE BUILT AROUND THE MITIGATION AREAS. A CUTLER SUCTON DREDGE WOULD THEN PUMP MATERIAL FROM THE INDICATED BORROW AREA INTO THE MITIGATION AREAS. AFTER DREDGING, THE CUTLER SUCTON DREDGE WOULD BE SET BACK TO WORK FOR ONE YEAR. THE CONTAINMENT DIVERS WOULD BE DECOMMISSIONED PRIOR TO PLANTING.

NOTES:

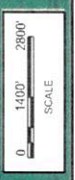
- ESTIMATED FILL QUANTITIES FOR PROPOSED MITIGATION AREAS ARE AS FOLLOWS:

Mitigation Area	Fill Quantity (Cubic Yards)
Area 1	1,809,900
Area 2	2,050,053
Area 3	5,257,265
Area 4	1,654,432
Area 5	515,432
Area 6	2,258,292
Area 7	1,196,595
Area 8	1,449,163
Total	16,401,310

3. RIPRAP:

RIPPRAP INDICATED ON THE DRAWING WOULD BE CONSTRUCTED AS PERMANENT SHORELINE PROTECTION. RIPRAP WOULD BE UNDERLAIN WITH GEOTEXTILE FABRIC. RIPRAP WOULD HAVE A THICKNESS OF 2 FEET AND BE AROUND 16.5 FEET FROM THE SHORELINE. RIPRAP WOULD BE PLACED UNDERNEATH ROADS IN THE AREAS INDICATED. THE SHORELINE FROM ELEVATION +4.5 FT NAVIGABLE DOWN TO ELEVATION 0 FT T. NAVD83.

ESTIMATED GEOTEXTILE QUANTITY IS 4,575 SY AND ESTIMATED RIPRAP QUANTITY OF 2,240 CY OR 3,109 TONS.

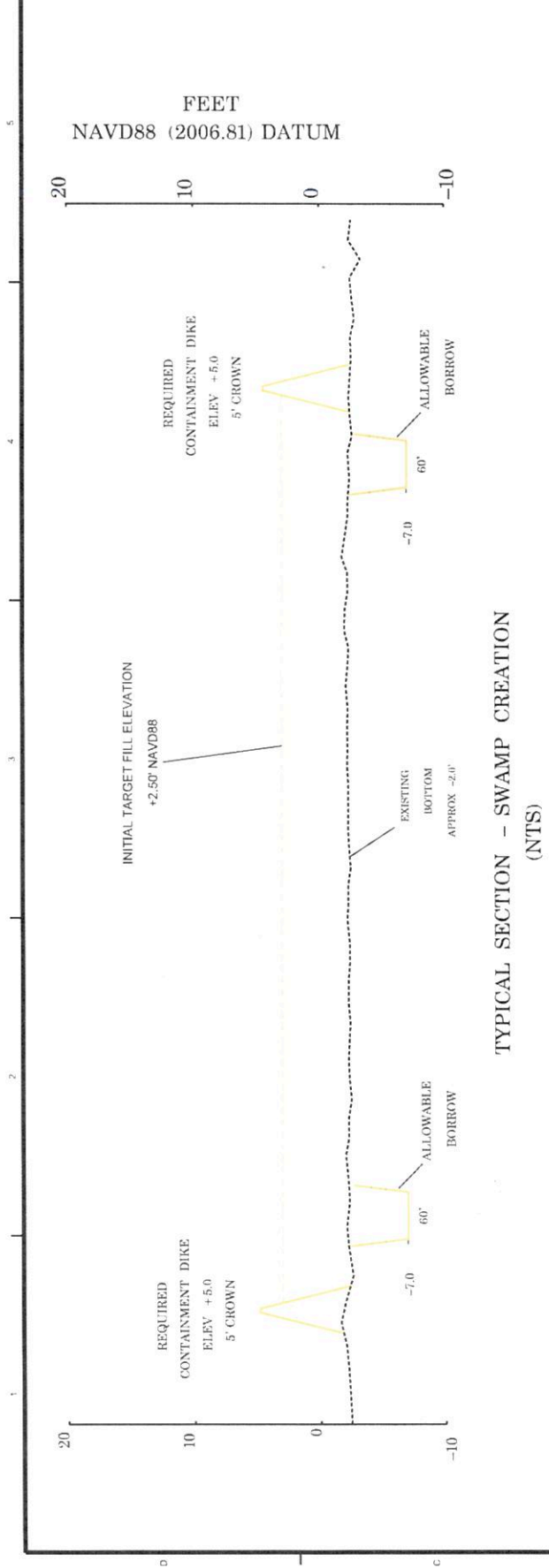


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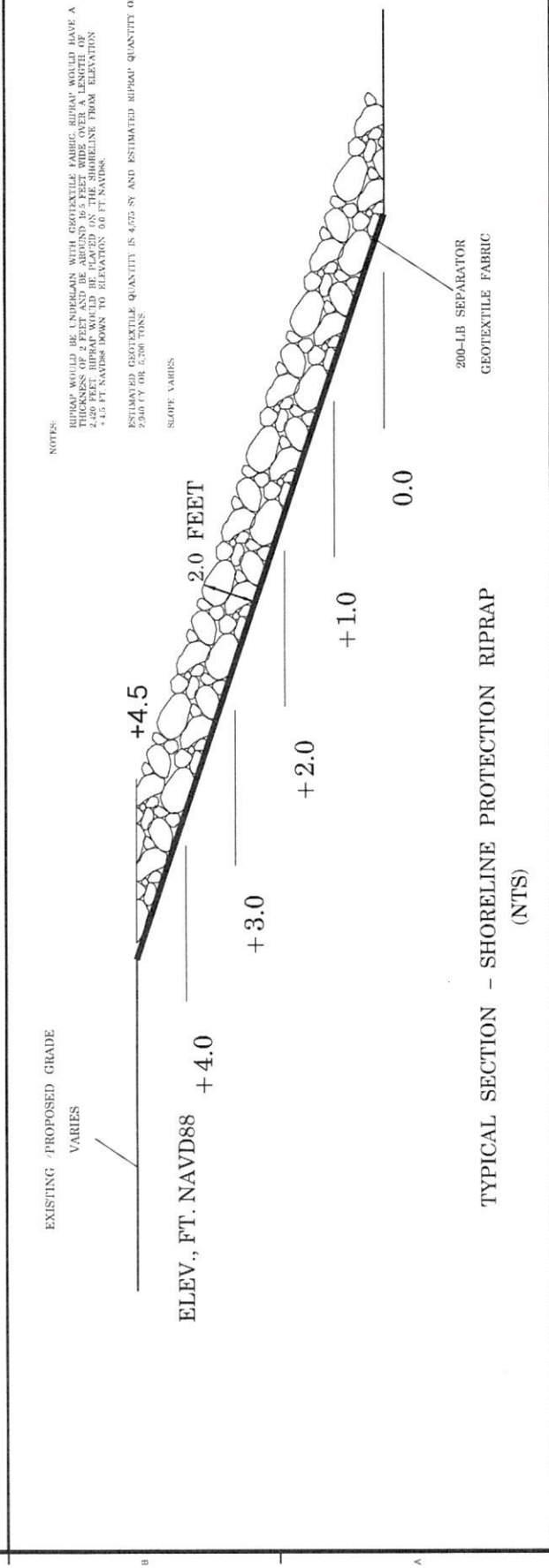
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U.S. ARMY CORPS OF ENGINEERS
 SWAMP RESTORATION
 ST. TAMMANY PARISH, LA
 PINE ISLAND MITIGATION SITE
 TYPICAL MITIGATION AREA AND RIPRAP CROSS SECTIONS

SHEET IDENTIFICATION
C-02



TYPICAL SECTION - SWAMP CREATION
 (NTS)



TYPICAL SECTION - SHORELINE PROTECTION RIPRAP
 (NTS)

NOTES:
 RIPRAP WOULD BE SUBGRANULAR WITH CONTAINABLE FINEST. RIPRAP WOULD HAVE A THICKNESS OF 2 FEET AND BE AROUND 16.5 FEET WIDE OVER A LENGTH OF 2.0 FEET. RIPRAP WOULD BE PLACED ON THE SHOULDER FROM ELEVATION +4.5 FT NAVD88 DOWN TO ELEVATION 0.0 FT NAVD88.
 ESTIMATED GEOTEXTILE QUANTITY IS 4,075 SQ YD AND ESTIMATED RIPRAP QUANTITY OF 2,840 CU YD OR 2,500 TONS.
 SLOPE VARIES



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

REPLY TO
ATTENTION OF

November 15, 2019

Regional Planning and Environment
Division South

Project Name: Bipartisan Budget Act (BBA) 18 Mitigation for Construction Projects, West Shore Lake Pontchartrain, Comite River Diversion, and East Baton Rouge Flood Risk Management. BBA Mitigation EA #576

Mr. David Bernhart
NMFS - Protected Resources Division
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701

Dear Mr. Bernhart,

The U.S. Army Corps of Engineers (Corps) is preparing an Environmental Assessment for the BBA Construction Projects Mitigation. The proposed project includes the conversion of shallow ponds just north of Lake Pontchartrain using material dredged and pumped from Lake Pontchartrain. Lake Pontchartrain is located north of the greater New Orleans area. The proposed project is located in Madisonville, St Tammany Parish, LA. Specifically, the project is located at 30°23'50.55"N, 90°13'10.16"W.

The Corps has determined that the proposed project may affect but is not likely to adversely affect (NLAA) federally-listed species and their designated critical habitat, as described below, and is therefore requesting concurrence with our determination pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1536), and the consultation procedures at 50 C.F.R. Part 402.

Pursuant to our request for informal consultation, the Corps is providing, enclosing, or otherwise identifying the following information:

- A description of the action to be considered;
- A description of the action area;
- A description of any listed species or designated critical habitat (DCH) that may be affected by the action; and
- An analysis of the potential routes of effect on any listed species or DCH.

1. PROPOSED ACTION

a. Description of the proposed action:

General:

The proposed project involves creation of up to a total of approximately 1,965 acres of swamp habitat over eight separate mitigation areas as compensatory mitigation for some of the swamp impacts resulting from construction of BBA projects. The swamp creation areas (mitigation areas) would be located in open water areas around Milton Island on the north shore of Lake Pontchartrain. This site is located southwest of the town of Madisonville adjacent to the Tchefuncte River in St. Tammany Parish.

Required earthwork prior to dredging would first consist of containment dike construction or rehabilitation around the perimeter of each of the eight mitigation areas. The crest elevation of these dikes would be approximately 5.0 feet NAVD88 and each dike would have a 5-ft wide crown. Existing material within each mitigation area would be used to construct or rehabilitate the containment dikes. Temporary submerged pipelines would be placed on the bottom of the canals that run between the mitigation areas as well as underneath the roads separating them as indicated on the attached drawing. Following dike construction and installation of the temporary pipelines, a cutterhead dredge would hydraulically place material (sediment) from within the borrow area indicated on the attached drawing into the mitigation areas using the shown pipeline routes. After filling the mitigation areas is complete, a one-year settlement period would pass prior to degrading the containment dikes and planting the mitigation areas. The temporary pipelines would be removed after pumping of dredged materials into the mitigation areas is complete.

Earthwork would also include building a permanent shoreline protection rip-rap feature (approximate center 30°23'18.75"N, 90°11'50.84"W) along an approximately 2,420-ft stretch of Lake Pontchartrain shoreline adjacent to Mitigation Area 7 which will be underlain with separator geotextile fabric.

After the end of the fill settlement period in the 8 mitigation areas and after the containment dikes are degraded to match the average fill elevation in each mitigation area, native canopy and midstory plants typical of swamp habitats would be installed in mitigation Areas 1 – 8. Swamp species that may be planted include bald cypress, tupelo gum, green ash, Drummond red maple, bitter pecan, buttonbush, swamp privet, possumhaw, and roughleaf dogwood.

The approximate maximum planted acreage within the proposed mitigation areas would be as follows:

Mitigation Area	Area (Acres)	Approx Center Coordinates
Area 1	218	30°24'24.54"N 90°13'50.09"W
Area 2	262	30°23'54.21"N 90°14'2.49"W
Area 3	524	30°23'21.18"N 90°13'41.01"W
Area 4	226	30°23'38.99"N 90°12'53.38"W
Area 5	72	30°23'55.62"N 90°12'45.23"W
Area 6	337	30°23'56.07"N 90°12'6.05"W
Area 7	142	30°23'30.74"N 90°11'57.48"W
Area 8	184	30°24'20.66"N 90°12'1.20"W
Total	1,965	

Proposed Planting:

Assumed total plantings within the swamp mitigation areas (approximate):

Mitigation Area	Canopy Seedlings	Midstory Seedlings
Area 1	118,810	29,648
Area 2	142,790	35,632
Area 3	285,580	71,264
Area 4	123,170	30,736
Area 5	39,240	9,792
Area 6	183,665	45,832
Area 7	77,390	19,312
Area 8	100,280	25,024
Total	1,070,925	267,240

Assume swamp canopy plant species would be installed on an 8ft by 10ft grid (545 seedlings per acre)

Assume swamp midstory plant species would be installed on a 16ft by 20ft grid (136 seedlings per acre)

Mowing poles (PVC pipes extending roughly 6 feet above grade) would be installed on each planted row every 50' to 100' to guide mowing operations.

Dike Construction/Rehabilitation:

Total perimeter retention would be required to retain dredged material and to allow for vertical accretion. The total length of each mitigation area which would require dike construction, rehabilitation, or lifting would be as follows:

Mitigation Area	Perimeter (ft)
Area 1	14,925
Area 2	22,366
Area 3	22,132
Area 4	19,090
Area 5	9,050
Area 6	16,948
Area 7	12,343
Area 8	30,628
Total	147,482

Any existing features such as existing perimeter dikes, access roads, and or ridges would be used for retention of dredged material. If dike rehabilitation is required, material for dike maintenance would come from within the proposed footprint of the swamp sites.

Existing dikes would be used to the extent practical. The retention dikes would be constructed to elevation 5.0 feet NAVD88, with a 5'-wide crown to assure dike integrity. The borrow ditch in each mitigation area used to obtain material for the retention (containment) dikes would be offset a minimum of 40' from each dike to assure dike stability. The borrow ditches would be on the interior side of the dikes (e.g. within the limits of the mitigation areas).

Plugs (undisturbed areas) would be left in the borrow ditch at 1,000- foot intervals to minimize water flow and material loss during pumping operations. Spill boxes and/or weirs would be constructed at locations along the northern and western retention dikes as necessary to allow for effluent water release from within the swamp creation areas for approximately one year after construction, when the perimeter dikes are breached and degraded. If deemed necessary by the construction contractor, a low-level interior weir or baffle dikes would be constructed to assist in vertical stacking of dredged

material. The gaps would be spaced with care being taken to locate gaps at existing natural bayous, canals, or other openings. The gaps would require a 25-foot wide bottom at approximately elevation 0.0 feet NAVD88 (lower limit of existing nearby marsh platform) to assure water interchange with the existing marsh.

Rip-Rap Construction:

On the Lake Pontchartrain shoreline of Mitigation Area 7, a 2,240-ft long stretch of shoreline covering approximately 0.93 acres would be reinforced with a stone bank rip-rap. This rip-rap would be two feet thick and be placed on the graded shoreline from elevation 0' up to elevation 4.5'. This two-foot thick rip-rap would be underlain with a 200 pound separator geotextile fabric. Total estimated geotextile fabric quantity for this rip-rap construction is 4,575 square yards and the estimated stone quantity is 5,700 tons or 2,940 cubic yards.

Dredging:

A hydraulic cutterhead dredge would be used to pump approximately 16.4 million cubic yards of material via a pipeline from the proposed 2,238 acre borrow site in Lake Pontchartrain to the swamp creation sites. Initial elevation for dredge fill within each mitigation area would be to approximate elevation 2.5 feet NAVD88, with the goal of ultimately resulting in a final target swamp elevation of approximately 2.0 feet. The maximum allowable dredging depth within the borrow site would be -19 feet NAVD88 plus a 1-foot allowable overdepth to account for inaccuracies in the dredging process.

Three 75-ft corridors are indicated on the drawing and run from the borrow site into Mitigation Areas 4 and 7 have been established to place 34" steel pipe for pumping material from the proposed borrow site to the mitigation areas. The first pipeline corridor runs down the middle of the entrance channel to the east of Milton Island and to the east of an area indicated to be a shell reef site. All activities related to this proposed work would avoid this area. All pipeline corridors would be placed and located in a manner which does not impact existing wetlands.

The estimated quantities required to achieve the initial target fill elevation of 2.5ft NAVD88 within the eight mitigation areas are as follows:

Mitigation Area	Fill Quantity (Cubic Yards)
Area 1	1,809,900
Area 2	2,205,053
Area 3	4,257,765
Area 4	1,900,702
Area 5	625,541
Area 6	2,756,592
Area 7	1,196,595

Area 8	1,649,163
Total	16,401,310

Duration:

Per the project delivery team (PDT), the assumed start date for construction is 1 June 2020. Necessary dike construction and initial pumping of sediment into the mitigation areas would be completed around June 2021. After a year-long settlement period, degrading of dike would begin in June 2022 and be completed no sooner than March 2023. Initial planting activities would likely be conducted in November 2023 through mid-March 2024. Notice of Construction Completion (NCC) would be issued soon after completion of the initial planting event.

Monitoring to determine success of the initial plantings would likely occur in October 2024 with the report submitted in December 2024. If this monitoring showed success criteria had been satisfied, a second monitoring event would likely occur in October 2025 with the report submitted in December 2025. Assuming this latter report showed applicable success criteria had been satisfied, the overall project would be turned over to the Non-Federal Sponsor in approximately March 2026.

Site Access:

From the north, Guste Island Road runs between Areas 1 and 8. This road then splits into Grand Rue Port Louis Road which runs between Areas 4, 5, and 7. South Chenier Drive runs between Area 2 and Area 3. Access to the mitigation areas can also be made via the many canals that run between all the areas.

Staging:

Staging of equipment for initial dike construction activities and riprap construction would be via barge(s) on or near the Lake Pontchartrain shoreline as indicated on the attached drawing. The proposed staging areas would first be submitted for Government approval. It is assumed that staging of materials for the initial planting event would be within the mitigation areas themselves.

Maintenance/Management Activities:

After completion of all dike construction, dredge pumping, and soil preparation activities but prior to initial plantings, herbicides may be applied to the mitigation areas to help control invasive and nuisance plant species. The herbicide to be used would be specifically labeled for use in wetlands. Herbicide applications in the proposed mitigation site would be limited to ground applications and would be halted when wind speeds exceed 10 miles per hour to avoid drift. Use of herbicides outside the limits of the swamp restoration areas (mitigation areas) would be strictly prohibited as would be any disposal of herbicide containers other than in duly licensed upland disposal facilities

(off-site). Any herbicides used in the proposed project would be labeled for use in a manner that ensures no significant impacts to wildlife would occur.

Mowing may also be performed in the mitigation area during this time period. After the mitigation area is initially planted and before the success of these plantings is evaluated (monitored), herbicide applications and/or mowing may also occur to help suppress undesirable vegetation. Throughout this period, access/maintenance roads would be maintained as necessary as would be any new drainage features established.

The first monitoring event would occur in the fall of the year of the initial plantings. This report could show additional plantings are needed or it may not. Regardless, various mowing events and herbicide application events would take place during the period from the first monitoring event to the second monitoring event performed the next year. It is assumed that the second monitoring event would show success criteria for the plantings had been achieved as were success criteria about control of invasive and nuisance plants. It is also assumed this monitoring event would show the success criterion established for the final soil surface elevation in the mitigation areas had been achieved. In this case, the Non-Federal Sponsor would take over the project including all management and maintenance work.

Equipment:

Equipment to be used for the respective work is assumed as follows:

Dike Construction: Excavators, marsh buggies, airboats

Dredge Pumping: Cutterhead dredge, tugs, crewboats, pipeline (steel, and rubber), derricks, barges, up to D-8 dozers, excavators, front-end loaders, marsh buggies, airboats, marsh masters

Rip-rap Construction: Excavators, scows, barges, up to D-8 dozers, front-end wheel loaders, marsh buggies

Planting Preparation: Tractor with harrow and scarifier, bulldozers, and backhoe.

Planting: Pickup trucks, ATVs and/or UTVs, and marsh buggies.

Potential work vessels that would be utilized during construction are:

- One or two Crewboats making two round trips per day to the dredge
- One Survey boat
- Two to three tug boats with max speed of 15 knots
- One anchor barge
- One supply barge
- One derrick barge

b. Description of the project purpose:

The purpose of the proposed action is to compensate for swamp habitat loss incurred during construction of the West Shore Lake Pontchartrain flood risk management project. The proposed mitigation would replace the lost functions and services of the impacted habitat through restoration activities designed to create/increase/improve the habitat functions and services at the Pine Island project location.

There was a very similar project in this same exact area constructed 2015-2017. The purpose of that project was to compensate for marsh habitat loss incurred during construction of the Lake Pontchartrain and Vicinity Hurricane Storm Risk Reduction System. It was a smaller project, approximately 132 acres, with a smaller borrow site. However, impacts to listed species would be the same among both projects. Consultation with NMFS was completed on September 8, 2014 (SER-2014-13425).

c. Description of minimization measures:

To reduce impacts further a cutterhead dredge would be utilized to remove borrow material from the designated borrow area. This equipment is slower moving and has not been identified as equipment that would impact Gulf sturgeon. Additionally, in project areas the bucket drop procedure will be utilized. The bucket drop procedure was developed by the USFWS, which involves dropping the bucket into the water and retrieving empty one time prior to starting work. After the bucket has been dropped and retrieved, a one-minute no work period would be observed. During this no work period, personnel shall carefully observe the work area in an effort to visually detect Gulf sturgeon. If sturgeons are sighted, no work dredging should be initiated until they have left the work area. If the water turbidity makes such visual sightings impossible, work may proceed after the one minute no work period. If more than fifteen minutes elapse with no dredging, then the empty bucket drop/retrieval process shall be performed again prior to work. The sea turtle and smalltooth sawfish construction conditions will also be applied to Gulf sturgeon.

CEMVN will adhere to the Measures for Reducing Entrapment Risk to Protected Species and the Sea Turtle and Smalltooth Sawfish Construction Conditions.

2. ACTION AREA

Pursuant to 50 C.F.R. § 402.02, the term *action area* is defined as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.” Accordingly, the action area typically includes the affected jurisdictional waters and other areas affected by the authorized work or structures within a reasonable distance. The ESA regulations recognize that, in some circumstances, the action area may extend beyond the limits of the Corps’ regulatory jurisdiction.

For the purposes of this consultation, the Corps has defined the action area to include the northwestern portion of Lake Pontchartrain, and the adjacent shallow pond areas within the wetlands just west of the Tchefunkte River and the mouth of the Tchefunkte

as shown in Figure 1. This boundary was determined as it encompasses the areas in which work vessels would travel, dredging operations would occur, pipeline would be laid and the swamp creation areas. The action area boundary was carried out ~1640 feet or more from the proposed borrow source.

Swamp creation site

The Swamp creation sites are shallow water ponds, averaging approximately 2 feet deep, cut off from the lake except during high water events. The composition of the substrates is mainly fine silty sediment. There may be some SAVs within the ponds, however, it is highly unlikely that any of the listed species would be found in the swamp creation areas due to such limited access.

Borrow site

The composition of the substrates is of clay and sand mixture, water depth is approximately 10 feet, and with no or very little submerged aquatic vegetation (SAV). Due to the lack of foraging habitat, the borrow area would be utilized as a migration route for the species listed in this letter. The Gulf sturgeon and listed sea turtles would likely avoid the immediate area due to construction activities. In a study by Clarke (2002), cutterhead sounds peaked at 100-110 dB in the frequency range of 70-1000 Hz and were inaudible at ~500 m from the source. And so therefore the Corps determined there wouldn't be any direct or indirect impacts to any listed species beyond the action area.



Figure 1. Swamp Creation Sites (Magenta), Borrow Site (Blue) Action Area (green)

3. AFFECTED SPECIES

Of the listed species occurring in St. Tammany Parish, only the Kemp's ridley, loggerhead, and green sea turtles and Gulf sturgeon are expected to potentially be found in the proposed borrow area in Lake Pontchartrain. However, it would be highly unlikely that any of the listed species would be found in the proposed swamp mitigation project area due to very shallow water and extremely limited access. All of these species are typically found in deeper water where they are able to maneuver and forage effectively.

Project activities have the potential to affect the listed species as shown in Table 1 below.

Table 1: Species in the action area

Species	ESA Listing Status	Listing Rule/Date	Most Recent recovery plan date	USACE Effect Determination (Species)
Green sea turtle ¹	T	81 FR 20057/ April 6, 2016	October 1991	NLAA
Kemp's ridley sea turtle	E	35 FR 18319/ December 2, 1970	September 2011	NLAA
Loggerhead sea turtle ²	T	76 FR 58868/ September 22, 2011	January 2009	NLAA
Gulf sturgeon	T	56 FR 49653/ September 30, 1991	September 1995	NLAA

Green, Kemp's ridley, and Loggerhead Sea Turtles

The three species of threatened or endangered sea turtles that could potentially occur in Lake Pontchartrain have a similar appearance, though they differ in maximum size and coloration. The Kemp's ridley is the smallest sea turtle – adults average about 100 pounds with a carapace length of 24 to 28 inches and a shell color that varies from gray in young individuals to olive green in adults. The loggerhead sea turtle is the next largest of these three species – adults average about 250 pounds with a carapace length of 36 inches and a reddish brown shell color. The green sea turtle is the largest of these three species – adults average 300 to 350 pounds with a length of more than 3 ft and a brown coloration (its name comes from its greenish colored fat). There have been no documented nesting activity along Lake Pontchartrain therefore it is unlikely the nesting activities of these three species would be impacted as all three species nest on sandy beaches, which are minimal in Lake Pontchartrain. The life stages that may occur in Lake Pontchartrain range from older juveniles to adults.

Gulf Sturgeon

¹ North Atlantic and South Atlantic DPS

² Northwest Atlantic Ocean DPS

The Gulf sturgeon was federally listed as threatened throughout its range on September 30, 1991. The Gulf sturgeon is an anadromous fish that migrates from salt water into coastal rivers to spawn and spend the warm summer months. Subadults and adults typically spend the three to four coolest months of the year in estuaries or Gulf of Mexico waters foraging before migrating into the rivers. This migration typically occurs from mid-February through April. Most adults arrive in the rivers when temperatures reach 70 degrees Fahrenheit and spend 8 to 9 months each year in the rivers before returning to estuaries or the Gulf of Mexico by the beginning of October.

Prior to the listing of the species, Davis et al. (1970) reported the collection of Gulf sturgeon from Lake Pontchartrain during a LDWF anadromous fish survey from 1966 to 1969. From 1988 to 1999, LDWF, through various means and studies, captured and recorded at least 60 Gulf sturgeon throughout Lake Pontchartrain, Lake Catherine, the Rigolets and Lake Borgne. A LDWF trammel net study conducted by Inland Fisheries Division in the spring of 2001 resulted in the capture of three young of the year juvenile sturgeon at the intersection of the East Pearl River and Little Lake. In 2002, LDWF Seafood Division reported the capture of a Gulf sturgeon in one of their gill nets while sampling in a cove west of Alligator Point, Lake Borgne. Bycatch of Gulf sturgeon has been reported by several recreational and commercial fishermen within these waters. A total of 177 Gulf sturgeon, measuring up to 7.2 feet in length and weighing from 2 to 152 lbs, were captured in these lakes and in the Rigolets from October 1991 to September 1992 (Rogillio, 1993). Reynolds (1993) reported that sturgeon measuring up to 7.2 feet in length and weighing up to 258 lbs were incidentally caught by shrimp trawlers, netters, and recreational anglers from 1889 to 1993 in Lake Pontchartrain.

4. ROUTE(S) OF EFFECT TO SPECIES:

Effects to Green, Kemp's ridley, and Loggerhead Sea Turtles

Effects to sea turtles include the risk of direct physical impact from dredging and other in-water construction activities. We believe the risk of physical injury is discountable due to the species' ability to move away from the project site and into adjacent suitable habitat, if disturbed. NMFS has previously determined in dredging Biological Opinions that, while oceangoing hopper-type dredges may lethally entrain protected species, including sea turtles, non-hopper-type dredging methods, such as the cutterhead dredge proposed in this project, are slower and extremely unlikely to overtake or adversely affect them (NMFS 2007). Additionally, the Corps's implementation of NMFS's Sea Turtle and Smalltooth Sawfish Construction Conditions will require all construction workers to observe in-water related activities for the presence of listed sea turtles. If a sea turtle is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle. Operation of any mechanical construction equipment shall cease immediately if a sea turtle is seen within a 50-foot radius of the equipment. Activities may not resume until the species has departed the project area of its own volition. Further, construction would be limited to daylight hours,

which will assist construction workers in seeing listed species and, if present, avoiding interactions with them.

Sea turtles may be entangled by in-water lines and other in-water equipment. However, we believe the effects to sea turtles from entanglement will be discountable because the following measures are included as part of the proposed action. All in-water lines and other in-water equipment must be properly secured with materials that reduce the risk of entanglement of marine species. In-water lines (rope, chain, and cable) must be stiff, taut, and non-looping. Examples of such lines are heavy metal chains or heavy cables that do not readily loop and tangle. Flexible in-water lines, such as nylon rope or any lines that could loop or tangle, must be enclosed in a plastic or rubber sleeve/tube to add rigidity and prevent the line from looping and tangling. In all instances, no excess line is allowed in the water. In-water lines and other in-water equipment must be placed in a manner that does not entrap species within the project area or block access for them to navigate around the project area.

Sea turtles might be adversely affected by their inability to access the project area for foraging, refuge, and/or nursery habitat, due to their avoidance of construction activities, related noise, and physical exclusion from the project area due to blockage by turbidity curtains (if used, although unlikely). We have determined that these effects will be insignificant. The site does not contain any structure that could be used by sea turtles for shelter. Sea turtles may forage in the area but the size of the area from which animals will be excluded is relatively small in comparison to the available similar habitat nearby. In addition, any disturbances to listed species would be temporary, limited to (12 months) of in-water construction, after which the site conditions are expected to return to background levels and animals will be able to return.

Sea turtles may be affected by the permanent removal of habitat, which can serve as forage resources. However, this effect will be insignificant, given the availability of similar resources nearby.

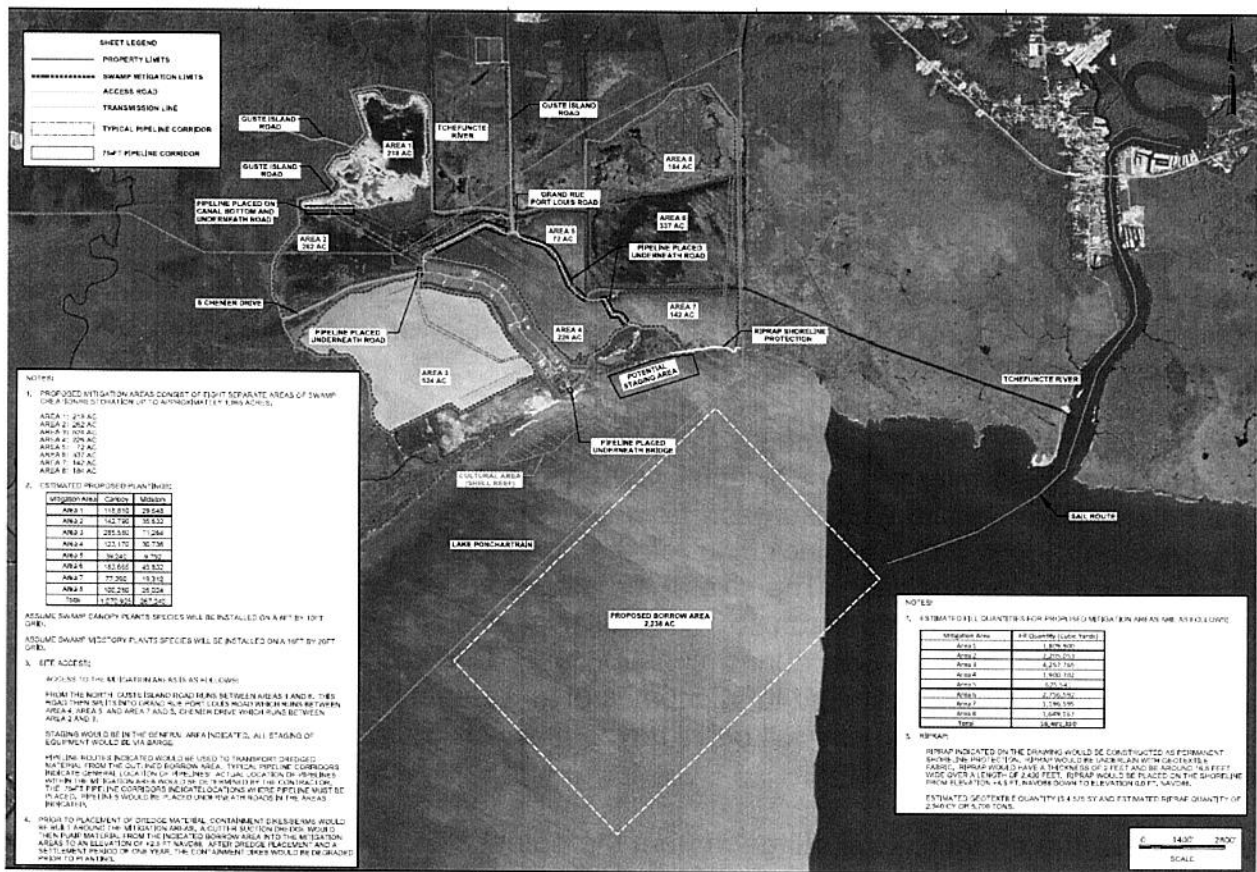


Figure 2. Project components (pipeline, green)

Effects to Gulf Sturgeon

Hypoxic and anoxic conditions can occur in deep borrow pits that have a tendency to accumulate organic material. This accumulation would be reduced for the Pine Island swamp creation project by: 1) limiting the depth of the pit; 2) increasing the pits surface area; and 3) decreasing side-slopes that transition from the pit to adjacent water bottoms. A shallow and broad “pan-shaped” borrow pit has been designed for this project to facilitate circulation with adjacent waters, thereby decreasing the likelihood that organic material would become entrained, as well as allow for periodic flushing of the pit during storm events.

The proposed borrow plan has been developed with an emphasis of mimicking a natural depression in the lake bottom and in line with designs discussed above. A gradual side slope of 1V:3H has been designed for the borrow pit. This gradual slope would facilitate tidal flushing and the size of the surface area would facilitate tidal mixing of the water column. Borrow pit depth would be kept to 10-11 feet below lake bottom.

Gulf sturgeon may be physically injured if struck by construction equipment, vessels, or materials. This effect is discountable due to the ability of the species to move away from the project site if disturbed. Gulf sturgeon are mobile and are able to avoid

construction noise, moving equipment, and placement or removal of materials during construction.

Gulf sturgeon may be physically injured if struck or entrained during dredging. This is extremely unlikely to occur due to the species' mobility and the type of dredge used for this project, therefore the effect is discountable. NMFS has previously determined in dredging Biological Opinions (e.g., (NMFS 2007)) that, while ocean-going hopper-type dredges may lethally entrain sturgeon, non-hopper type dredging methods, such as the cutterhead dredging method used in this project, are slower and extremely unlikely to adversely affect Gulf sturgeon.

Use of turbidity curtains (although unlikely), the construction activities, and related construction noise may prevent or deter Gulf sturgeon from entering the project area. We believe the effect to Gulf sturgeon from temporary exclusion from the project area due to construction activities, including related noise and presence of turbidity curtains (if used), will be insignificant. The size of the area from which animals will be excluded is relatively small in comparison to the available similar habitat nearby, which Gulf sturgeon will be able to use during construction. Disturbances and loss of habitat access will be temporary, limited to 12 months of in-water construction. After the project is completed, turbidity curtains will be removed and Gulf sturgeon will be able to return to the project area.

We believe the effect to Gulf sturgeon from the potential loss of foraging habitat due to dredging will be insignificant. Gulf sturgeon are opportunistic feeders that forage over large areas and will be able to locate prey beyond the small relatively dredging footprint (2,238 acres). Also, impacts to foraging resources from dredging are temporary since benthic invertebrate populations in dredged areas have been observed to recover in 3-24 months after dredging (Culter and Mahadevan 1982; Saloman et al. 1982; Wilber et al. 2007).

5. ROUTES OF EFFECT TO CRITICAL HABITAT

The project is not located in designated critical habitat (DCH), and there are no potential routes of effect to any designated critical habitat.

6. DETERMINATION:

The Corps has reviewed the proposed project for its impacts to federally listed species. Based on currently available historical and catch data, a review of current literature and studies, and with the employment of avoidance measures recommended through guidelines set up during coordination with NMFS, including marine mammal entrapment measures and the sea turtle and smalltooth sawfish construction conditions, the Corps has concluded the project may affect but is not likely to adversely affect the species listed in Table 1 but will not affect any DCH. This analysis was prepared based on the best scientific and commercial data available.

The Corps is requesting National Marine Fisheries Service's (NMFS) written concurrence with these determinations. The Corps appreciates your cooperation in completing this informal section 7 consultation by concurring with the Corps' effect determination(s) a timely manner. If NMFS disagrees with the Corps' effect determination(s) and requests formal Section 7 consultation, please contact the below referenced Environmental Manager to discuss suggested modifications to the action to avoid potential adverse effects and NMFS' additional information needs. The Corps will continue to coordinate with NMFS office via email to provide the requested information and, if warranted, a revised effects determination.

The Finding of No Significant Impacts (FONSI) will not be signed and no contract for construction nor construction will begin until this ESA consultation is complete with your agency (CFR 402.12 (b)(2)).

Sincerely,



Marshall K. Harper
Chief, New Orleans District
Environmental Branch

Literature Cited

Clarke, D., Dickerson, C., and K. Reine 2002. "Characterization of underwater sounds produced by dredges. *Dredging 2002*, ASCE, Orlando, Florida, USA, p 64-81.

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USACE, 2014. "Programmatic Individual Environmental Report 36 Tiered Individual Environmental Report 1, Milton Island Marsh Restoration Project, Saint Tammany Parish, Louisiana

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
<https://www.fisheries.noaa.gov/region/southeast>

November 21, 2019

F/SER31:LW
SERO-2019-02308

Chief, Environmental Branch
New Orleans District Corps of Engineers
Department of the Army
7400 Leake Avenue
New Orleans, Louisiana 70118

Ref.: Bipartisan Budget Act 18 EA #576, Madisonville, St. Tammany Parish, Louisiana. – EXPEDITED

Dear Mr. Harper:

This letter responds to your November 15, 2019, request pursuant to Section 7 of the Endangered Species Act (ESA) for consultation with the National Marine Fisheries Service (NMFS) on the subject action.

We reviewed the action agency's consultation request document and related materials. Based on our knowledge, expertise, and the action agency's materials, we concur with the action agency's conclusions that the proposed action is not likely to adversely affect the NMFS ESA-listed species and/or designated critical habitat. This concludes your consultation responsibilities under the ESA for species and/or designated critical habitat under NMFS's purview. Reinitiation of consultation is required and shall be requested by the action agency or by NMFS where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) take occurs; (b) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in this consultation; (c) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not previously considered in this consultation; or (d) if a new species is listed or critical habitat designated that may be affected by the action.

We look forward to further cooperation with you on other projects to ensure the conservation of our threatened and endangered marine species and designated critical habitat. If you have any questions on this consultation, please contact Laura Wright, Consultation Biologist, at (727) 209-5977 or by email at laura.wright@noaa.gov.

Sincerely,

for David Bernhart
Assistant Regional Administrator
for Protected Resources

File: 1514-22.f.7



FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency) Date Of Land Evaluation Request

Name of Project BBA Construction Projects Mitigation Federal Agency Involved USACE

Proposed Land Use Conversion to Forested Wetlands County and State Louisiana St. Mary Ascension St. John
E. Feliciana E. St. James
St. Tammany Tangipahoa

PART II (To be completed by NRCS) Date Request Received By NRCS Person Completing Form: [Signature]

Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form) YES NO Acres Irrigated Average Farm Size

Major Crop(s) Farmable Land In Govt. Jurisdiction Amount of Farmland As Defined in FPPA
Acres: % Acres: %

Name of Land Evaluation System Used Name of State or Local Site Assessment System Date Land Evaluation Returned by NRCS

PART III (To be completed by Federal Agency) Alternative Site Rating

	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	3,268			
B. Total Acres To Be Converted Indirectly	—			
C. Total Acres In Site	3,268			

PART IV (To be completed by NRCS) Land Evaluation Information

- A. Total Acres Prime And Unique Farmland
- B. Total Acres Statewide Important or Local Important Farmland
- C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted
- D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value

PART V (To be completed by NRCS) Land Evaluation Criterion
Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)

Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	See Attached			
2. Perimeter In Non-urban Use	(10)				
3. Percent Of Site Being Farmed	(20)				
4. Protection Provided By State and Local Government	(20)				
5. Distance From Urban Built-up Area	(15)				
6. Distance To Urban Support Services	(15)				
7. Size Of Present Farm Unit Compared To Average	(10)				
8. Creation Of Non-farmable Farmland	(10)				
9. Availability Of Farm Support Services	(5)				
10. On-Farm Investments	(20)				
11. Effects Of Conversion On Farm Support Services	(10)				
12. Compatibility With Existing Agricultural Use	(10)				
TOTAL SITE ASSESSMENT POINTS	160				

PART VII (To be completed by Federal Agency)

Relative Value Of Farmland (From Part V)	100			
Total Site Assessment (From Part VI above or local site assessment)	160			
TOTAL POINTS (Total of above 2 lines)	260			

Site Selected: All sites Attached Date Of Selection July 8, 2019 Was A Local Site Assessment Used?
YES NO

Reason For Selection:

Name of Federal agency representative completing this form: Date:

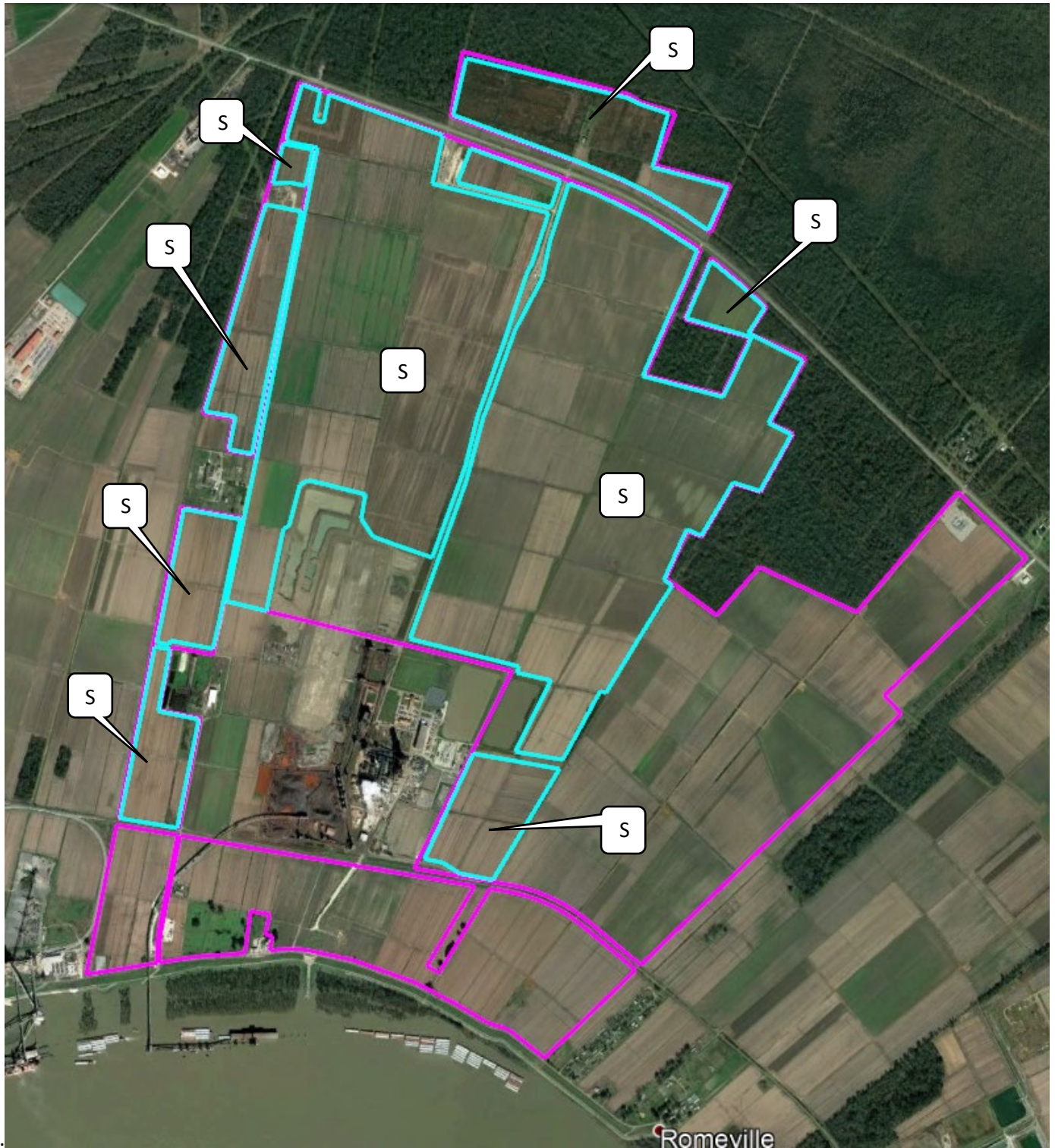
(See Instructions on reverse side)



PINE ISLAND (P1)

SWAMP: 1,946 acres (865 AAHUs)

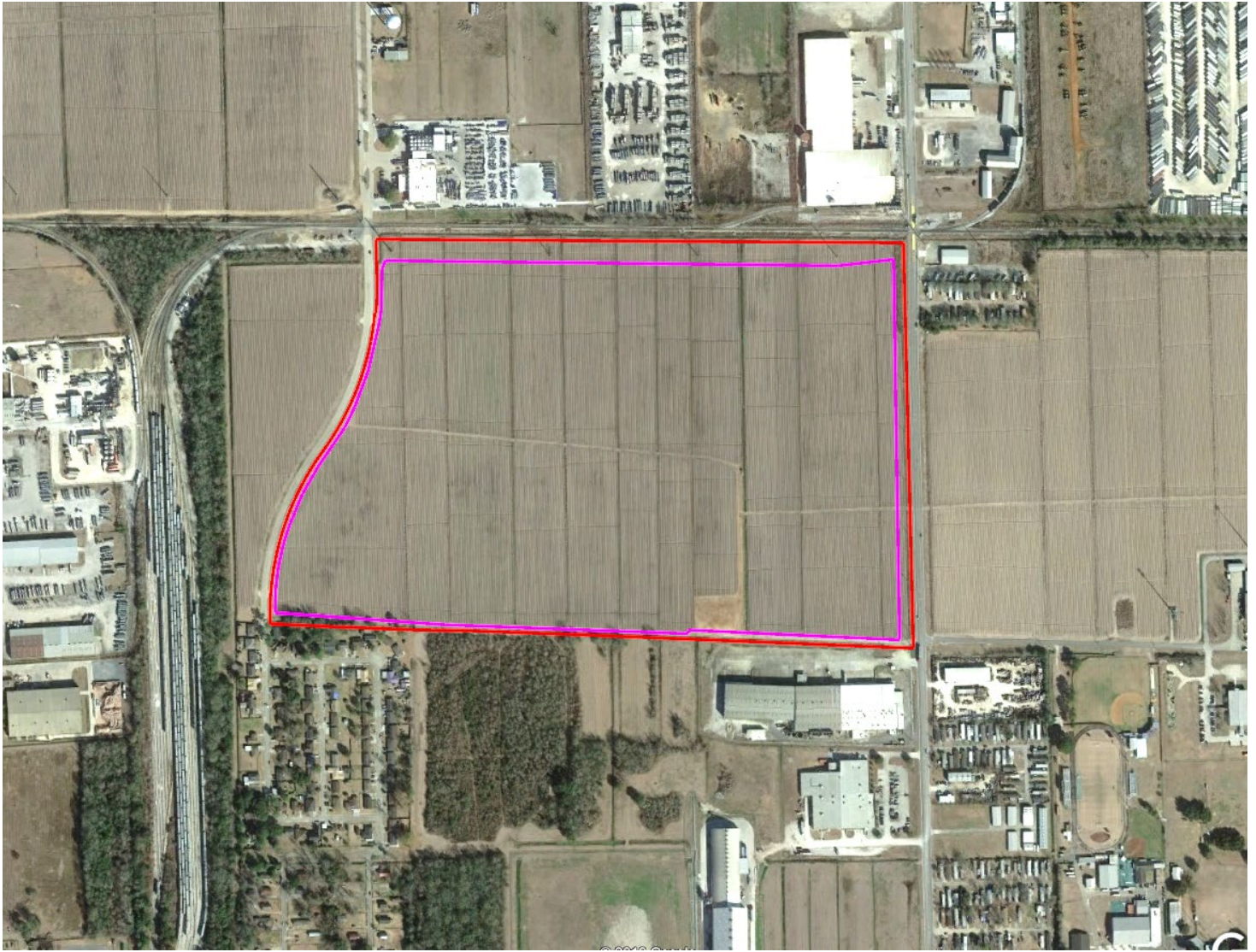
Not Prime Farmland



SAINT JAMES (P2)

SWAMP (S) = 1,246.6 acres (561 AAHUs) OR – All mitigation areas may be BLH restoration (685.6 AAHUs)

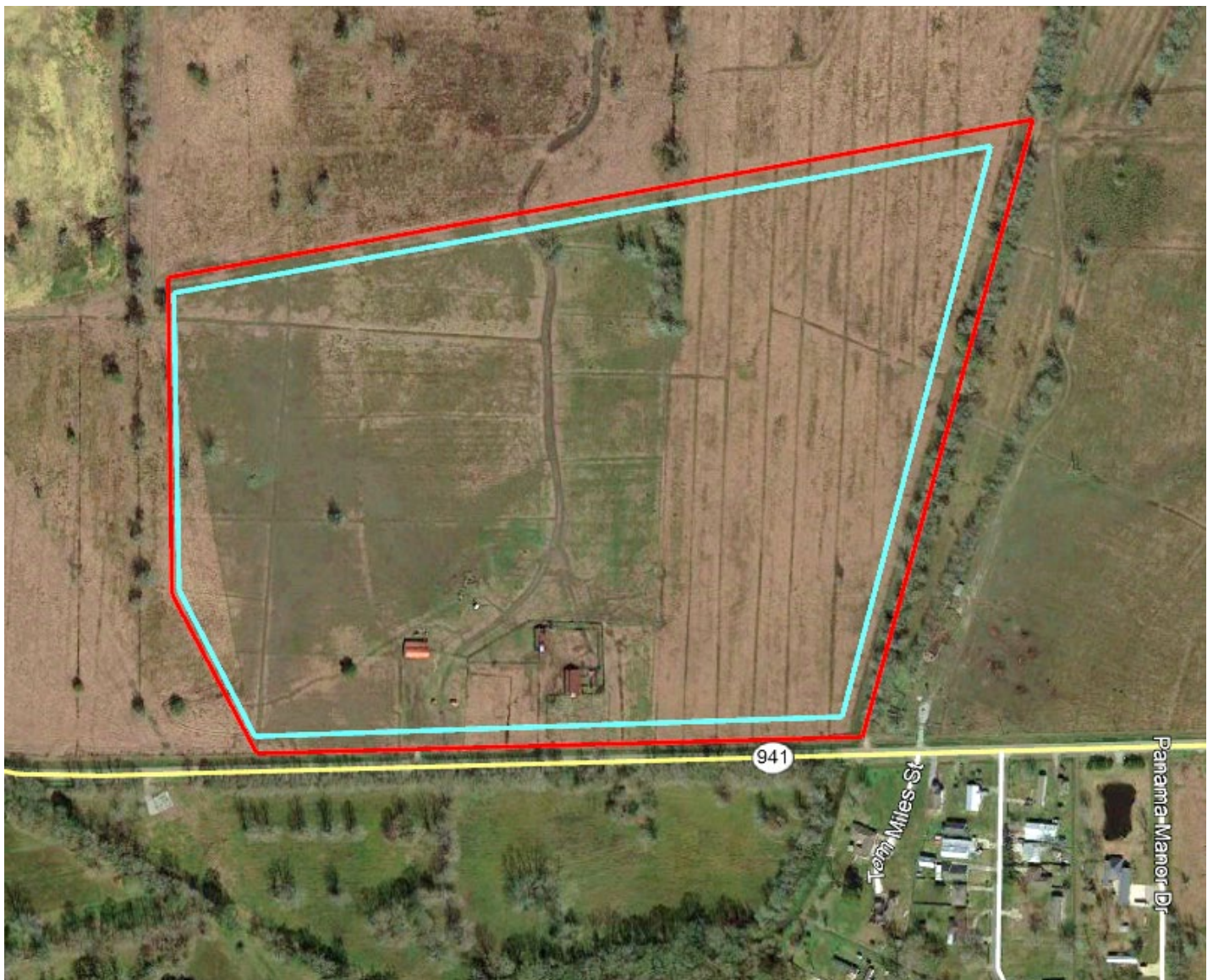
- | | |
|-------|--------|
| 1. 15 | 7. 10 |
| 2. 10 | 8. 10 |
| 3. 20 | 9. 5 |
| 4. 0 | 10. 15 |
| 5. 15 | 11. 10 |
| 6. 15 | 12. 0 |



SAINT JOHN (P3)

BLH = 94.7 acres (47 AAHUs)

1.15	7.0
2.10	8.10
3.20	9.5
4.0	10.15
5.15	11.10
6.15	12.0



ASCENSION SB (P6)

BLH = 56 acres (31 AAHUs)

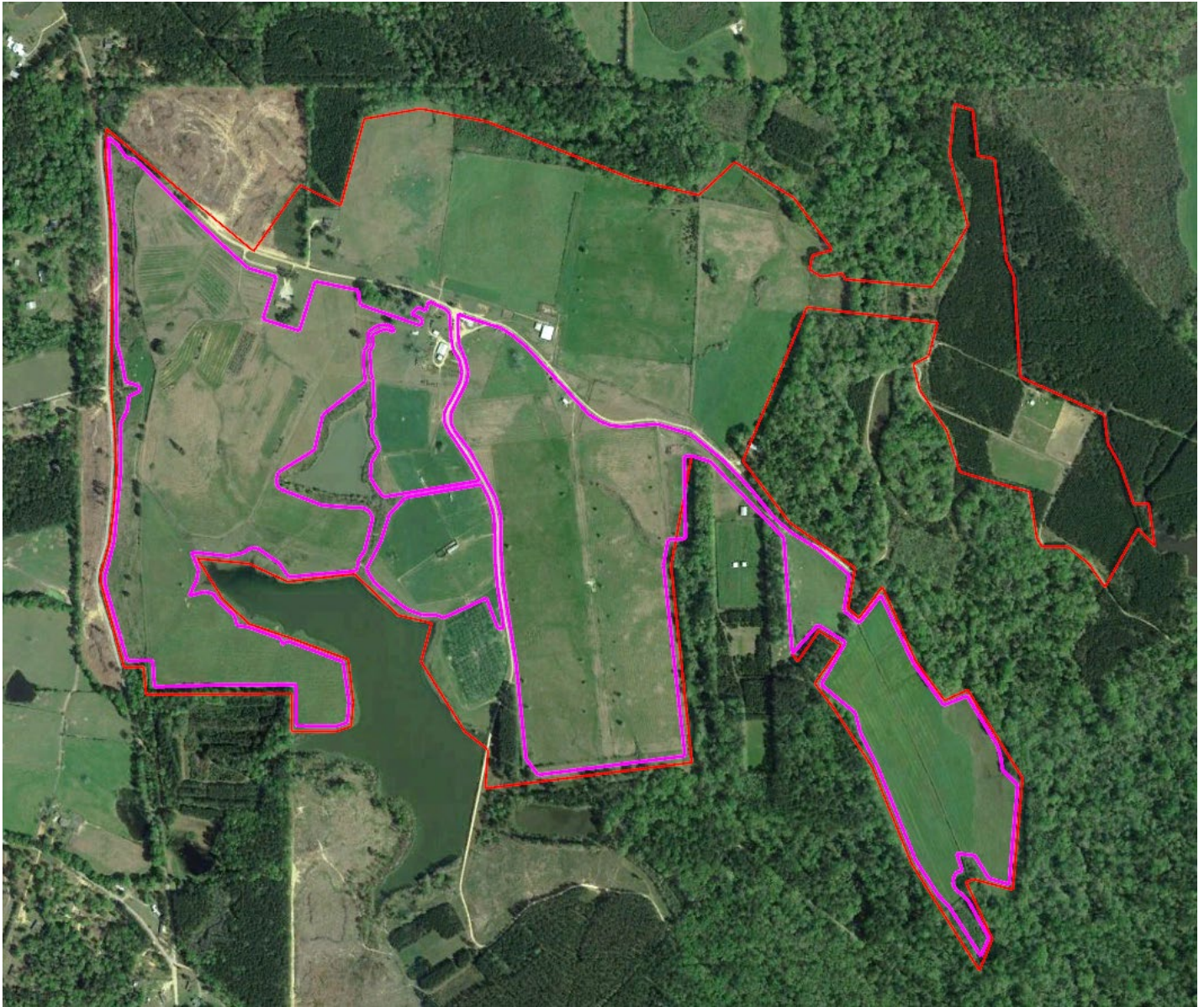
1.15	7.0
2.10	8.10
3.20	9.5
4.0	10.19
5.15	11.10
6.15	12.0



GBRPC (P10)

BLH = 135 acres (68 AAHUs)

1. 15	7. 10
2. 10	8. 10
3. 20	9. 5
4. 0	10. 15
5. 15	11. 10
6. 15	12. 0



FELICIANA (P12)

BLH = 267 acres (160 AAHUs)

1.15	7.7
2.10	8.10
3.20	9.5
4.0	10.16
5.15	11.10
6.15	12.0

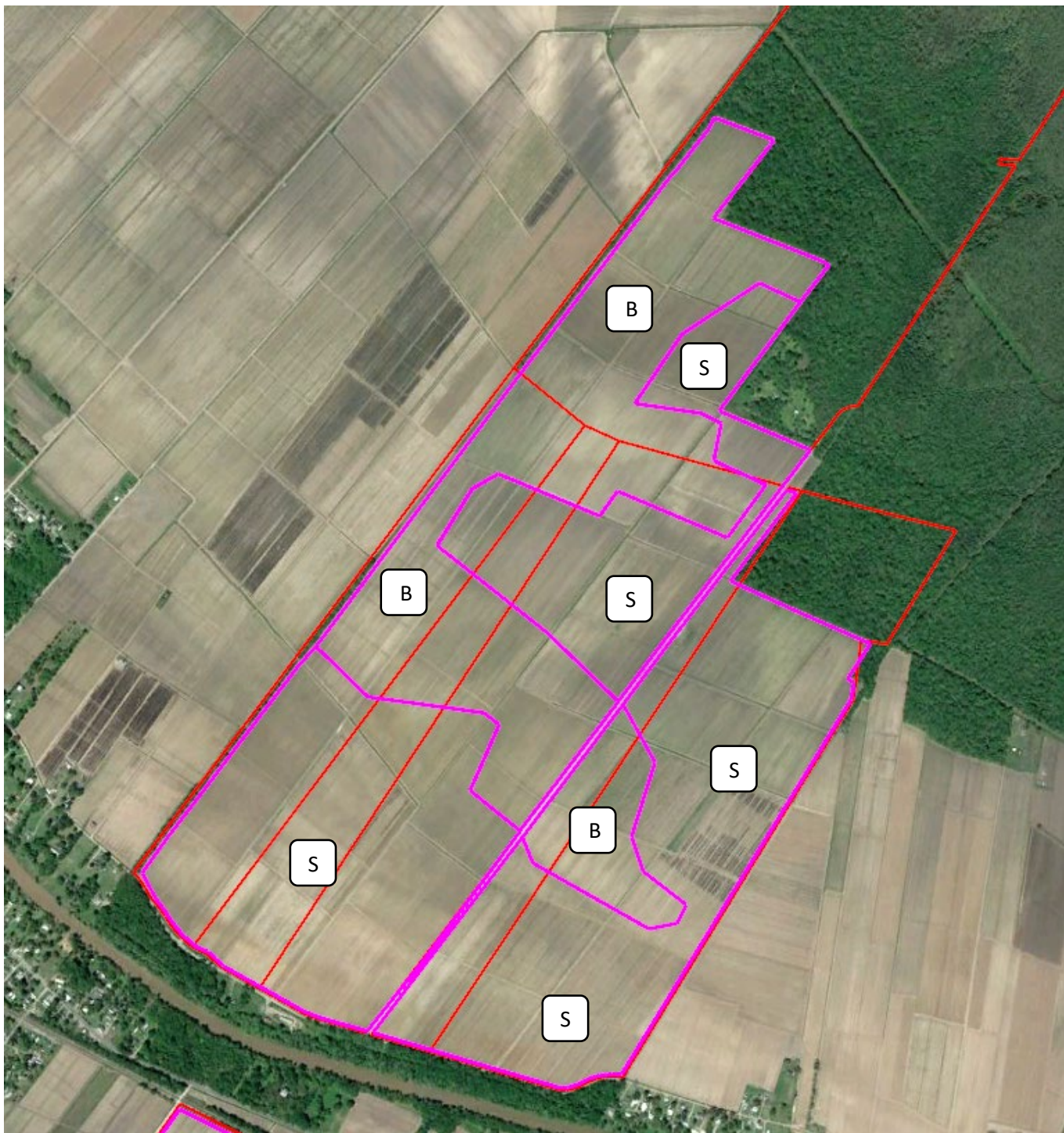


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JOYCE WMA (P14)

SWAMP = 1,126 acres, enhancement (338 AAHUs)

Not Prime Farmland

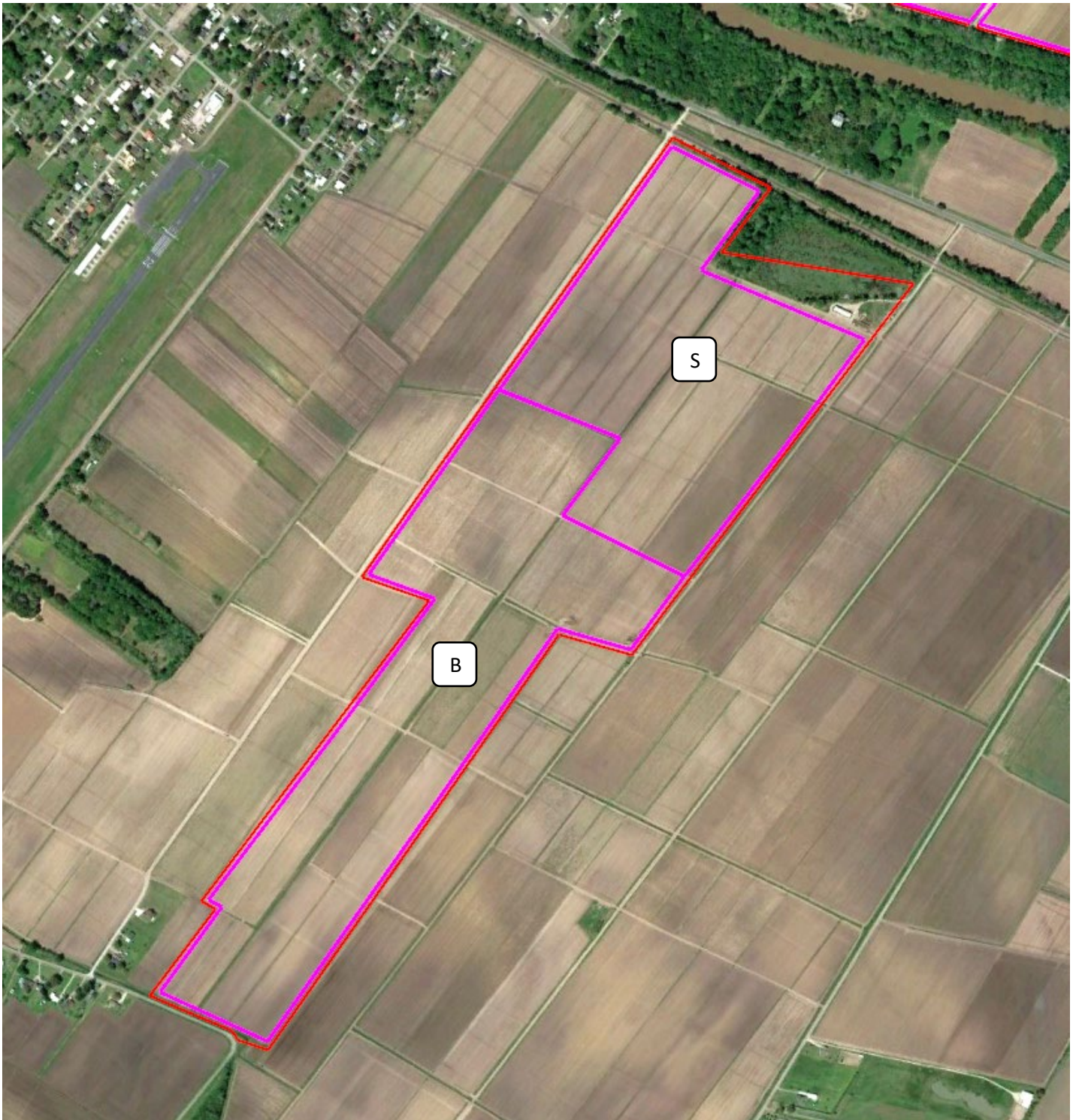


ALBANIA NORTH (V1)

SWAMP (S) = 633 acres (285 AAHUs)

BLH (B) = 332 acres (199 AAHUs)

1. 15	7. 5
2. 10	8. 10
3. 20	9. 5
4. 0	10. 12
5. 15	11. 10
6. 15	12. 0

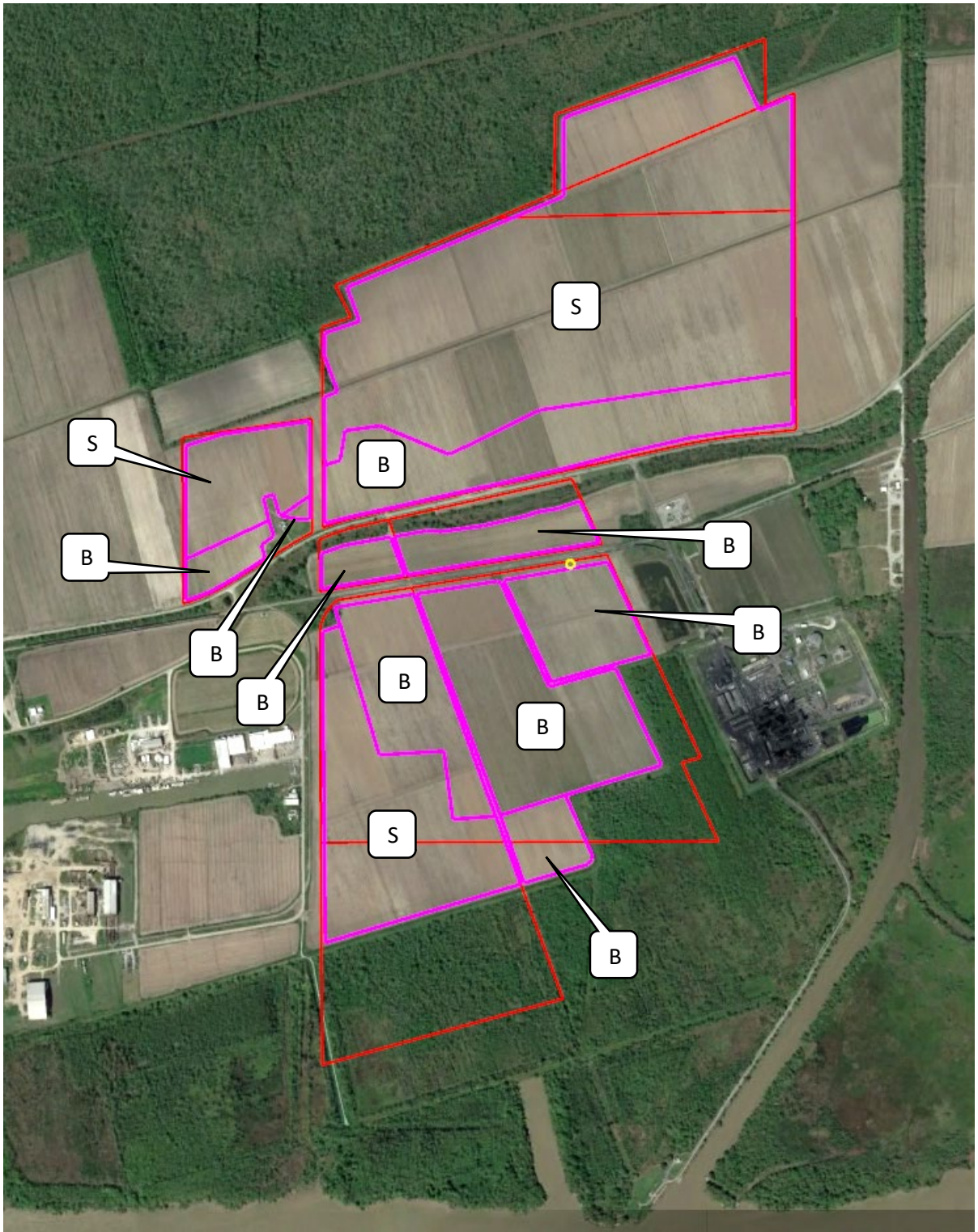


ALBANIA SOUTH (V2)

SWAMP (S) = 81 acres (32 AAHUs)

BLH (B) = 111 acres (61 AAHUs)

1. 15	7. 5
2. 10	8. 10
3. 20	9. 5
4. 0	10. 12
5. 15	11. 10
6. 15	12. 0



COTE BLANCHE (V3)

SWAMP (S) = 279 acres (126 AAHUs)

BLH (B) = 168 acres (92 AAHUs)

1. 15	7. 5
2. 10	8. 10
3. 20	9. 5
4. 0	10. 12
5. 15	11. 10
6. 15	12. 0

September 24, 2019

Tammy Gilmore, Biologist/Environmental Resource Specialist
 U.S. Army Corps of Engineers
 Regional Planning and Environmental Division South
 CEMVN-PDN-CEP
 7400 Leake Avenue
 New Orleans, LA 70118

RE: BBA Construction Project Mitigation – Multiple Parishes – Farmland Conversion Impact Rating; West Shore Lake Pontchartrain, Comite River Diversion, and East Baton Rouge Flood Risk Management

Dear Ms. Gilmore:

I have reviewed the above referenced project for potential requirements of the Farmland Protection Policy Act (FPPA) and potential impact to Natural Resource Conservation Service projects in the immediate vicinity.

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

The project map and narrative submitted with your request indicates that the proposed construction areas will potentially impact the following prime or unique farmland soils:

Albania North

Soil Map Unit and Symbol	Acres	RV
Iberia Parish		
Ba – Baldwin silty clay loam, 0 to 1 percent slopes	0.7	92
Gv – Galvez silt loam	0.6	100
Lo – Loreauville silt loam	0.7	100
Sh – Schriever clay, 0 to 1 percent slopes	0.2	92
Total Acres	2.2	Weighted Avg. RV 97



Natural Resources Conservation Service
 State Office
 3737 Government Street
 Alexandria, Louisiana 71302
 Voice: (318) 473-7751 Fax: (844) 325-6947

Helping People Help the Land

Soil Map Unit and Symbol	Acres	RV
St. Mary Parish		
BdA – Baldwin silty clay loam, 0 to 1 percent slopes	386.4	88
GaA – Galvez silt loam, 0 to 1 percent slopes	239.2	93
GxA – Uderts and Glenwild soils, 0 to 3 percents slopes	47.3	93
IbA – Iberia clay, 0 to 1 percent slopes	180.2	88
LoA – Loreauville silt loam, 0 to 1 percent slopes	118.7	96
ShA – Schriever clay, 0 to 1 percent slopes	19.1	81
Total Acres	990.9	Weighted Avg. RV 90

Albania South

Soil Map Unit and Symbol	Acres	RV
BdA – Baldwin silty clay loam, 0 to 1 percent slopes	24.9	100
CoA – Coteau silt, 0 to 1 percent slopes	16.2	93
IbA – Iberia clay, 0 to 1 percent slopes	67.5	100
JaA – Jeanerette silt loam, 0 to 1 percent slopes	21.3	100
PaA – Patoutville silt, 0 to 1 percent slopes	77.1	93
Total Acres	207.0	Weighted Avg. RV 97

Ascension

Soil Map Unit and Symbol	Acres	RV
Es – Essen silt loam	0.1	72
Sa – Sharkey silty clay loam	3.1	85
Sc – Sharkey clay, 0 to 1 percent slopes, rarely flooded	59.9	85
Total Acres	63.0	Weighted Avg. RV 85

Cote Blanche

Soil Map Unit and Symbol	Acres	RV
BdA – Baldwin silty clay loam, 0 to 1 percent slopes	230.1	96
DrA – Dupuy silt loam, 0 to 1 percent slopes	69.0	93
IbA – Iberia clay, 0 to 1 percent slopes	108.8	88
LoA – Loreauville silt loam, 0 to 1 percent slopes	88.6	100
Total Acres	496.5	Weighted Avg. RV 95

Feliciana

Soil Map Unit and Symbol	Acres	RV
Ca – Calhoun silt loam, 0 to 1 percent slopes	0.2	59
Dx – Dexter silt loam, 1 to 3 percent slopes	4.7	88
Fk – Fluker silt loam, 0 to 2 percent slopes	17.6	70
Lt – Lytle silt loam, 1 to 3 percent slopes	4.4	80
Ta – Tangi silt loam, 1 to 3 percent slopes	102.4	80
To – Toula silt loam, 1 to 3 percent slopes	6.0	80
Total Acres	135.3	79

GBRPC

Soil Map Unit and Symbol	Acres	RV
CmA – Cancienne silt loam, 0 to 1 percent slopes	11.3	81
ShB – Schriever-Thibaut clays, gently undulating	149.0	70
Total Acres	160.3	71

Gravity

Soil Map Unit and Symbol	Acres	RV
Cm – Commerce silt loam, 0 to 1 percent slopes	5.2	100
Co – Commerce silty clay loam	18.4	100
Sc – Sharkey clay, 0 to 1 percent slopes, rarely flooded	61.6	85
Total Acres	85.2	89

Saint James

Soil Map Unit and Symbol	Acres	RV
CmA – Cancienne silt loam, 0 to 1 percent slopes	149.0	100
CnA – Cancienne silty clay loam, 0 to 1 percent slopes	157.1	100
CvA – Carville silt loam, 0 to 1 percent slopes	77.7	100
GrA – Gramercy silty clay, 0 to 1 percent slopes	626.1	85
SkA – Schriever clay, 0 to 1 percent slopes	121.5	85
VhA – Vacherie very fine sandy loam, 0 to 1 percent slopes	221.6	100
Total Acres	1353.0	92

Saint John

Soil Map Unit and Symbol	Acres	RV
CmA – Cancienne silt loam, 0 to 1 percent slopes	101.6	100
GrA – Gramercy silty clay, 0 to 1 percent slopes	2.5	85
Total Acres	104.1	100

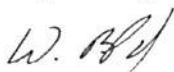
Please find attached an AD-1006 'Farmland Conversion Impact Rating' form for each construction area related to this project with our agency's information completed. Furthermore, we do not predict impacts to NRCS work in the vicinity.

For specific information about the soils found in the project area, please visit our Web Soil Survey at the following location: <http://websoilsurvey.nrcs.usda.gov/>

For more information on FPPA requirements or the process to receive a Farmland Conversion Impact Rating (Form AD-1006 or CPA-106) please visit the following location: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/>

Please direct all future correspondence to me at the address shown below.

Respectfully,

A handwritten signature in black ink, appearing to read "W. Landreneau". The signature is written in a cursive style with a large, sweeping initial "W".

Acting for Tim Landreneau
Acting State Conservationist

Attachment



REPLY TO
ATTENTION OF

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

Regional Planning and Environment
Division South

AUG 19 2019

Scott Guilliams
Louisiana Dept. of Env. Quality
Administrator of Water Permits Div.
P.O. Box 4313
Baton Rouge, LA 70821-4313

Dear Mr. Guilliams:

An application for a State Water Quality Certificate, prepared by the U.S. Army Corps of Engineers, New Orleans District (CEMVN), for the Bipartisan Budget Act (BBA) 18 Mitigation for Construction Projects, West Shore Lake Pontchartrain, Comite River Diversion, and East Baton Rouge Flood Risk Management (BBA Mitigation EA #576) is enclosed along with a project map and description. The CEMVN staff request that a water quality certification be completed, pursuant to Section 401 of the Clean Water Act of 1977, as amended (33 U.S.C., Section 1341).

The proposed project consists of bottomland hardwoods and swamp restoration/creation and swamp enhancement located in the Lake Pontchartrain Basin and extending through the Mississippi Alluvial Plain, south of and including the Southern Holocene Meander Belts (73k). To the best of our knowledge, any dredge/fill material will be free of contaminants. Please provide the Public Notice for publication in the Advocate of Baton Rouge. In addition to sending us the hard copy of your documents, we request that an e-mail with your transmittal letter and the public notice attached be sent to tammy.f.gilmore@usace.army.mil.

Please address any comments to the attention of Ms. Tammy Gilmore; U.S. Army Corps of Engineers; Regional Planning and Environmental Division South; CEMVN-PDN-CEP; 7400 Leake Avenue; New Orleans, Louisiana 70118.

Sincerely,

A handwritten signature in blue ink that reads "Marshall K. Harper".

Marshall K. Harper
Chief, Environmental Planning Branch

Enclosures

U.S. Army Corps of Engineers (USACE)
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
 33 CFR 325. The proponent agency is CECW-CO-R.

*Form Approved -
 OMB No. 0710-0003
 Expires: 01-08-2018*

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: <http://dpclid.defense.gov/Privacy/SORNS/Index/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx>

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
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(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - Middle - Last - Company - US Army Corps of Engineers, New Orleans District E-mail Address -	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First - Marshall Middle - K. Last - Harper Company - US Army Corps of Engineers, New Orleans District E-mail Address - Marshall.K.Harper@usace.army.mil
6. APPLICANT'S ADDRESS: Address- CEMVN-PDS-C, P.O. Box 60267 City - New Orleans State - LA Zip - 70160 Country - USA	9. AGENT'S ADDRESS: Address- CEMVN-PDS-C, P.O. Box 60267 City - New Orleans State - LA Zip - 70160 Country - USA
7. APPLICANT'S PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 504-862-1151	10. AGENTS PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 504-862-1151

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions) BBA Mitigation Project	
13. NAME OF WATERBODY, IF KNOWN (if applicable) Unnamed open water areas north of Lake Pontchartrain	14. PROJECT STREET ADDRESS (if applicable) Address not applicable
15. LOCATION OF PROJECT Latitude: +N 30 23' 48.20" N Longitude: -W 90 13' 05.93"	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID Municipality Saint Tammany Parish Section - Township - Range -	

17. DIRECTIONS TO THE SITE

Directions to Pine Island Mitigation Site --

Take I-55 to Ponchatoula, then go east on LA-22 toward Madisonville. Go approximately 13.5 miles on LA-22, then turn south (right) on Guste Island Road. Continue approximately 2.5 miles south on Guste Island Road. You will then be near the center of the area where the Pine Island mitigation areas are proposed.

18. Nature of Activity (Description of project, include all features)

Please refer to Attachment 1 for a description of this multi-faceted mitigation project, and to Attachment 2 for drawings pertaining to this project. Note that Attachments 1 and 2 plus this application addresses all 19 potential USACE-constructed mitigation projects and seeks a Water Quality Certification determination for the entire BBA Mitigation Project which includes these 19 mitigation projects/sites. However, only the proposed Pine Island Mitigation Project would involve placing (discharging) fill material (dredged sediments) into jurisdictional Waters of the United States that are also navigable waters of the US. Because of this, all the information provided in items 13 through 23 of this application form is specific to the Pine Island Mitigation Project and not the other 18 mitigation projects that are elements of the overall BBA Mitigation project.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The purpose of the proposed BBA Mitigation Project is to provide compensatory mitigation for wetland habitat impacts associated with construction of the Westshore Lake Pontchartrain, Comite Diversion, and East Baton Rouge Flood Risk Management projects. These USACE civil works projects are collectively referred to as the Bipartisan Budget Act (BBA) Construction Projects.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

The proposed Pine Island Mitigation project involves conversion of existing open water areas to forested wetlands, specifically swamp habitats. Discharge of dredged material (sediment) from Lake Pontchartrain into the 8 mitigation areas and discharge of dredged/excavated material (sediment) obtained from within the 8 mitigation areas and stacked along within the mitigation areas as containment berms are necessary to establish soil platforms in the mitigation areas that have an appropriate elevation for forested swamp habitats. Discharge of rip-rap along the shoreline of Lake Pontchartrain is necessary to protect one of the mitigation areas from the effects of shoreline erosion.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
Sediment: 16,401,310 CY	Stone Rip-Rap: 2,940 CY	

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 1.966 acres of Other Waters would be filled. All but 1 acre would be converted to forested wetlands.

or

Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

No compensation is proposed for the required discharge of dredged and fill material into Waters of the United States since this discharge is necessary to establish mitigation habitats. In addition, all but less than 1 acre of this discharge (the shoreline protection area) would remain Waters of the United States.

Temporary adverse impacts to water quality would be minimized by requiring the construction contractor to adhere to a USACE-approved Stormwater Pollution Prevention Plan (SWPPP), to obtain an LPDES General Permit for the project that incorporates the SWPPP, and to adhere to applicable conditions of the permit.

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list)

a. Address-

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
USFWS	Letter of Concurrence	N/A	In process		
LaDNR	Coastal Zone Consist	N/A	In process		
NMFS	Letter of Concurrence	N/A	In process		
SHPO	Programmatic Agree	N/A	In process		

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

_____ HARPER MARSHALL KEVIN 1536114 Printed on 08/07/19 10:24:00 AM 2019-08-07
358 Date: 2019/08/07 10:24:00 AM
 SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

ATTACHMENT 1

BBA 18 MITIGATION FOR CONSTRUCTION PROJECTS WESTSHORE LAKE PONTCHARTRAIN, COMITE DIVERSION, AND EAST BATON ROUGE FLOOD RISK MANAGEMENT

INFORMATION FOR CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION APPLICATION

1. INTRODUCTION

The U.S. Army Corps of Engineers (USACE), Mississippi Valley Division, New Orleans District (CEMVN), is proposing to provide compensatory mitigation for the impacts associated with construction of the Westshore Lake Pontchartrain (WSLP), Comite Diversion, and East Baton Rouge (EBR) Flood Risk Management projects; collectively known as the BBA (Bipartisan Budget Act) Construction Projects. The proposed mitigation project is referred to as the BBA Mitigation Project. The mitigation need for each of the cited USACE construction projects is based on the existing approved action for each of them and captures the worst-case scenario for their implementation (includes contingencies to ensure full satisfaction of mitigation requirements).

Currently, the mitigation needs for the cited construction projects' impacts to swamp and wet bottomland hardwoods (BLH-wet) have been estimated as indicated in Table 1 below. Impacts are expressed in Average Annual Habitat Units (AAHUs) lost as a result of construction impacts to the specified habitat type. Note that the impact values indicated represent the maximum anticipated that require mitigation via the BBA Mitigation Plan. As BBA construction project designs are refined, these values may decrease.

Table 1. Impacts to BLH-Wet and swamp habitats estimated for the BBA Construction projects.

Project	BLH-Wet Impacts AAHUs	Swamp Impacts AAHUs
WSLP	87	1,504
Comite Diversion	319	0
EBR	383	0
Totals	789	1,504

Tentatively selected mitigation projects (TSPs) by habitat type (e.g. BLH-Wet or swamp) were combined like building blocks to form the Tentatively Selected Alternative (TSA) for the BBA Mitigation Plan. Table 2 below lists the mitigation projects (TSPs; mitigation sites) that comprise the TSA. These include, when counting mitigation banks; (A) 9 BLH-Wet mitigation projects, 7 of which would be USACE constructed mitigation projects, and (B); 7 swamp mitigation projects. Table 2 also lists 9 BLH-Wet mitigation projects that are not elements of the TSA, but were selected as potential USACE constructed mitigation projects that could be used if necessary if the BLH-Wet mitigation projects selected for the TSA were unable to fully satisfy the BLH-Wet mitigation requirements for some reason. Figure 1A shows the approximate location of each of the potential USACE constructed mitigation projects. All figures cited herein are provided in Attachment 2.

Table 2. Tentatively selected mitigation projects comprising the Tentatively Selected Alternative for the BBA Mitigation Plan and potential "fall-back" BLH-wet mitigation projects.

MITIGATION PROJECT	SITE ID	DRAINAGE BASIN
<i>BLH-WET, INSIDE LP BASIN AND COASTAL ZONE*</i>		
Mitigation Bank(s)	n/a	Lake Pontchartrain
ASCENSION SB	P6	Lake Pontchartrain
SAINT JOHN	P3	Lake Pontchartrain

Attachment 1 – BBA Mitigation Project Information

MITIGATION PROJECT	SITE ID	DRAINAGE BASIN
GRAVITY	P5	Lake Pontchartrain
SWAMP, INSIDE COASTAL ZONE*		
Mitigation Bank(s)	n/a	variable
PINE ISLAND	P1	Lake Pontchartrain
JOYCE WMA	P14	Lake Pontchartrain
BAYOU VISTA	A6	Atchafalaya
ALBANIA NORTH	V1	Vermillion-Teche
ALBANIA SOUTH	V2	Vermillion-Teche
COTE BLANCHE	V3	Vermillion-Teche
BLH-WET, INSIDE LP BASIN BUT OUTSIDE COASTAL ZONE*		
Mitigation Bank(s)	n/a	Lake Pontchartrain
FELICIANA	P12	Lake Pontchartrain
GBRPC	P10	Lake Pontchartrain
AMITE	P15	Lake Pontchartrain
SAINT JAMES	P2	Lake Pontchartrain
OTHER BLH-WET, OUTSIDE LP BASIN		
SUNSET RIDGE	B1	Barataria
PORT ALLEN	T1	Terrebonne
TPSB	T2	Terrebonne
ROSEDALE	T3	Terrebonne
INNIS	A1	Atchafalaya
KROTZ	A3	Atchafalaya
ALBANIA NORTH	V1	Vermillion-Teche
ALBANIA SOUTH	V2	Vermillion-Teche
COTE BLANCHE	V3	Vermillion-Teche

* All mitigation sites/projects listed within the categories marked with an asterisk are elements of the Tentatively Selected Alternative LP Basin = Lake Pontchartrain Basin

The number of in-kind credits that will be available for purchase from an authorized mitigation bank at the time of implementing the BBA Mitigation Plan (BBA Mitigation Project) is unknown. The availability of numerous credits in a particular habitat category (BLH-Wet or swamp) could mean that one or more of the USACE constructed mitigation projects in that category would not need to be implemented (as long as the cost of bank credits did not exceed the cost of the USACE constructed project(s)). In terms of mitigating BLH-Wet impacts, it is also feasible that mitigation bank credits would be lacking and one or more of the BLH-Wet mitigation projects comprising the TSA turn out to be non-viable (ex. land owner may not want to convey the property to USACE). In such a case, one or more of the BLH-Wet mitigation projects that do not comprise the TSA would have to be used to satisfy mitigation requirements.

Given the above possibilities, CEMVN is requesting that LDEQ provides Clean Water Act Section 401 Water Quality Certification (WQC) for all of the mitigation projects listed in Table 2, excluding mitigation banks. This certainly does not mean that USACE intends to implement all the USACE constructed mitigation projects listed in Table 2. However, CEMVN needs to retain the flexibility of being able to implement any of these projects as necessary to fully compensate (mitigate) for impacts to BLH-Wet and swamp habitats generated by the BBA Construction Projects that have thus far not been mitigated.

Attachment 1 – BBA Mitigation Project Information

2. BBA MITIGATION PROJECTS AND THEIR IMPACTS TO WATER QUALITY & WATERS OF THE UNITED STATES

2.1 Grouping of Mitigation Projects

The potential BBA mitigation projects (mitigation sites) can be grouped into four mitigation categories based on the existing conditions at each site and the nature of the mitigation activities anticipated. Figures 1 through 19 (see Attachment 2) depict each of the 19 mitigation projects. Table 3 lists each mitigation project and assigns each project to one of the four categories. For each project, this table also indicates the approximate total acreage encompassed by anticipated property boundaries, the approximate total acreage occupied by mitigation areas within each site (e.g. the areas that would be converted to BLH-Wet and/or Swamp habitat and thus function as the actual mitigation features), and the estimated total acres within the mitigation areas that would have to be excavated (degraded) to achieve the desired wetland hydroperiod. Note that the property boundaries for a particular mitigation site could change substantially compared to those currently estimated. Such changes would obviously change the total property acreage indicated in Table 3.

Table 3. Potential BBA mitigation projects: classification by mitigation “category”, total property acreage, total acreage of mitigation areas within the property, and total acreage of areas that would be degraded within the mitigation areas.

Mitigation Project (Site)	Mitigation Category	Total Property (Total Acres)	Mitigation Area(s) (Total Acres)	Excavation/Degrading Areas (Total Acres within Mitigation Areas)
St. John	A	105	95	95
Gravity	A	89	75	24
Feliciana	A	314	267	235
GBRPC	A	160	135	6
St. James	A	1,353	1,245	510
Innis	A	142	130	125
TPSB	A	576	484	484
Rosedale	A	250	224	224
Port Allen	A	105	89	89
Sunset Ridge	A	431	324	75
Albania South	A	207	192	111
Albania North	A	1,016	964	332
Cote Blanche	A	496	446	167
Bayou Vista	A	77	41	41
Ascension SB	B	63	56	0
Krotz	B	171	147	0
Joyce WMA	C	1,125	1,125	0
Amite	D	596	369	134
Pine Island	E	2,399	1,964	0

A. Conversion of agricultural lands to forested wetlands, with lowering of existing soil surface elevations

B. Conversion of agricultural and managed lands to forested wetlands, without lowering of existing soil surface elevations

C. Enhancement of forested wetlands

D. Conversion of mined lands to forested wetlands

E. Conversion of open water areas to forested wetlands

Attachment 1 – BBA Mitigation Project Information

2.2 Conversion of Agricultural Lands to Forested Wetlands, with Lowering of Existing Soil Surface Elevations

As indicated in Table 3, fourteen of the 19 potential mitigation projects (mitigation sites) would involve conversion of upland agricultural field areas to BLH-Wet and/or swamp habitats (mitigation areas), with this conversion first requiring lowering of the existing soil surface elevations (e.g. degrading/excavating of fields) to help ensure a suitable wetland hydroperiod. Earthwork would primarily involve degrading the fields where necessary, lowering the soil surface by roughly 0.5 to 1.0 foot in most cases. Some of the excavated topsoil would be used within the mitigation areas to fill drainage ditches and level the fields where necessary. However, most of this soil would be hauled off-site by the construction contractor to a USACE-approved upland disposal site. Earthwork activities would also include: filling existing drainage ditches within mitigation areas, as long as this does not adversely affect off-site drainage; removal or gapping of existing on-site agricultural berms that block desirable stormwater sheetflow, as long as this does not adversely affect water levels in off-site lands; clearing and grubbing fields; final tillage of the mitigation areas; establishment of on-site dirt roadways around the perimeter of mitigation areas and/or through some mitigation areas for access and maintenance purposes; establishment of a temporary on-site construction staging area. After completion of all earthwork, the mitigation areas would be planted with native canopy and midstory species typical of the desired target habitat (e.g. BLH-Wet habitat and/or swamp habitat).

Prior to starting project construction at a given mitigation site, the construction contractor would be required to submit a Stormwater Pollution Prevention Plan (SWPPP) to USACE for approval. The contractor would then be required to apply for and obtain a Louisiana Pollutant Discharge Elimination System (LPDES) General Permit No. LAR10000 (Storm Water Discharges from Constructon Activities of 5 acres or more) from the Louisiana Department of Environmental Quality (LDEQ), with the application including the SWPPP. Following issuance of the LPDES General Permit, the contractor would be required to adhere to the permitted SWPPP and to all applicable permit conditions.

All the projects in this mitigation category would have no direct impacts to jurisdictional Waters of the United States (WOTUS), including navigable waters. The projects would not include any discharge of fill material into WOTUS. Project earthwork activities would likely generate turbid stormwater runoff. However, such temporary water quality impacts would be minimized by adherence to the LPDES General Permit and the SWPPP for each project. In the long term, any of the proposed projects in this category should help improve water quality since agricultural practices that can adversely affect water quality would be abandoned and the mitigation habitats would be more effective at water quality treatment.

2.3 Conversion of Agricultural & Managed Lands to Forested Wetlands, Without Lowering of Existing Soil Surface Elevations

As indicated in Table 3, two of the 19 potential mitigation projects (mitigation sites) would involve conversion of upland agricultural field areas (at Ascension mitigation site) and managed wetland field areas (at Krotz mitigation site) to BLH-Wet habitats (mitigation areas), but would not require requiring lowering of the existing soil surface elevations to help ensure a suitable wetland hydroperiod. These projects would essentially involve the same activities as those discussed in Section 2.2 above, with the exception of the removal and transport of topsoil to establish desired elevations.

These two project would also have no direct impacts to WOTUS, including navigable waters. They would not include any discharge of fill material into WOTUS. Temporary project impacts to water quality would be the same as those discussed in Section 2.2 and would be mitigated in the same manner as discussed in Section 2.2. Long-term water quality effects would likely be beneficial compared to existing conditions.

Attachment 1 – BBA Mitigation Project Information

2.4. Enhancement of Forested Wetlands

Proposed mitigation at the Joyce WMA mitigation site would only involve the planting of native canopy and midstory plants typical of swamp habitats within the three mitigation areas (see Figure 18). Plantings would be made in existing wetland areas that have overly sparse densities of swamp trees and shrubs. Mitigation work would not include any discharge of fill material into WOTUS. Any temporary impacts to water quality within these existing wetlands would be minimal.

2.5. Conversion of Mined Lands to Forested Wetlands

Only the Amite mitigation sites (see Figures 7A through 7F) would involve conversion of lands disturbed by previous sand and gravel mining to native BLH-wet forests. The process involved in making this conversion would be similar to that described in Section 2.2. Earthwork in portions of most mitigation areas would include removing (excavating; degrading) spoil material (sand, other sediments, gravel) to lower the soil surface elevation sufficiently to help ensure an adequate wetland hydroperiod. Unlike the category of projects covered in Section 2.2 however, the majority of the spoil material excavated would be disposed into remnant man-made mining pit lakes situated near the mitigation areas. Table 4 lists the approximate total acres of mine pit lakes that would be filled at each mitigation site and the approximate total cubic yards of fill that would be disposed within these mine pit lakes. Note that material excavated (removed) from mitigation site AM3 would be disposed in the mine pit lake disposal areas at mitigation site AM5.

Table 4. Fill disposal proposed in mine pit lakes adjacent to the listed Amite mitigation sites.

Mitigation Site	Fill Disposal in Mine Pit Lakes	
	Total Acres	Total Cubic Yards
AM1	14.8	263,941
AM2	11.0	62,275
AM4	13.3	203,925
AM5	24.2	435,681
AM6	18.6	206,345
Grand Totals	81.8	1,172,167

CEMVN has determined that none of the 7 mine pit lakes into which spoil (fill) would be disposed classify as jurisdictional WOTUS and thus are not subject to water quality certification requirements. During project construction, it is anticipated that turbidity would increase in stormwater runoff within the various mitigation areas. Turbidity would also temporarily increase in the mine pit lakes where excavated spoil is disposed. These temporary impacts would be reduced by adherence to the SWMPPP and LPDES General Permit issued for the overall Amite mitigation project.

2.6 Conversion of Open Water Areas to Forested Wetlands

Only the Pine Island mitigation site (see Figure 17 and Sheets C-01 and C-02 in Attachment 2) would involve conversion of open water areas to forested swamp wetland habitats. Eight different mitigation areas would first be filled to establish soil platforms on which to plant native swamp canopy and midstory species.

Containment dikes would first be built around the perimeter of each mitigation area. These dikes would have a crest elevation of 5.0 feet NAVD88 with a 5-foot wide crown. Existing material (sediment) would be excavated from within each mitigation area to construct the containment dikes. Following dike construction, a

Attachment 1 – BBA Mitigation Project Information

cutterhead dredge would dredge sediments from within the proposed 2,238-acre borrow site established in Lake Pontchartrain and pump this dredged material from the borrow site into the mitigation areas via temporary pipelines. The initial elevation for the dredge fill would be approximately 2.5 feet NAVD88, with the goal of this material settling to the final target elevation of 2.0 feet. The maximum allowable dredging depth within the borrow site would be -20 feet NAVD88 plus a 1-foot allowable overdepth to account for inaccuracies in the dredging process. It is estimated that the total volume of sediment dredged from the lake would be approximately 16,401,310 cubic yards or less.

After the mitigation areas are filled, they would be allowed to settle for roughly 1 year. The perimeter dikes would then be degraded to equal the finish grade in the mitigation areas, with the degraded material placed back into the mitigation areas. Finally, the mitigation areas would be planted with native canopy and midstory species typical of swamp habitat.

The lake shoreline adjacent to the southern boundary of mitigation area 8 would be protected by placing riprap along the shoreline. This would help protect the mitigation area from shoreline erosion effects. The stone riprap area would be approximately 2,420 feet long by 17 feet wide by 2 feet thick, with the riprap underlain by geotextile fabric. The stone would be placed along the southern mitigation area boundary at approximately elevation 4.5 feet NAVD88 and slope down to approximately elevation 0.0 feet NAVD in the lake. Approximately 2,940 cubic yards of stone would be required and would be transported and placed via barge.

The listed species Gulf sturgeon, West Indian manatee, green sea turtle, Kemp's Ridley sea turtle, and loggerhead sea turtle have the potential to occur in Lake Pontchartrain. Standard protection measures and construction conditions for manatees and Gulf sturgeon prescribed by US Fish and Wildlife Service would be implemented by the construction contractor during dredging operations and construction of the shoreline protection. Sea turtle and smalltooth sawfish construction conditions prescribed by National Marine Fisheries Services would also be followed by the construction contractor.

The eight mitigation areas and Lake Pontchartrain classify as jurisdictional WOTUS. Table 5 lists the WOTUS areas where fill would be discharged, the extent of this fill in each area, and the approximate quantity of fill that would be discharged in each area. All of the fill in the mitigation areas would be sediments excavated from within the mitigation areas themselves (for containment dikes) and dredged from Lake Pontchartrain. The fill in the shoreline protection area would be clean stone riprap.

Attachment 1 – BBA Mitigation Project Information

Table 5. Fill proposed in Waters of the United States as part of the Pine Island mitigation project.

Mitigation Area (Sediment Fill)	Fill Area (Acres)	Fill Quantity (Cubic Yards)
1	218	1,809,900
2	262	2,205,053
3	524	4,257,765
4	226	1,900,702
5	72	625,541
6	337	2,756,592
7	142	1,196,595
8	184	1,649,163
Total Sediment Fill	1,965	16,401,310
Shoreline Protection Rip-Rap Fill	< 1	2,940
Total Fill in WOTUS	1,966	16,404,250

Adverse water quality impacts should be relatively temporary and mainly limited to the period of initial construction. The primary effect would be increased turbidity within the mitigation areas and, to a lesser degree, within small marsh areas immediately adjacent to the mitigation areas. Adverse temporary water quality impacts in these areas would be minimized by requiring the contractor to adhere to the SWPPP and the LPDES Construction General permit for the project. Dredging in Lake Pontchartrain would temporarily increase turbidity in the lake within and near the borrow site, and could also temporarily decrease dissolved oxygen concentrations. NMFS may require that the lake borrow site be monitored for dissolved oxygen levels or other parameters after the project dredging is completed. CEMVN would have such monitoring conducted if required. In the long term, water quality in the forested mitigation areas should improve somewhat compared to existing conditions. Restoration of the soil and vegetation once present in the mitigation areas would provide improved water quality treatment compared to open water conditions.

Note that all of the 8 mitigation areas filled (total of 1,965 acres) would be converted from open water areas to forested wetlands. Thus, the affected mitigation areas would still remain jurisdictional WOTUS upon completion of the mitigation work. While the proposed shoreline protection would place riprap in a portion of the wetland fringe of Lake Pontchartrain and in the lake itself, most of the affected area in the lake would remain jurisdictional WOTUS.

ATTACHMENT 2

**BBA 18 MITIGATION FOR CONSTRUCTION PROJECTS WESTSHORE LAKE PONTCHARTRAIN, COMITE
DIVERSION, AND EAST BATON ROUGE FLOOD RISK MANAGEMENT**

FIGURES FOR CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION APPLICATION

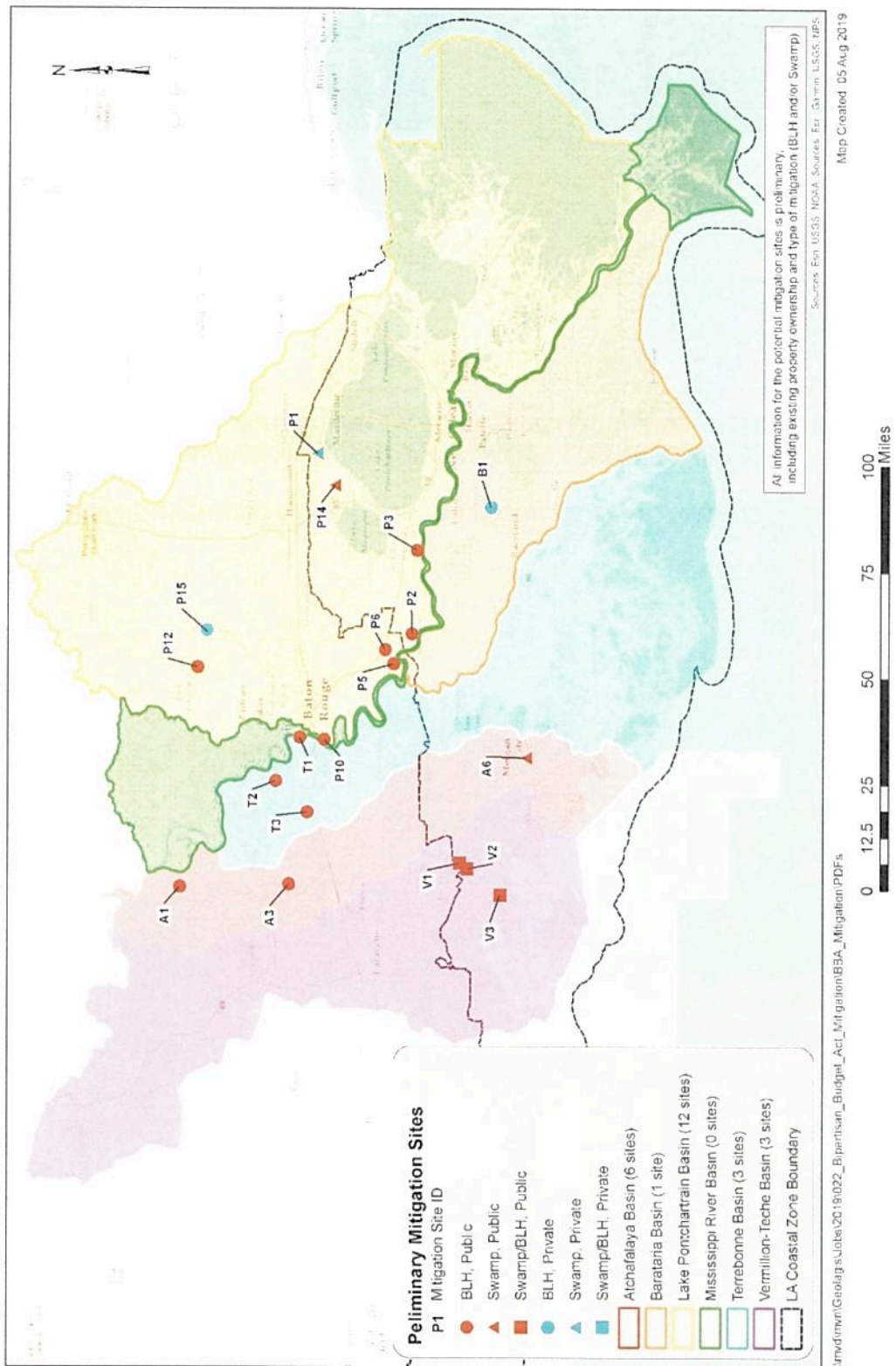


Figure 1A. Approximate location of the potential BBA mitigation projects/sites.

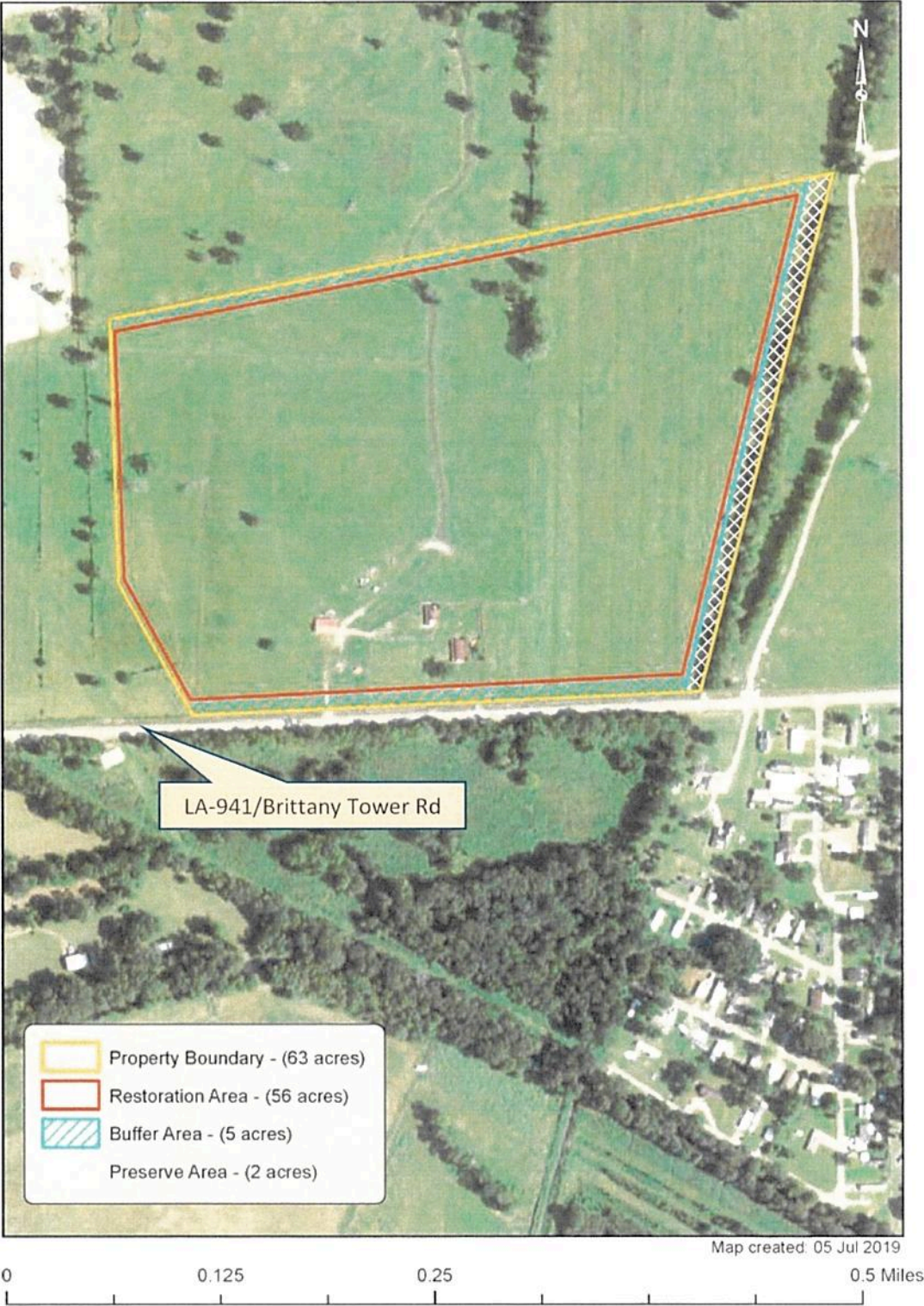


Figure 1. Proposed Ascension SB Mitigation Site (BLH-Wet restoration).

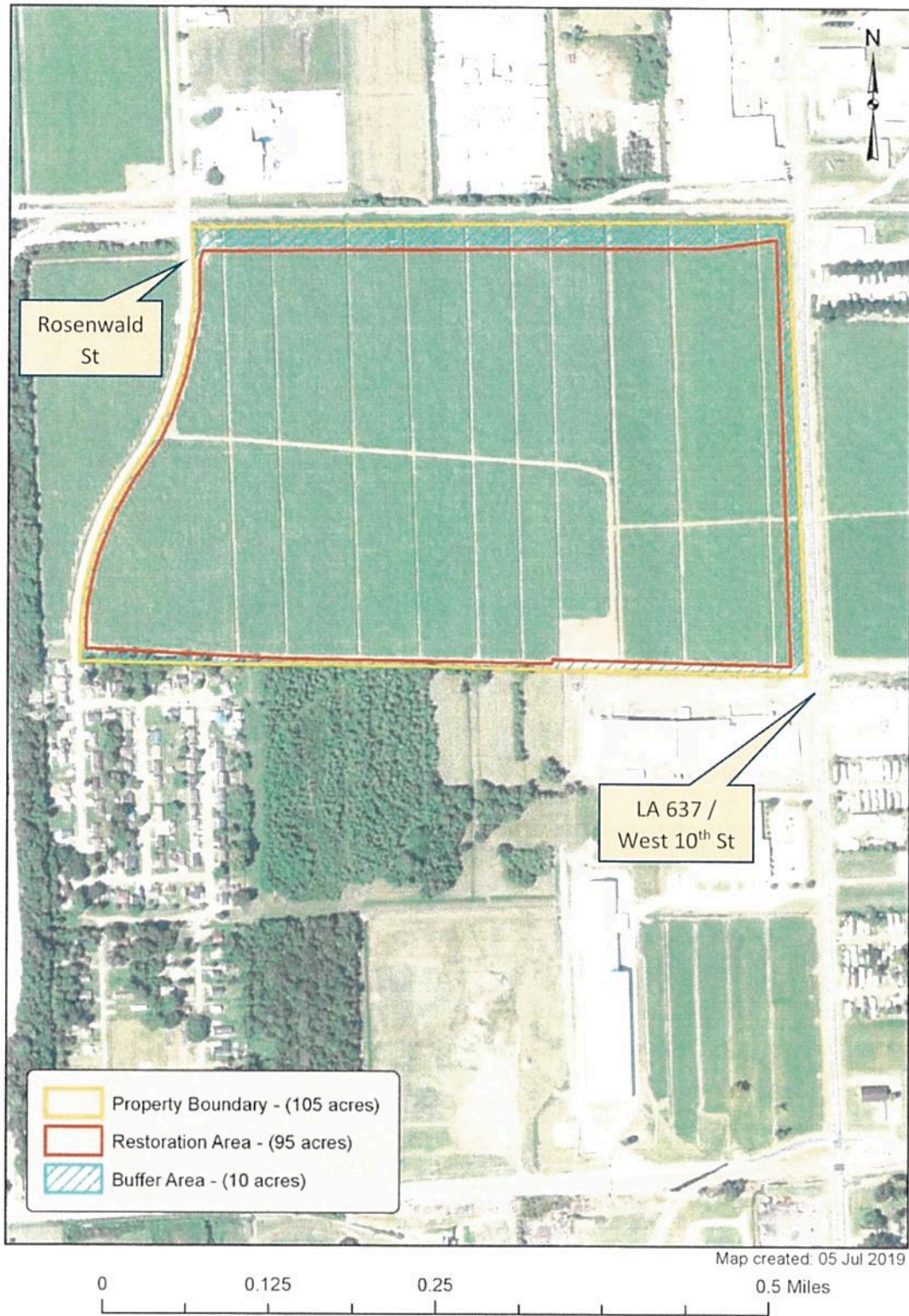


Figure 2. Proposed Saint John Mitigation Site (BLH-Wet restoration).

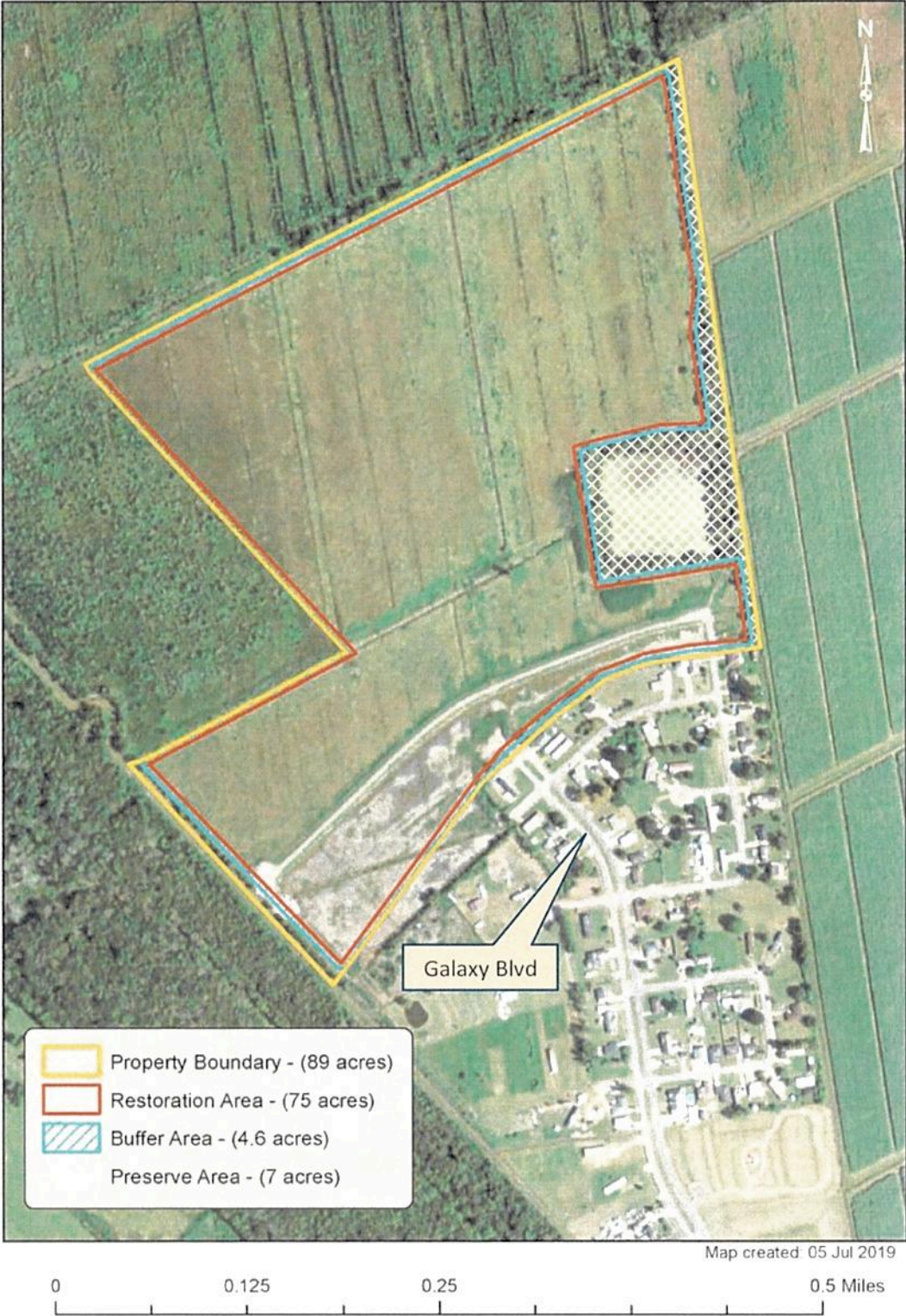


Figure 3. Proposed Gravity Mitigation Site (BLH-Wet restoration).

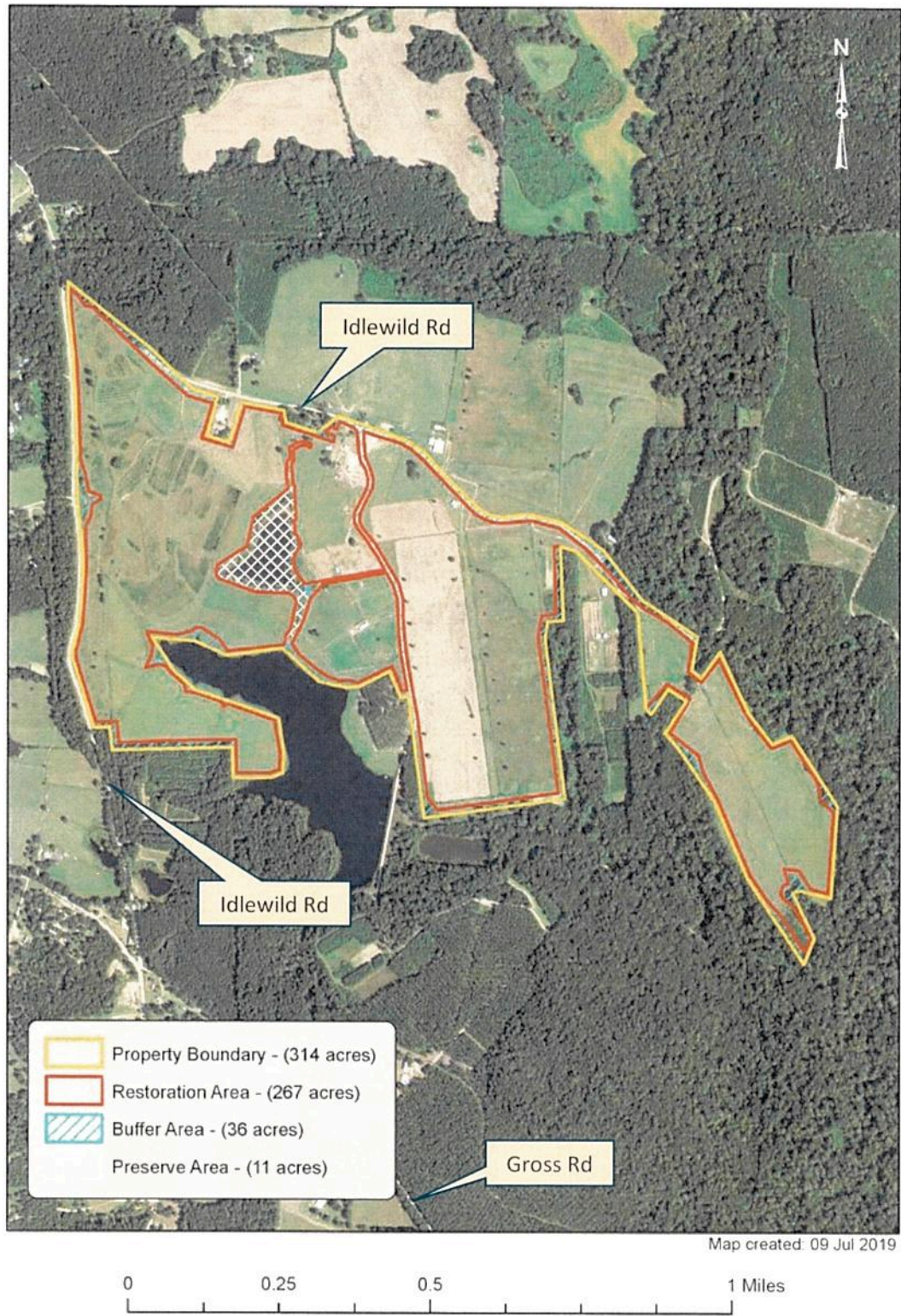


Figure 4. Proposed Feliciana Mitigation Site (BLH-Wet restoration).

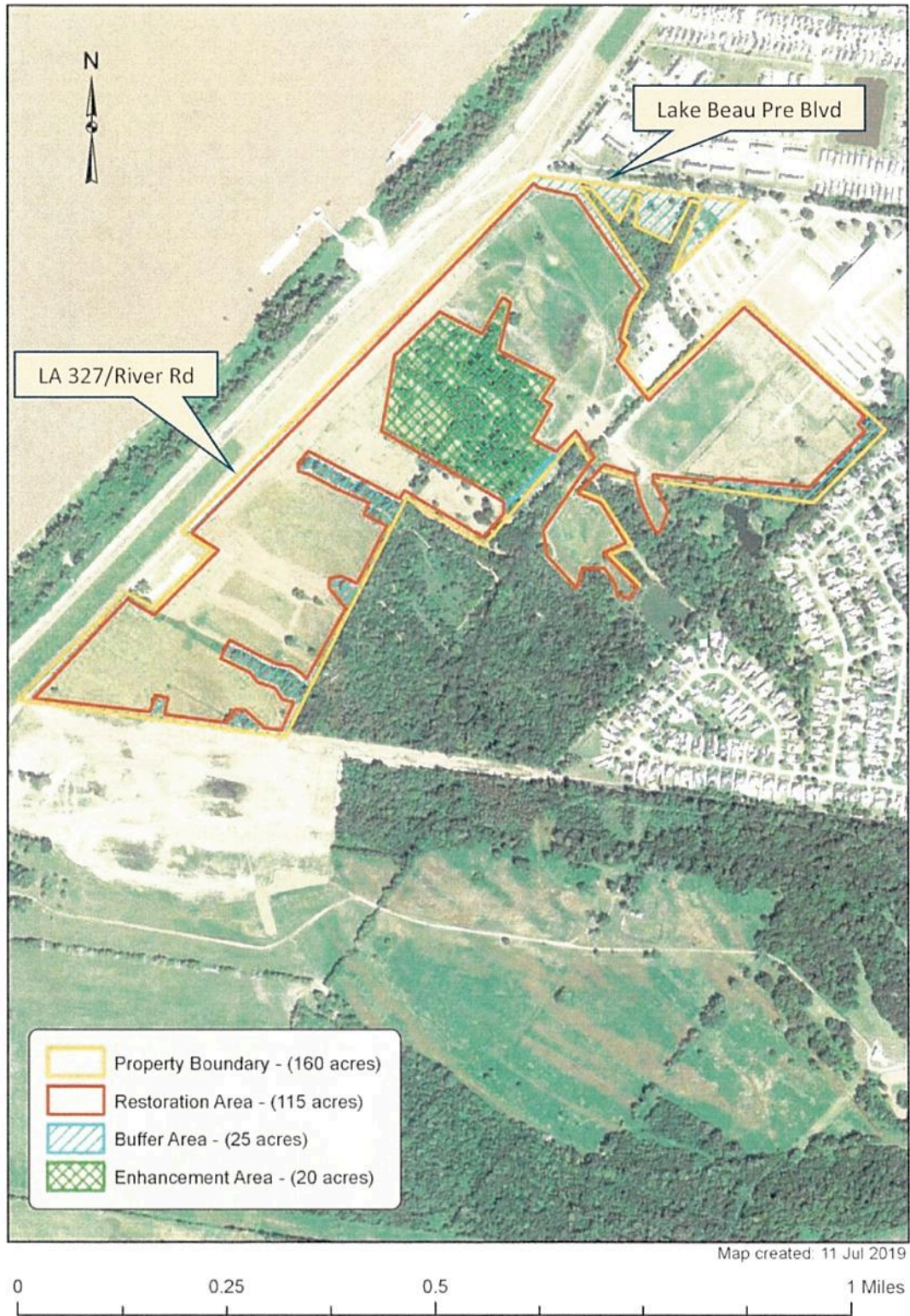


Figure 5. Proposed GBRPC Mitigation Site (BLH-Wet restoration).

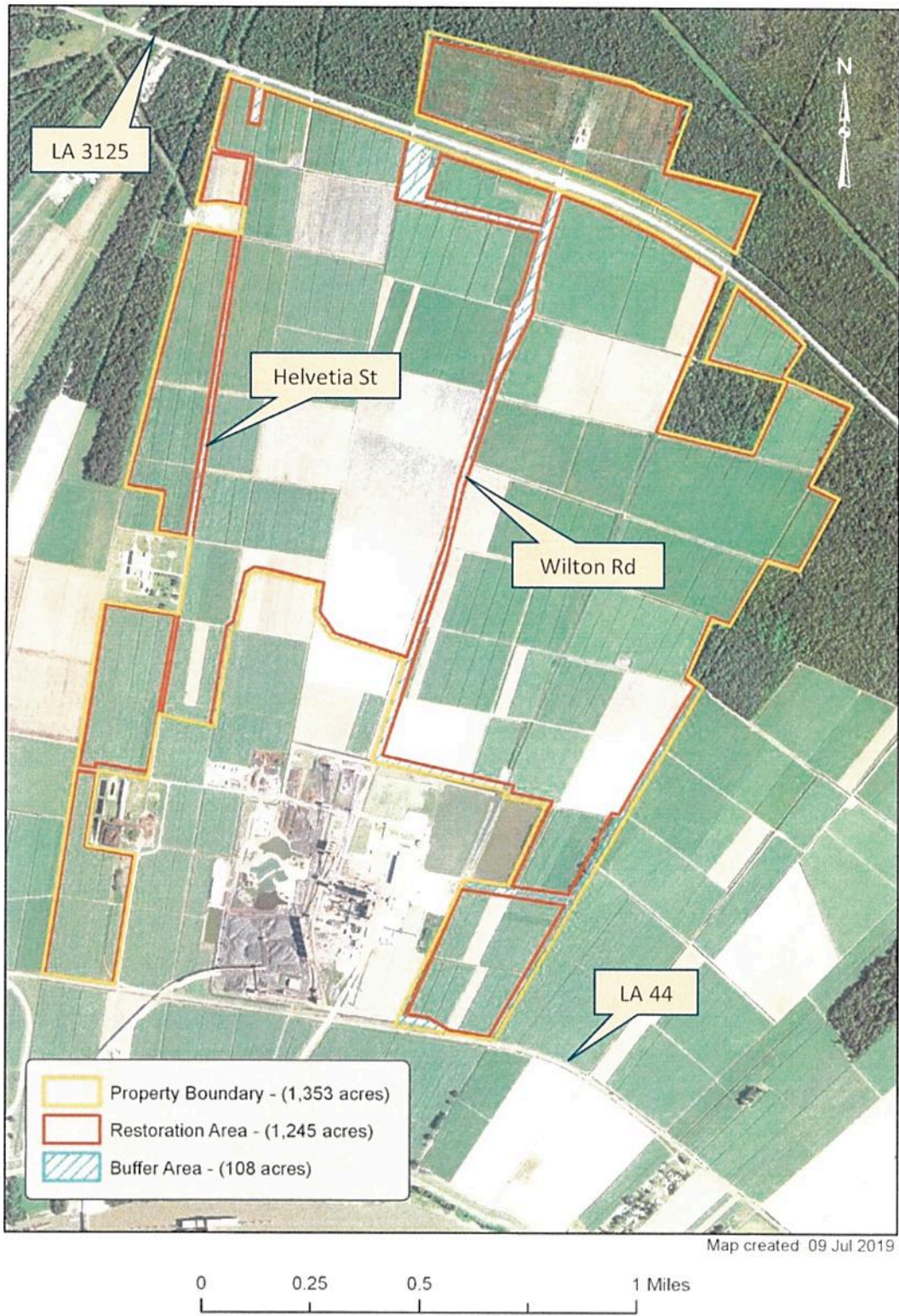


Figure 6. Proposed Saint James Mitigation Site (BLH-Wet restoration).

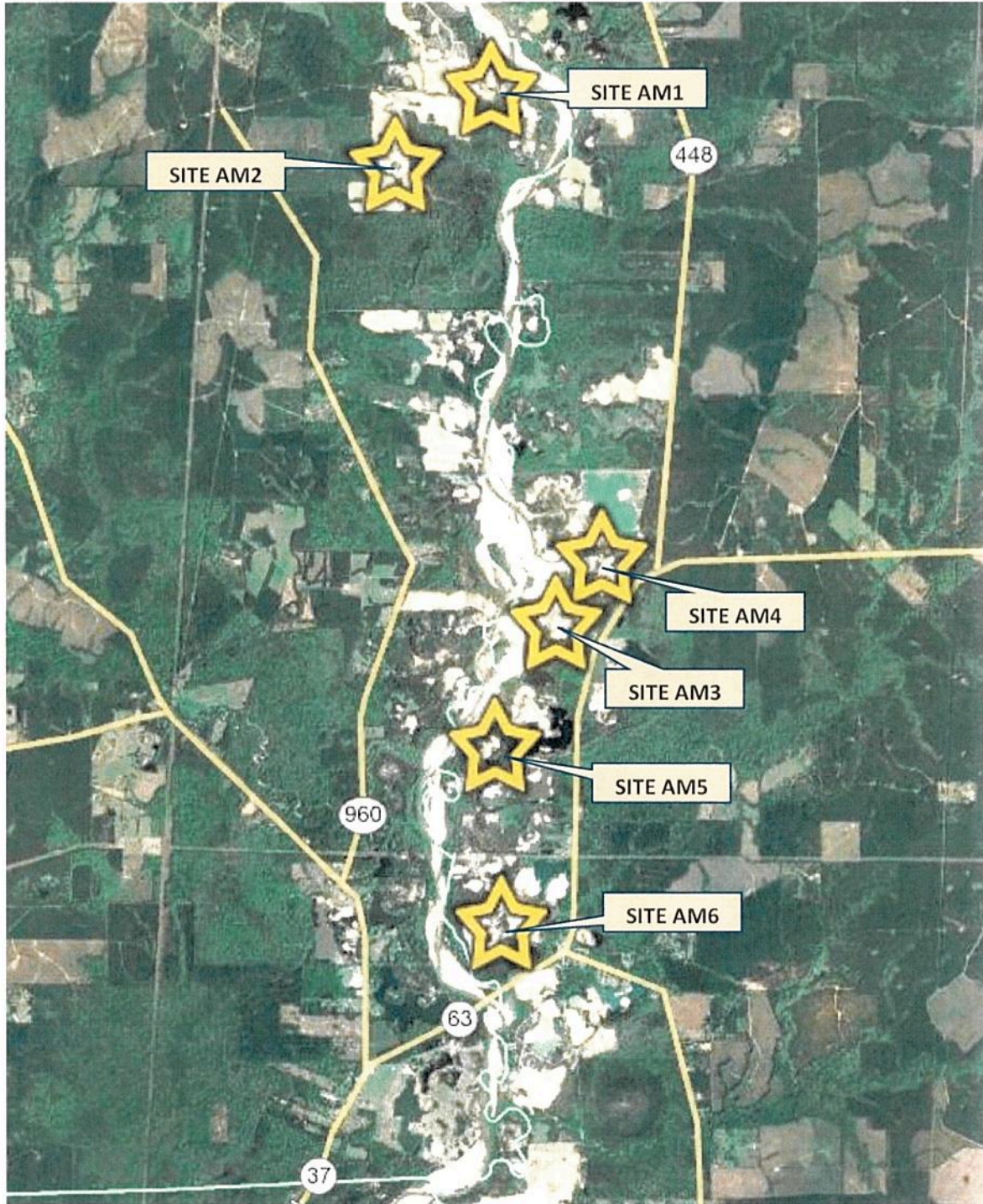


Figure 7. Proposed Amite Mitigation Sites (BLH-Wet creation/restoration) – Location Map

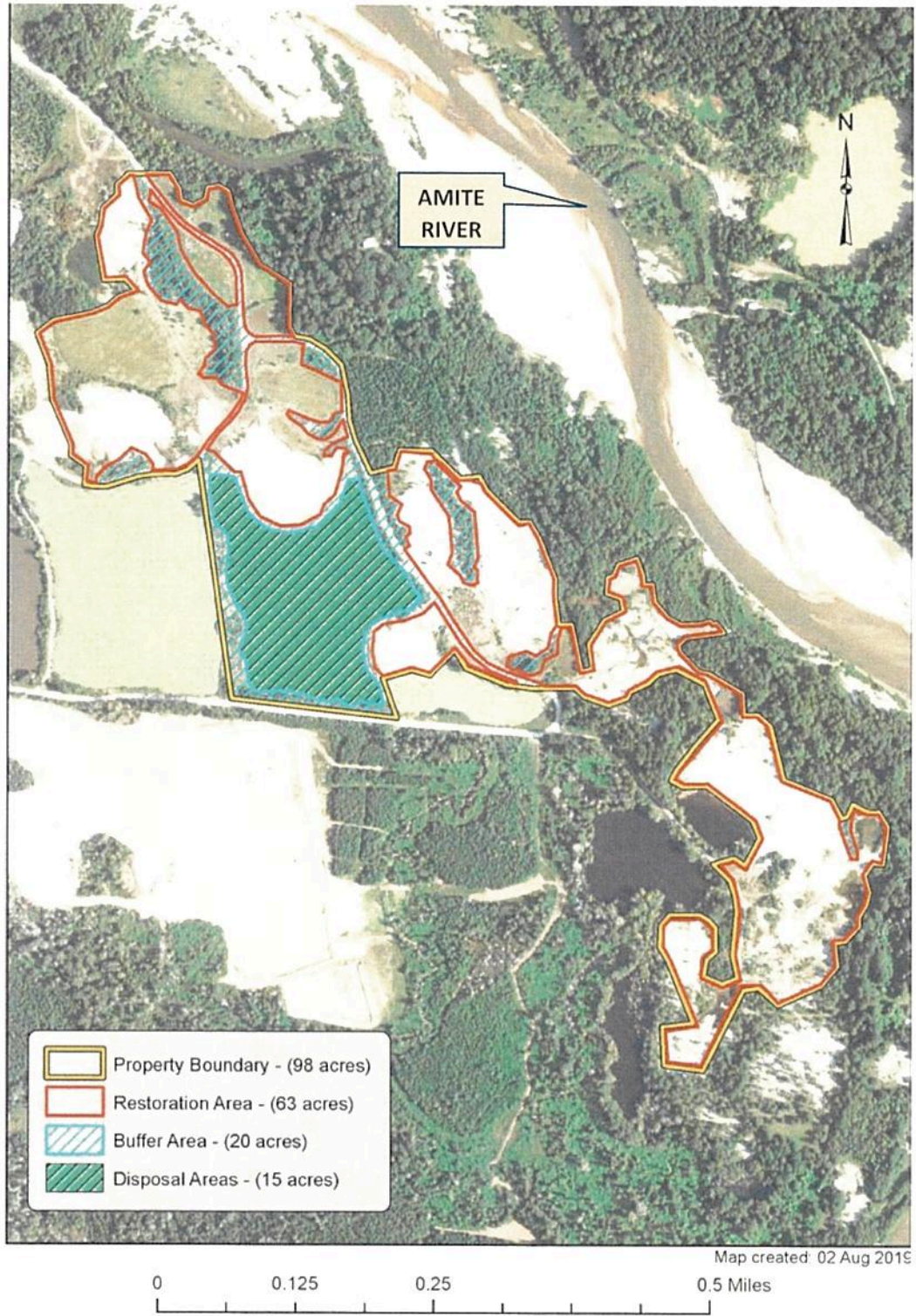


Figure 7A. Proposed Amite Mitigation Site AM1.

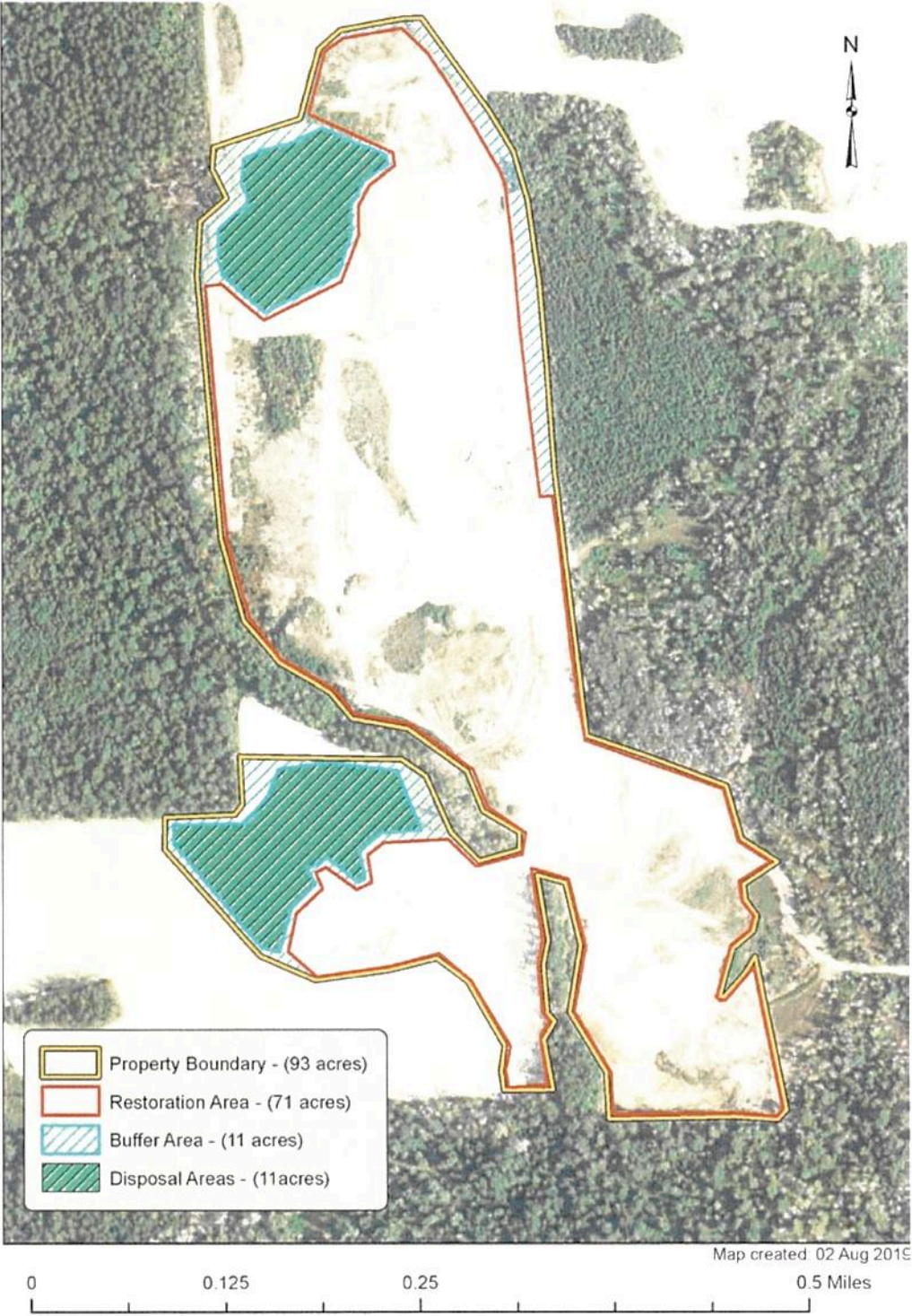


Figure 7B. Proposed Amite Mitigation Site AM2.

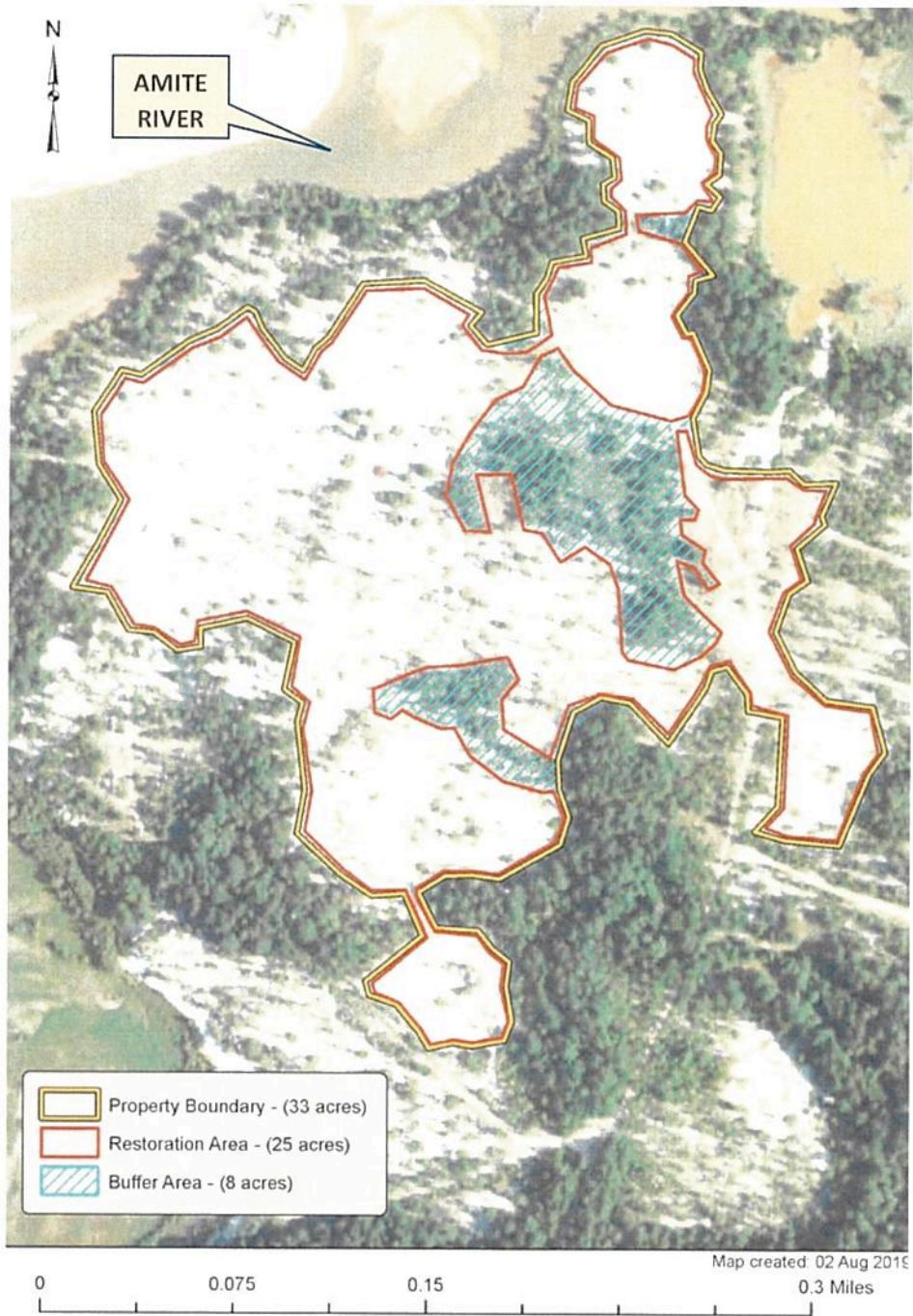


Figure 7C. Proposed Amite Mitigation Site AM3.

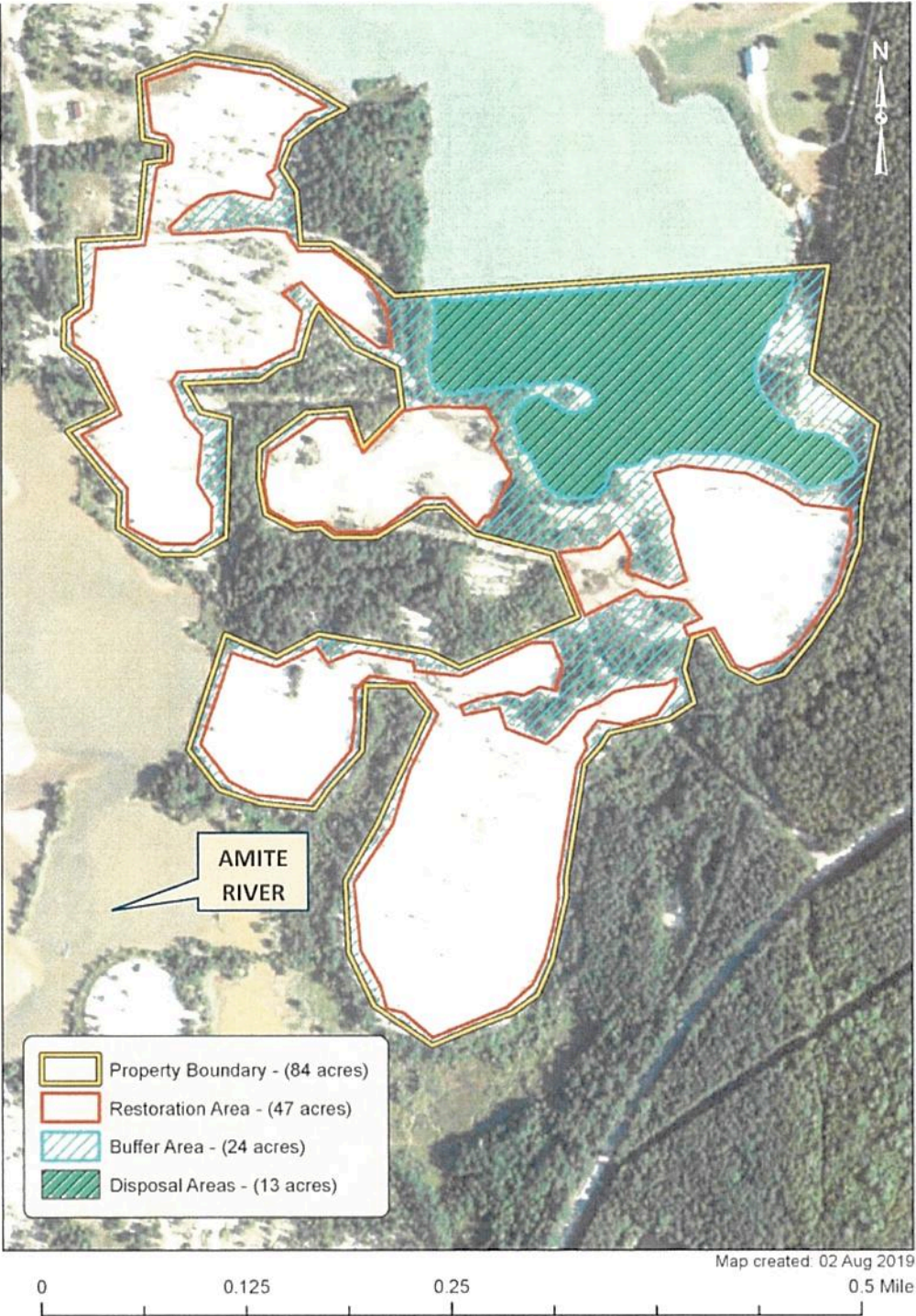


Figure 7D. Proposed Amite Mitigation Site AM4.

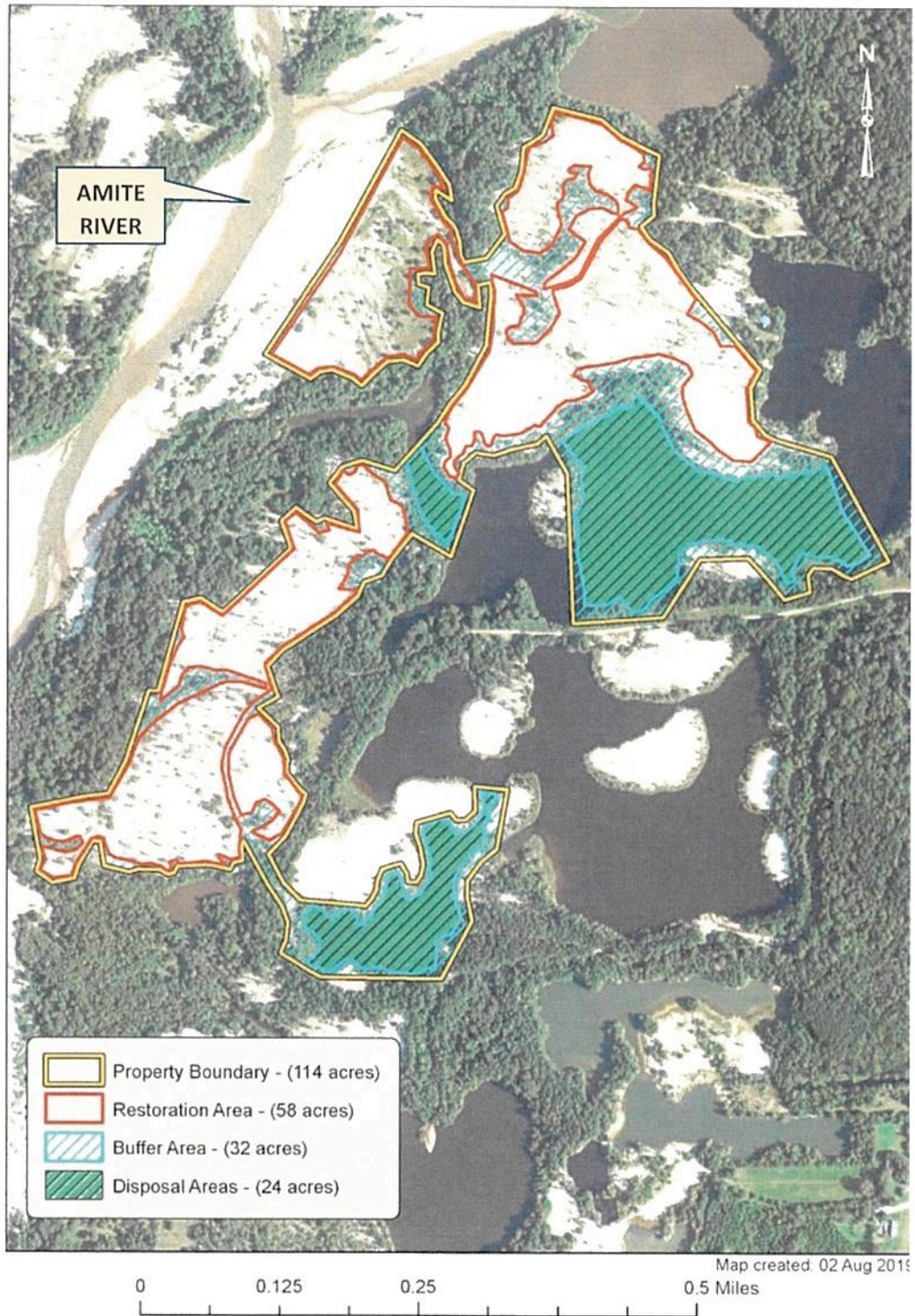


Figure 7E. Proposed Amite Mitigation Site AM5.

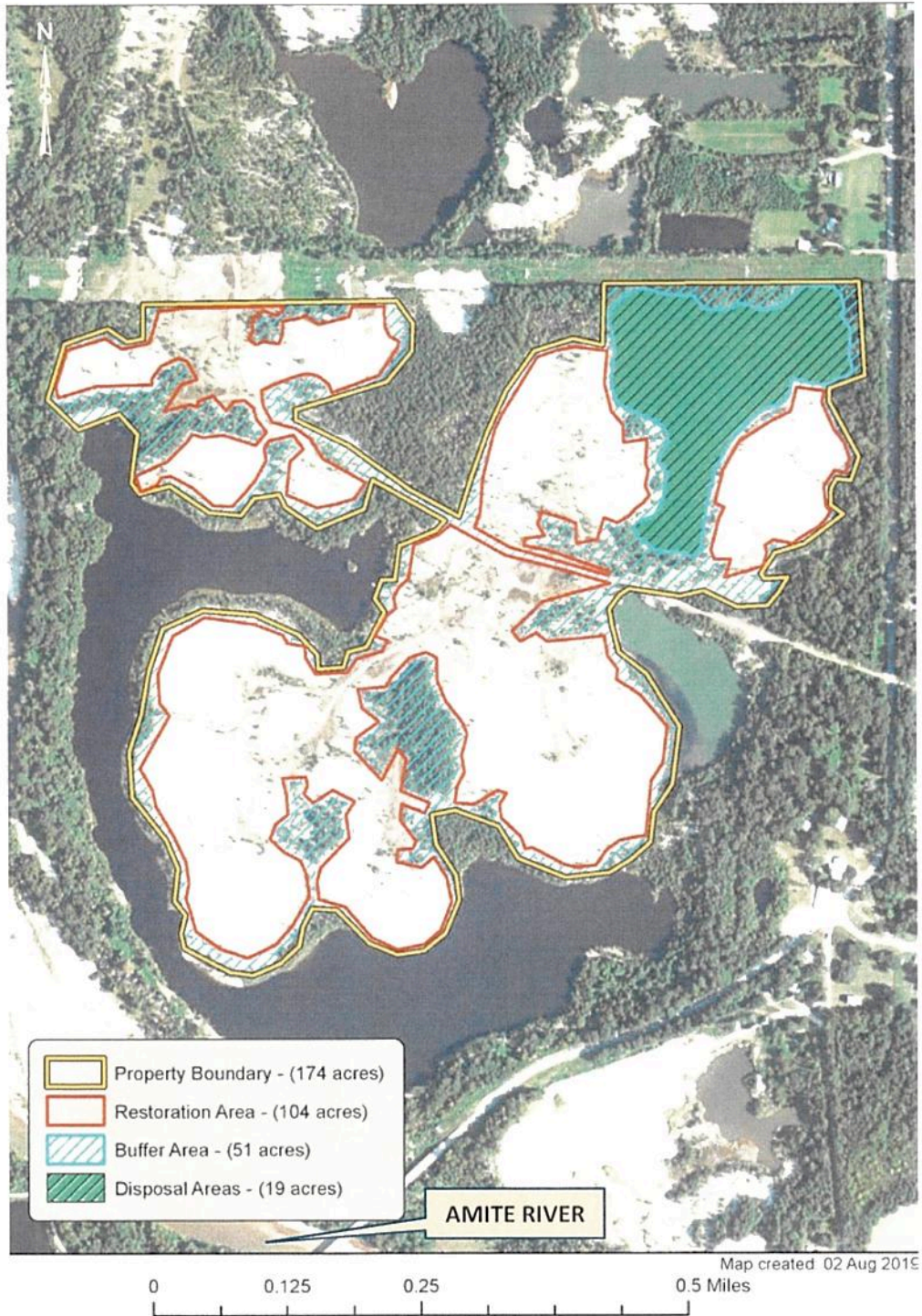


Figure 7F. Proposed Amite Mitigation Site AM6.



Figure 8. Proposed Innis Mitigation Site (BLH-Wet restoration).

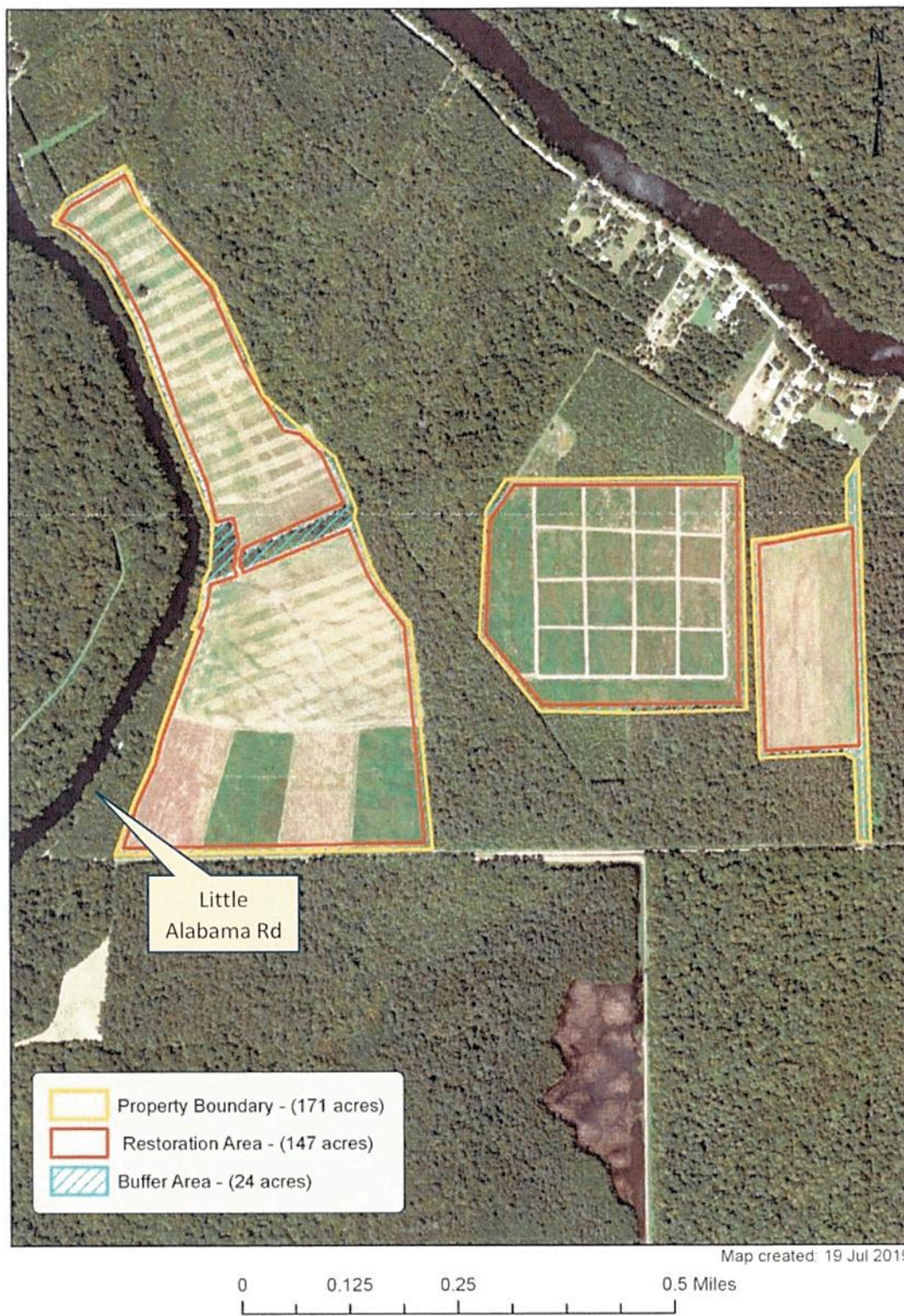


Figure 9. Proposed Krotz Mitigation Site (BLH-Wet restoration).

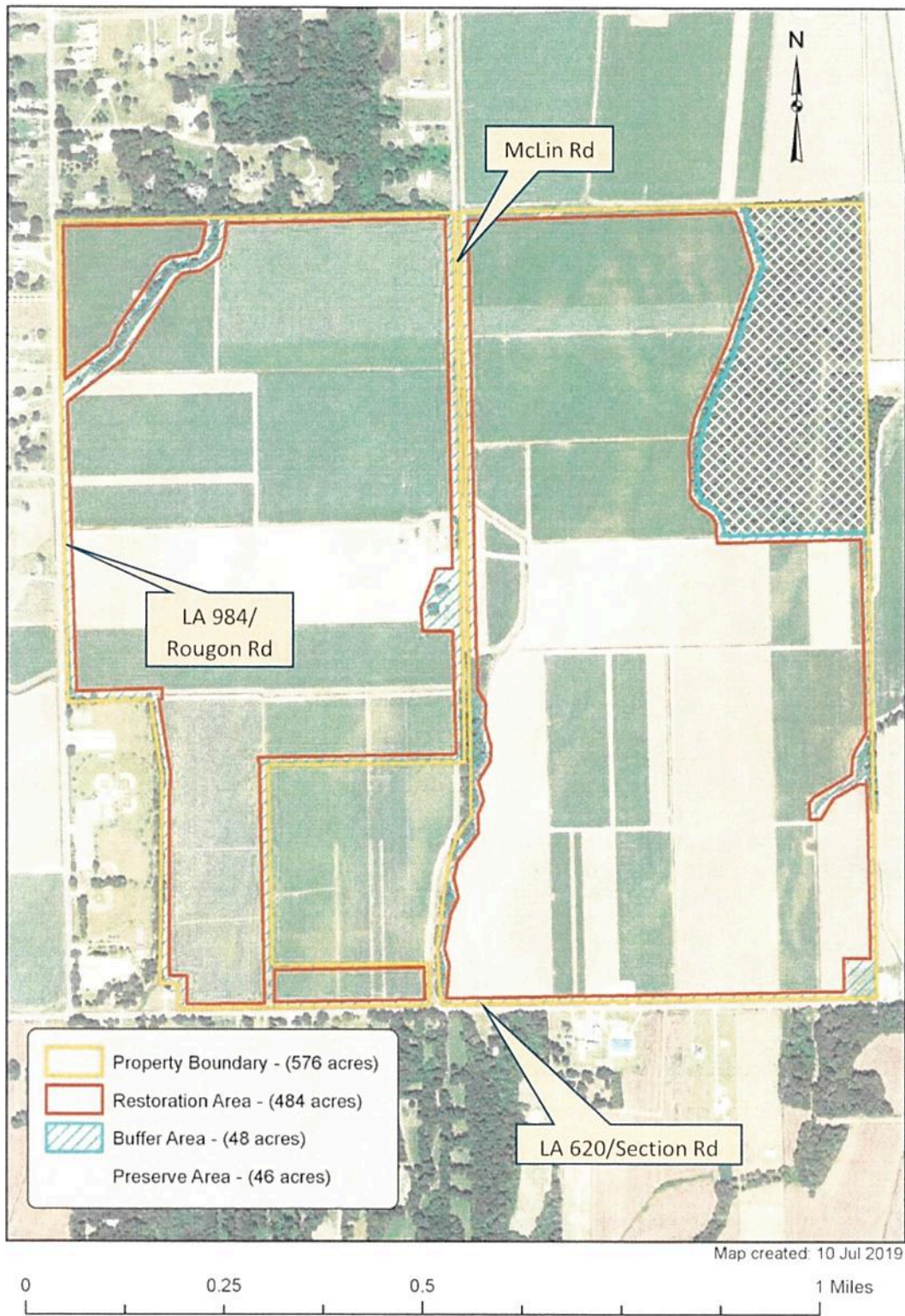


Figure 10. Proposed TPSB Mitigation Site (BLH-Wet restoration).

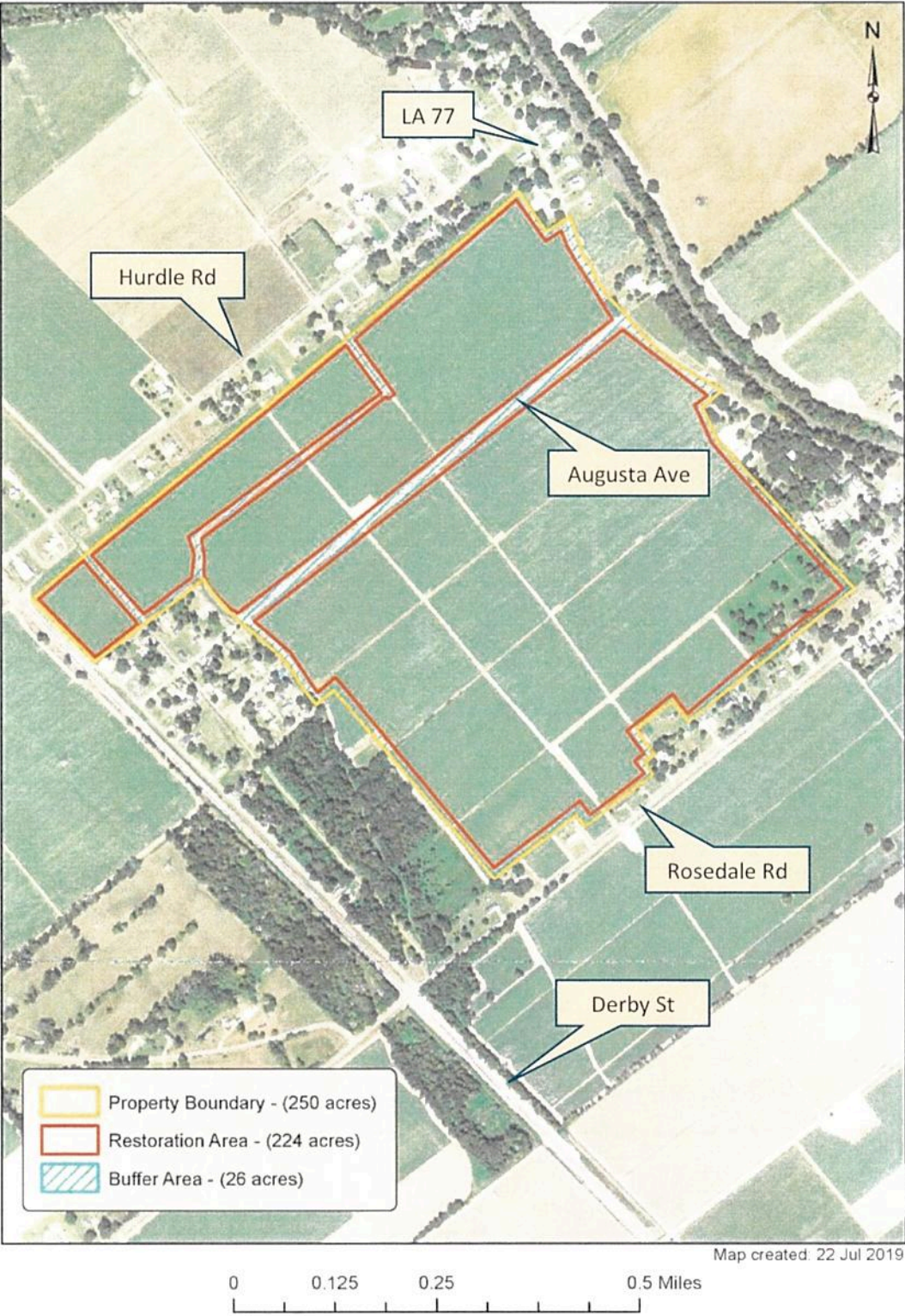


Figure 11. Proposed Rosedale Mitigation Site (BLH-Wet restoration).

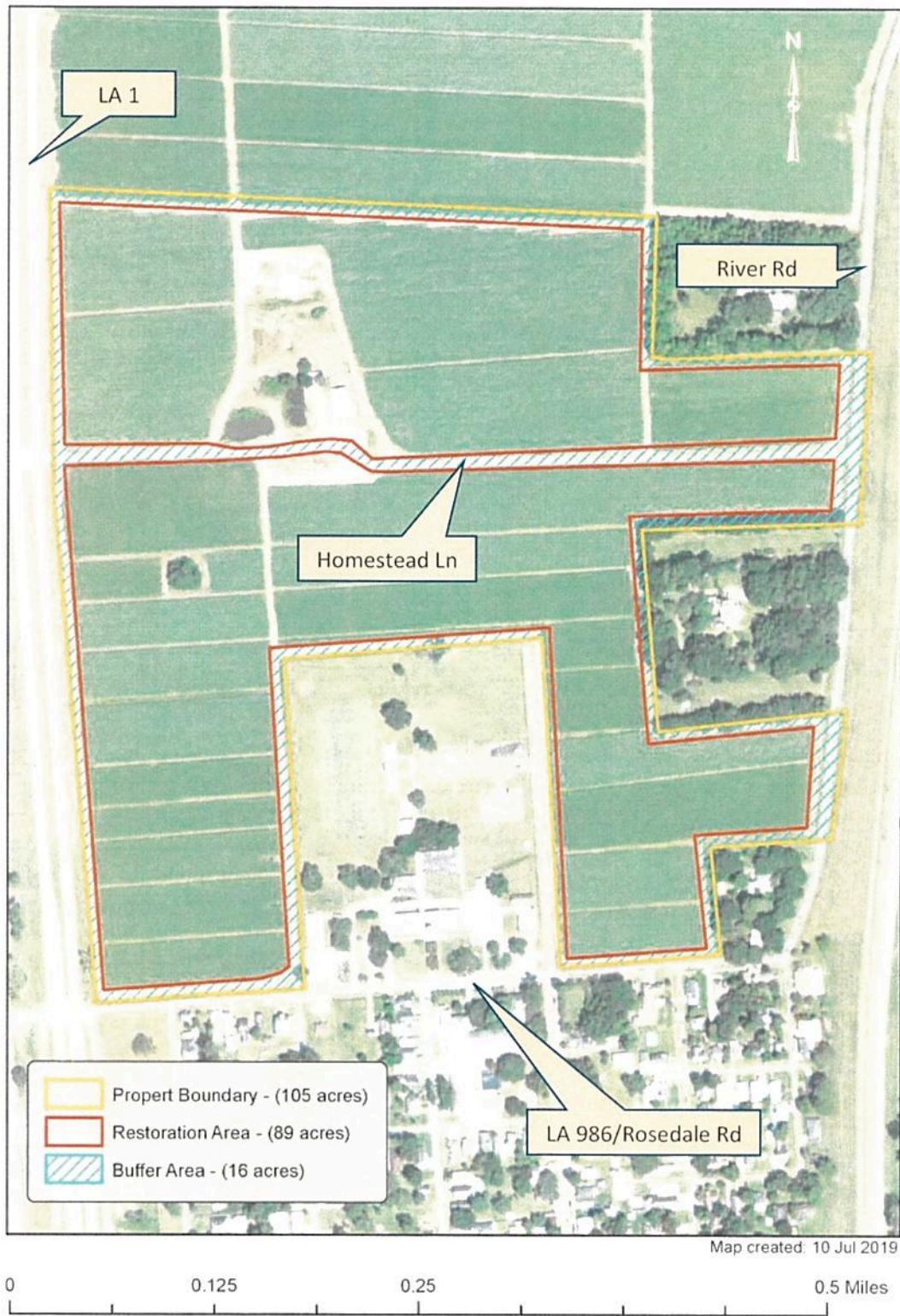


Figure 12. Proposed Port Allen Mitigation Site (BLH-Wet restoration).

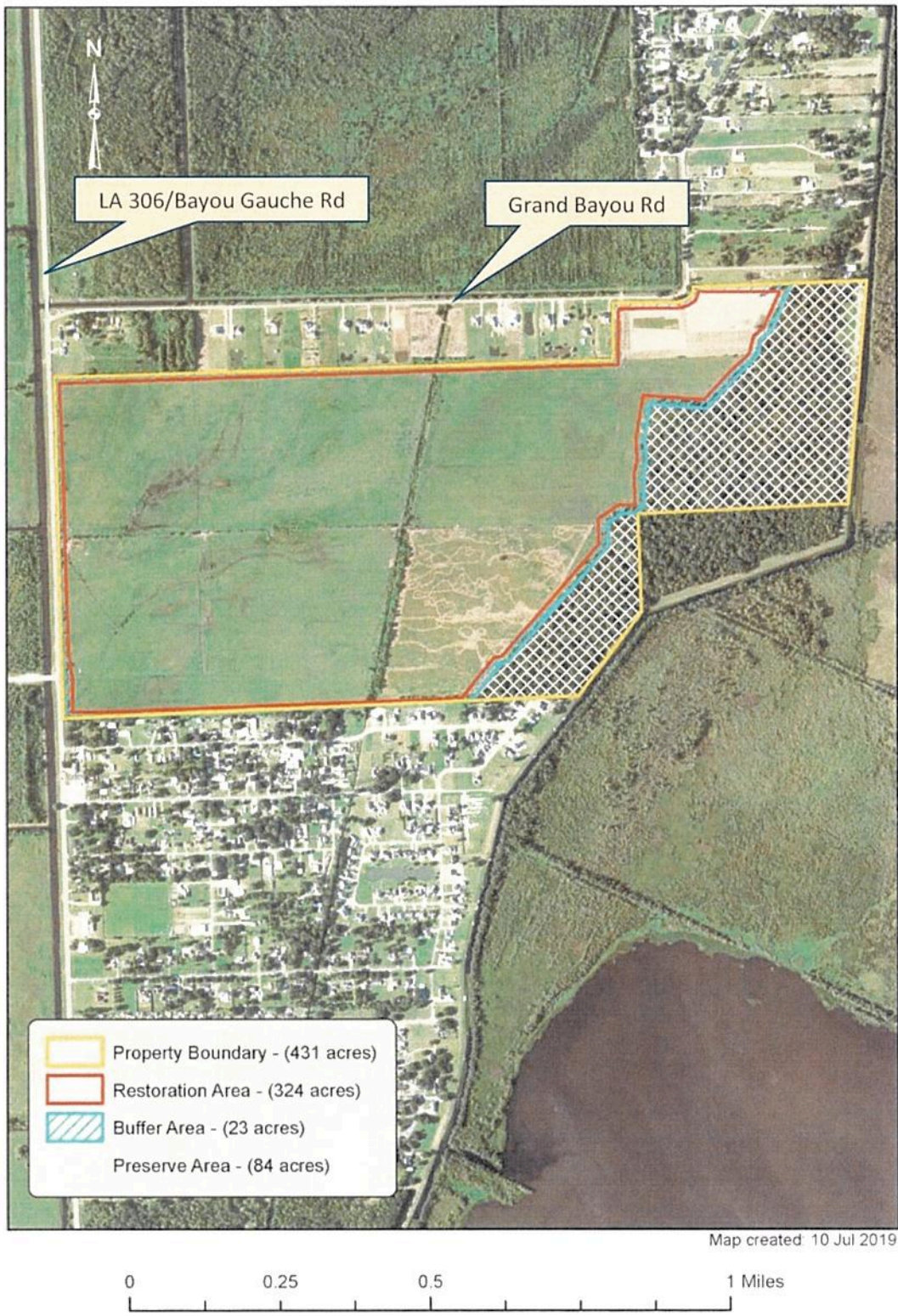


Figure 13. Proposed Sunset Ridge Mitigation Site (BLH-Wet restoration).

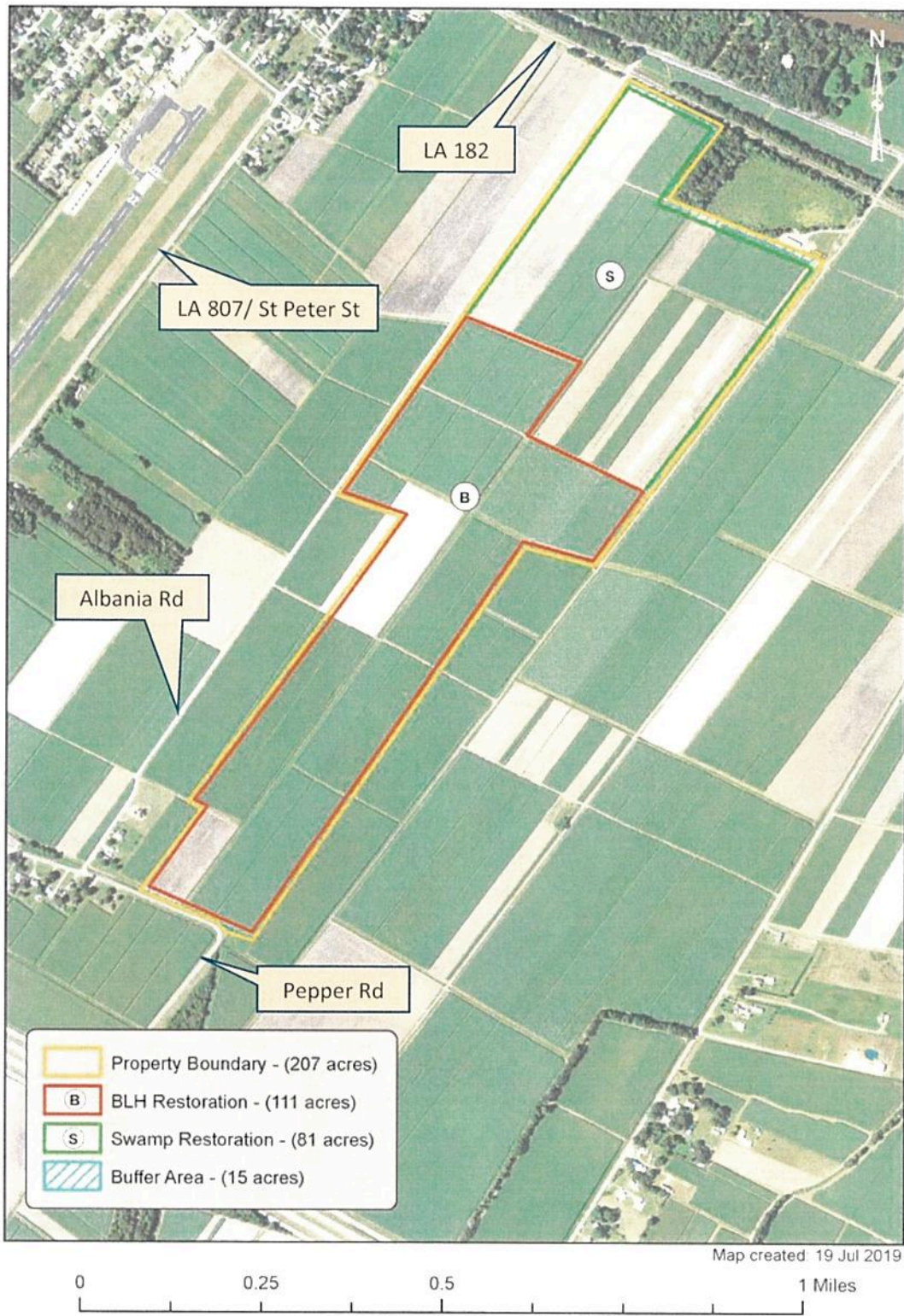


Figure 14. Proposed Albania South Mitigation Site (BLH-Wet and Swamp restoration).

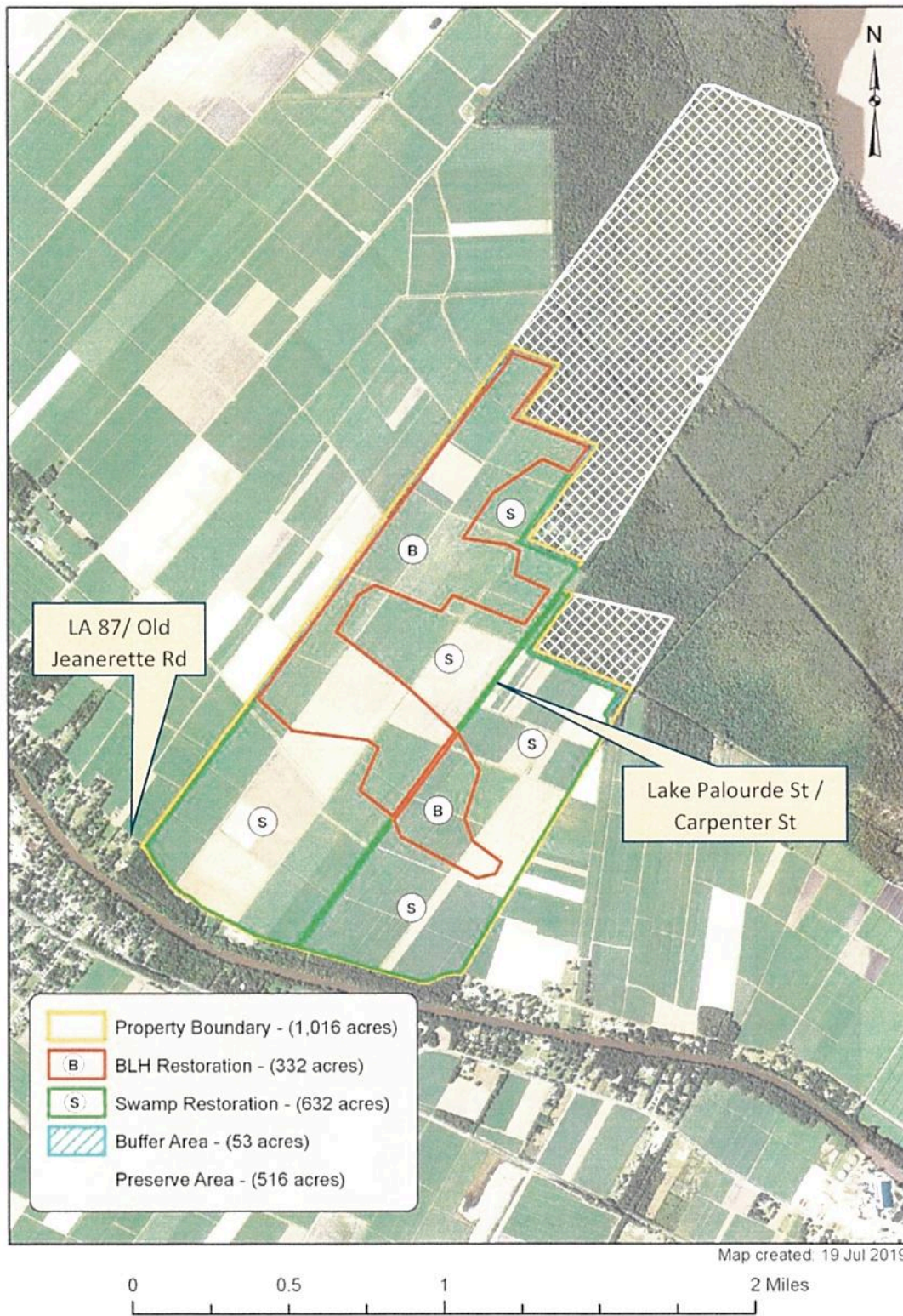


Figure 15. Proposed Albania North Mitigation Site (BLH-Wet and Swamp restoration).

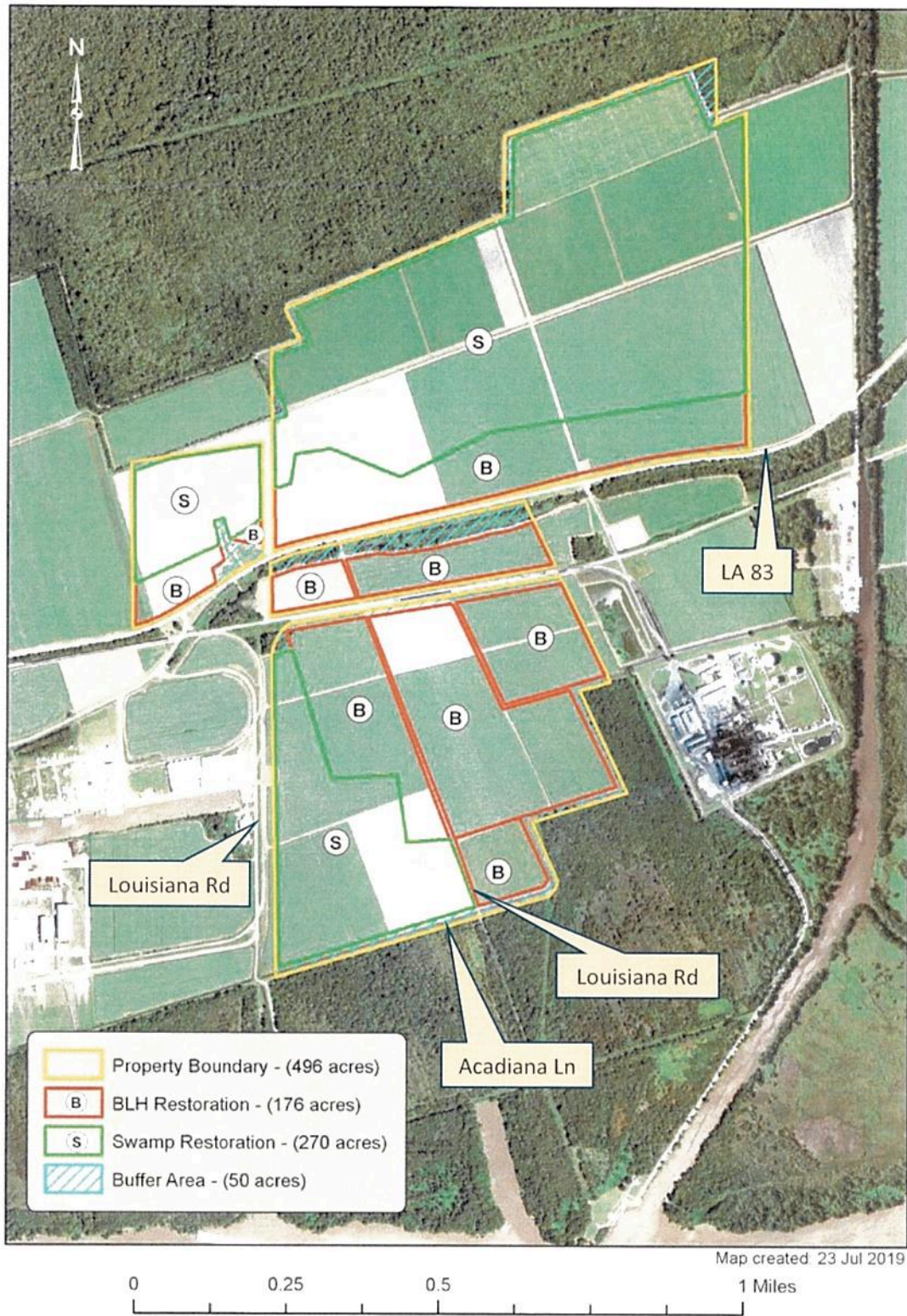


Figure 16. Proposed Cote Blanche Mitigation Site (BLH-Wet and Swamp restoration).

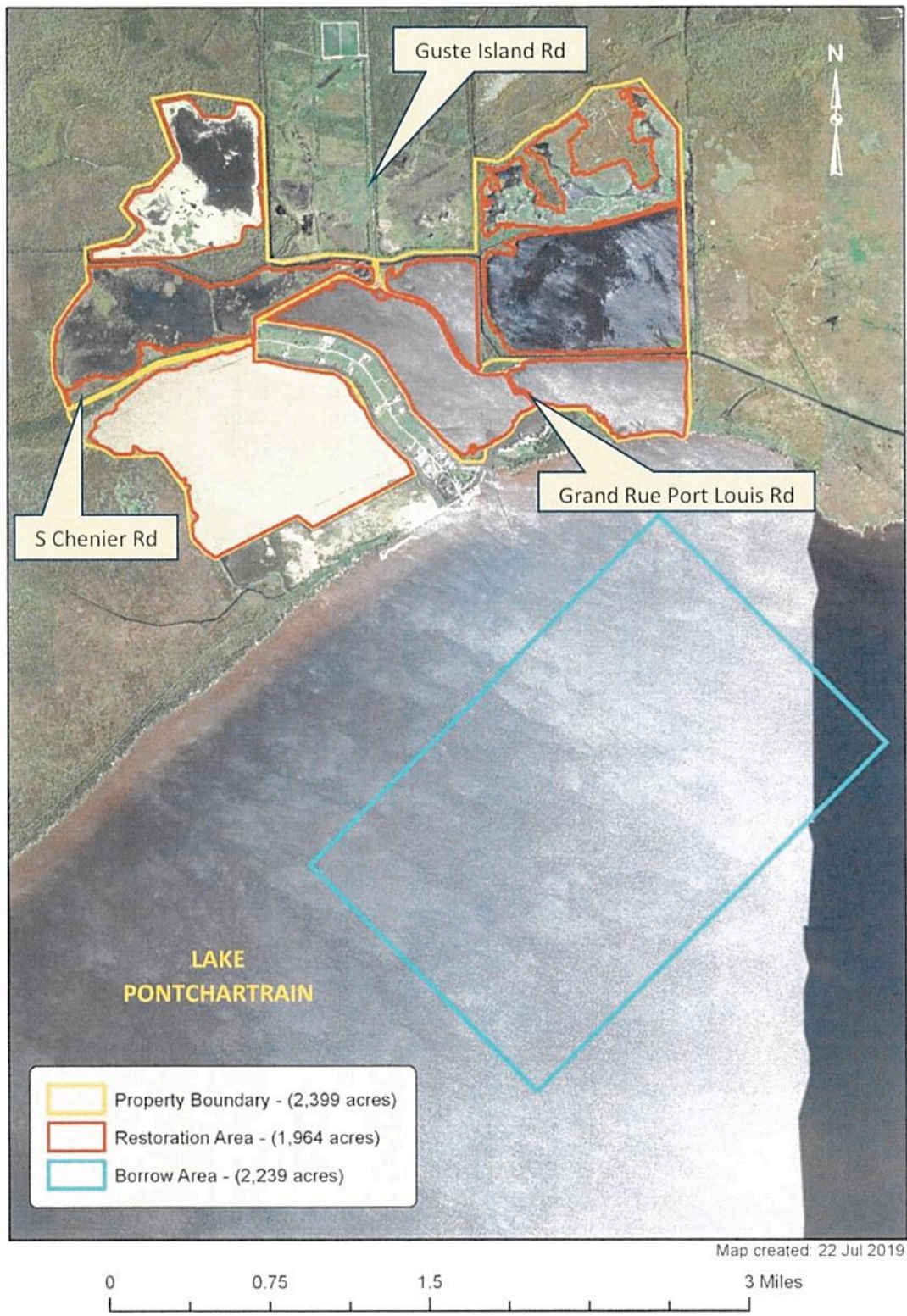


Figure 17. Proposed Pine Island Mitigation Site (Swamp restoration).

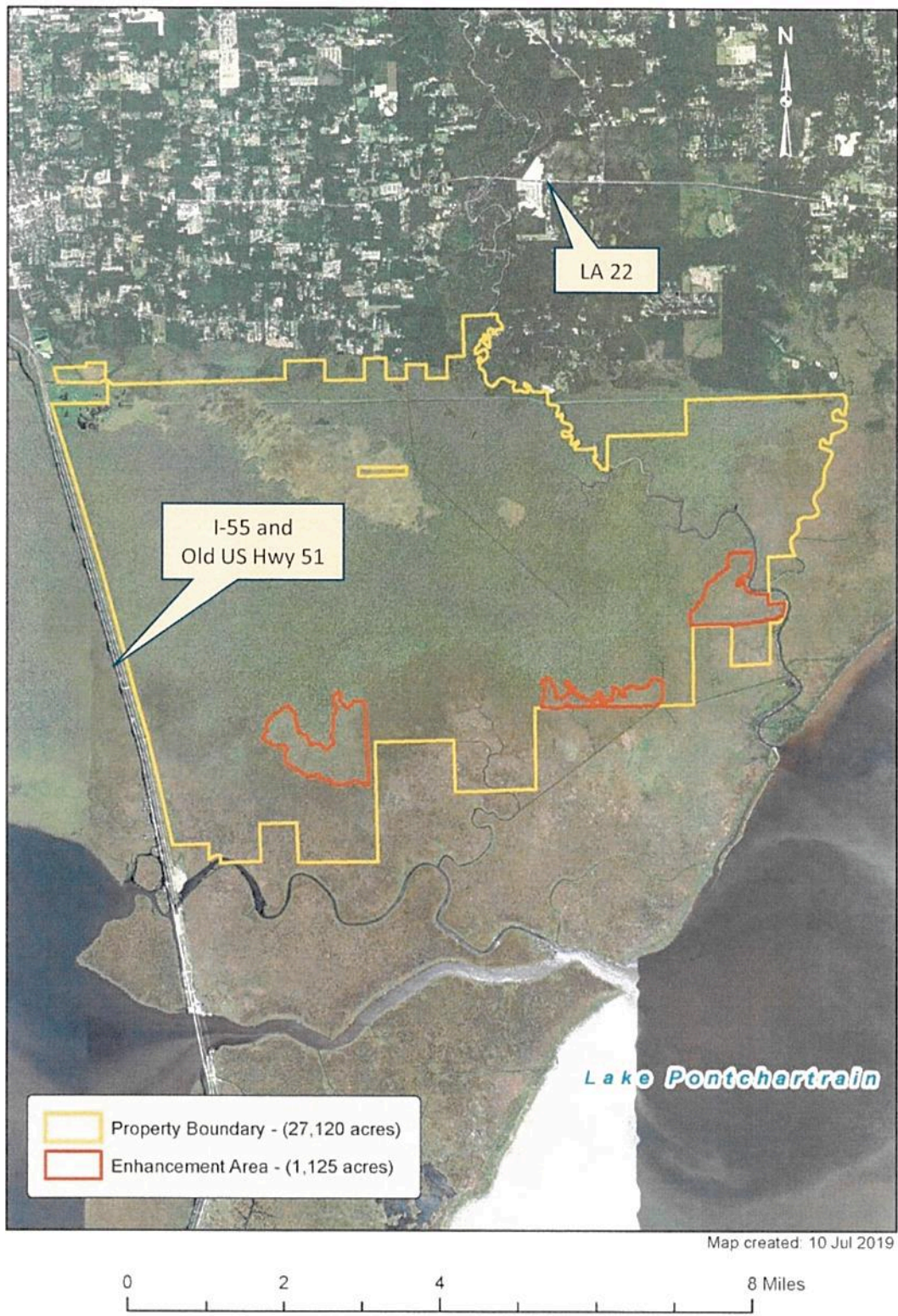


Figure 18. Proposed Joyce WMA Mitigation Site (Swamp enhancement).

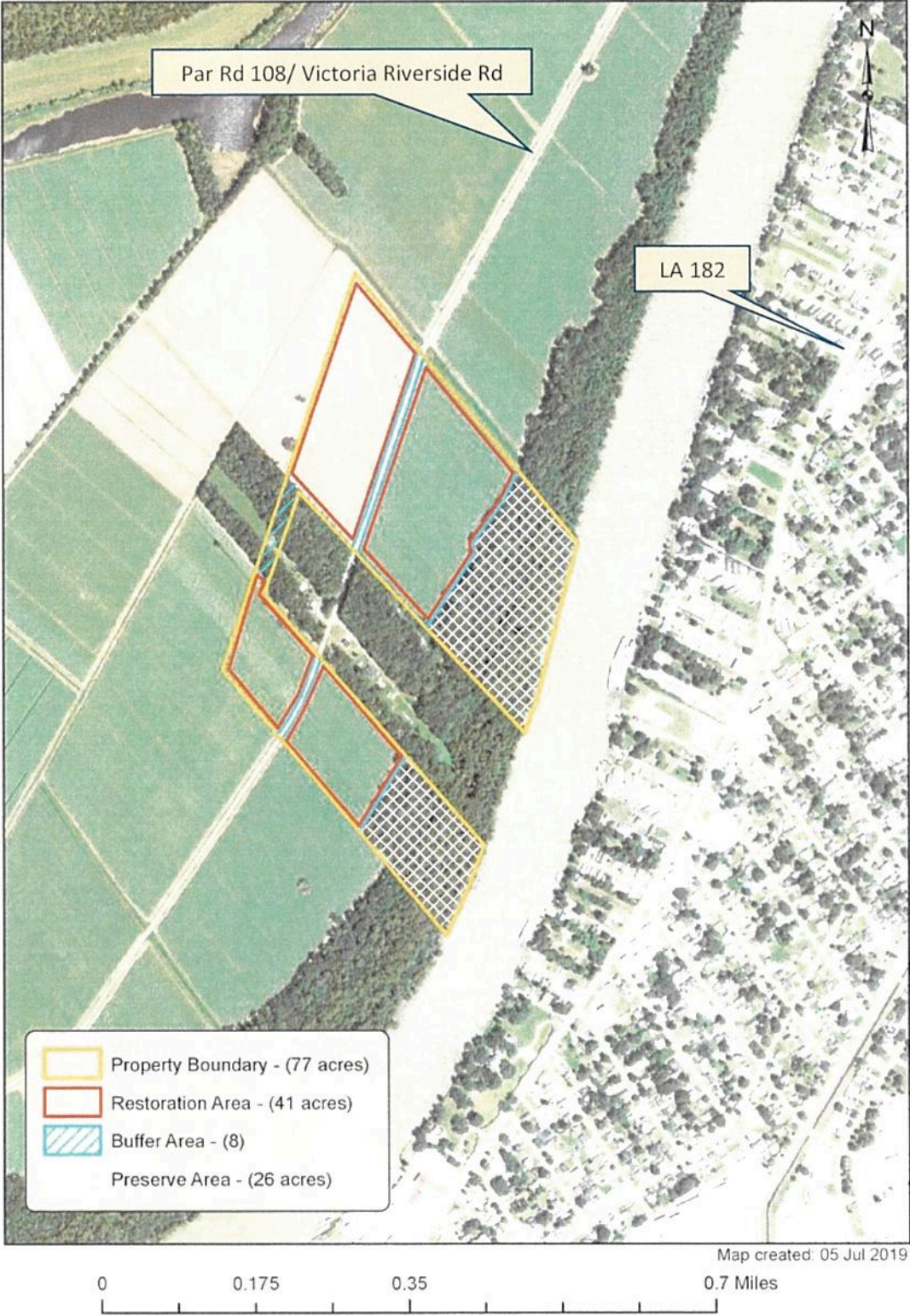


Figure 19. Proposed Bayou Vista Mitigation Site (Swamp restoration).



NOTES:

- PROPOSED MITIGATION AREAS CONSIST OF EIGHT SEPARATE AREAS OF SWAMP CREATION RESTORATION UP TO APPROXIMATELY 1,265 ACRES.
- ESTIMATED PROPOSED PLANTINGS

Mitigation Area	Capacity	Volume
Area 1	118,810	291,548
Area 2	52,790	39,932
Area 3	295,540	77,264
Area 4	1,21,170	30,796
Area 5	39,240	9,782
Area 6	183,665	45,932
Area 7	77,390	19,312
Area 8	100,290	25,024
Total	1,078,925	267,240

ASSUME SWAMP CAPACITY PLANT SPECIES WILL BE INSTALLED ON A 9FT BY 10FT GRID.
 SWAMP MITIGATION PLANT SPECIES WILL BE INSTALLED ON A 16 FT BY 20 FT GRID.
 SITE ACCESS:
 ACCESS TO THE MITIGATION AREAS IS AS FOLLOWS:
 FROM THE NORTH, GUSTE ISLAND ROAD RUNS BETWEEN AREAS 1 AND 2. THIS ROAD THEN SPLIT TO GRAND RUE PORT LOUIS ROAD WHICH RUNS BETWEEN AREA 4, AREA 5, AND AREA 7 AND S. CHENEY DRIVE WHICH RUNS BETWEEN AREA 2 AND 3.
 STAGING WOULD BE IN THE GENERAL AREA INDICATED. ALL STAGING OF EQUIPMENT WOULD BE VIA BARGE.
 PIPELINE ROUTES INDICATED WOULD BE USED TO TRANSFER DREDGED MATERIAL FROM THE OUTLINE BORROW AREA. TYPICAL PIPELINE CORRIDORS WOULD BE 75 FT WIDE. THE MITIGATION AREA WOULD BE DETERMINED BY THE CONTRACTOR WITHIN THE 75 FT PIPELINE CORRIDORS INDICATED. WHERE PIPELINE MUST BE INSTALLED, PIPELINES WOULD BE PLACED UNDERNEATH ROADS IN THE AREAS INDICATED.
 RIPRAP TO BE USED FOR BRIDGE MATERIAL. CONCRETE BRIDGE PILES WOULD BE BUILT AROUND THE MITIGATION AREAS. A CUTTER SECTION DREDGE WOULD THEN PUMP MATERIAL FROM THE INDICATED BORROW AREA INTO THE MITIGATION AREAS. THE MITIGATION AREAS WOULD BE PLACED AT ELEVATION 4.5 FEET TO AN ELEVATION OF 4.5 FT NAVD83. AFTER DREDGE PLACEMENT AND A SETTLE PERIOD OF ONE YEAR, THE DREDGEMENT AREAS WOULD BE DEGRADED PRIOR TO PLANTING.


NOTES:

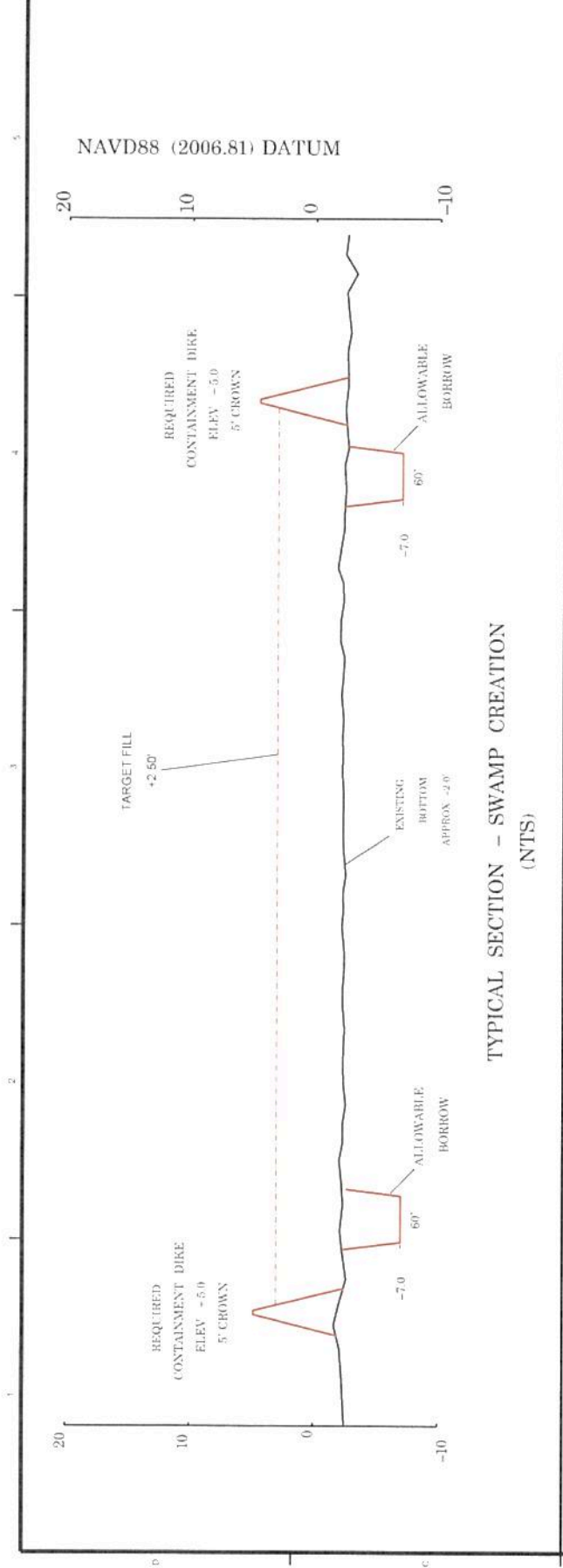
- ESTIMATED FILL QUANTITIES FOR PROPOSED MITIGATION AREAS ARE AS FOLLOWS:
- RIPRAP:

Mitigation Area	Fill Quantity (Cubic Yards)
Area 1	1,809,800
Area 2	2,252,551
Area 3	277,723
Area 4	1,467,000
Area 5	625,543
Area 6	2,738,792
Area 7	1,196,056
Area 8	1,649,183
Total	16,401,110

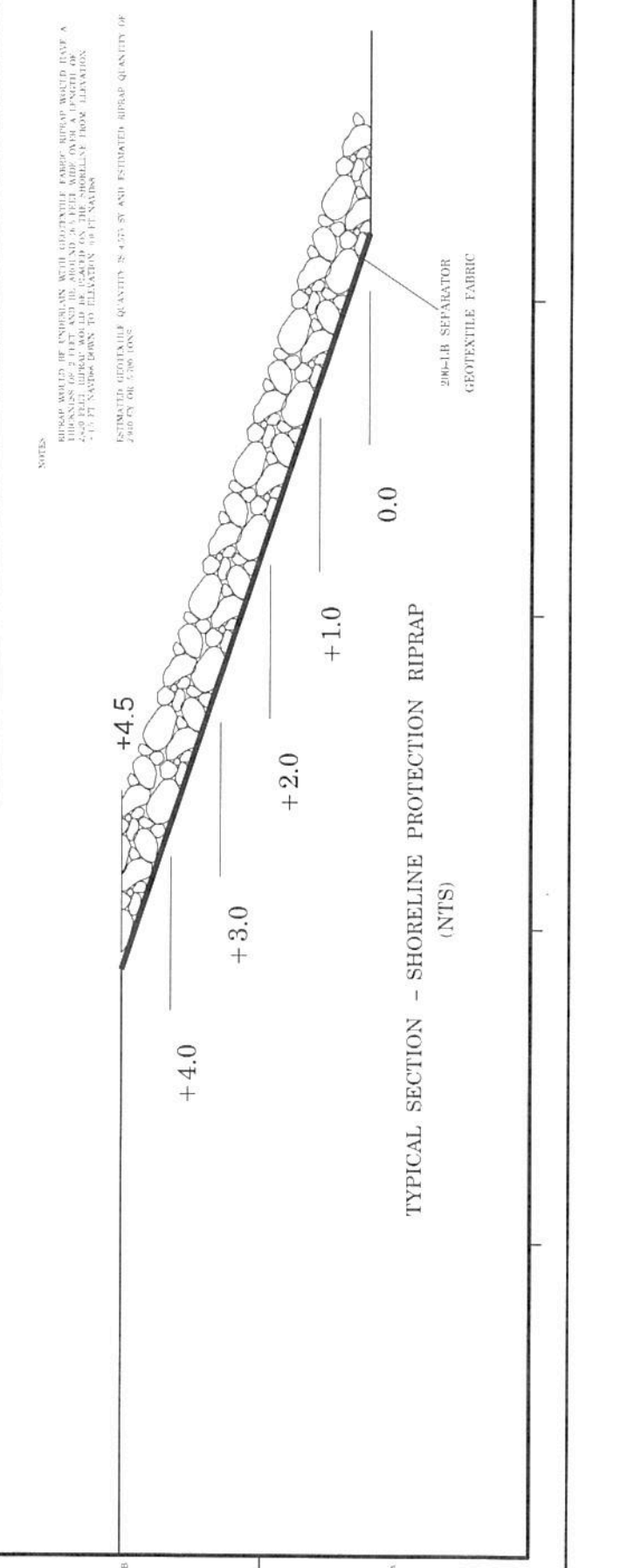
RIPRAP INDICATED ON THE DRAWING WOULD BE CONSTRUCTED AS PERMANENT SHORELINE PROTECTION. RIPRAP WOULD BE UNDERLAIN WITH GEOTEXTILE AND A 18" SAND BED. RIPRAP WOULD BE PLACED UNDERNEATH THE SHORELINE FROM ELEVATION 4.5 FT NAVD83 TO ELEVATION 6.11 NAVD83. ESTIMATED GEOTEXTILE QUANTITY IS 4.5 YD/SY AND ESTIMATED RIPRAP QUANTITY OF 2,540 CY OR 5,700 TONS.



 U.S. Army Corps of Engineers DISTRICT OF MISSISSIPPI	PROJECT NO. 17-00000000 DRAWING NO. 17-00000000 SHEET NO. 17-00000000	PROJECT TITLE DRAWING TITLE SHEET TITLE	PROJECT LOCATION DRAWING DATE SHEET DATE
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TYPICAL SECTION - SWAMP CREATION
(NTS)



TYPICAL SECTION - SHORELINE PROTECTION RIPRAP
(NTS)

NOTES

1. RIPRAP SHOULD BE UNDERLAIN WITH GEOTEXTILE FABRIC. RIPRAP SHOULD HAVE A MINIMUM COVER OF 12" ABOVE THE UNDERLAINING GEOTEXTILE FABRIC. RIPRAP SHOULD BE PLACED IN A SINGLE LAYER WITH A MINIMUM COVER OF 12" ABOVE THE UNDERLAINING GEOTEXTILE FABRIC. RIPRAP SHOULD BE PLACED IN A SINGLE LAYER WITH A MINIMUM COVER OF 12" ABOVE THE UNDERLAINING GEOTEXTILE FABRIC.

2. ESTIMATED GEOTEXTILE QUANTITY IS 4.57 SQ YD AND ESTIMATED RIPRAP QUANTITY OF 2,940 CY OR 5,395 TONS.

JOHN BEL EDWARDS
GOVERNOR



CHUCK CARR BROWN, PH.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

SEP 09 2019

Ms. Tammy Gilmore
U.S. Army Corps of Engineers
Regional Planning and Environmental Division South
CEMVN-PDN-CEP
7400 Leake Avenue
New Orleans, LA 70118

AI No.: 101235
Activity No.: CER2019003

RE: BBA 18 Mitigation Project for the West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction, Comite River Diversion, and East Baton Rouge Parish Flood Risk Management Projects
Water Quality Certification WQC 190828-02

Dear Ms. Gilmore:

The Louisiana Department of Environmental Quality, Water Permits Division (LDEQ), has reviewed the application for swamp enhancement and to create and/or restore bottomland hardwoods and swamp to provide for compensatory mitigation for wetland habitat impacts associated with construction of the West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction, Comite River Diversion, and East Baton Rouge Parish Watershed Flood Control projects.

The information provided in the application has been reviewed in terms of compliance with State Water Quality Standards, the approved Water Quality Management Plan and applicable state water laws, rules and regulations. LDEQ determined that the requirements for a Water Quality Certification have been met. LDEQ concludes that the discharge of fill specific to the Pine Island Mitigation Project and all other proposed activities associated with the 19 mitigation projects will not violate water quality standards as provided for in LAC 33:IX.Chapter 11. Therefore, LDEQ hereby issues U.S. Army Corps of Engineers, New Orleans District Water Quality Certification, WQC 190828-02.

Should you have any questions concerning any part of this certification, please contact Elizabeth Hill at (225) 219-3225 or by email at elizabeth.hill@la.gov. Please reference Agency Interest (AI) number 101235 and Water Quality Certification 190828-02 on all future correspondence to this Department to ensure all correspondence regarding this project is properly filed into the Department's Electronic Document Management System. Please find included with this certification the public notice for publication in the Advocate of Baton Rouge.

Sincerely,

A handwritten signature in blue ink, appearing to read "Scott Williams".

Scott Williams
Administrator
Water Permits Division

Enclosure

PUBLIC NOTICE TO RUN IN

THE ADVOCATE OF Baton Rouge

legal.ads@theadvocate.com

Phone: 225-388-0128

Contact: Shelley Calloni or Kristi Bunch

Notice is hereby given that the U.S. Army Corps of Engineers, New Orleans District has applied for a 401 Water Quality Certification for swamp enhancement and to create and/or restore bottomland hardwoods and swamp to provide for compensatory mitigation for wetland habitat impacts associated with construction of the West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction, Comite River Diversion, and East Baton Rouge Parish Watershed Flood Control projects. The U.S. Army Corps of Engineers, New Orleans District is applying to the Louisiana Department of Environmental Quality, Office of Environmental Services for a Water Quality Certification in accordance with statutory authority contained in the LAC 33:IX.1507.A-E and provisions of Section 401 of the Clean Water Act.

Comments concerning this application can be filed with the Water Permits Division within ten days of this notice by referencing WQC 190828-02, AI 101235 to the following address:

Louisiana Department of Environmental Quality
Water Permits Division
P.O. Box 4313
Baton Rouge, LA 70821-4313
Attn: Elizabeth Hill

A copy of the application is available for inspection and review at the LDEQ Public Records Center, on the first floor of the Galvez Building, Room 127 at 602 North Fifth Street, Baton Rouge, LA 70802, from 8:00 a.m. to 4:30 p.m.



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVE
NEW ORLEANS LA 70118-3651

July 03, 2019

Regional Planning and
Environment Division, South
Environmental Planning Branch
Attn: CEMVN-PDS-N

Kristin Sanders, SHPO
LA State Historic Preservation Officer
P.O. Box 44247
Baton Rouge, LA 70804-4241

RE: Notice of Intent to Prepare Programmatic Agreement Regarding “Bipartisan Budget Act of 2018 Compensatory Mitigation for the Comite River Diversion, East Baton Rouge Parish Watershed Flood Control, and West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Projects.”

Dear Ms. Sanders:

The United States Army Corps of Engineers (USACE), New Orleans District (CEMVN), is initiating the process to develop a Programmatic Agreement (PA) for the Bipartisan Budget Act of 2018 Compensatory Mitigation for the Comite River Diversion (Comite), East Baton Rouge Parish Watershed Flood Control (EBR), and West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction (WSLP) Projects pursuant to Section 106 of the National Historic Preservation Act (NHPA), as amended (54 U.S.C. § 300101 et seq.), and Section 110 of the NHPA, that require Federal agencies to take into account the effect of their undertakings on historic properties during the planning process and consult with stakeholders regarding these effects. This letter is intended to notify the LA State Historic Preservation Officer (LA SHPO) pursuant to 36 CFR Part 800.14(b) of our plan to develop a project-specific PA that establishes procedures to satisfy the CEMVN’s Section 106 responsibilities with regard to the programmatic review of this feasibility study and allows CEMVN to coordinate Section 106 reviews with its evaluation of the proposed action’s potential for significant impacts to the human and natural environment required by the National Environmental Policy Act (NEPA), as amended (42 U.S.C. § 4321 et seq.). The PA will address the potential of this undertaking to effect historic properties that are eligible for or listed on the National Register of Historic Places (NRHP), including archaeological sites, districts, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and/or sites of religious and cultural significance on or off Tribal Lands [as defined in 36 CFR § 800.16(x)]. We invite the LA SHPO to participate in this consultation since it may involve important questions of policy or interpretation and will result in the development of a PA that governs the application of the Section 106 process with regards to the proposed undertaking.

Study Authority

CEMVN is conducting the present compensatory mitigation feasibility study under the standing authority of the Bipartisan Budget Act of 2018 (Pub. L. 115-123), Division B, Subdivision 1, H. R. 1892-13, Title IV, Corps of Engineers-Civil, Department of the Army, Investigations, for flood and storm damage risk reduction, signed into law February 9, 2018. The Comite, EBR, and WSLP projects were previously authorized and have since been included in the Bipartisan Budget Act of 2018 for construction. The lead Federal agency for this proposed action is the USACE. The Non-Federal Sponsors (NFS) for the Comite project are the Louisiana Department of Transportation and Development and the Amite River Basin Commission. The NFS for the EBR project are East Baton Rouge Parish and the City of Central. The NFS for the WSLP project are the Louisiana Coastal Protection and Restoration Authority and the Pontchartrain Levee District. The feasibility study phase is 100% federally funded.

Study Purpose and Background

The purpose of the proposed action is to compensate for habitat losses incurred during construction of the WSLP, Comite, and EBR projects. The WSLP project is located in southeast Louisiana, on the east-bank of the Mississippi River in St. Charles, St. John the Baptist, and St. James Parishes. The project, as currently designed, is approximately 18.5 miles (29.7 km) in length and includes 17.5 miles (28.1 km) of levee, 1 mile of T-wall (1.6 km), four (4) pumping stations, two (2) drainage structures, and approximately 35 utility relocations. It is currently anticipated that approximately 2,020 acres (817.4 ha) of swamp and 150 acres (60.7 ha) of bottomland hardwoods (BLH) would be needed for mitigation. However, the construction project is currently undergoing re-design and therefore the mitigation needs, could change.

The Comite Project is located in the southern portion of the Comite River Basin, in East Baton Rouge Parish, Louisiana. The primary project features include a control structure at the Comite River, a control structure at Lilly Bayou, three (3) control drop structures at the intersections of the diversion channel with White, Cypress, and Baton Rouge Bayous, a drop control structure in the vicinity of McHugh Road, two (2) railroad bridges, four (4) highway bridges and one (1) parish road bridge. Some construction has begun to date and therefore some mitigation has been completed as well. It is currently anticipated that approximately 690 acres (279.2 ha) of BLH mitigation is remaining.

The EBR project is located in East Baton Rouge Parish, Louisiana, and is intended to reduce flooding throughout East Baton Rouge Parish by improving approximately 66.0 miles (106.2 km) of channels in five (5) sub-basins including: Jones Creek and tributaries, Ward Creek and its tributaries, Bayou Fountain, Beaver Bayou, and Blackwater Bayou and its main tributary. It is anticipated that approximately 430 acres (174.0 ha) of BLH would needed for mitigation. However, the construction project is currently undergoing re-design and therefore the impacts, and therefore the mitigation needs, could change.

Study Area

Generally and to the extent possible, the mitigation projects will be implemented in the same coastal basin where the project impacts occur. The mitigation is still in the early planning phase and therefore a Tentatively Selected Plan (TSP) has not yet been identified. However, CEMVN has identified several sites that may be suitable for mitigation. In addition to purchasing existing mitigation bank credits, CEMVN is presently reviewing 31 potential mitigation areas (Table 1):

Table 1. Potential Mitigation Areas

	Mitigation Site	Total Acreage	Latitude	Longitude
1	Pine Island	1945.7	30.396678	-90.219547
2	Saint James	1393.9	30.085205	-90.851138
3	Saint John	104.9	30.068508	-90.569073
4	Ziegler	65.2	30.434510	-90.706101
5	Gravity	80.5	30.148050	-90.958326
6	Ascension SB	63.0	30.177260	-90.907816
7	Saint Gabriel	1322.4	30.277361	-91.090627
8	Staring	171.9	30.319447	-91.131753
9	LSUAM 1	1484.8	30.367455	-91.174861
10	GBRPC	134.9	30.383259	-91.213589
11	LSUAM 2	258.0	30.395102	-91.197027
12	Feliciana	267.0	30.813381	-90.965219
13	Sunset Ridge	324.5	29.816439	-90.418021
14	Tangipahoa	82.4	30.700819	-90.409489
15	Port Allen	89.3	30.466937	-91.207063
16	TPSB	507.9	30.548381	-91.356100
17	Rosedale	224.8	30.441978	-91.463792
18	Grosse Tete	93.4	30.378220	-91.420981
19	Modeste	83.8	30.174734	-91.056964
20	White Castle	69.0	30.169062	-91.153865
21	Innis	131.0	30.874877	-91.718614
22	Lottie	50.4	30.542888	-91.653708
23	Krotz	147.2	30.503050	-91.708769
24	Maringouin	706.0	30.460997	-91.571503
25	Ramah	325.0	30.407211	-91.536795
26	Bayou Vista	41.7	29.693493	-91.277743
27	Albania North	964.8	29.913454	-91.639675
28	Albania South	192.1	29.893694	-91.657721
29	Cote Blanche	447.0	29.779846	-91.745178
30	Amite MIT	2499.2	30.665275	-90.873107
31	Joyce	1125.5	30.352237	-90.330586

A map depicting the locations of potential mitigation areas is included as Figure 1. Additional information and maps regarding this project can be accessed at: <https://www.mvn.usace.army.mil/About/Projects/BBA-2018/Mitigation/>.

Consideration of Alternatives

Currently, the mitigation projects need to compensate for two (2) habitat categories: BLH and Swamp. The CEMVN mitigation Project Delivery Team (PDT) will identify potential projects based on time, risks, costs, and potential to effect significant cultural, historic, scenic, and recreational resources, among other factors, and will evaluate viable alternatives in cooperation with environmental resource agencies, LA SHPO, Tribes, other external stakeholders and the NFS. Preliminary investigations will help determine which sites could be carried forward for further analysis. TSPs will be evaluated in one (1) comprehensive NEPA document prepared by CEMVN, which will be released for public review and comment.

Mitigation Plan Formulation Milestones

Table 2 (below) provides a schedule of proposed study milestone dates for the present feasibility study. Schedule updates will be provided to stakeholders in subsequent Section 106 consultation meetings. The schedule assumes that an Environmental Assessment (EA) will be required in furtherance of CEMVN's responsibilities under NEPA. The EA will examine the existing condition of environmental and cultural resources within the study area and analyze potential impacts to those resources as a result of implementing the alternatives. Upon the completion of the Draft EA a stakeholder/public comment period will be initiated in conjunction with technical, peer, and policy reviews. Subsequently, results of the reviews and additional feasibility work will be incorporated into the Final EA, which will again be made available for stakeholder/public review.

Table 2. Proposed Study Milestone Schedule

Milestone	Scheduled	Actual	Complete
Mitigation Industry Day	Sept 7, 2018	Sept 7, 2018	Yes
Screening of Potential Sites	April 2019	May 03, 2019	Yes
Alternative Analysis	Ongoing	Ongoing	No
TSP Selection	Aug 16, 2019	TBD	No
Release Draft EA to Public	Aug 22, 2019	TBD	No
Final EA Routing	Oct 15, 2019	TBD	No

On September 07, 2018, CEMVN hosted an Environmental Mitigation Industry Day to seek ideas from the mitigation banking industry, landowners, and others, for potential projects to compensate for anticipated habitat impacts associated with the Comite, EBR, and WSLP Projects. Additionally, the public was invited to submit ideas for potential projects to CEMVN by e-mail no later than October 31, 2018. Starting in April of 2019, CEMVN began screening potential sites recommended by Industry Day participants and the public for suitability. On May 03, 2019, assembled an initial list of potential mitigation areas for alternative analysis. Presently, the evaluation of alternatives is ongoing.

At the feasibility level, there is insufficient funding and time to fully conduct required NHPA cultural resources identification and evaluations and to determine any necessary avoidance, minimization, or mitigation measures in consultation with stakeholders. Therefore, prior to approving the undertaking, the agency is proposing to develop a project-specific PA in consultation with stakeholders as the federal agency cannot fully determine how the undertaking may affect historic properties or the location of historic properties and their significance and character at this time. Following the execution of a PA, the Chief of Engineers may then

proceed with making a final recommendation on the project and issuing a Finding of No Significant Impact (FONSI) in compliance with NHPA and NEPA.

Section 106 Consultation

CEMVN has determined that the proposed action constitutes an Undertaking as defined in 36 CFR § 800.16(y) and has the potential to cause effects on historic properties. This letter initiates formal Section 106 consultation pursuant to 36 CFR § 800.3(c). Due to time and budget constraints for this undertaking, CEMVN proposes to develop a project-specific PA pursuant to 36 CFR § 800.14(b)(3). The goal of this Section 106 consultation is to provide a framework for addressing this undertaking and establish protocols for continuing consultation with the LA SHPO, Tribal Governments, and other stakeholders. The PA would identify consulting parties, define applicability, establish review timeframes, stipulate roles and responsibilities of stakeholders, summarize Tribal consultation procedures, consider the views of the SHPO/THPO and any other consulting parties, afford for public participation, develop programmatic allowances to exempt certain actions from Section 106 review, provide the measures CEMVN will implement to develop an Area of Potential Effects (APE) in consultation with external stakeholders, outline a standard review process for plans and specifications as they are developed, determine an appropriate level of field investigation to identify and evaluate historic properties within the APE and the potential to affect historic properties and/or sites of religious and cultural significance, streamline the assessment and resolution of Adverse Effects through avoidance, minimization, and programmatic treatment approaches for mitigation, establish reporting frequency and schedule, provide provisions for post-review unexpected discoveries and unmarked burials, and incorporate the procedures for amendments, duration, termination, dispute resolution, and implementation.

CEMVN proposes to send future notices, draft agreements, and other background information to consulting parties by e-mail to minimize communication delays and expedite the development of the PA. Please let CEMVN know if this is impractical, so we can make alternative arrangements.

A date and time for the initial Section 106 consultation meeting has not been set. Upon selection of a TSP, CEMVN will schedule a teleconference with consulting parties. The purpose of the initial meeting will be to discuss the proposed undertaking, the APE, and determine the appropriate steps to identify, evaluate, avoid, minimize, and mitigate potential adverse effects. CEMVN will notify likely consulting parties regarding the meeting as soon as possible and forward information regarding the meeting location, a conference call-in number, and the Agenda.

Please do not hesitate to notify CEMVN regarding any information your office may wish to provide at this time concerning the proposed undertaking and its potential to significantly affect historic properties and/or of any other relevant parties who you feel may have an interest in participating in this consultation. Should you have any questions or need additional information regarding this undertaking or the Proposed Study Milestone Schedule, please contact Jeremiah Kaplan, Archaeologist at Jeremiah.H.Kaplan@usace.army.mil or (504) 862-2004.

Sincerely,

for MARSHALL K. HARPER
Chief, Environmental Planning Branch

CC:File

LA SHPO

An electronic copy of this letter with enclosures will be provided to the Section 106 Inbox,
section106@crt.la.gov.

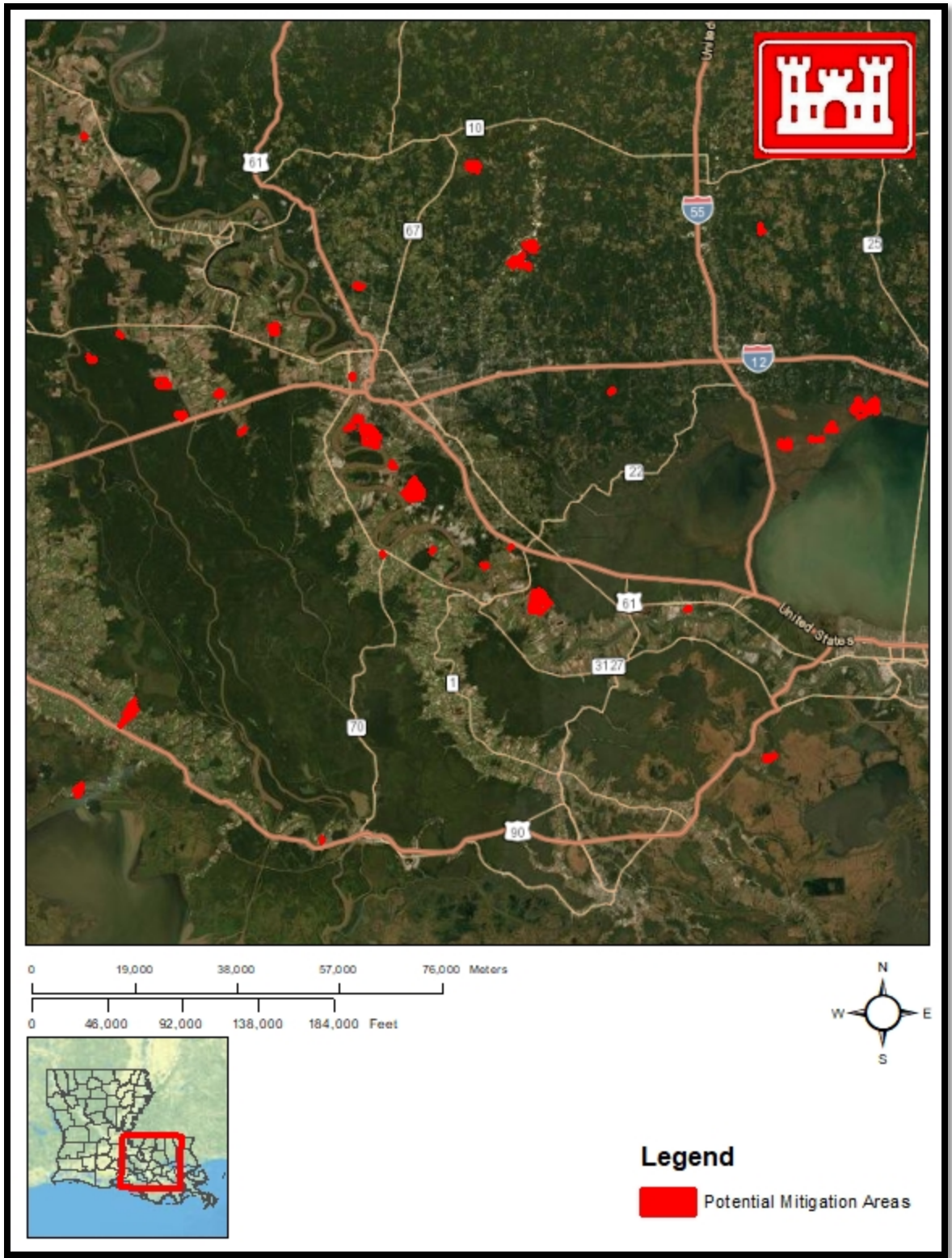


Figure 1. Map displaying location of potential mitigation areas.

Public Notice NHPA/NEPA¹

Notice of Intent to Prepare Programmatic Agreement Regarding “Bipartisan Budget Act of 2018 Compensatory Mitigation for the Comite River Diversion, East Baton Rouge Parish Watershed Flood Control, and West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Projects.”

The United States Army Corps of Engineers (USACE), New Orleans District (CEMVN), is initiating the process to develop a Programmatic Agreement (PA) for the Bipartisan Budget Act of 2018 Compensatory Mitigation for the Comite River Diversion (Comite), East Baton Rouge Parish Watershed Flood Control (EBR), and West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction (WSLP) Projects pursuant to Section 106 of the National Historic Preservation Act (NHPA), as amended (54 U.S.C. § 300101 et seq.), and Section 110 of the NHPA, that require Federal agencies to take into account the effect of their undertakings on historic properties during the planning process and consult with stakeholders regarding these effects.

The purpose of the proposed action is to compensate for habitat losses incurred during construction of the WSLP, Comite, and EBR projects. The WSLP project is located in southeast Louisiana, on the east-bank of the Mississippi River in St. Charles, St. John the Baptist, and St. James Parishes. The Comite Project is located in the southern portion of the Comite River Basin, in East Baton Rouge Parish, Louisiana. The EBR project is located in East Baton Rouge Parish, Louisiana. Generally and to the extent possible, the mitigation projects will be implemented in the same coastal basin where the project impacts occur. In addition to purchasing existing mitigation bank credits, CEMVN is presently reviewing 31 potential mitigation areas (Figure 1).

The mitigation projects need to compensate for two habitat categories: Bottom Land Hardwood and Swamp. Among other factors, the mitigation team will identify projects based on time, risks, costs, and potential to effect significant cultural resources, and will evaluate viable alternatives. Additional project information can be accessed at: <https://www.mvn.usace.army.mil/About/Projects/BBA-2018/Mitigation/>.

CEMVN has determined that the proposed action constitutes an Undertaking as defined in 36 CFR § 800.16(y) and has the potential to cause effects on historic properties. Accordingly, CEMVN proposes to develop a project-specific PA pursuant to 36 CFR § 800.14(b)(3) to provide a framework for addressing this undertaking and establish protocols for continuing consultation with the LA State Historic Preservation Officer (LA SHPO), Tribal Governments, and other stakeholders. The PA would identify consulting parties, define applicability, establish review timeframes, stipulate roles and responsibilities of stakeholders, consider the views of the SHPO/Tribal Historic Preservation Officer and other consulting parties, afford for public participation, provide the measures CEMVN will implement to develop an Area of Potential Effects (APE) in consultation with external stakeholders, outline a standard review process for plans and specifications as they are developed, determine an appropriate level of field investigation to identify and evaluate historic properties and/or sites of religious and cultural significance within the APE, streamline the assessment and resolution of Adverse Effects through avoidance, minimization, and programmatic treatment approaches for mitigation.

To help further develop a course of action for this project CEMVN is requesting your input by July 17, 2019, concerning the proposed Undertaking and its potential to significantly affect historic properties and/or of relevant parties who may have an interest in participating in this consultation. Comments can be sent electronically to: mvnenvironmental@usace.army.mil, or, mail comments to: Cultural & Social Resources Section (CEMVN-PDP-CSR), USACE, Room 140, 7400 Leake Ave., New Orleans, LA 70118-3651.



Figure 1. Map displaying potential mitigation areas.

¹ CEMVN is issuing this public notice as part of its responsibilities under the Advisory Council on Historic Preservation's regulations, 36 CFR Part 800, implementing Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 306108). This notice applies to activities carried out under the standing authority of The Bipartisan Budget Act of 2018 (Pub. L. 115-123), Division B, Subdivision 1, H. R. 1892-13, Title IV, Corps of Engineers-Civil, Department of the Army, Investigations, for flood and storm damage risk reduction. CEMVN is also required to fulfill the Council of Environmental Quality regulations (NEPA regulations, 43 FR 55978 (1978)) that provide policy and procedures to enable CEMVN officials to be informed and to take into account environmental considerations when authorizing or approving CEMVN actions that may significantly affect the environment of the United States. It is the intent of NEPA that federal agencies encourage and facilitate public involvement to the extent practicable in decisions that may affect the quality of the environment.



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVE
NEW ORLEANS LA 70118-3651

July 23, 2019

Regional Planning and
Environment Division, South
Environmental Planning Branch
Attn: CEMVN-PDS-N

Kristin Sanders, SHPO
LA State Historic Preservation Officer
P.O. Box 44247
Baton Rouge, LA 70804-4241

**RE: Continued Consultation: Section 106 Programmatic Agreement Regarding
“Bipartisan Budget Act of 2018 Compensatory Mitigation for the Comite River
Diversion, East Baton Rouge Parish Watershed Flood Control, and West Shore
Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Projects.”**

Dear Ms. Sanders:

The U.S. Army Corps of Engineers (USACE), New Orleans District (CEMVN), is continuing consultation to develop a Programmatic Agreement (PA) for the “Bipartisan Budget Act of 2018 Compensatory Mitigation for the Comite River Diversion (Comite), East Baton Rouge Parish Watershed Flood Control (EBR), and West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction (WSLP) Projects” pursuant to Section 106 of the National Historic Preservation Act (NHPA), as amended (54 U.S.C. § 300101 et seq.), and Section 110 of the NHPA, that require Federal agencies to take into account the effect of their undertakings on historic properties during the planning process and consult with stakeholders regarding these effects. This letter is intended to provide information regarding CEMVN’s Tentatively Selected Plan (TSP) for compensatory mitigation (habitat) and notify the LA State Historic Preservation Officer pursuant to 36 CFR Part 800.14(b) of our proposal to develop a project-specific PA that establishes procedures to satisfy the CEMVN’s Section 106 responsibilities with regard to the programmatic review of this feasibility study and allows CEMVN to coordinate Section 106 reviews with its evaluation of the proposed action’s potential for significant impacts to the human and natural environment required by the National Environmental Policy Act (NEPA), as amended (42 U.S.C. § 4321 et seq.). The PA will address the potential of this undertaking to effect historic properties that are eligible for or listed on the National Register of Historic Places (NRHP), including archaeological sites, districts, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and/or sites of religious and cultural significance on or off Tribal Lands [as defined in 36 CFR § 800.16(x)]. We invite the LA State Historic Preservation Officer to participate in this consultation since it may involve important questions of policy or interpretation and will result in the development of a PA that governs the application of the Section 106 process with regards to the proposed undertaking.

Study Authority

CEMVN is conducting the present compensatory mitigation feasibility study under the standing authority of the Bipartisan Budget Act of 2018 (Pub. L. 115-123), Division B, Subdivision 1, H. R. 1892-13, Title IV, Corps of Engineers-Civil, Department of the Army, Investigations, for flood and storm damage risk reduction, signed into law February 9, 2018. The Comite, EBR, and WSLP projects were previously authorized and have since been included in the Bipartisan Budget Act of 2018 for construction. The lead Federal agency for this proposed action is the USACE. The Non-Federal Sponsors (NFS) for the Comite project are the Louisiana Department of Transportation and Development (LA DOTD) and the Amite River Basin Commission (ARBC). The NFS for the EBR project are East Baton Rouge Parish (EBRP) and the City of Central (CC). The NFS for the WSLP project are the Louisiana Coastal Protection and Restoration Authority (CPRA) and the Pontchartrain Levee District (PLD). The feasibility study phase is 100% federally funded.

Study Purpose

The purpose of the proposed action is to compensate for habitat losses incurred during construction of the WSLP, Comite, and EBR projects. Generally and to the extent possible, the mitigation projects will be implemented in the same coastal basin where the project impacts occur. The WSLP project is located in southeast Louisiana, on the east-bank of the Mississippi River in St. Charles, St. John the Baptist, and St. James Parishes. The Comite Project is located in the southern portion of the Comite River Basin, in East Baton Rouge Parish, Louisiana. The EBR project is located in East Baton Rouge Parish, Louisiana. Currently, the mitigation projects need to compensate for two (2) habitat categories: bottomland hardwoods (BLH) and Swamp. Some of the construction projects are currently undergoing re-design and therefore the impacts and mitigation needs, could change.

Background

On July 03, 2019, CEMVN submitted an initial consultation letter entitled: *Notice of Intent to Prepare Programmatic Agreement Regarding "Bipartisan Budget Act of 2018 Compensatory Mitigation for the Comite River Diversion, East Baton Rouge Parish Watershed Flood Control, and West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Projects"* to the Louisiana State Historic Preservation Office (SHPO), Affected Tribes (the Alabama-Coushatta Tribe of Texas (ACTT), the Caddo Nation of Oklahoma (CN), the Choctaw Nation of Oklahoma (CNO), the Coushatta Tribe of Louisiana (CT), the Chitimacha Tribe of Louisiana (CTL), the Jena Band of Choctaw Indians (JBCI), the Mississippi Band of Choctaw Indians (MBCI), the Muscogee (Creek) Nation (MCN), the Seminole Nation of Oklahoma (SNO), the Seminole Tribe of Florida (STF), and the Tunica-Biloxi Tribe of Louisiana (TBTL)), the NFS (the LA DOTD, ARBC, EBRP, CC, CPRA, and PLD), and the Advisory Council on Historic Preservation (ACHP). The aforementioned letter provided information regarding the study area, initial array of mitigation areas being considered, alternative evaluation criteria, mitigation plan formulation milestones, and CEMVN's proposal to develop a project-specific PA pursuant to 36 CFR § 800.14(b) to fulfill its responsibilities under Section 106 of the NHPA. Additionally, this letter invited stakeholders to provide input regarding the proposed undertaking and its potential to significantly affect historic properties and/or sites of religious and cultural significance and requested potential consulting parties' assistance with identifying other relevant entities who may have an interest in participating in this consultation.

On July 15, 2019, CEMVN received a written response from the ACHP stating that the agency “has not yet determined if Appendix A of the regulations, Criteria for Council Involvement in Reviewing Individual Section 106 Cases, applies to this undertaking” and requested additional information regarding the views of the SHPO, Tribes, other consulting parties, and the public in order to determine if their participation in this consultation is warranted. CEMVN will provide the ACHP with a summary of any views or comments received from stakeholders subsequent to this consultation. To date, no response has been received from any of the other stakeholders consulted (SHPO/Tribal/NFS).

Beginning in September 2018, CEMVN also began providing the public with documentation related to “Mitigation” on the designated project website at: <https://www.mvn.usace.army.mil/About/Projects/BBA-2018/Mitigation/>. The web page includes background information regarding purpose, potential mitigation area locations, project planning, and project status along with supplemental materials including a Mitigation Fact Sheet, Industry Day information (date September 7, 2018), and a mitigation basin area map. CEMVN intends to continue to use this website to post project information and as a source for public input. Additionally, on July 02, 2019, CEMVN posted a NHPA/NEPA Public Notice to this website for a 15-day comment period requesting the public’s input concerning the proposed undertaking and its potential to significantly affect historic properties, assistance in identifying any relevant parties who may have an interest in participating in this consultation, and CEMVN’s proposal to develop a project-specific PA pursuant to 36 CFR § 800.14(b). No comments were received.

Updated Mitigation Plan Formulation Milestones

Table 1 (below) provides a schedule of proposed study milestone dates. Schedule updates will continue to be provided to stakeholders in subsequent Section 106 consultation meetings. The CEMVN mitigation Project Delivery Team (PDT) is in the process of screening potential mitigation areas based on project need, time constraints, costs, risks, and potential to effect significant cultural, historic, scenic, and recreational resources, amongst other factors, and will evaluate the TSP in coordination with SHPO, Tribes, the NFS, and other external stakeholders. The assessment of the TSP will be further detailed in one (1) comprehensive NEPA document, prepared by CEMVN, which will be released for stakeholder/public review and comment. The schedule assumes that an Environmental Assessment (EA) will be required in furtherance of CEMVN’s responsibilities under NEPA. The EA will examine the existing condition of environmental and cultural resources within the study area and analyze potential impacts to those resources as a result of implementing the alternatives. Upon the completion of the Draft EA a stakeholder/public comment period will be initiated in conjunction with technical, peer, and policy reviews. Subsequently, results of the reviews and additional feasibility work will be incorporated into the Final EA, which will again be made available for stakeholder/public review.

Table 1. Proposed Study Milestone Schedule

Milestone	Scheduled	Actual	Complete
Mitigation Industry Day	Sept 7, 2018	Sept 7, 2018	Yes
Screening of Potential Sites	April 2019	May 03, 2019	Yes
Alternative Analysis	Ongoing	Ongoing	No
TSP Selection	Aug 16, 2019	July 08, 2019	YES
Release Draft EA to Public	Aug 22, 2019	TBD	No
Final EA Routing	Oct 15, 2019	TBD	No

Description of the Undertaking

CEMVN has now completed its initial screening of alternatives and has developed a TSP that meets the study’s purpose and need. CEMVN may also elect to purchase sufficient BLH-swamp credits from an existing mitigation bank within the Lower Pontchartrain Vicinity (LPV) coastal basin to mitigate for the required acreage-habitat units. The particular bank to be utilized is unknown at this time. However, since permitted banks exist as reasonably foreseeable projects in the Future Without Project conditions, no new direct, indirect, or cumulative impacts to cultural resources would be incurred from the purchase of these credits for the mitigation. In addition to purchasing existing mitigation bank credits, CEMVN is presently reviewing 19 potential mitigation areas (Table 2). A map depicting the locations of the mitigation areas being carried forward for further analysis in the TSP is included as Figure 1 and Attachment 1 provides additional information regarding the tentative actions that would be taken to construct the recommended Plan. The description of the work that would be performed at each mitigation area is still under design and will be refined and coordinated with stakeholders as the project is developed further.

Table 2. TSP

Mitigation Site	Available Acreage	Latitude	Longitude	BLH/Swamp
Pine Island	1945.7	30.411920	-90.241302	Swamp
Saint James	1393.9	30.085205	-90.851138	BLH
Saint John	104.9	30.068508	-90.569073	BLH
Gravity	80.5	30.148050	-90.958326	BLH
Ascension SB	63	30.177260	-90.907816	BLH
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Feliciana	267	30.813381	-90.965219	BLH
Sunset Ridge	324.5	29.816439	-90.418021	BLH
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Innis	131	30.874877	-91.718614	BLH
Krotz	147.2	30.503050	-91.708769	BLH
Bayou Vista	41.7	29.693493	-91.277743	Swamp
Albania North	964.8	29.913454	-91.639675	BLH/Swamp
Albania South	192.1	29.893694	-91.657721	BLH/Swamp
Cote Blanche	447	29.779846	-91.745178	BLH/Swamp
Amite MIT	2499.2	30.763337	-90.839090	BLH
Joyce	1125.5	30.352237	-90.330586	Swamp

With the exception of Pine Island, all projects include conversion of agricultural land to forested habitat (BLH and Swamp). Any combination of the TSP mitigation areas could be used to satisfy the project purpose and need. The total acreage of potential mitigation areas selected for the TSP is presently greater than actual need so that some flexibility may be afforded if additional evaluation reveals that a particular location is not feasible or avoidance measures are necessitated. Your agency's input will help inform CEMVN of the potential impacts associated with any of the above alternatives and assist in determining avoidance measures.

Area of Potential Effects (APE)

This letter serves as consultation for the Area of Potential Effects (APE) in accordance with 36 CFR § 800.16(d). Attachment 2 provides maps displaying CEMVN's proposed APE for each individual mitigation area included in the TSP. The APE is the same for standing structures and archaeology, incorporates both direct effects (access, staging, and construction areas) and indirect effects (visual), including all areas of proposed ground disturbance, and is presently defined as the individual real estate parcel/s that CEMVN would purchase for each mitigation area (Table 2). At the feasibility level of design, the APE for each individual mitigation area will be used primarily to identify and evaluate the historic properties within. However, the PA will include a standard review process for plans and specifications as they are developed, and therefore; changes to the APE may be warranted as the pre-construction design is further refined. If necessitated, CEMVN will re-initiate consultation with stakeholders to revise the APE in accordance with the PA.

Assessment of the Undertaking's potential to effect Historic Properties

CEMVN has completed an initial review of existing information regarding historic properties within the potential mitigation areas selected for the TSP. Historic Properties within the APE were identified based on CEMVN's review of the NRHP database, the *Louisiana Cultural Resources Map* provided by SHPO, and historic map research. This data was evaluated by CEMVN using the NRHP Criteria. CEMVN's preliminary review of the properties selected for the TSP is summarized in Table 3 (below):

Table 3. Historic Properties within the APE

Mitigation Site	Previously recorded Archaeological Sites within Parcel	Previous Survey within Parcel ¹	Previous Survey Coverage	Other Notes:
Pine Island	16ST45 (partial); 16ST98 (partial)	22-0824 - A+R	Partial	Project area situated in dense cluster of sites. Primarily prehistoric. Little survey coverage of proposed mitigation area
Saint James	16SJ20; 16SJ21; 16SJ34; 16SJ30	22-0665 - A+R; 22-3017 Ph. I; 22-3693 - Ph. II; 22-3693 - Ph. II; 22-3713 - Ph. III; 22-4669 A+R; 22-3017 - Ph. II; 22-3823 - Ph. III; 22-4043 - Ph. III; 22-0728 - Ph. I; 22-0727 - A+R; 22-3812 - Ph. III	Partial	Multiple previously recorded plantation sites within project area: Wilton Plantation, Helvetia Plantation, St. Rose Plantation, and Columb Plantation (including cemetery within parcel)
Saint John	N/A	22-2572 - A+R; 22-3779 - Ph. I (negative)	Complete	Good potential for mitigation area
Gravity	N/A	N/A	N/A	Unassessed
Ascension SB	N/A	N/A	N/A	Requires additional assessment
GBRPC	16EBR72 (partial); 16EBR74	22-1468 - Ph. I	Sparse- N/A	Requires additional assessment
Feliciana	16EF42; 16EF43; 16EF47; 16EF44 (partial); 16EF45 (partial); 16EF48 (partial); 16EF12; 16EF46	22-0774 - A+R	Sparse- NA	Requires additional assessment
Sunset Ridge	N/A	N/A	N/A	Unassessed
Port Allen	N/A	N/A	N/A	Unassessed

¹ A+R = Assessment + Reconnaissance; Ph. I = Phase I (Identification); Ph. II = Phase II (Evaluation); Phase III (Mitigation).

Mitigation Site	Previously recorded Archaeological Sites within Parcel	Previous Survey within Parcel ¹	Previous Survey Coverage	Other Notes:
TPSB	N/A	N/A	N/A	Unassessed
Rosedale	N/A	22-2261 - A+R	only A+R	Requires additional assessment
Innis	N/A	N/A	N/A	Unassessed
Krotz	N/A	N/A	N/A	Unassessed
Bayou Vista	N/A	N/A	N/A	Unassessed
Albania North	N/A	N/A	N/A	Unassessed
Albania South	N/A	N/A	N/A	Unassessed
Cote Blanche	N/A	N/A	N/A	Unassessed
Amite MIT	16SH4	22-0801 (partial)	Only partial A+R	Project area largely unassessed. Heavily impacted by gravel mining though still contains some site potential
Joyce	N/A	N/A	N/A	Unassessed

Based on the aforementioned identification and evaluation, CEMVN has determined that there are multiple historic properties as defined in 36 CFR 800.16(l) within the APE (Table 3). At the present time it remains undetermined if many of the previously identified archaeological deposits (Table 3) are eligible for inclusion in the NRHP. Furthermore, many of the individual proposed TSP mitigation areas possess a high potential to contain additional un-recorded deposits and identification and evaluation for these properties is ongoing. Therefore, CEMVN has determined that that the proposed undertaking includes ground disturbing activities that have the potential to effect historic properties in a way that will directly or indirectly affect the characteristics that make the property eligible for the NRHP. However, no determination of effect under the NHPA is being made at this time. Following the completion of all identification and evaluation for each individual property, CEMVN will consider ways to revise the Scope of Work (SOW) to substantially conform to the standards, and/or avoid or minimize adverse effects for National Register listed or eligible historic properties and/or sites of religious or cultural Tribal significance.

Section 106 Consultation

CEMVN has determined that the proposed action constitutes an Undertaking as defined in 36 CFR § 800.16(y) and has the potential to cause effects on historic properties. At the feasibility level, there is insufficient funding and time to fully conduct all required NHPA cultural resources identification and evaluation and to determine any necessary avoidance, minimization, or mitigation measures in consultation with stakeholders and the agency is mandated by law to make a final decision on this undertaking within a timeframe that simply cannot accommodate the standard Section 106 process. Therefore, prior to approving the undertaking, the agency is proposing to develop a project-specific PA pursuant to 36 CFR § 800.14(b) in consultation with stakeholders in furtherance of CEMVN's Section 106 responsibilities for this undertaking as the federal agency cannot fully determine how the undertaking may affect historic properties, the location of historic properties, or their significance and character at the present time [36 CFR § 800.14(b)(1)(ii)].

The goal of this Section 106 consultation is to provide a framework for addressing this undertaking and establish protocols for continuing consultation with the LA SHPO, Tribal governments, and other stakeholders. The PA would identify consulting parties, define applicability, establish review timeframes, stipulate roles and responsibilities of stakeholders, summarize Tribal consultation procedures, consider the views of the SHPO/THPO and any other consulting parties, afford for public participation, develop programmatic allowances to exempt certain actions from Section 106 review, outline a standard review process for plans and specifications as they are developed, provide the measures CEMVN will implement to revise the APE in consultation with external stakeholders if necessary, determine an appropriate level of field investigation to identify and evaluate historic properties within the APE and determine the potential to affect historic properties and/or sites of religious and cultural significance, streamline the assessment and resolution of Adverse Effects through avoidance, minimization, and programmatic treatment approaches for mitigation, establish reporting frequency and schedule, provide provisions for post-review unexpected discoveries and unmarked burials, and incorporate the procedures for amendments, duration, termination, dispute resolution, and implementation. Following the execution of a PA, the Chief of Engineers may then proceed with making a final recommendation on the project and issuing a Finding of No Significant Impact (FONSI) in compliance with NHPA and NEPA. The PA would then govern CEMVN's subsequent NHPA compliance efforts.

Consulting Parties

This letter continues formal Section 106 consultation pursuant to 36 CFR § 800.3(c). In addition to the LA SHPO, USACE has identified the following Tribal governments as having an interest in the project: the ACTT, CN, CNO, CT, CTL, JBCI, MBCI, MCN, SNO, STF, and TBTL; the following non-federal organizations: the LA DOTD, ARBC, EBRP, CC, CPRA, and PLD; and the ACHP. USACE has not identified any other preservation interests. Should you know of additional Tribal governments or preservation groups, please do not hesitate to communicate these to USACE.

CEMVN proposes to send future notices, draft agreements, and other background information to consulting parties by e-mail to minimize communication delays and expedite the development of the PA. Please let CEMVN know if this is impractical, so we can make alternative arrangements.

Conclusion

In conclusion, no determination of effect under the NHPA is being made at this time. CEMVN is providing the available TSP information and seeking any information your office may wish to provide at this time concerning:

- The proposed undertaking and its potential to significantly affect historic properties and/or sites of religious and cultural significance;
- Any other relevant parties who you feel may have an interest in participating in this consultation.

Additionally, CEMVN requests your response regarding:

- Concurrence with CEMVN's proposed APE for the individual mitigation areas included in the TSP;

- Concurrence with CEMVN's proposal to develop a project-specific PA that establishes procedures to satisfy CEMVN's Section 106 responsibilities with regard to the programmatic review of this feasibility study;
- Your organization's interest in participating in the development of this PA.

CEMVN is forwarding this letter and the attached documentation to various consulting parties for their review and comments as required by 36 CFR §800.4(d)(1), and we request that these potential consulting parties provide comments within the 30 days provided for by 36 CFR 800. However, CEMVN proposes to hold an initial Section 106 consultation meeting via teleconference between the dates of **August 13th to the 15th 2019** based on the interested parties' availability. The purpose of the initial meeting will be to review the properties presently being considered as part of the TSP, the APE, gather feedback from your organization regarding the proposed undertaking and the potential to affect significant cultural/Tribal resources, and begin development of the PA. CEMVN will notify the SHPO, Tribes, and other likely consulting parties regarding the meeting as soon as possible and forward information regarding a conference call-in number and the agenda. If your organization would like to participate in the forthcoming consultation or has any information your agency wants to share at this point in time, we request that you notify CEMVN by email or mail within one (1) week; by **July 30, 2019**.

CEMVN looks forward to your organization's review of this information and working with you and your staff to ensure that CEMVN fulfills its historic preservation responsibilities in its treatment of significant historic properties and/or properties that may have traditional religious and cultural importance to Tribes. Should you have any questions or need additional information regarding this undertaking, please contact Jeremiah Kaplan, Archaeologist at Jeremiah.H.Kaplan@usace.army.mil or (504) 862-2004.

Sincerely,

for MARSHALL K. HARPER
Chief, Environmental Planning Branch

CC:File

LA SHPO

An electronic copy of this letter with enclosures will be provided to the Section 106 Inbox, section106@crt.la.gov.

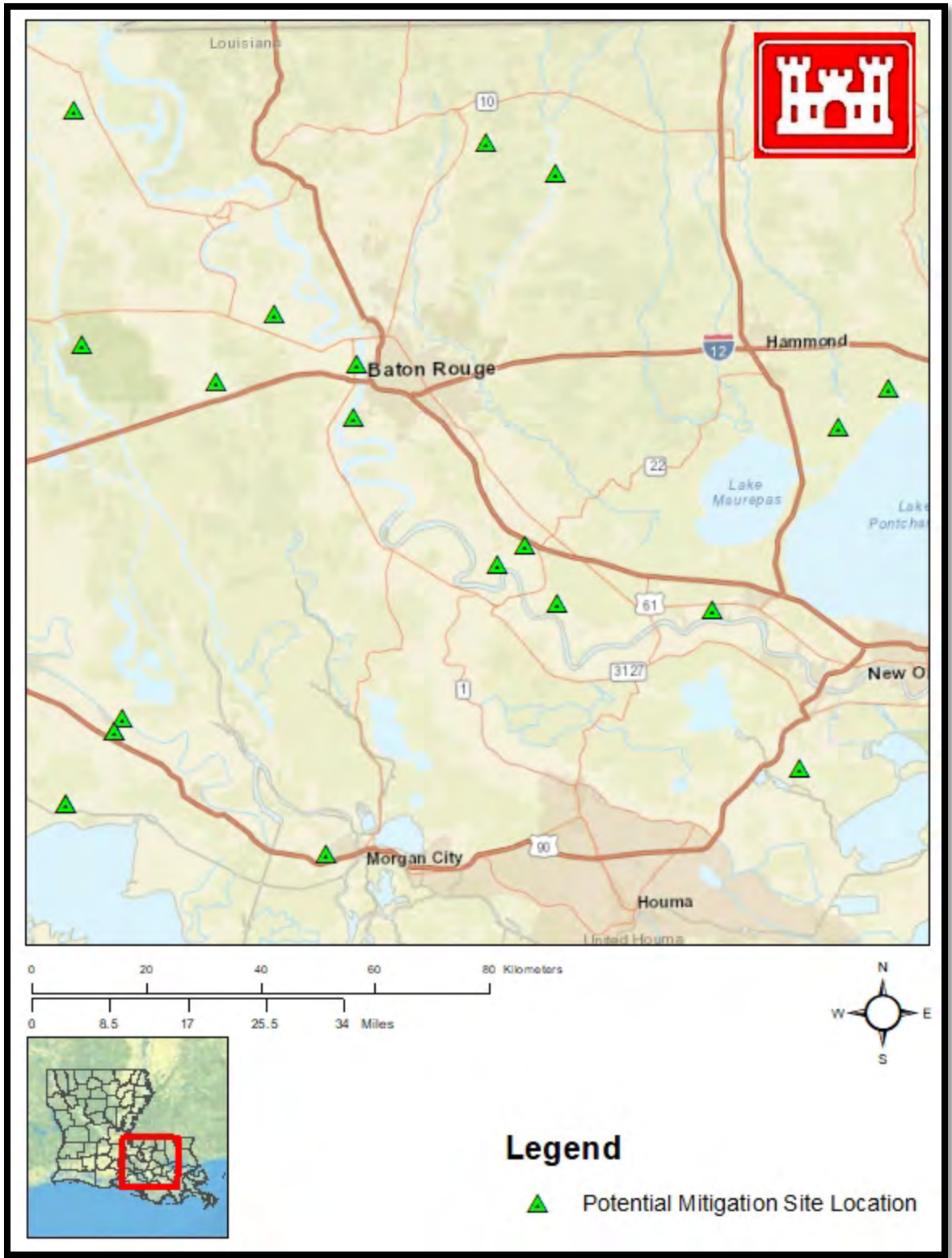


Figure 1. Map displaying location of potential TSP mitigation areas.



REPLY TO
ATTENTION OF

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

Regional Planning and Environment
Division South

Charles Reulet
Interagency Affairs - LADNR
Field Services Division
P.O. Box 44487, Capital Station
Baton Rouge, LA 70804-4487

Dear Mr. Reulet:

A Coastal Zone Consistency Determination, prepared by the U.S. Army Corps of Engineers, New Orleans District (CEMVN), for the Bipartisan Budget Act (BBA) 18 Mitigation for Construction Projects, West Shore Lake Pontchartrain, Comite River Diversion, and East Baton Rouge Flood Risk Management (BBA Mitigation EA #576) is enclosed along with a project maps and descriptions.

The proposed project consists of bottomland hardwoods and swamp restoration/creation and swamp enhancement located in the Lake Pontchartrain Basin and extending through the Mississippi Alluvial Plain, south of and including the Southern Holocene Meander Belts (73k).

Please address any comments or questions to the attention of Ms. Tammy Gilmore; U.S. Army Corps of Engineers; Regional Planning and Environmental Division South; CEMVN-PDN-CEP; 7400 Leake Avenue; New Orleans, Louisiana 70118.

Sincerely,

A handwritten signature in blue ink, appearing to read "Marshall K. Harper", followed by a small mark that looks like "for".

Marshall K. Harper
Chief, Environmental Planning Branch

Enclosures

Coastal Zone Consistency Determination
Bipartisan Budget Act (BBA) 18 Mitigation for Construction Projects,
West Shore Lake Pontchartrain, Comite River Diversion,
and East Baton Rouge Flood Risk Management
EA #576

The table below identifies the Tentatively Selected Alternative for the BBA Mitigation. The projects in red text are the only projects that fall within the coastal zone and are therefore the focus of this determination. Any combination of the TSPs identified in the TSA could be used to satisfy the mitigation needs of 99 AAHUs BLH-Wet in CZ, 702 AAHUs BLH-wet out of CZ, and 1,504 AAHUs swamp.

Table 2-3: Tentatively Selected Alternative				
	Projects	Habitat	AAHUs	Acres
BLH-Wet in CZ	Mitigation Bank	BLH-wet		TBD
	Saint John	BLH-wet	42.1	94.7
	Albania South	BLH-wet	Max of 99	Max of 180
	Albania North	BLH-wet	Max of 99	Max of 190.4
Swamp in CZ	Mitigation Bank	Swamp		TBD
	Pine Island	Swamp	774.7	1,965.0
	Joyce	Swamp	195.1	1,126.1
	Albania South	Swamp	up to 87.7	up to 192.1
	Albania North	Swamp	up to 424.1	up to 964.8
	Cote Blanche	Swamp	up to 212.1	up to 446
BLH-Wet Out of CZ	Mitigation Bank	BLH-wet		TBD
	Ascension	BLH-wet	28.5	55.8
	Feliciana	BLH-wet	155.6	267.0
	GBRPC	BLH-wet	54.1	134.9
	St James	BLH-wet	676.2	1246.0

The following projects consist of converting agricultural lands to forested wetlands and would all require similar construction activities. St John, Albania South, Albania North, and Cote Blanche. Below is a summary of those construction activities required to achieve mitigation at the aforementioned sites.

The work would consist of construction of new gravel access roads, degrading some areas to a depth of .5ft to 1.5ft (+/- 0.5ft) (site specific), backfilling of existing ponds (site specific), demolition of some structures (site specific), minor grading to ensure positive drainage, harrowing soil to receive planting, and planting of canopy and mid-story plant species required to establish BLH-wet and/or swamp habitat. All demolished material and earthen material would be hauled off by the Contractor to a Government approved disposal area, assume 15 mile one way haul. Quantities, access duration and staging would vary among sites and are discussed for each project along with any site specific components (attachment 1).

The Pine Island project consists of hydraulically dredging material from Lake Pontchartrain and pumping it into adjacent open water areas. The swamp creation area would be approximately 1,965 acres and would be filled to an elevation of +2.5 feet and expected to settle to swamp elevation of +2.0 feet. The swamp footprint would be planted with appropriate swamp species upon satisfactory settlement and dewatering of the dredged material, approximately 1 year after initial construction.

The borrow plan is to obtain material from a 2,238 acre site in Lake Pontchartrain. Swamp restoration would require borrow of approximately 16.4 million cubic yards of material. Borrow excavation would not be allowed greater than 10 feet below the existing lake bottom, which ranges from 9 to 10 feet in depth, except that a tolerance of 1-foot below this target elevation would be allowed to account for inaccuracies in the dredging process.

A pipeline corridor has been designated from the borrow source to the shoreline. The dredge pipeline would be submerged within this corridor, and then the dredge pipe would be laid across the shoreline and into the swamp creation area. The area of shoreline disturbed by this pipeline access effort would be minimum and would be repaired upon completion of the dredging operation.

The Joyce project consists of simply planting appropriate swamp species in degraded swamp areas of the Joyce Wildlife Management Area. All plants to be installed would be 1 gallon stock. All plantings would be protected by predation guards. This would be accomplished by airboats, motor boats, ATVs and possibly marsh buggies.

Detailed project descriptions of each project are attached.

Louisiana Administrative Code
Title 43
NATURAL RESOURCES
Part I. Office of the Secretary
Chapter 7. Coastal Management
Subchapter B. Coastal Use Guidelines

Coastal use guidelines as approved by the House Natural Resources Committee on July 9, 1980, the Senate Natural Resources Committee on July 11, 1980, and the governor on July 24, 1980.

§701. Guidelines Applicable to All Uses

- A. The guidelines must be read in their entirety. Any proposed use may be subject to the requirements of more than one guideline or section of guidelines and all applicable guidelines must be complied with.

Response: Acknowledged. The guidelines have been ready in their entirety.

- B. Conformance with applicable water and air quality laws, standards and regulations, and with those other laws, standards and regulations which have been incorporated into the coastal resources program shall be deemed in conformance with the program except to the extent that these guidelines would impose additional requirements.

Response: Acknowledged and concur

- C. The guidelines include both general provisions applicable to all uses and specific provisions applicable only to certain types of uses. The general guidelines apply in all situations. The specific guidelines apply only to the situations they address. Specific and general guidelines should be interpreted to be consistent with each other. In the event there is an inconsistency, the specific should prevail.

Response: Acknowledged.

- D. These guidelines are not intended to nor shall they be interpreted so as to result in an involuntary acquisition or taking of property.

Response: Acknowledged.

- E. No use or activity shall be carried out or conducted in such a manner as to constitute a violation of the terms of a grant or donation of any lands or waterbottoms to the state or any subdivision thereof. Revocations of such grants and donations shall be avoided.

Response: Acknowledged.

- F. Information regarding the following general factors shall be utilized by the permitting authority in evaluating whether the proposed use is in compliance with the guidelines:

1. type, nature, and location of use;

2. elevation, soil, and water conditions and flood and storm hazard characteristics of site;
3. techniques and materials used in construction, operation, and maintenance of use;
4. existing drainage patterns and water regimes of surrounding area including flow, circulation, quality, quantity, and salinity; and impacts on them;
5. availability of feasible alternative sites or methods of implementing the use;
6. designation of the area for certain uses as part of a local program;
7. economic need for use and extent of impacts of use on economy of locality;
8. extent of resulting public and private benefits;
9. extent of coastal water dependency of the use;
10. existence of necessary infrastructure to support the use and public costs resulting from use;
11. extent of impacts on existing and traditional uses of the area and on future uses for which the area is suited;
12. proximity to and extent of impacts on important natural features such as beaches, barrier islands, tidal passes, wildlife and aquatic habitats, and forest lands;
13. the extent to which regional, state, and national interests are served including the national interest in resources and the siting of facilities in the coastal zone as identified in the coastal resources program;
14. proximity to, and extent of impacts on, special areas, particular areas, or other areas of particular concern of the state program or local programs;
15. likelihood of, and extent of impacts of, resulting secondary impacts and cumulative impacts;
16. proximity to and extent of impacts on public lands or works, or historic, recreational, or cultural resources;
17. extent of impacts on navigation, fishing, public access, and recreational opportunities;
18. extent of compatibility with natural and cultural setting;
19. extent of long term benefits or adverse impacts.

Response: Acknowledged.

G. It is the policy of the coastal resources program to avoid the following adverse impacts. To this end, all uses and activities shall be planned, sited, designed, constructed, operated, and maintained to avoid to the maximum extent practicable significant:

1. reductions in the natural supply of sediment and nutrients to the coastal system by alterations of freshwater flow;

Response: No reductions anticipated. Restoration of BLH-Wet and swamp habitat and reconnection of the project area to the coastal zone would slightly increase the natural supply of sediment and nutrients into the coastal system.

2. adverse economic impacts on the locality of the use and affected governmental bodies;

Response: There would be no significant adverse economic impacts.

3. detrimental discharges of inorganic nutrient compounds into coastal waters;

Response: no inorganic nutrients would be discharged with the proposed projects

4. alterations in the natural concentration of oxygen in coastal waters;

Response: no alterations are anticipated as the borrow site for the Pine Island project has been designed to avoid such alterations.

5. destruction or adverse alterations of streams, wetland, tidal passes, inshore waters and waterbottoms, beaches, dunes, barrier islands, and other natural biologically valuable areas or protective coastal features;

Response: 1,945 acres of shallow ponds would be converted to swamp. 2,238 acres of waterbottom would be impacted due to this action. The conversion of shallow ponds to swamp would be beneficial to coastal processes. The impact to waterbottoms would not be destructive or significantly adverse considering the size of Lake Pontchartrain.

6. adverse disruption of existing social patterns;

Response: none anticipated

7. alterations of the natural temperature regime of coastal waters;

Response: none anticipated

8. detrimental changes in existing salinity regimes;

Response: none anticipated

9. detrimental changes in littoral and sediment transport processes;

Response: none anticipated

10. adverse effects of cumulative impacts;

Response: none anticipated

11. detrimental discharges of suspended solids into coastal waters, including turbidity resulting from dredging;

Response: There would be discharges of suspended solids within Lake Pontchartrain during dredging activities. These impacts are expected to be minimum and temporary.

12. reductions or blockage of water flow or natural circulation patterns within or into an estuarine system or a wetland forest;

Response: The swamp creation site would require retention dikes during pumping. This would block water flow into the area but only during construction and consolidation. The dikes would be degraded 1-3 years after construction in order to reestablish tidal connectivity.

13. discharges of pathogens or toxic substances into coastal waters;

Response: no pathogens or toxic substances would be discharged.

14. adverse alteration or destruction of archaeological, historical, or other cultural resources;

Response: all archaeological, historical, or other cultural resources would be avoided.

15. fostering of detrimental secondary impacts in undisturbed or biologically highly productive wetland areas;

Response: no action would take place within existing wetlands.

16. adverse alteration or destruction of unique or valuable habitats, critical habitat for endangered species, important wildlife or fishery breeding or nursery areas, designated wildlife management or sanctuary areas, or forestlands;

Response: the mitigation projects would be of benefit to wildlife, fisheries and forestlands.

17. adverse alteration or destruction of public parks, shoreline access points, public works, designated recreation areas, scenic rivers, or other areas of public use and concern;

Response: there would be no alteration of these resources.

18. adverse disruptions of coastal wildlife and fishery migratory patterns;

Response: none anticipated

19. land loss, erosion, and subsidence;

Response: the project would help prevent land loss, erosion, and subsidence by creating forested wetlands in shallow ponds adjacent to Lake Pontchartrain

20. increases in the potential for flood, hurricane and other storm damage, or increases in the likelihood that damage will occur from such hazards;

Response: not anticipated

21. reduction in the long term biological productivity of the coastal ecosystem.

Response: the project would enhance the long term biological productivity of the coastal ecosystem by creating forested wetlands

- H. 1. In those guidelines in which the modifier "maximum extent practicable" is used, the proposed use is in compliance with the guideline if the standard modified by the term is complied with. If the modified standard is not complied with, the use will be in compliance with the guideline if the permitting authority finds, after a systematic consideration of all pertinent information regarding the use, the site and the impacts of the use as set forth in Subsection F above, and a balancing of their relative significance, that the benefits resulting from the proposed use would clearly outweigh the adverse impacts resulting from noncompliance with the modified standard and there are no feasible and practical alternative locations, methods, and practices for the use that are in compliance with the modified standard and:
 - a. significant public benefits will result from the use; or
 - b. the use would serve important regional, state, or national interests, including the national interest in resources and the siting of facilities in the coastal zone identified in the coastal resources program, or;
 - c. the use is coastal water dependent.

2. The systematic consideration process shall also result in a determination of those conditions necessary for the use to be in compliance with the guideline. Those conditions shall assure that the use is carried out utilizing those locations, methods, and practices which maximize conformance to the modified standard; are technically, economically, environmentally, socially, and legally feasible and practical; and minimize or offset those adverse impacts listed in §701.G and in the Subsection at issue.

Response: Acknowledged

- I. Uses shall to the maximum extent practicable be designed and carried out to permit multiple concurrent uses which are appropriate for the location and to avoid unnecessary conflicts with other uses of the vicinity.

Response: Acknowledged

- J. These guidelines are not intended to be, nor shall they be, interpreted to allow expansion of governmental authority beyond that established by R.S. 49:214.21-49:214.42, as amended; nor shall these guidelines be interpreted so as to require permits for specific uses legally commenced or established prior to the effective date of the coastal use permit program nor to normal maintenance or repair of such uses.

Response: Acknowledged

AUTHORITY NOTE: Promulgated in accordance with R.S. 49:214.27

HISTORICAL NOTE: Promulgated by the Department of Natural Resources, Office of the Secretary, LR 6:493 (August 1980).

§703. Guidelines for Levees

These guidelines are not applicable as the proposed action does not include any levee work.

§705. Guidelines for Linear Facilities

These guidelines are not applicable as the proposed action does not include construction of any linear facilities.

§707. Guidelines for Dredged Spoil Deposition

- A. Spoil shall be deposited utilizing the best practical techniques to avoid disruption of water movement, flow, circulation, and quality.

Response: Concur. The project would be a confined pump and fill process.

- B. Spoil shall be used beneficially to the maximum extent practicable to improve productivity or create new habitat, reduce or compensate for environmental damage done by dredging activities, or prevent environmental damage. Otherwise, existing spoil disposal areas or upland disposal shall be utilized to the maximum extent practicable rather than creating new disposal areas.

Response: Concur. The project is dredging and pumping fill to create swamp habitat.

- C. Spoil shall not be disposed of in a manner which could result in the impounding or draining of wetlands or the creation of development sites unless the spoil deposition is part of an approved levee or land surface alteration project.

Response: Concur. The project is dredging and pumping fill to create swamp habitat.

- D. Spoil shall not be disposed of on marsh, known oyster or clam reefs, or in areas of submersed vegetation to the maximum extent practicable.

Response: Concur. The shallow ponds in which material would be placed may contain some SAV. However, the project would be creating nearly 2,000 acres of swamp.

- E. Spoil shall not be disposed of in such a manner as to create a hindrance to navigation or fishing, or hinder timber growth.

Response: Concur.

- F. Spoil disposal areas shall be designed and constructed and maintained using the best practical techniques to retain the spoil at the site, reduce turbidity, and reduce shoreline erosion when appropriate.

Response: Concur. The project would be a confined pump and fill process to create swamp habitat.

- G. The alienation of state-owned property shall not result from spoil deposition activities without the consent of the Department of Natural Resources.

Response: Concur.

AUTHORITY NOTE: Promulgated in accordance with R.S. 49:214.27.

HISTORICAL NOTE: Promulgated by the Department of Natural Resources, Office of the Secretary, LR 6:493 (August 1980).

§709. Guidelines for Shoreline Modification

These guidelines are not applicable as the proposed action would not include shoreline alteration.

§711. Guidelines for Surface Alterations

- A. Industrial, commercial, urban, residential, and recreational uses are necessary to provide adequate economic growth and development. To this end, such uses will be encouraged in those areas of the coastal zone that are suitable for development. Those uses shall be consistent with the other guidelines and shall, to the maximum extent practicable, take place only:

1. on lands 5 feet or more above sea level or within fast lands; or
2. on lands which have foundation conditions sufficiently stable to support the use, and where flood and storm hazards are minimal or where protection from these hazards can be reasonably well achieved, and where the public safety would not be unreasonably endangered, and:

- a. the land is already in high intensity of development use; or
- b. there is adequate supporting infrastructure; or
- c. the vicinity has a tradition of use for similar habitation or development.

Response: These are forested wetland creation projects and would not allow for Industrial, commercial, urban, or residential uses. Hunting, hiking, bird watching etc. may potentially be allowed at any of the mitigation sites.

- B. Public and private works projects such as levees, drainage improvements, roads, airports, ports, and public utilities are necessary to protect and support needed development and shall be encouraged. Such projects shall, to the maximum extent practicable, take place only when:
- 1. they protect or serve those areas suitable for development pursuant to §711.A; and
 - 2. they are consistent with the other guidelines; and
 - 3. they are consistent with all relevant adopted state, local, and regional plans.

Response: Not Applicable. These are forested wetland creation projects.

C. Reserved.

- D. To the maximum extent practicable wetland areas shall not be drained or filled. Any approved drain or fill project shall be designed and constructed using best practical techniques to minimize present and future property damage and adverse environmental impacts.

Response: Not Applicable. These are forested wetland creation projects from agricultural land or shallow open water.

- A. Coastal water dependent uses shall be given special consideration in permitting because of their reduced choice of alternatives.

Response: Concur. The swamp impacts that are being mitigated are coastal zone impacts and therefore must be mitigated within the coastal zone. Although the Pine Island project would not be constructed within coastal water, it would be dependent on the tidal connectivity to coastal water.

- B. Areas modified by surface alteration activities shall, to the maximum extent practicable, be revegetated, refilled, cleaned, and restored to their predevelopment condition upon termination of the use.

Response: concur. These are forested wetland creation projects.

- C. Site clearing shall to the maximum extent practicable be limited to those areas immediately required for physical development.

Response: Concur.

- D. Surface alterations shall, to the maximum extent practicable, be located away from critical wildlife areas and vegetation areas. Alterations in wildlife preserves and management areas shall be conducted in strict accord with the requirements of the wildlife management body.

Response: Concur.

- E. Surface alterations which have high adverse impacts on natural functions shall not occur, to the maximum extent practicable, on barrier islands and beaches, isolated cheniers, isolated natural ridges or levees, or in wildlife and aquatic species breeding or spawning areas, or in important migratory routes.

Response: Concur.

- F. The creation of low dissolved oxygen conditions in the water or traps for heavy metals shall be avoided to the maximum extent practicable.

Response: Concur. The borrow pit for the Pine Island project was designed to avoid low dissolved oxygen conditions.

- G. Surface mining and shell dredging shall be carried out utilizing the best practical techniques to minimize adverse environmental impacts.

Response: Not Applicable

- H. The creation of underwater obstructions which adversely affect fishing or navigation shall be avoided to the maximum extent practicable.

Response: Not Applicable

- I. Surface alteration sites and facilities shall be designed, constructed, and operated using the best practical techniques to prevent the release of pollutants or toxic substances into the environment and minimize other adverse impacts.

Response: Concur

- J. To the maximum extent practicable only material that is free of contaminants and compatible with the environmental setting shall be used as fill.

Response: Concur. A 404(b)(1) has been prepared and a Water Quality Certification request has been submitted.

AUTHORITY NOTE: Promulgated in accordance with R.S. 49:214.27.

HISTORICAL NOTE: Promulgated by the Department of Natural Resources, Office of the Secretary, LR 6:493 (August 1980).

§713. Guidelines for Hydrologic and Sediment Transport Modifications

- A. The controlled diversion of sediment-laden waters to initiate new cycles of marsh building and sediment nourishment shall be encouraged and utilized whenever such diversion will enhance the viability and productivity of the outfall area. Such diversions shall incorporate a plan for monitoring and reduction and/or amelioration of the effects of pollutants present in the freshwater source.

Response: Not applicable. The only sediment transport that would occur with this project is a pump and fill.

- B. Sediment deposition systems may be used to offset land loss, to create or restore wetland areas or enhance building characteristics of a development site. Such systems shall only be utilized as part of an approved plan. Sediment from these systems shall only be discharged in the area where the proposed use is to be accomplished.

Response: Not applicable. The only sediment transport that would occur with this project is a pump and fill.

- C. Undesirable deposition of sediments in sensitive habitat or navigation areas shall be avoided through the use of the best preventive techniques.

Response: Concur. Sediment would be deposited in shallow ponds adjacent to Lake Pontchartrain and surrounding wetlands.

- D. The diversion of freshwater through siphons and controlled conduits and channels, and overland flow to offset saltwater intrusion and to introduce nutrients into wetlands shall be encouraged and utilized whenever such diversion will enhance the viability and productivity of the outfall area. Such diversions shall incorporate a plan for monitoring and reduction and/or amelioration of the effects of pollutants present in the freshwater source.

Response: Not applicable. The only sediment transport that would occur with this project is a pump and fill.

- E. Water or marsh management plans shall result in an overall benefit to the productivity of the area.

Response: Not applicable. This is not a water or marsh management project

- F. Water control structures shall be assessed separately based on their individual merits and impacts and in relation to their overall water or marsh management plan of which they are a part.

Response: Not applicable. This project does not include water control structures

- G. Weirs and similar water control structures shall be designed and built using the best practical techniques to prevent "cut arounds," permit tidal exchange in tidal areas, and minimize obstruction of the migration of aquatic organisms.

Response: Concur. This project would restore connectivity to the created forested wetland.

- H. Impoundments which prevent normal tidal exchange and/or the migration of aquatic organisms shall not be constructed in brackish and saline areas to the maximum extent practicable.

Response: Not applicable. The project is not located within brackish or saline systems

- I. Withdrawal of surface and ground water shall not result in saltwater intrusion or land subsidence to the maximum extent practicable.

Response: Not applicable.

AUTHORITY NOTE: Promulgated in accordance with R.S. 49:214.27.

HISTORICAL NOTE: Promulgated by the Department of Natural Resources, Office of the Secretary, LR 6:493 (August 1980).

§715. Guidelines for Disposal of Wastes

The proposed action would not involve the disposal of wastes and, therefore, these guidelines are not applicable.

§717. Guidelines for Uses that Result in the Alteration of Waters Draining into Coastal Waters

These guidelines are not applicable as the proposed action would not involve the alteration of waters draining into coastal water.

§719. Guidelines for Oil, Gas, and Other Mineral Activities

The proposed action would not involve oil, gas, and other mineral activities and, therefore, these guidelines are not applicable

OTHER STATE POLICIES INCORPORATED INTO THE PROGRAM

Section 213.8A of Act 361 directs the Secretary of DOTD, in developing the LCRP, to include all applicable legal and management provisions that affect the coastal zone or are necessary to achieve the purposes of Act 361 or to implement the guidelines effectively. It states:

The Secretary shall develop the overall state coastal management program consisting of all applicable constitutional provisions, laws and regulations of this state which affect the coastal zone in accordance with the provisions of this Part and shall include within the program such other applicable constitutional or statutory provisions, or other regulatory or management programs or activities as may be necessary to achieve the purposes of this Part or necessary to implement the guidelines hereinafter set forth.

The constitutional provisions and other statutory provisions, regulations, and management and regulatory programs incorporated into the LCRP are identified and described in Appendix 1. A description of how these other authorities are integrated into the LCRP and coordinated during program implementation is presented in Chapter IV. Since all of these policies are incorporated into the LCRP, federal agencies must ensure that their proposed actions are consistent with these policies as well as the coastal use guidelines (CZMA, Section 307).

CONSISTENCY DETERMINATION

This Coastal Zone Consistency determination has been completed on the mitigation for the BBA Construction Projects to mitigate impacts to 99 AAHUs of BLH-Wet habitat and 1,504 AAHUs of swamp habitat. The TSA would restore up to approximately 2,169 acres of BLH-Wet habitat and 4,694 acres of swamp and reconnect approximately 5,159 acres with the coastal zone. Since the impacts from constructing any permitted bank have been assessed through NEPA compliance achieved during the Regulatory permitting process no new direct, indirect or cumulative impacts to significant resources in the coastal zone would be incurred from that project.

Based on this evaluation, the U. S. Army Corps of Engineers, New Orleans District, has determined that the implementation of the proposed action is consistent, to the maximum extent practicable, with the State of Louisiana's Coastal Resources Program.

PROJECT: BBA Mitigation, St. John BLH-Wet Creation, St. John the Baptist Parish, Louisiana

GENERAL SOW:

The work consists of proposed mitigation site that is composed of BLH (wet) creation, up to approximately 94.7 acres located at existing agricultural fields north of the Mississippi River between US-61 (Airline Highway) and Route LA-637 northwest of the unincorporated community of Reserve in St. John the Baptiste Parish. Work will include minor grading to ensure positive drainage, degrading of existing unpaved roads, harrowing soil to receive planting, and planting of canopy and mid-story plant species required to establish BLH habitat as stated herein. The proposed BLH area is continuous with no breaks.

PROPOSED PLANTING:

Assuming project BLH area:

BLH Canopy: Approximately 51,565 seedlings. (545 seedlings per acre)

BLH Mid-story: Approximately 12,985 seedlings. (136 seedlings per acre)

Assume BLH canopy plants species will be installed on an 8ft by 10ft grid.

Assume BLH mid-story plants species will be installed on a 16ft by 20ft grid.

Existing agriculture rows will be harrowed and graded for proper drainage prior to planting. To maximized water flow into the site, any existing dikes/berms within the property boundary which prevent water flow into the site will be degraded as long as this effort does not harm or adversely affect outside properties/water sources.

Mowing poles, timber post, 6' above grade will be installed on each planted row every 50' to 100' to guide mowing operations.

DEGRADE AREAS:

The entire site will be degraded a depth of approximately 1.0 ft. to obtain proper hydrology for BLH habitat.

BLH - Area 1: Degrade approximately 152,785 CY.

Degrade material will be hauled off site to a contractor-provided disposal area, assume a 15 mile one-way haul distance.

DEMOLISHION:

No existing structures within the mitigation site. Existing unpaved roads to be degraded.

DURATION:

The estimated construction duration for this project is 280 calendar days.

SITE ACCESS:

Access to the project work limits will be as follows:

From the north use us-61 (w airline highway) and take either West 10th street (Route LA-637) or Rosenwald Street). Both roads lead to an unpaved road that runs around the western and southern perimeter of the site and intersects with another unpaved road that runs through the middle of the site.

From the south use Route LA-44 to West 10th Street and enter the site using the unpaved road mentioned above.

STAGING:

Staging area(s) will only be permitted within the shown BLH area indicated on the attached drawings. The Contractor shall determine where within the BLH area limits to place staging and laydown areas suitable for the Contractor's means and methods to meet the required project period of performance. All staging area(s) shall be submitted for Government approval. The Contractor shall be permitted to place crush stone paving for parking and laydown areas along with a temporary construction trailers. No utilities will be provided by the Government, and the Contractor shall obtain all permissions and permits for utilities. All trailers, crushed stone paving, and temporary utilities shall be removed and restored to original site conditions prior to leaving the project site.

EQUIPMENT:

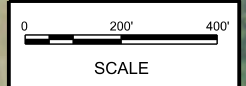
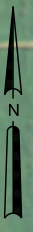
Equipment to be used for the respective work is assumed as follows:

Degrading: Up to D8 bulldozers, front loaders, off road and on road dump trucks.

Demolition: Backhoes with grapple and hammer attachments, bulldozer, front loaders, and on/off road dump trucks.

Planting Preparation: Tractor with harrow, bulldozers, and backhoe.

Planting: Pickup trucks and/or ATVs, skid loader with auger, and 2,000 to 4,000 gallon water trucks.



SHEET LEGEND

- PROPERTY LIMITS
- - - BLH MITIGATION LIMITS
- POWER LINE
- ACCESS ROAD
- · - · - RAILROAD



MARK	DESCRIPTION	DATE	APPR

DESIGNED BY: L. TORVAR	DATE:	SOLICITATION NO.:
DRAWN BY: J. JAC	07-26-2019	CONTRACT NO.:
CHECKED BY: M.J.T.		FILE NUMBER:
SUBMITTED BY: M.J.T.		
PLOT SCALE:	PLOT DATE:	FILE NAME:
SIZE:	ANSI:	

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

BBA MITIGATION,
ST. JOHN BLH+WET
ST. JOHN THE BAPTIST PARISH, LA.

BLH - WET CREATION

PLAN VIEW

SHEET IDENTIFICATION
C-01

ROSENWALD STREET

BLH - AREA 1

WEST 10TH STREET

UNNAMED & UNPAVED ROAD

UNNAMED & UNPAVED ROAD

NOTES:

1. PROPOSED MITIGATION SITE CONSISTS OF BLH (WET) CREATION UP TO APPROXIMATELY 94.7 ACRES.
2. PROPOSED PLANTING:
 - BLH CANOPY: APPROXIMATELY 51,565 SEEDLINGS.
 - BLH MID-STORY: APPROXIMATELY 12,985 SEEDLINGS.
 ASSUME BLH CANOPY PLANTS SPECIES INSTALLED ON A 8FT BY 10FT GRID.
 ASSUME BLH MID-STORY PLANTS SPECIES INSTALLED ON A 16FT BY 20FT GRID.
 PRIOR TO PLANTING, ALL PLANTING AREAS WILL BE TILLED AND DRESSED.
3. SITE ACCESS:
 - FROM THE NORTH USE US-61 (W AIRLINE HIGHWAY) AND TAKE EITHER WEST 10TH STREET (ROUTE LA-637) OR ROSENWALD STREET. BOTH ROADS LEAD TO AN UNPAVED ROAD THAT RUNS AROUND THE WESTERN AND SOUTHERN PERIMETER OF THE SITE AND INTERSECTS WITH ANOTHER UNPAVED ROAD THAT RUNS THROUGH THE MIDDLE OF THE SITE.
 - FROM THE SOUTH USE ROUTE LA-44 TO WEST 10TH STREET AND ENTER THE SITE USING THE UNPAVED ROAD MENTIONED ABOVE.
4. DEGRADE AREAS:
 - THE ENTIRE SITE WILL NEED TO BE DEGRADED 1.0 FT TO OBTAIN PROPER HYDROLOGY FOR BLH HABITAT.
 - BLH - AREA 1: DEGRADE APPROXIMATELY 152,785 CY.
 - DEGRADED MATERIAL WILL BE HAULED OFF SITE TO A CONTRACTOR PROVIDED DISPOSAL AREA, ASSUME 15 MILE HAUL DISTANCE.
5. NO EXISTING STRUCTURES APPEAR TO BE LOCATED WITHIN THE MITIGATION SITE.

PROJECT: BBA Mitigation, Albania South BLH-Wet and Swamp Creation, St. Mary Parish, Louisiana

GENERAL SOW:

The work consists of proposed mitigation sites that are composed of swamp creation, up to approximately 81.0 acres, and BLH (wet) creation up to approximately 110.7 acres located at existing agricultural fields on Bayou Teche and east of the town of Jeanerette in St. Mary Parish. Work will include minor grading to ensure positive drainage, degrading of existing unpaved roads, harrowing soil to receive planting, and planting of canopy and mid-story plant species required to establish BLH and swamp habitat as stated herein. The proposed BLH and Swamp areas for this project are broken up into areas as follows:

BLH – Area 1: 110.73 AC
Swamp – Area 1: 81.04 AC

PROPOSED PLANTING:

Assuming project totals all areas of swamp and BLH:

Swamp Canopy: Approximately 44,170 seedlings. (545 seedlings per acre)

Swamp Mid-story: Approximately 11,025 seedlings. (136 seedlings per acre)

BLH Canopy: Approximately 30,350 seedlings. (545 seedlings per acre)

BLH Mid-story: Approximately 15,060 seedlings. (136 seedlings per acre)

Assume both swamp and BLH canopy plants species will be installed on an 8ft by 10ft grid.

Assume both swamp and BLH mid-story plants species will be installed on a 16ft by 20ft grid.

Existing agriculture rows will be harrowed and graded for proper drainage prior to planting. In general, the overall existing drainage/hydraulic conveyance on site will remain as is.

Mowing poles, timber post, 6' above grade will be installed on each planted row every 50' to 100' to guide mowing operations.

DEGRADE AREAS:

All BLH areas will be degraded to a depth of 0.5 ft. – 1.0 ft. to obtain proper hydrology for BLH habitat. Quantities listed are assuming 1.0 ft. degrading.

BLH - Area 1: Degrade approximately 178,645 CY.

Degrade material will be used to fill existing canals throughout the site. All remaining degraded material will be hauled off-site at a Contractor provided disposal area, assume 15 mile one way haul. Truck washing rack(s) will be required prior to entrance of public roads.

DEMOLITION:

No existing structures appear to be present within the mitigation areas.

DURATION:

The estimated construction duration for this project is 90 calendar days.

p

SITE ACCESS:

Access to the project work limits will be as follows:

Swamp – Area 1 and BLH Area 1: From the south, use route us-90 to Pepper Road and onto Albania Road. There is also a dirt road off US-90 that run along the entire east side of the site.

From the north, use Route LA-182 to either the dirt road along the east side of the site or to Albania Road. Several existing unpaved roads intersect Albania road and the eastern road and run throughout the site.

STAGING:

Staging area(s) will only be permitted within the shown BLH or Swamp Areas indicated on the attached drawings. The Contractor shall determine where within the BLH or Swamp Area limits to place staging and laydown areas suitable for the Contractor's means and methods to meet the required project period of performance. All staging area(s) shall be submitted for Government approval. The Contractor shall be permitted to place crush stone paving for parking and laydown areas along with a temporary construction trailers. No utilities will be provided by the Government, and the Contractor shall obtain all permissions and permits for utilities. All trailers, crushed stone paving, and temporary utilities shall be removed and restored to original site conditions prior to leaving the project site.

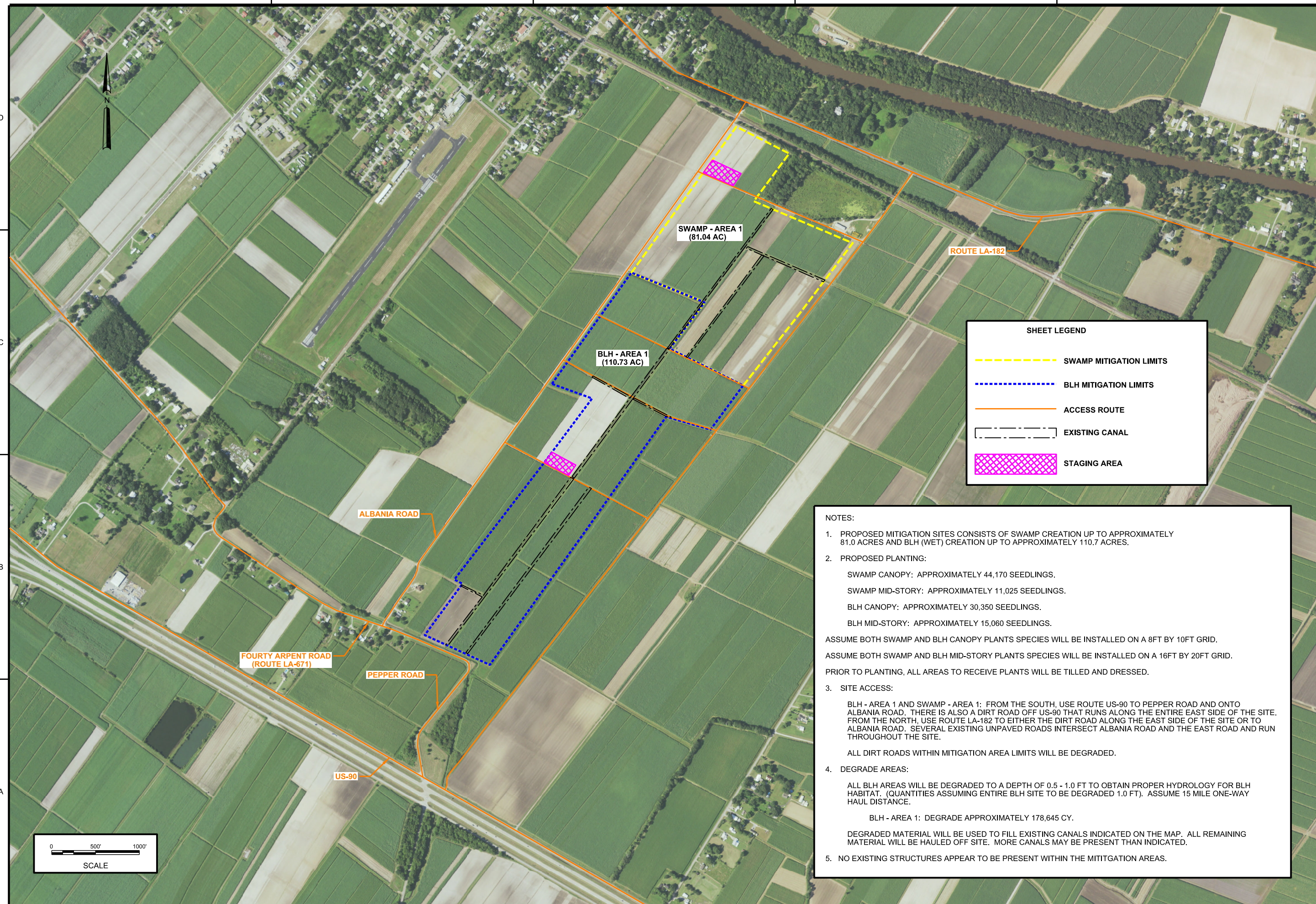
EQUIPMENT:

Equipment to be used for the respective work is assumed as follows:

Degrading: Up to D8 bulldozers, front loaders, off road and on road dump trucks.

Planting Preparation: Tractor with harrow, bulldozers, and backhoe.

Planting: Pickup trucks and/or ATVs, skid loader with auger, and 2,000 to 4,000 gallon water trucks.



DATE	DESCRIPTION	MARK

DESIGNED BY: J.L. TOULBAR	DATE:
DRAWN BY: J.A.C.	SOLICITATION NO.:
CHECKED BY: M.J.T.	CONTRACT NO.:
DATE:	FILE NUMBER:
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA	U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA
DESIGNED BY: J.L. TOULBAR	DATE:
DRAWN BY: J.A.C.	SOLICITATION NO.:
CHECKED BY: M.J.T.	CONTRACT NO.:
DATE:	FILE NUMBER:
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA	U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA
DESIGNED BY: J.L. TOULBAR	DATE:
DRAWN BY: J.A.C.	SOLICITATION NO.:
CHECKED BY: M.J.T.	CONTRACT NO.:
DATE:	FILE NUMBER:
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA	U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA

NOTES:

- PROPOSED MITIGATION SITES CONSISTS OF SWAMP CREATION UP TO APPROXIMATELY 81.0 ACRES AND BLH (WET) CREATION UP TO APPROXIMATELY 110.7 ACRES.
- PROPOSED PLANTING:
 - SWAMP CANOPY: APPROXIMATELY 44,170 SEEDLINGS.
 - SWAMP MID-STORY: APPROXIMATELY 11,025 SEEDLINGS.
 - BLH CANOPY: APPROXIMATELY 30,350 SEEDLINGS.
 - BLH MID-STORY: APPROXIMATELY 15,060 SEEDLINGS.

ASSUME BOTH SWAMP AND BLH CANOPY PLANTS SPECIES WILL BE INSTALLED ON A 8FT BY 10FT GRID.
ASSUME BOTH SWAMP AND BLH MID-STORY PLANTS SPECIES WILL BE INSTALLED ON A 16FT BY 20FT GRID.
PRIOR TO PLANTING, ALL AREAS TO RECEIVE PLANTS WILL BE TILLED AND DRESSED.
- SITE ACCESS:

BLH - AREA 1 AND SWAMP - AREA 1: FROM THE SOUTH, USE ROUTE US-90 TO PEPPER ROAD AND ONTO ALBANIA ROAD. THERE IS ALSO A DIRT ROAD OFF US-90 THAT RUNS ALONG THE ENTIRE EAST SIDE OF THE SITE. FROM THE NORTH, USE ROUTE LA-182 TO EITHER THE DIRT ROAD ALONG THE EAST SIDE OF THE SITE OR TO ALBANIA ROAD. SEVERAL EXISTING UNPAVED ROADS INTERSECT ALBANIA ROAD AND THE EAST ROAD AND RUN THROUGHOUT THE SITE.

ALL DIRT ROADS WITHIN MITIGATION AREA LIMITS WILL BE DEGRADED.
- DEGRADE AREAS:

ALL BLH AREAS WILL BE DEGRADED TO A DEPTH OF 0.5 - 1.0 FT TO OBTAIN PROPER HYDROLOGY FOR BLH HABITAT. (QUANTITIES ASSUMING ENTIRE BLH SITE TO BE DEGRADED 1.0 FT). ASSUME 15 MILE ONE-WAY HAUL DISTANCE.

BLH - AREA 1: DEGRADE APPROXIMATELY 178,645 CY.

DEGRADED MATERIAL WILL BE USED TO FILL EXISTING CANALS INDICATED ON THE MAP. ALL REMAINING MATERIAL WILL BE HAULED OFF SITE. MORE CANALS MAY BE PRESENT THAN INDICATED.
- NO EXISTING STRUCTURES APPEAR TO BE PRESENT WITHIN THE MITIGATION AREAS.

BBA MITIGATION,
ALBANIA SOUTH BLH AND SWAMP
ST. MARY PARISH, LA.
BLH - WET AND SWAMP CREATION
PLAN VIEW

SHEET IDENTIFICATION
C-01

PROJECT: BBA Mitigation, Albania North BLH-Wet and Swamp Creation, St. Mary Parish, Louisiana

GENERAL SOW:

The work consists of proposed mitigation sites that are composed of swamp creation, up to approximately 632.7 acres, and BLH (wet) creation up to approximately 331.4 acres located at existing agricultural fields on Bayou Teche and north of the town of Jeanerette in St. Mary Parish. The western edge of the site borders Iberia Parish. Work will include demolition of some structures, minor grading to ensure positive drainage, degrading of existing unpaved roads, harrowing soil to receive planting, and planting of canopy and mid-story plant species required to establish BLH and swamp habitat as stated herein. The proposed BLH and Swamp areas for this project are broken up into multiple smaller areas as follows:

BLH – Area 1: 284.67 AC
BLH – Area 2: 46.69 AC
Swamp – Area 1: 234.07 AC
Swamp – Area 2: 138.23 AC
Swamp – Area 3: 260.38 AC

PROPOSED PLANTING:

Assuming project totals all areas of swamp and BLH:

Swamp Canopy: Approximately 344,815 seedlings. (545 seedlings per acre)

Swamp Mid-story: Approximately 86,045 seedlings. (136 seedlings per acre)

BLH Canopy: Approximately 180,595 seedlings. (545 seedlings per acre)

BLH Mid-story: Approximately 45,065 seedlings. (136 seedlings per acre)

Assume both swamp and BLH canopy plants species will be installed on an 8ft by 10ft grid.

Assume both swamp and BLH mid-story plants species will be installed on a 16ft by 20ft grid.

Existing agriculture rows will be harrowed and graded for proper drainage prior to planting. In general, the overall existing drainage/hydraulic conveyance on site will remain as is.

Mowing poles, timber post, 6' above grade will be installed on each planted row every 50' to 100' to guide mowing operations.

DEGRADE AREAS:

All BLH areas will be degraded to a depth of 0.5 ft. to obtain proper hydrology for BLH habitat.

BLH - Area 1: Degrade approximately 229,635 CY.

BLH - Area 2: Degrade approximately 37,665 CY.

Degrade material will be used to fill existing canals throughout the site. All remaining degraded material will be hauled off-site at a Contractor provided disposal area, assume 15 mile one way haul. Truck washing rack(s) will be required prior to entrance of public roads.

DEMOLITION:

Existing structures at the proposed staging area in Swamp – Area 3 may be required to be demolished. All demolished materials will be hauled off by the contractor to a government approved disposal area.

DURATION:

The estimated construction duration for this project is 365 calendar days.

SITE ACCESS:

Access to the project work limits will be as follows:

Swamp – Area 1 & 2, and BLH Area 1: Existing road Justa Street via Route LA-84 from the south end of the site. Several unpaved roads which run throughout the areas can be used until planting reaches these roads. Unpaved roads will then be degraded and dressed prior to planting.

Swamp – Area 3, and BLH – Area 2: Existing road Carpenter Street via Route LA-84 from the south and becomes Lake Palourde Street at the north end of the site. Existing unpaved roads which run throughout the areas can be used until planting reaches these roads. Unpaved roads will then be degraded and dressed prior to planting.

Carpenter Street will be preserved and be used for future monitoring and maintenance operations.

STAGING:

Staging area(s) will only be permitted within the shown BLH or Swamp Areas indicated on the attached drawings. The Contractor shall determine where within the BLH or

Swamp Area limits to place staging and laydown areas suitable for the Contractor's means and methods to meet the required project period of performance. All staging area(s) shall be submitted for Government approval. The Contractor shall be permitted to place crush stone paving for parking and laydown areas along with a temporary construction trailers. No utilities will be provided by the Government, and the Contractor shall obtain all permissions and permits for utilities. All trailers, crushed stone paving, and temporary utilities shall be removed and restored to original site conditions prior to leaving the project site.

EQUIPMENT:

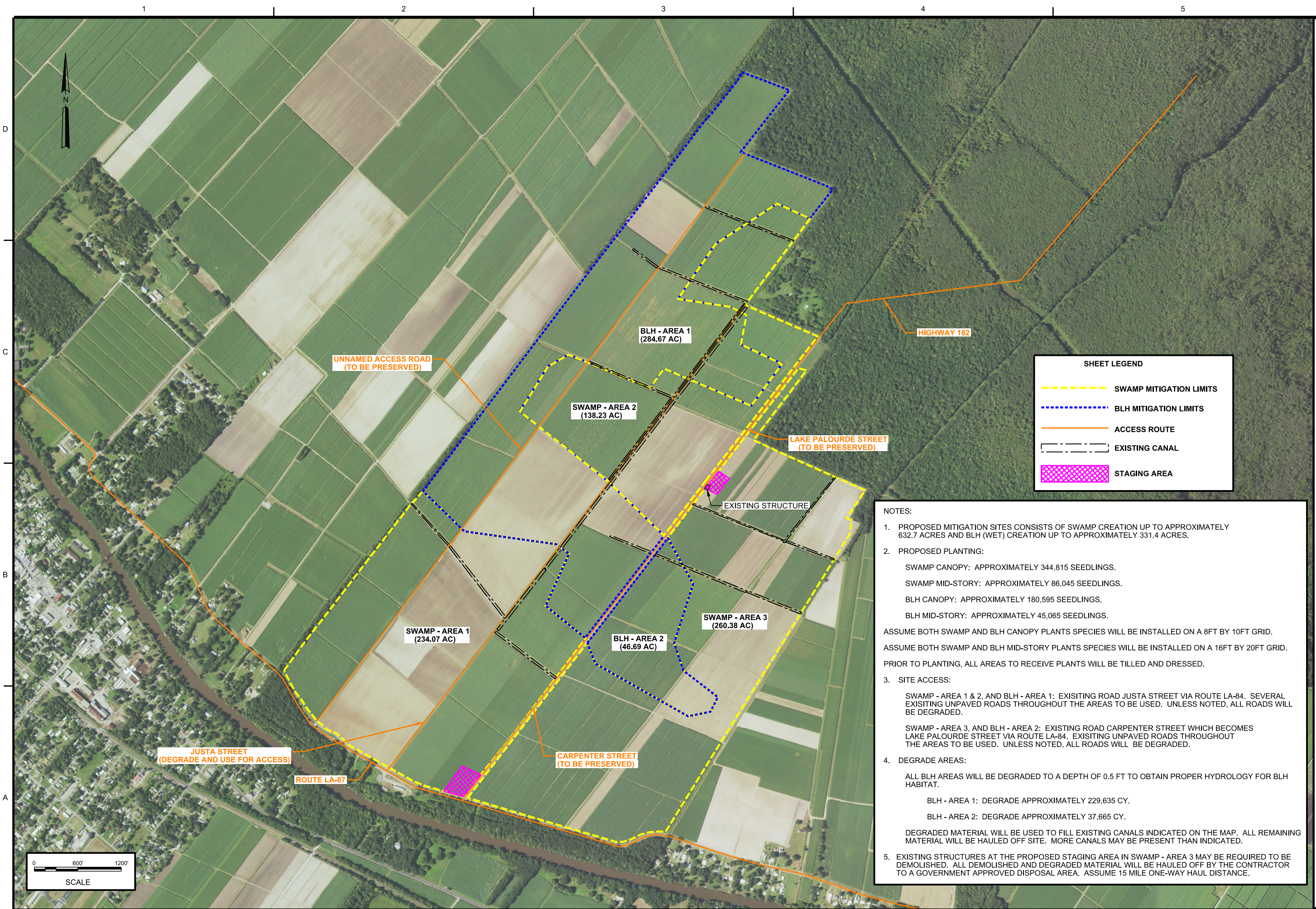
Equipment to be used for the respective work is assumed as follows:

Degrading: Up to D8 bulldozers, front loaders, off road and on road dump trucks.

Demolition: Backhoes with grapple and hammer attachments, bulldozer, front loaders, and on/off road dump trucks.

Planting Preparation: Tractor with harrow, bulldozers, and backhoe.

Planting: Pickup trucks and/or ATVs, skid loader with auger, and 2,000 to 4,000 gallon water trucks.



SHEET LEGEND

	SWAMP MITIGATION LIMITS
	BLH MITIGATION LIMITS
	ACCESS ROUTE
	EXISTING CANAL
	STAGING AREA

NOTES:

- PROPOSED MITIGATION SITES CONSISTS OF SWAMP CREATION UP TO APPROXIMATELY 632.7 ACRES AND BLH (WET) CREATION UP TO APPROXIMATELY 331.4 ACRES.
- PROPOSED PLANTING:
 - SWAMP CANOPY: APPROXIMATELY 344,815 SEEDLINGS.
 - SWAMP MID-STORY: APPROXIMATELY 86,045 SEEDLINGS.
 - BLH CANOPY: APPROXIMATELY 180,595 SEEDLINGS.
 - BLH MID-STORY: APPROXIMATELY 45,065 SEEDLINGS.
 ASSUME BOTH SWAMP AND BLH CANOPY PLANTS SPECIES WILL BE INSTALLED ON A 8FT BY 10FT GRID.
 ASSUME BOTH SWAMP AND BLH MID-STORY PLANTS SPECIES WILL BE INSTALLED ON A 16FT BY 20FT GRID.
 PRIOR TO PLANTING, ALL AREAS TO RECEIVE PLANTS WILL BE TILLED AND DRESSED.
- SITE ACCESS:
 - SWAMP - AREA 1 & 2, AND BLH - AREA 1: EXISTING ROAD JUSTA STREET VIA ROUTE LA-84. SEVERAL EXISTING UNPAVED ROADS THROUGHOUT THE AREAS TO BE USED. UNLESS NOTED, ALL ROADS WILL BE DEGRADED.
 - SWAMP - AREA 3, AND BLH - AREA 2: EXISTING ROAD CARPENTER STREET WHICH BECOMES LAKE PALOURDE STREET VIA ROUTE LA-84. EXISTING UNPAVED ROADS THROUGHOUT THE AREAS TO BE USED. UNLESS NOTED, ALL ROADS WILL BE DEGRADED.
- DEGRADE AREAS:
 - ALL BLH AREAS WILL BE DEGRADED TO A DEPTH OF 0.5 FT TO OBTAIN PROPER HYDROLOGY FOR BLH HABITAT.
 - BLH - AREA 1: DEGRADE APPROXIMATELY 229,635 CY.
 - BLH - AREA 2: DEGRADE APPROXIMATELY 37,665 CY.
 DEGRADED MATERIAL WILL BE USED TO FILL EXISTING CANALS INDICATED ON THE MAP. ALL REMAINING MATERIAL WILL BE HAULED OFF SITE. MORE CANALS MAY BE PRESENT THAN INDICATED.
- EXISTING STRUCTURES AT THE PROPOSED STAGING AREA IN SWAMP - AREA 3 MAY BE REQUIRED TO BE DEMOLISHED. ALL DEMOLISHED AND DEGRADED MATERIAL WILL BE HAULED OFF BY THE CONTRACTOR TO A GOVERNMENT APPROVED DISPOSAL AREA. ASSUME 15 MILE ONE-WAY HAUL DISTANCE.



US Army Corps of Engineers
NEW ORLEANS DISTRICT

DATE	DESCRIPTION	MARK	DATE	DESCRIPTION	MARK

DESIGNED BY: J. TORVAR	DATE: 07-28-2019
DRAWN BY: J. TORVAR	SOLICITATION NO.:
CHECKED BY: J. TORVAR	CONTRACT NO.:
APPROVED BY: J. TORVAR	FILE NUMBER:
PROJECT: BBA MITIGATION, ALABAMA NORTH BLH AND SWAMP ST. MARY PARISH, LA.	SIZE: ANS/D
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA	

BBA MITIGATION, ALABAMA NORTH BLH AND SWAMP ST. MARY PARISH, LA.
BLH - WET AND SWAMP RESTORATION PLAN VIEW

SHEET IDENTIFICATION
C-01

PROJECT: BBA Mitigation, Pine Island Swamp Creation, St. Tammany Parish, Louisiana

GENERAL SOW:

The proposed project involves creation of up to a total of approximately 1,965 acres of swamp habitat over eight separate mitigation areas as compensatory mitigation for some of the swamp impacts resulting from construction of BBA projects. The swamp creation areas (mitigation areas) would be located in open water areas around Milton Island on the north shore of Lake Pontchartrain. This site is located southwest of the town of Madisonville adjacent to the Tchefuncte River in St. Tammany Parish.

Required earthwork prior to dredging would first consist of containment dike construction or rehabilitation around the perimeter of each of the eight mitigation areas. The crest elevation of these dikes would be approximately 5.0 feet NAVD88 and each dike would have a 5-ft wide crown. Existing material within each mitigation area would be used to construct or rehabilitate the containment dikes. Temporary submerged pipelines would be placed on the bottom of the canals that run between the mitigation areas as well as underneath the roads separating them as indicated on the attached drawing. Following dike construction and installation of the temporary pipelines, a cutterhead dredge would hydraulically place material (sediment) from within the borrow area indicated on the attached drawing into the mitigation areas using the shown pipeline routes. After filling the mitigation areas is complete, a one-year settlement period would pass prior to dike degrading the containment dikes and planting the mitigation areas. The temporary pipelines would be removed after pumping of dredged materials into the mitigation areas is complete.

Earthwork would also include building a permanent shoreline protection rip-rap feature along an approximately 2,420-ft stretch of Lake Pontchartrain shoreline adjacent to Mitigation Area 7 which will be underlain with separator geotextile fabric.

After the end of the fill settlement period in the 8 mitigation areas and after the containment dikes are degraded to match the average fill elevation in each mitigation area, native canopy and midstory plants typical of swamp habitats would be installed in mitigation Areas 1 – 8 .

The approximate maximum planted acreage within the proposed mitigation areas would be as follows:

Mitigation Area	Area (Acres)
Area 1	218
Area 2	262
Area 3	524
Area 4	226

Pine Island Mitigation Site

Mitigation Area	Area (Acres)
Area 5	72
Area 6	337
Area 7	142
Area 8	184
Total	1,965

PROPOSED PLANTING:

Assumed total plantings within the swamp mitigation areas (approximate):

Mitigation Area	Canopy Seedlings	Midstory Seedlings
Area 1	118,810	29,648
Area 2	142,790	35,632
Area 3	285,580	71,264
Area 4	123,170	30,736
Area 5	39,240	9,792
Area 6	183,665	45,832
Area 7	77,390	19,312
Area 8	100,280	25,024
Total	1,070,925	267,240

Assume swamp canopy plant species would be installed on an 8ft by 10ft grid (545 seedlings per acre)

Assume swamp midstory plant species would be installed on a 16ft by 20ft grid (136 seedlings per acre)

Mowing poles (PVC pipes extending roughly 6 feet above grade) would be installed on each planted row every 50' to 100' to guide mowing operations.

Dike Construction/Rehabilitation:

Total perimeter retention would be required to retain dredged material and to allow for vertical accretion. The total length of each mitigation area which would require dike construction, rehabilitation, or lifting would be as follows:

Pine Island Mitigation Site

Mitigation Area	Perimeter (ft)
Area 1	14,925
Area 2	22,366
Area 3	22,132
Area 4	19,090
Area 5	9,050
Area 6	16,948
Area 7	12,343
Area 8	30,628
Total	147,482

Any existing features such as existing perimeter dikes, access roads, and or ridges would be used for retention of dredged material. If dike rehabilitation is required, material for dike maintenance would come from within the proposed footprint of the swamp sites.

Existing dikes would be used to the extent practical. The retention dikes would be constructed to elevation 5.0 feet NAVD88, with a 5'-wide crown to assure dike integrity. The borrow ditch in each mitigation area used to obtain material for the retention (containment) dikes would be offset a minimum of 40' from each dike to assure dike stability. The borrow ditches would be on the interior side of the dikes (e.g. within the limits of the mitigation areas).`

Plugs would be left in the borrow ditch at 1,000- foot intervals to minimize water flow and material loss during pumping operations. Spill boxes and/or weirs would be constructed at locations along the northern and western retention dikes as necessary to allow for effluent water release from within the swamp creation areas for approximately one year after construction, when the perimeter dikes are breached and degraded. If deemed necessary by the construction contractor, a low-level interior weir or baffle dikes would be constructed to assist in vertical stacking of dredged material. The gaps would be spaced with care being taken to locate gaps at existing natural bayous, canals, or other openings. The gaps would require a 25-foot bottom at approximately elevation 0.0 feet NAVD88 (lower limit of existing nearby marsh platform) to assure water interchange with the existing marsh.

Rip-Rap Construction:

On the Lake Pontchartrain shoreline of Mitigation Area 7, a 2,240-ft long stretch of shoreline covering approximately 0.93 acres would be reinforced with a stone bank rip-rap. This rip-rap would be two feet thick and be placed on the graded shoreline from elevation 0' up to elevation 4.5'. This two-foot thick rip-rap would be underlain with a 200 pound separator geotextile fabric. Total estimated geotextile fabric quantity for this

Pine Island Mitigation Site

rip-rap construction is 4,575 square yards and the estimated stone quantity is 5,700 tons or 2,940 cubic yards.

Dredging:

A hydraulic cutterhead dredge would be used to pump approximately 16.4 million cubic yards of material via a pipeline from the proposed borrow site in Lake Pontchartrain to the swamp creation sites. Initial elevation for dredge fill within each mitigation area would be to approximate elevation 2.5 feet NAVD88, with the goal of ultimately resulting in a final target swamp elevation of approximately 2.0 feet. The maximum allowable dredging depth within the borrow site would be -19 feet NAVD88 plus a 1-foot allowable overdepth to account for inaccuracies in the dredging process.

Three 75-ft corridors are indicated on the drawing and run from the borrow site into Mitigation Areas 4 and 7 have been established to place subline for pumping material from the proposed borrow site to the mitigation areas. The first pipeline corridor runs down the middle of the entrance channel to the east of Milton Island and to the east of an area indicated to be a shell reef site. All activities related to this proposed work would avoid this area. All pipeline corridors would be placed and located in a manner which does not impact existing wetlands.

The estimated quantities required to achieve the initial target fill elevation of 2.5ft NAVD88 within the eight mitigation areas are as follows:

Mitigation Area	Fill Quantity (Cubic Yards)
Area 1	1,809,900
Area 2	2,205,053
Area 3	4,257,765
Area 4	1,900,702
Area 5	625,541
Area 6	2,756,592
Area 7	1,196,595
Area 8	1,649,163
Total	16,401,310

DURATION:

Per the PDT, the assumed start date for construction is 1 June 2020. Necessary dike construction and initial pumping of sediment into the mitigation areas would be completed around June 2021. After a year-long settlement period, degrading of dike would begin in June 2022 and be completed no sooner than March 2023. Initial planting activities would likely be conducted in November 2023 through mid-March

Pine Island Mitigation Site

2024. Notice of Construction Completion (NCC) would be issued soon after completion of the initial planting event.

Monitoring to determine success of the initial plantings would likely occur in October 2024 with the report submitted in December 2024. If this monitoring showed success criteria had been satisfied, a second monitoring event would likely occur in October 2025 with the report submitted in December 2025. Assuming this latter report showed applicable success criteria had been satisfied, the overall project would be turned over to the Non-Federal Sponsor in approximately March 2026.

SITE ACCESS:

Access to the project site would be as follows:

From the north, Guste Island Road runs between Areas 1 and 8. This road then splits into Grand Rue Port Louis Road which runs between Areas 4, 5, and 7. South Chenier Drive runs between Area 2 and Area 3. Access to the mitigation areas can also be made via the many canals that run between all the areas.

STAGING:

Staging of equipment for initial dike construction activities and riprap construction would be via barge(s) on or near the Lake Pontchartrain shoreline as indicated on the attached drawing. The proposed staging areas would first be submitted for Government approval. Staging of materials for the initial planting event would be within the mitigation areas themselves most likely.

MAINTENANCE/MANAGEMENT ACTIVITIES:

After completion of all dike construction, dredge pumping, and soil preparation activities but prior to initial plantings, herbicides may be applied to the mitigation areas to help control invasive and nuisance plant species. Mowing may also be performed in the mitigation area during this time period. After the mitigation area is initially planted and before the success of these plantings is evaluated (monitored), herbicide applications and/or mowing may also occur to help suppress undesirable vegetation. Throughout this period, access/maintenance roads would be maintained as necessary as would be any new drainage features established.

The first monitoring event would occur in the fall of the year of the initial plantings. This report could show additional plantings are needed or it may not. Regardless, various mowing events and herbicide application events would take place during the period from the first monitoring event to the second monitoring event performed the next year. It is assumed that the second monitoring event would show success criteria for the plantings had been achieved as were success criteria about control of invasive and nuisance plants. It is also assumed this monitoring event would show the success criterion established for the final soil surface elevation in the mitigation areas had been

Pine Island Mitigation Site

achieved. In this case, the Non-Federal Sponsor would take over the project including all management and maintenance work.

EQUIPMENT:

Equipment to be used for the respective work is assumed as follows:

Dike Construction: Excavators, marsh buggies, airboats

Dredge Pumping: Cutterhead dredge, tugs, crewboats, pipeline (steel, and rubber), derricks, barges, up to D-8 dozers, excavators, front-end loaders, marsh buggies, airboats, marsh masters

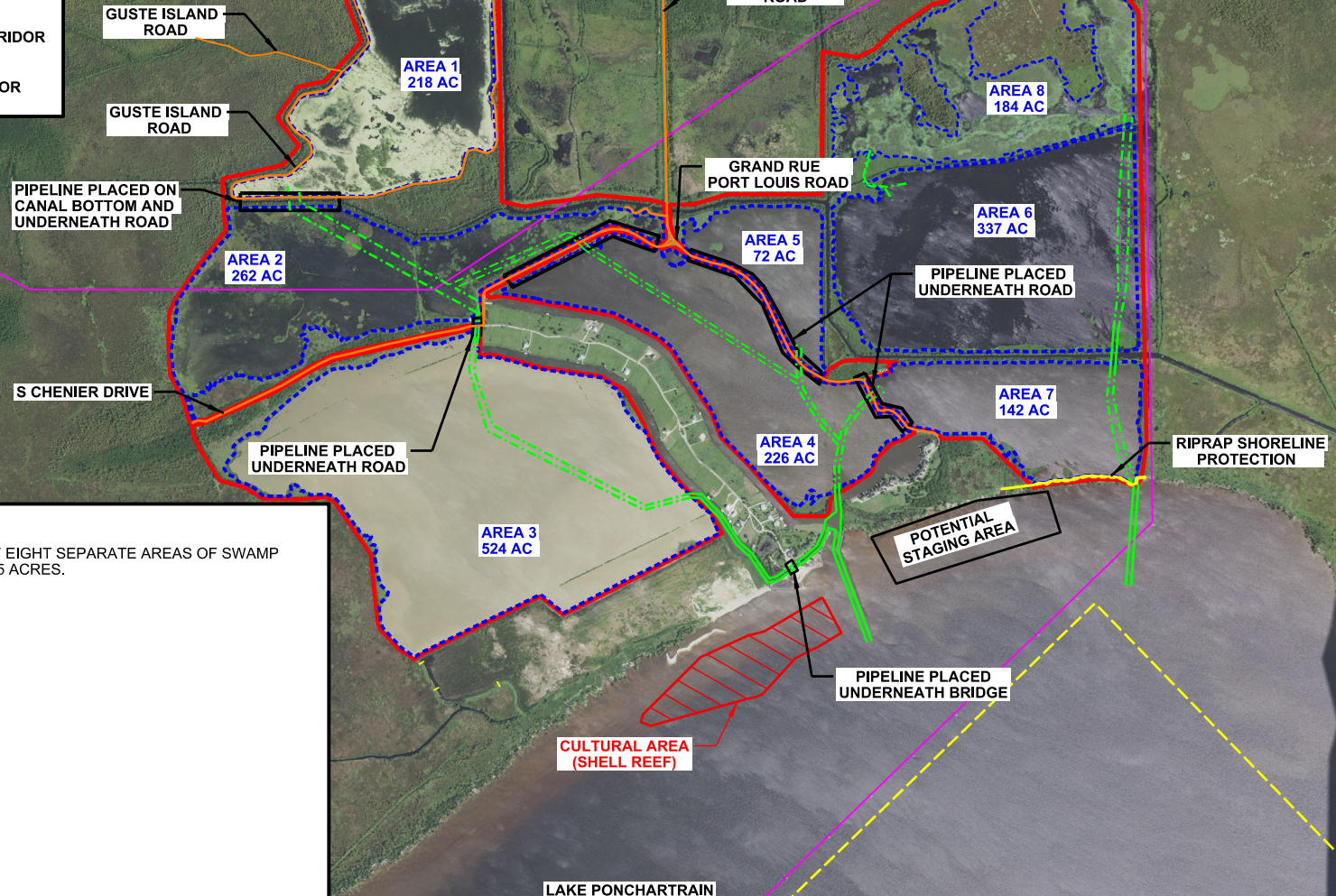
Rip-rap Construction: Excavators, scows, barges, up to D-8 dozers, front-end wheel loaders, marsh buggies

Planting Preparation: Tractor with harrow and scarifier, bulldozers, and backhoe.

Planting: Pickup trucks, ATVs and/or UTVs, and marsh buggies.

SHEET LEGEND

- PROPERTY LIMITS
- - - SWAMP MITIGATION LIMITS
- ACCESS ROAD
- TRANSMISSION LINE
- - - TYPICAL PIPELINE CORRIDOR
- 75-FT PIPELINE CORRIDOR



NOTES:

- PROPOSED MITIGATION AREAS CONSIST OF EIGHT SEPARATE AREAS OF SWAMP RESTORATION UP TO APPROXIMATELY 1,965 ACRES.
 - AREA 1: 218 AC
 - AREA 2: 262 AC
 - AREA 3: 524 AC
 - AREA 4: 226 AC
 - AREA 5: 72 AC
 - AREA 6: 337 AC
 - AREA 7: 142 AC
 - AREA 8: 184 AC
- ESTIMATED PROPOSED PLANTINGS:

Mitigation Area	Canopy	Midstory
Area 1	118,810	29,648
Area 2	142,790	35,632
Area 3	285,580	71,264
Area 4	123,170	30,736
Area 5	39,240	9,792
Area 6	183,665	45,832
Area 7	77,390	19,312
Area 8	100,280	25,024
Total	1,070,925	267,240

ASSUME SWAMP CANOPY PLANTS SPECIES WILL BE INSTALLED ON A 8FT BY 10FT GRID.
 ASSUME SWAMP MIDSTORY PLANTS SPECIES WILL BE INSTALLED ON A 16FT BY 20FT GRID.

- SITE ACCESS:

ACCESS TO THE MITIGATION AREAS IS AS FOLLOWS:

FROM THE NORTH, GUSTE ISLAND ROAD RUNS BETWEEN AREAS 1 AND 8. THIS ROAD THEN SPLITS INTO GRAND RUE PORT LOUIS ROAD WHICH RUNS BETWEEN AREA 4, AREA 5, AND AREA 7 AND S. CHENIER DRIVE WHICH RUNS BETWEEN AREA 2 AND 3.

STAGING WOULD BE IN THE GENERAL AREA INDICATED. ALL STAGING OF EQUIPMENT WOULD BE VIA BARGE.

PIPELINE ROUTES INDICATED WOULD BE USED TO TRANSPORT DREDGED MATERIAL FROM THE OUTLINED BORROW AREA. TYPICAL PIPELINE CORRIDORS INDICATE GENERAL LOCATION OF PIPELINES; ACTUAL LOCATION OF PIPELINES WITHIN THE MITIGATION AREA WOULD BE DETERMINED BY THE CONTRACTOR. THE 75-FT PIPELINE CORRIDORS INDICATE LOCATIONS WHERE PIPELINE MUST BE PLACED. PIPELINES WOULD BE PLACED UNDERNEATH ROADS IN THE AREAS INDICATED.

SAIL ROUTE INDICATED ON THE DRAWING DENOTES GENERAL ROUTES BOATS WOULD TAKE TO TRAVEL TO THE PROPOSED BORROW SITE.
- PRIOR TO PLACEMENT OF DREDGE MATERIAL, CONTAINMENT DIKES/BERMS WOULD BE BUILT AROUND THE MITIGATION AREAS. A CUTTER SUCTION DREDGE WOULD THEN PUMP MATERIAL FROM THE INDICATED BORROW AREA INTO THE MITIGATION AREAS TO AN ELEVATION OF +2.5 FT NAVD88. AFTER DREDGE PLACEMENT AND A SETTLEMENT PERIOD OF ONE YEAR, THE CONTAINMENT DIKES WOULD BE DEGRADED PRIOR TO PLANTING.

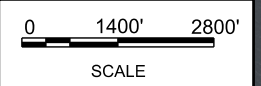
NOTES:

- ESTIMATED FILL QUANTITIES FOR PROPOSED MITIGATION AREAS ARE AS FOLLOWS:

Mitigation Area	Fill Quantity (Cubic Yards)
Area 1	1,809,900
Area 2	2,205,053
Area 3	4,257,765
Area 4	1,900,702
Area 5	625,541
Area 6	2,756,592
Area 7	1,196,595
Area 8	1,649,163
Total	16,401,310
- RIPRAP:

RIPRAP INDICATED ON THE DRAWING WOULD BE CONSTRUCTED AS PERMANENT SHORELINE PROTECTION. RIPRAP WOULD BE UNDERLAIN WITH GEOTEXTILE FABRIC. RIPRAP WOULD HAVE A THICKNESS OF 2 FEET AND BE AROUND 16.5 FEET WIDE OVER A LENGTH OF 2,420 FEET. RIPRAP WOULD BE PLACED ON THE SHORELINE FROM ELEVATION +4.5 FT. NAVD88 DOWN TO ELEVATION 0.0 FT. NAVD88.

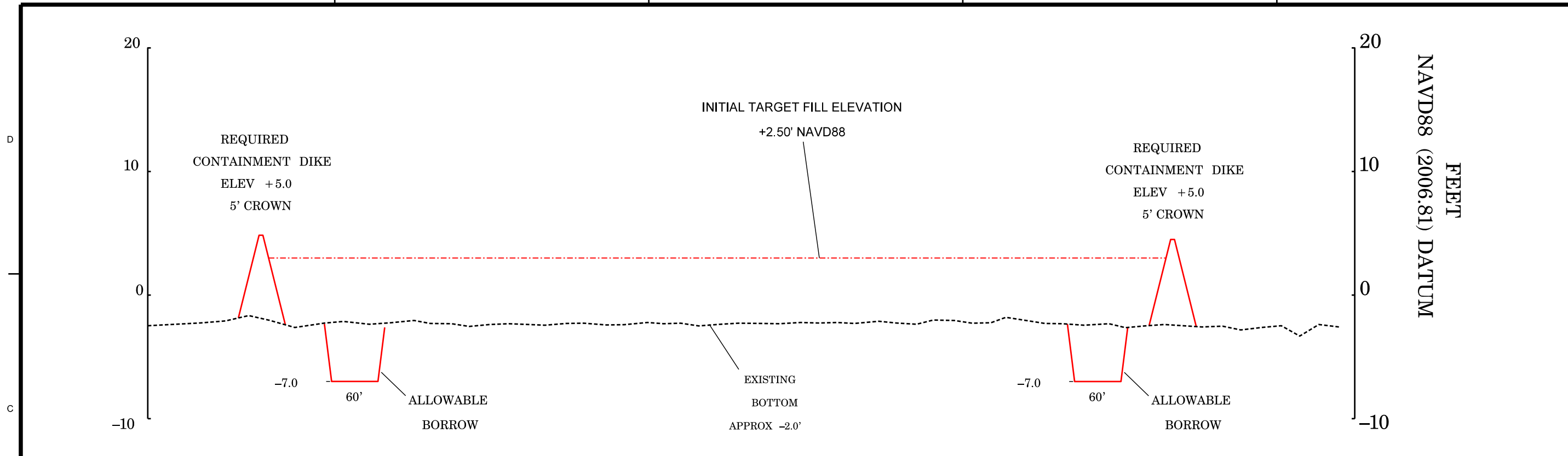
ESTIMATED GEOTEXTILE QUANTITY IS 4,575 SY AND ESTIMATED RIPRAP QUANTITY OF 2,940 CY OR 5,700 TONS.



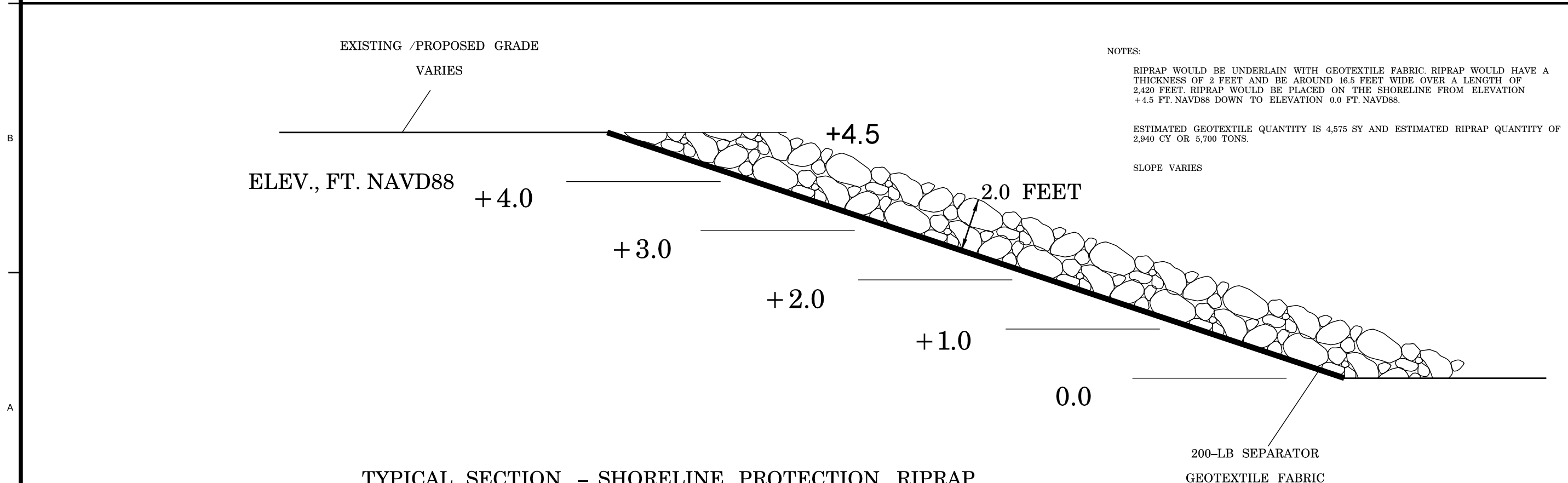
DATE	DESCRIPTION	MARK

DESIGNED BY: MICHAEL J. TOLLIVAR	DATE: AUGUST 2019
DRAWN BY: ZAS	SOILS/GEOTECHNICAL NO.:
SUBMITTED BY: MICHAEL J. TOLLIVAR	CONTRACT NO.:
PROJECT NO.:14001	FILE NUMBER: H-16-XXXX
SCALE:	FILE NAME:
SIZE:	ANSI:

BBA MITIGATION SWAMP RESTORATION ST. TAMMANY PARISH, LA
 PINE ISLAND MITIGATION SITE
 PLAN VIEW



TYPICAL SECTION - SWAMP CREATION
(NTS)



TYPICAL SECTION - SHORELINE PROTECTION RIPRAP
(NTS)

US Army Corps of Engineers NEW ORLEANS DISTRICT		
DATE	DESCRIPTION	MARK

DATE: AUGUST 6, 2019	DESIGNED BY: L. J. COVARR	CONTRACT NO.: W91298-19-C-XXXX	FILE NUMBER: H-16-XXXXX
PROJECT NO.: W91298-19-C-XXXX	CHECKED BY: J. HARRIS	PLANT DATE: 08/02/2019	FILE NAME:
DRAWN BY: J. HARRIS	INCHES: 1/4" = 1'	NOT TO SCALE	ANSI D
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT NEW ORLEANS, LOUISIANA			

BBA MITIGATION
SWAMP RESTORATION
ST. TAMMANY PARISH, LA

PINE ISLAND MITIGATION SITE
TYPICAL MITIGATION AREA AND RIPRAP
CROSS SECTIONS

SHEET IDENTIFICATION
C-02

PROJECT: BBA Mitigation, Joyce WMA Swamp Enhancement, Tangipahoa Parish, Louisiana

GENERAL SOW:

The proposed project involves enhancement of a total of approximately 1,124 acres of existing swamp habitat within the Joyce Wildlife Management Area (WMA) mitigation site on the north shore of Lake Pontchartrain. The mitigation site is an estimated 8 miles southeast of Ponchatoula, LA and is situated east of Interstate 55 in Tangipahoa Parish.

Work will include planting of native canopy and midstory plant species required to enhance swamp habitat as stated herein. The proposed swamp enhancement for this project is broken into three separate mitigation areas as follows:

Mitigation Area ID	Acres
J1	550
J2	195
J3	380
Total	1,125

PROPOSED PLANTING:

Assumed total planting required within the mitigation areas are provided below:

Mitigation Area	Canopy Seedlings	Midstory Seedlings
J1	143,748	35,937
J2	63,707	15,927
J3	132,422	33,106
Totals	339,877	84,969

Assume swamp canopy plants species will be installed on a 10ft by 10ft grid.

Assume swamp midstory plants species will be installed on a 20ft by 20ft grid.

The existing density of canopy and midstory plant species in each mitigation area is quite variable and relatively sparse in many places. The enhancement objectives for the 3 swamp enhancement areas (mitigation areas) is to achieve an average density of at least 250 living native swamp canopy species and an average density of at least 80 living native swamp midstory species per acre. Native swamp and midstory plants would be installed among the existing canopy and midstory plants to help achieve these objectives.

Canopy species would be installed to obtain an initial average density of approximately 435 trees per acre in planted areas. Midstory species would be installed to obtain an initial average density of approximately 109 midstory species per acre in planted areas.

The canopy species would be installed on 10-foot centers, while the midstory species would be installed on 20-foot centers. These represent the typical spacing of plants, but this spacing would be adjusted as necessary to account for and not conflict with existing living canopy and midstory plants. All plants to be installed would be 1 gallon stock. All plantings would be protected by predation guards.

DEGRADE AREAS:

No degrading would be required as planting would occur in existing swamp.

DEMOLITION:

No existing structures appear to be located within the proposed mitigation areas, thus no demolition is anticipated.

DURATION:

Per PDT, the assumed start date for construction is 1 June 2020. Initial planting activities would likely begin in November 2022 and be completed at the end of March 2023. Notice of Construction Completion (NCC) would be issued soon after completion of the initial planting event.

Monitoring to determine success of the initial plantings would likely occur in October 2023 with the report submitted in December 2023. If this monitoring showed success criteria had been satisfied, a second monitoring event would likely occur in October 2024 with the report submitted in December 2024. Assuming this latter report showed applicable success criteria had been satisfied, the overall project would be turned over to the Non-Federal Sponsor in January 2025.

SITE ACCESS:

Access to the project work limits is to be determined.

STAGING:

Staging area(s) for the proposed mitigation area is to be determined.

MAINTENANCE/MANAGEMENT ACTIVITIES:

The first monitoring event would occur in the fall of the year of the initial plantings. This report could show additional plantings are needed or it may not. Regardless, various mowing events and herbicide application events would take place during the period from the first monitoring event to the second monitoring event. It is assumed that the second monitoring event would show success criteria for the plantings had been achieved as were success criteria about control of invasive and nuisance plants. In this

case, the Non-Federal Sponsor would take over the project including all management and maintenance work.

EQUIPMENT:

Equipment to be used for the respective work is assumed as follows:

Planting: Air boats, diesel-engine boats, small barges, ATVs, UTVs, and marsh buggies

SHEET LEGEND

— PROPERTY BOUNDARY FOR JOYCE WMA

- - - LIMITS OF MITIGATION AREAS

JOYCE WILDLIFE MANAGEMENT AREA

NOTES:

- PROPOSED MITIGATION SITES CONSIST OF SWAMP ENHANCEMENT COVERING A TOTAL OF APPROXIMATELY 1,1245 ACRES. THE THREE AREAS AS FOLLOWS:
 AREA J1: 550 AC
 AREA J2: 195 AC
 AREA J3: 380 AC
- ESTIMATED PROPOSED PLANTINGS:

Mitigation Area	Canopy	Midstory
J1	143,748	35,937
J2	63,707	15,927
J3	132,422	33,106
Total	339,877	84,970

ASSUME SWAMP CANOPY PLANTS SPECIES INSTALLED ON A 10FT BY 10FT GRID.
 ASSUME SWAMP MIDSTORY PLANTS SPECIES INSTALLED ON A 20FT BY 20FT GRID.
 ASSUMED SPACING GRIDS OF PLANTINGS REPRESENT TYPICAL SPACING OF PLANTS, BUT THIS SPACING WOULD BE FIELD ADJUSTED AS NECESSARY TO ACCOUNT FOR AND NOT CONFLICT WITH EXISTING LIVING CANOPY AND MIDSTORY PLANTS.
 THE EXISTING DENSITY OF CANOPY AND MIDSTORY PLANT SPECIES IN EACH MITIGATION AREA IS VARIABLE AND SPARSE IN MANY PLACES. PLANTING ESTIMATES BASED ON ACHIEVING AN AVERAGE DENSITY OF AT LEAST 250 LIVING NATIVE SWAMP CANOPY AND 80 LIVING NATIVE SWAMP MIDSTORY SPECIES PER ACRE.
 CANOPY SPECIES WOULD BE INSTALLED TO OBTAIN AN INITIAL AVERAGE DENSITY OF APPROXIMATELY 435 TREES PER ACRE IN PLANTED AREAS. MIDSTORY SPECIES WOULD BE INSTALLED TO OBTAIN AN INITIAL AVERAGE DENSITY OF APPROXIMATELY 109 MIDSTORY SPECIES PER ACRE IN PLANTED AREAS.
- SITE ACCESS:
 ACCESS TO THE MITIGATION AREAS IS TO BE DETERMINED.
- NO DEGRADING OR DEMOLITION IS REQUIRED FOR THIS PROJECT



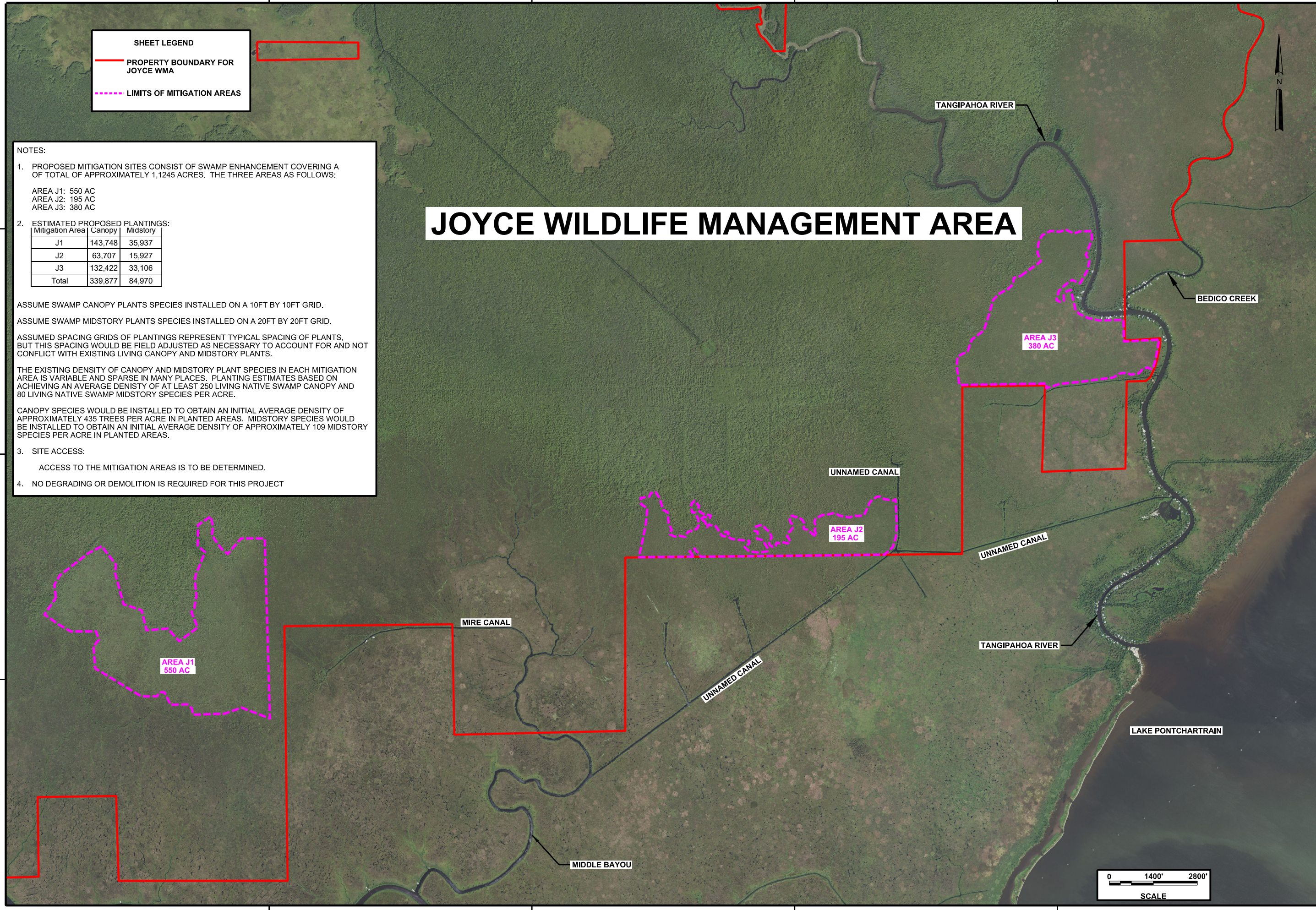
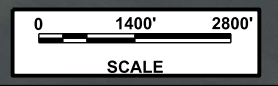
DATE	DESCRIPTION	MARK

DESIGNED BY: JAVIAR	DATE:	SOLICITATION NO.:
DRAWN BY: JAV	ISSUED BY: JAV	CONTRACT NO.:
SUBMITTED BY: M.J.T.	FILE NO.:	FILE NUMBER:
PLANTING DATE: 08-08-2019	FILE NAME:	
SIZE: ANS/D		

BBA MITIGATION, SWAMP ENHANCEMENT
TANGIPAHOA PARISH, LA.

JOYCE WMA
MITIGATION SITE
PLAN VIEW

SHEET IDENTIFICATION
C-01



**PROJECT: BBA Mitigation, Cote Blanche BLH-Wet Creation, St. Mary Parish,
Louisiana**

GENERAL SOW:

The work consists of proposed mitigation site that is composed of BLH (wet) creation, up to approximately 176.5 acres and Swamp creation, up to approximately 269.6 acres located at existing agricultural fields north of the Intracoastal Waterway and an estimated 5 miles west of the town of Glencoe, LA in St. Mary Parish. The mitigation site is separated by Route LA-83 along with multiple dirt roads. Work will include grading to ensure positive drainage, degrading of existing unpaved roads, harrowing soil to receive planting, and planting of canopy and midstory plant species required to establish BLH and swamp habitat as stated herein.

Work would primarily include removal of the upper 0.5 feet and 1.0 feet of soil within the mitigation areas to establish an appropriate hydroperiod for BLH-Wet plant species, harrowing soil to receive plantings, and planting of native canopy and midstory species required to establish BLH-Wet and swamp habitat as stated herein. The proposed BLH-Wet and swamp creation for this project is broken into separate areas as follows:

<u>BLH – Area 1:</u>	5.8 AC
<u>BLH – Area 2:</u>	0.6 AC
<u>BLH – Area 3:</u>	47.2 AC
<u>BLH – Area 4:</u>	5.2 AC
<u>BLH – Area 5:</u>	12.9 AC
<u>BLH – Area 6:</u>	27.6 AC
<u>BLH – Area 7:</u>	49.4 AC
<u>BLH – Area 8:</u>	19.0 AC
<u>BLH – Area 9:</u>	8.9 AC
Total BLH-Wet:	176.5 AC

<u>Swamp – Area 1:</u>	20.8 AC
<u>Swamp – Area 2:</u>	195.4 AC
<u>Swamp – Area 3:</u>	53.4 AC
Total Swamp:	269.6 AC

Note that the total acreage of BLH-Wet and swamp creation indicated above would be reduced by the Contractor's staging area and possibly by additional dirt roadways within the BLH-Wet and swamp creation area (mitigation area) established for access and maintenance purposes.

PROPOSED PLANTING:

Assuming project BLH and swamp area:

BLH Canopy: Approximately 92,216 seedlings. (545 seedlings per acre)

BLH Midstory: Approximately 21,010 seedlings. (136 seedlings per acre)

Swamp Canopy: Approximately 146,906 seedlings. (545 seedlings per acre)

Swamp Midstory: Approximately 36,659 seedlings. (136 seedlings per acre)

Assume BLH and swamp canopy plants species will be installed on an 8ft by 10ft grid.

Assume BLH and swamp midstory plants species will be installed on a 16ft by 20ft grid.

To maximize water flow into the site, any existing dikes/berms within the property boundary which prevent water flow into the site would be degraded as long as this effort does not harm or adversely affect outside properties/water sources. Any existing drainage features (drainage ditches, etc.) within or adjacent to the mitigation areas and within the property boundary would likely be removed to help assure appropriate site hydrology.

Mowing poles (PVC pipes extending roughly 6 feet above grade) would be installed on each planted row every 50' to 100' to guide mowing operations.

DEGRADE AREAS:

Degrading would be required to help ensure satisfactory hydrology/hydroperiod for BLH-Wet habitat. All of BLH - Area 1, 2, 4, and 5 would need to be degraded to a depth of approximately 1.0ft. All of BLH- Area 6 and 8 would need to be degraded to approximately 0.5ft. BLH - Area 7 would need to be degraded to approximately 0.5ft with the exception of the area indicated which shows no degrading would be required. BLH - Area 9 would not require degrading. There is a possibility BLH - Area 6, 7, and 8 would need to be degraded to a depth approximately 1.0ft but further tests would need to be conducted. No degrading would be required for swamp habitat to help ensure satisfactory hydrology/hydroperiod.

Degraded material would be hauled off site to a contractor provided disposal area. Assume a 15 mile on-way haul distance.

BLH - Area 1: Degrade Approximately: 9,434 CY.
BLH - Area 2: Degrade Approximately: 1,016 CY.
BLH - Area 3: Degrade Approximately: 76,084 CY.
BLH - Area 4: Degrade Approximately: 8,399 CY.
BLH - Area 5: Degrade Approximately: 20,831 CY.
BLH - Area 6: Degrade Approximately: 22,230 CY.
BLH - Area 7: Degrade Approximately: 4,536 CY.
BLH - Area 8: Degrade Approximately: 15,309 CY.

Total Degrade Approximately: 157,839 CY.

DEMOLISHION:

No existing structures appear to be located within the BLH-Wet and swamp creation area (mitigation area).

DURATION:

Per PDT, the assumed start date for construction is 1 June 2020. Necessary harrowing and related activities would likely start around early August 2020 and last approximately 220 days. Initial planting activities would likely begin in December 2021 while the plants are dormant and last approximately 56 days. Notice of Construction Completion (NCC) would be issued soon after completion of the initial planting event.

Monitoring to determine success of the initial plantings would likely occur in October 2022 with the report submitted in December 2022. If this monitoring showed success criteria had been satisfied, a second monitoring event would likely occur in October 2023 with the report submitted in December 2023. Assuming this latter report showed applicable success criteria had been satisfied, the overall project would be turned over to the Non-Federal Sponsor in January 2024.

SITE ACCESS:

Access to the project work limits would be as follows:

Access to the mitigation area would be made via route la-83 which intersects Alice B Road. Alice B Road intersects Louisiana Road which runs north/south along the western limits of the site. Louisiana Road intersects B E Boudreaux Road which runs east/west through the site. This road intersects Louisiana Road which runs north/south through the mitigation areas. Route LA-83 intersects an unnamed road that runs north/south through the areas north of the railroad.

Dirt maintenance/access roads approximately 15 feet wide would be established around the perimeter of the mitigation area shown on the attached drawing. The Contractor may also establish other maintenance/access roads within the mitigation area. Such roads would first have to be approved by the Government. If approved, such roads would slightly reduce the acreage of the BLH-Wet mitigation area.

STAGING:

Staging area(s) would only be permitted within the shown BLH area indicated on the attached drawings. The Contractor would determine where within the BLH area limits to place staging and laydown areas suitable for the Contractor's means and methods to meet the required project period of performance. The proposed staging area would first be submitted for Government approval. The Contractor would be permitted to place crushed stone paving for parking and laydown areas along with a temporary construction trailer. No utilities would be provided by the Government, and the Contractor must obtain all permissions and permits for utilities. The trailer, crushed

stone paving, and temporary utilities would have to be removed by the Contractor and the end of the project and the disturbed area would have to be planted with native grasses by the Contractor leaving the project site.

MAINTENANCE/MANAGEMENT ACTIVITIES:

After completion of all excavation, grading, and soil preparation activities but prior to initial plantings, herbicides may be applied to the mitigation areas to help control invasive and nuisance plant species. Mowing may also be performed in the mitigation areas during this time period. After the mitigation areas are initially planted and before the success of these plantings is evaluated (monitored), herbicide applications and/or mowing may also occur to help suppress undesirable vegetation. Throughout this period, access/maintenance roads would be maintained as necessary as would be any new drainage features established.

The first monitoring event would occur in the fall of the year of the initial plantings. This report could show additional plantings are needed or it may not. Regardless, various mowing events and herbicide application events would take place during the period from the first monitoring event to the second monitoring event. It is assumed that the second monitoring event would show success criteria for the plantings had been achieved as were success criteria about control of invasive and nuisance plants. In this case, the Non-Federal Sponsor would take over the project including all management and maintenance work.

EQUIPMENT:

Equipment to be used for the respective work is assumed as follows:

Degrading: Up to D8 bulldozers, wheel tractor scrapers, front-endloaders, off-road and on-road dump trucks.

Planting Preparation: Tractor with harrow and scarifier, bulldozers, and backhoe.

Planting: Pickup trucks and ATVs and/or UTVs, and 2,000 to 4,000 gallon water trucks.

Initial Maintenance: Tractor with brush-hog/mower; ATVs and/or UTVs, back-pack sprayers and/or boom sprayers; bulldozers or backhoes.

Planting: Pickup trucks and/or ATVs, skid loader with auger, and 2,000 to 4,000 gallon water trucks.

1

2

3

4

5

D

C

B

A



US Army Corps of Engineers
NEW ORLEANS DISTRICT

DATE	DESCRIPTION	APPR	MARK

DESIGNED BY: CORREY L. TOULVAR	DATE:	SOLICITATION NO.:
DRAWN BY: JAG	07-17-2019	CONTRACT NO.:
CHECKED BY: M.J.T.		FILE NUMBER:
PROJECT NO.:		

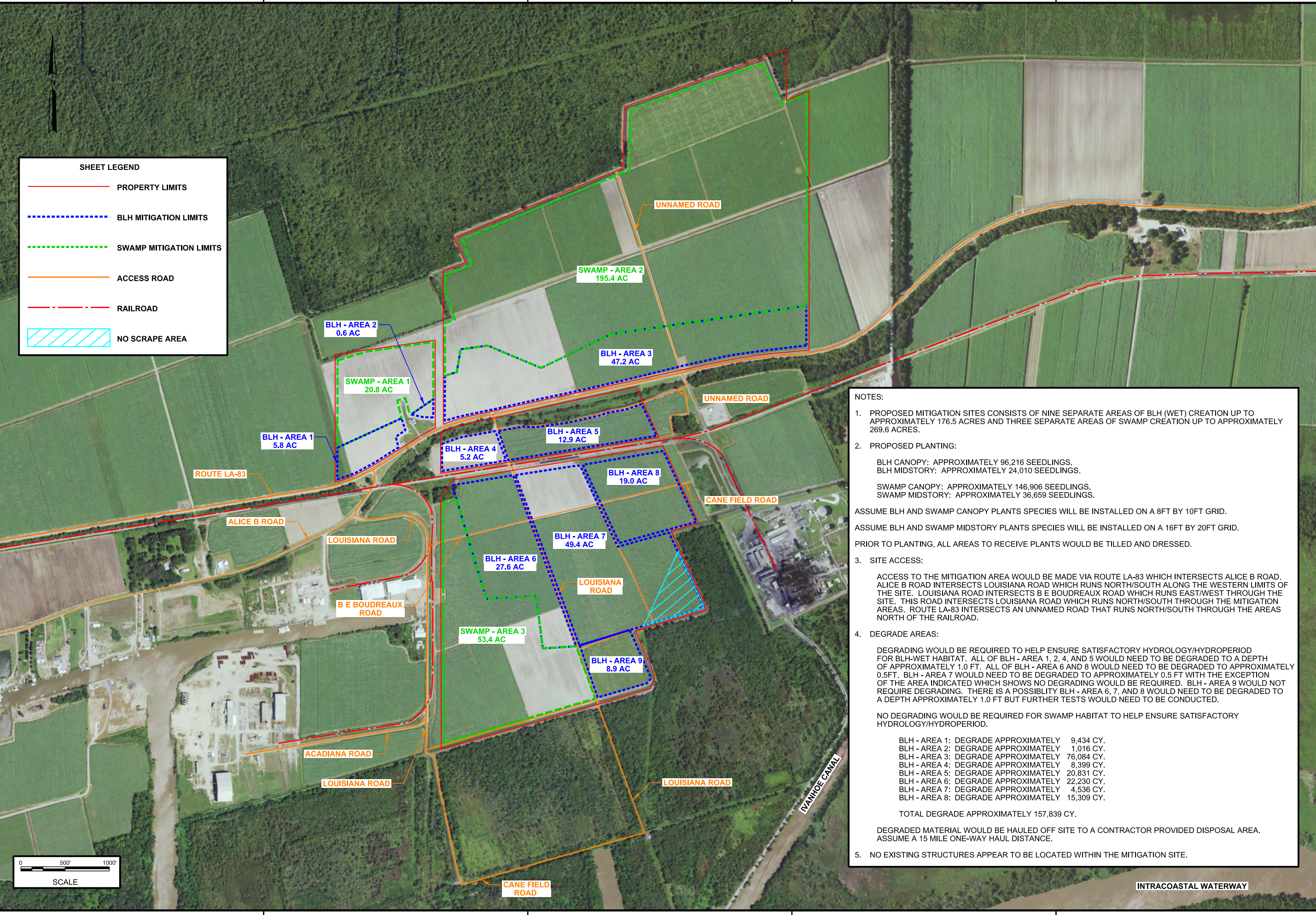
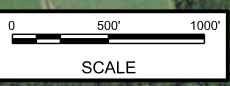
BBA MITIGATION,
COTE BLANCHE BLH-WET AND SWAMP
ST. MARY PARISH, LA.

BLH - WET AND SWAMP CREATION
PLAN VIEW

SHEET IDENTIFICATION
C-01

SHEET LEGEND

- PROPERTY LIMITS (Red solid line)
- BLH MITIGATION LIMITS (Blue dashed line)
- SWAMP MITIGATION LIMITS (Green dashed line)
- ACCESS ROAD (Orange solid line)
- RAILROAD (Red dashed line)
- NO SCRAPE AREA (Cyan hatched area)



NOTES:

- PROPOSED MITIGATION SITES CONSISTS OF NINE SEPARATE AREAS OF BLH (WET) CREATION UP TO APPROXIMATELY 176.5 ACRES AND THREE SEPARATE AREAS OF SWAMP CREATION UP TO APPROXIMATELY 269.6 ACRES.
- PROPOSED PLANTING:
 - BLH CANOPY: APPROXIMATELY 96,216 SEEDLINGS.
 - BLH MIDSTORY: APPROXIMATELY 24,010 SEEDLINGS.
 - SWAMP CANOPY: APPROXIMATELY 146,906 SEEDLINGS.
 - SWAMP MIDSTORY: APPROXIMATELY 36,659 SEEDLINGS.

ASSUME BLH AND SWAMP CANOPY PLANTS SPECIES WILL BE INSTALLED ON A 8FT BY 10FT GRID.
ASSUME BLH AND SWAMP MIDSTORY PLANTS SPECIES WILL BE INSTALLED ON A 16FT BY 20FT GRID.
PRIOR TO PLANTING, ALL AREAS TO RECEIVE PLANTS WOULD BE TILLED AND DRESSED.
- SITE ACCESS:

ACCESS TO THE MITIGATION AREA WOULD BE MADE VIA ROUTE LA-83 WHICH INTERSECTS ALICE B ROAD. ALICE B ROAD INTERSECTS LOUISIANA ROAD WHICH RUNS NORTH/SOUTH ALONG THE WESTERN LIMITS OF THE SITE. LOUISIANA ROAD INTERSECTS B E BOUDREAUX ROAD WHICH RUNS EAST/WEST THROUGH THE SITE. THIS ROAD INTERSECTS LOUISIANA ROAD WHICH RUNS NORTH/SOUTH THROUGH THE MITIGATION AREAS. ROUTE LA-83 INTERSECTS AN UNNAMED ROAD THAT RUNS NORTH/SOUTH THROUGH THE AREAS NORTH OF THE RAILROAD.
- DEGRADE AREAS:

DEGRADING WOULD BE REQUIRED TO HELP ENSURE SATISFACTORY HYDROLOGY/HYDROPERIOD FOR BLH-WET HABITAT. ALL OF BLH - AREA 1, 2, 4, AND 5 WOULD NEED TO BE DEGRADED TO A DEPTH OF APPROXIMATELY 1.0 FT. ALL OF BLH - AREA 6 AND 8 WOULD NEED TO BE DEGRADED TO APPROXIMATELY 0.5FT. BLH - AREA 7 WOULD NEED TO BE DEGRADED TO APPROXIMATELY 0.5 FT WITH THE EXCEPTION OF THE AREA INDICATED WHICH SHOWS NO DEGRADING WOULD BE REQUIRED. BLH - AREA 9 WOULD NOT REQUIRE DEGRADING. THERE IS A POSSIBLITY BLH - AREA 6, 7, AND 8 WOULD NEED TO BE DEGRADED TO A DEPTH APPROXIMATELY 1.0 FT BUT FURTHER TESTS WOULD NEED TO BE CONDUCTED.

NO DEGRADING WOULD BE REQUIRED FOR SWAMP HABITAT TO HELP ENSURE SATISFACTORY HYDROLOGY/HYDROPERIOD.

BLH - AREA 1:	DEGRADE APPROXIMATELY	9,434 CY.
BLH - AREA 2:	DEGRADE APPROXIMATELY	1,016 CY.
BLH - AREA 3:	DEGRADE APPROXIMATELY	76,084 CY.
BLH - AREA 4:	DEGRADE APPROXIMATELY	8,399 CY.
BLH - AREA 5:	DEGRADE APPROXIMATELY	20,831 CY.
BLH - AREA 6:	DEGRADE APPROXIMATELY	22,230 CY.
BLH - AREA 7:	DEGRADE APPROXIMATELY	4,536 CY.
BLH - AREA 8:	DEGRADE APPROXIMATELY	15,309 CY.

TOTAL DEGRADE APPROXIMATELY 157,839 CY.

DEGRADED MATERIAL WOULD BE HAULED OFF SITE TO A CONTRACTOR PROVIDED DISPOSAL AREA. ASSUME A 15 MILE ONE-WAY HAUL DISTANCE.
- NO EXISTING STRUCTURES APPEAR TO BE LOCATED WITHIN THE MITIGATION SITE.

INTRACOASTAL WATERWAY