

SANDERS ENVIRONMENTAL, LLC

2305 Lewis Gate Drive, Gautier, Mississippi 39553

February 14, 2024

Mrs. Willa Brantley
Permitting Branch
Mississippi Department of Marine Resources
1141 Bayview Drive
Biloxi, MS 39532

and

Dylan Hendrix
Regulatory Division, MS Coastal Branch
U. S. A. E. District, Mobile]
P. O. Box 2288
Mobile, AL 36628-0001

RE: Request for an Individual Permit for the Jarvis Estates Subdivision Project located in the Vancleave area of Jackson County, Mississippi.

Dear Mr. Hendrix and Mrs. Brantley,

This letter transmits a package in support of request for a wetlands determination and nationwide permit for impacts to wetlands in the above-referenced area, as defined by Section 404 of the Clean Water Act of 1977 (as amended). The enclosed package contains two parts: Part I consists of a wetlands delineation report, including data sheets, a site location and wetlands delineation map, along with a request for a preliminary wetlands determination. Part II contains the information needed regarding the requested permit. Included are a standard application form, along with Attachments A, B, and C, a Wetlands Rapid Assessment Procedure (WRAP) report, and Threatened/Endangered Species survey report. The Cultural Resource Phase 1 survey is currently underway and will be provided to the appropriate USACE Project Manager once appointed.

This project consists of a 13.10 acre tract which has a proposed 11 residential lots which are identified in Figure 2 of this permit package. The site has 8.77 acre of wetlands which has already been cleared and impacted, making this permit an AFTER THE FACT Individual Permit. The applicant originally had a wetland delineation performed by an engineering firm. Chris Pickering visited the site to approve the wetland delineation to find that the wetland delineation was in error with more wetlands having been not identified. Within this permit package you'll find my wetland delineation with

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2305 Lewis Gate Drive, Gautier, Mississippi 39555

The tract is forested, mostly cleared with a fill representing the roadway which is the access for the 11 proposed lots. All wetlands on the site have been impacted by either clearing, filling or ditching. This permit rectifies the impacts and offers a wetland mitigation plan that offsets the unauthorized impacts. Mitigation for the wetland impacts will be provided by purchasing 17.54 wetland mitigation credits from an approved Wetland Mitigation Bank (an approved Corps approved wetlands delineation bank) to compensate for impacts to 8.77 acre of permanently impacted LOW quality pine savanna wetlands.

If you need additional information, please contact me at 228/588-1244 (office) or 228/623-9714 (cell).

Sincerely,

Dana Sanders Jr.

JOINT APPLICATION AND NOTIFICATION

U.S. ARMY CORPS OF ENGINEERS

MISSISSIPPI DEPARTMENT OF MARINE RESOURCES

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY/OFFICE OF POLLUTION CONTROL

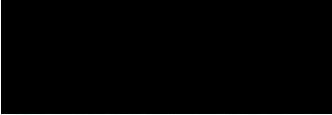
This form is to be used for proposed activities in waters of the United States in Mississippi and for the erection of structures on suitable sites for water dependent industry. Note that some items, as indicated, apply only to projects located in the coastal area of Hancock, Harrison and Jackson Counties.

1. Date

Feb 12 2024
month day year

2. Applicant name, mailing address, phone number and email address:

Kevin Jarvis



Agent name, mailing address, phone number and email address:

Sanders Environmental
2305 Lewis Gate Drive
Gautier, MS 39553
drsawet@bellsouth.net 228/623-9714(office)

3. Official use only

COE _____
DMR _____
DEQ _____
A95 _____
DATE RECEIVED _____

4. Project location

Street Address Daisy Vestry Road City/Community Vanceleave
Name of Waterway Cypress Creek Latitude 30.489125N Longitude (if known) -88.863721W
Geographic location: Section 27 Township 6S Range 9W County Jackson

5. Project description

New work Maintenance work

Dredging

<input type="checkbox"/> Channel	length _____	width _____	existing depth _____	proposed depth _____
<input type="checkbox"/> Canal	length _____	width _____	existing depth _____	proposed depth _____
<input type="checkbox"/> Boat Slip	length _____	width _____	existing depth _____	proposed depth _____
<input type="checkbox"/> Marina	length _____	width _____	existing depth _____	proposed depth _____
<input type="checkbox"/> Other-Mooring Basin	length _____	width _____	existing depth _____	proposed depth _____

Cubic yards of material to be removed _____ Type of material _____

Location of spoil disposal area _____

Dimensions of spoil area _____ Method of excavation _____

How will excavated material be contained? _____

Construction of structures

<input type="checkbox"/> Bulkhead	Total length _____	Height above water _____	
<input type="checkbox"/> Pier	length _____	width _____	height _____
<input type="checkbox"/> Boat Ramp	length _____	width _____	slope _____
<input type="checkbox"/> Boat House	length _____	width _____	height _____

____ Structures on designed sites for water dependent industry (Coastal area only). Explain in item 11 or include as attachment.

____ Other (explain) _____

Filling

Dimensions of fill area 8.77 acres

Cubic yards of fill 2000 Type of fill Construction Fill/tosoil

Other regulated activities (i.e. Seismic exploration, burning or clearing of marsh) Explain.

6. Additional information relating to the proposed activity

Does project area contain any marsh vegetation? Yes _____ No X

(If yes, explain) _____

Is any portion of the activity for which authorization is sought now complete? Yes _____ No X

(If yes, explain) _____

Month and year activity took place _____

If project is for maintenance work on existing structures or existing channels, describe legal authorization for the existing work. Provide permit number, dates or other form(s) of authorization. _____

Has any agency denied approval for the activity described herein or for any activity that is directly related to the activity described herein?

Yes _____ No X (If yes, explain) _____

7. Project schedule

Proposed start date Feb 1 2025 Proposed completion date Feb 1 2026

Expected completion date (or development timetable) for any projects dependent on the activity described herein. _____

8. Estimated cost of the project \$400,000

9. Describe the purpose of this project. Describe the relationship between this project and any secondary or future development the project is designed to support. This project is to provide residential opportunities for the citizens of the Mississippi Gulf Coast. This project will also provide jobs and increase the tax base for Jackson County.

Intended use: Private _____ Commercial X Public _____ Other (Explain) _____

10. Describe the public benefits of the proposed activity and of the projects dependent on the proposed activity.

Also describe the extent of public use of the proposed project.

This project provides no public use with of the exception of providing an increase tax base.

11. Narrative Project Description:

[See Attachment A]

12. Provide the names and addresses of the adjacent property owners. Also identify the property owners on the plan view of the drawing described in Attachment "A". (Attach additional sheets if necessary.)

1. See Attachment D.

2.

13. List all approvals or certifications received or applied for from Federal, State and Local agencies for any structures, construction, discharges, deposits or other activities described in this application. Note that the signature in Item 14 certifies that application has been made to or that permits are not required from the following agencies. If permits are not required, place N/A in the space for Type Approval.

<u>Agency</u>	<u>Type Approval</u>	<u>Application Date</u>	<u>Approval Date</u>
Dept. of Environmental Quality			
Dept. of Marine Resources			
Army Corps of Engineers			
City/County _____			
Other _____			

14. Certification and signatures

Application is hereby made for authorization to conduct the activities described herein. I agree to provide any additional information/data that may be necessary to provide reasonable assurance or evidence to show that the proposed project will comply with the applicable state water quality standards or other environmental protection standards both during construction and after the project is completed. I also agree to provide entry to the project site for inspectors from the environmental protection agencies for the purpose of making preliminary analyses of the site and monitoring permitted works. I certify that I am familiar with and responsible for the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete and accurate. I further certify that I am the owner of the property where the proposed project is located or that I have a legal interest in the property and that I have full legal authority to seek this permit.

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 willingly falsifies, conceals, or covers up by any trick, scheme or device 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 statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

Mississippi Coastal Program (Coastal area only)

I certify that the proposed project for which authorization is sought complies with the approved Mississippi Coastal Program and will be conducted in a manner consistent with the program.

Signature of Applicant or Agent

Date

15. Fees

Payable to MS Dept. of Marine Resources
\$50.00 Single-family residential application fee
\$500.00 Commercial application fee
Public notice fee may be required

Please include appropriate fees for all projects proposed in coastal areas of Hancock, Harrison and Jackson Counties.

16. If project is in Hancock, Harrison or Jackson Counties, send one completed copy of this application form and appropriate fees listed in Item 15 to:

Department of Marine Resources
Bureau of Wetlands Permitting
1141 Bayview Avenue
Biloxi, MS 39530
(228) 374-5000

If project IS NOT in Hancock, Harrison or Jackson Counties, send one completed copy of this application form to each agency listed below:

District Engineer
Mobile District
Attn: CESAM-RD
P.O. Box 2288
Mobile, AL 36628-0001

District Engineer
Vicksburg District
Regulatory Branch
Attn: CEMVK-OD-F
4155 Clay Street
Vicksburg, MS 39183-3435

Director
Mississippi Dept. of Environmental Quality
Office of Pollution Control
P.O. Box 10385
Jackson, MS 39289

17. In addition to the completed application form, the following attachments are required:

Attachment "A" Drawings

Provide a vicinity map showing the location of the proposed site along with a written description of how to reach the site from major highways or landmarks. Provide accurate drawings of the project site with proposed activities shown in detail. All drawings must be to scale or with dimensions noted on drawings and must show a plan view and cross section or elevation. Use 8 1/2 x 11" white paper or drawing sheet attached.

Attachment "B" Authorized Agent

If applicant desires to have an agent or consultant act in his behalf for permit coordination, a signed authorization designating said agent must be provided with the application forms. The authorized agent named may sign the application forms and the consistency statement.

Attachment "C" Environmental Assessment (Coastal Area Only)

Provide an appropriate report or statement assessing environmental impacts of the proposed activity and the final project dependent on it. The project's effects on the wetlands and the effects on the life dependent on them should be addressed. Also provide a complete description of any measures to be taken to reduce detrimental offsite effects to the coastal wetlands during and after the proposed activity. Alternative analysis, minimization and mitigation information may be required to complete project evaluation.

Attachment "D" Variance or Revisions to Mississippi Coastal Program (Coastal area only)

If the applicant is requesting a variance to the guidelines in Section 2, Part III or a revision to the Coastal Wetlands Use Plan in Section 2, Part IV of the Rules, Regulations, Guidelines and Procedures of the Mississippi Coastal Program, a request and justification must be provided.

Part I
Wetland Delineation Report
Preliminary Jurisdictional Determination

Wetland Delineation Report

December 8, 2023

Mr. Kevin Jarvis
Latimer, MS

RE: Wetland Delineation Report for 13.10 acres in the Latimer area of Jackson County, MS.

Dear Mr. Jarvis:

This letter constitutes my final report on a wetland identification/delineation study you requested on a 13.10 -acre site located in the Latimer area of Jackson County, MS. The purpose of the study was to identify portions (if any) of the property that qualify as wetlands or other "Waters of the United States" pursuant to Section 404 of the Clean Water Act of 1977 (as amended), and to delineate their boundaries. Field work for the study was conducted on December 7, 2023.

SITE DESCRIPTION

The study area consists of 13.10-acres, which is located in Section 27, Township 6 South and Range 9 West at 30.489125/-88.863721. The site is adjacent to and east of Daisy Vestry Road in the Latimer community of Jackson County, MS. The property is undeveloped and has recently been cleared with all vegetation and stumpage removed. Currently the site has the beginnings of an access road originating on Daisy Vestry Road which traverses the center of the property and ends in the southeast corner.

The standard for wetlands used in this study conforms to the wetland definition and procedures described in the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987), as modified and clarified by 1991 and 1992 Memoranda from the Office, Chief of Engineers and the 2010 Supplement for the Atlantic and Gulf Coastal Plain, herein further called "Supplement" (U. S. Corps of Engineers, 2010). Under these procedures, an area is a wetland if positive wetland indicators are in evidence for each of three parameters or criteria -- hydrophytic vegetation, hydric soil, and wetlands hydrology. If positive wetland indicators cannot be ascertained for any one of the three parameters, the area is a nonwetland.

Routine wetland identification/delineation procedures described in Environmental Laboratory (1987) were applied at representative sampling stations. Sampling stations were chosen as representing typical conditions of a relatively large area of homogeneous topography, vegetation, soil, and hydrologic conditions.

At each sampling station, the vegetation was described by subjectively estimating the dominant species in each stratum of the vegetation. Hydrophytic vegetation was considered to be present when more than 50 percent of the cumulative dominant species in all strata at a sampling station had a wetland indicator status of FACULTATIVE, FACULTATIVE WETLAND, and/or OBLIGATE (USDA-NRCS,2012). This information was noted on the vegetation section of the data form (See Appendix A).

The upper portion of the soil profile at each sampling station was described and recorded on the data sheet for that sampling station. The soil was considered to be hydric when one or more indicators of hydric soil appearing on the Supplement data form were observed in the soil at a sampling station.

Hydrologic conditions of each site were considered. Evidence was sought regarding the presence of any indicator of wetland hydrology listed in The 1987 Corps Manual and the Supplement. If any primary indicator or two secondary indicators were present, the area at the sampling station was considered to have wetland hydrology.

The boundaries of areas qualifying as wetlands were flagged using pink "WETLAND DELINEATION" flags. Flags were placed at the highest (elevationally) point along the slope where indicators were present for all three parameters. The wetland delineation flags were surveyed by a sub meter Trimble GPS unit and mapping prepared using AUTOCAD by Dana Sanders.

RESULTS AND DISCUSSION

General

Portions of the property qualifying as wetlands and nonwetlands are provided on Figure 2. Also, locations of sampling stations are marked on Figure 2. Conditions at each sampling station are described on data sheets contained in Appendix A.

Wetlands

The wetlands identified on the study area pine savanna wetlands which flow through the center of the property and exit the southeast corner of the property. The full extent of the wetland acreage on site has been cleared with stumps removed. Characteristics of the wetland areas are described on Data Sheet 2 (See Appendix A and Figure 2). The data sheet is representative of conditions at a given location. The vegetation in this wetland sample plot only has a few greenbrier (*Smilax laurifolia*) (FACW) and pitcher plant (*Sarracenia flava*)(FACW).

The wetland acreage on the study area is mapped as Bayou. These soil series are typically found within depression areas in wetlands. The soils in the wetland sample plots are fine sandy and have a 2.5Y3/1 soil color and with 10YR5/6 mottles, and are consistent with the hydric soils. The primary indicator or hydric soils is Depleted Matrix (B2).

Primary wetland hydrology indicators found at the wetland sampling sites include high water table (A2), saturation (A3), watermarks (B1), sediment deposits (B2), and oxidized rhizospheres on living roots (C3).

Since the area at the wetland sampling stations exhibit wetland indicators for all three wetlands criteria, these and all similar areas qualify as wetlands. A total of **8.77** acres of the subject tract (Figure 2) meet the three technical criteria for wetlands.

Nonwetlands

The nonwetland acreage has also been cleared of all vegetation with the exception of a couple hardwood trees which remain along the south property line. Nonwetland plant communities of the property are typified by the description on Data Sheet 1-3 (see Appendix A and Figure 2). The nonwetlands of this site have Escambia and Bayou sandy loam soils which exhibit nonhydric characteristics. The vegetation of the nonwetland-sampling plots is dominated by broomsedge (*Andropogon virginicus*)(FAC), water oak (*Quercus nigra*)(FAC) and switchgrass (*Panicum virgatum*)(FAC).

Soils of the nonwetland areas are mapped as the Bayou and Escambia series. Soils in the upland sample plots have a texture of sandy loam with a matrix color of 2.5Y4/4 with no mottles. No indicators of wetland hydrology were found at any site described as nonwetland. The total area of nonwetlands on the property is **4.33** acres. These areas are not subject to federal jurisdiction under Section 404 of the Clean Water Act of 1977 (as amended).

CONCLUSIONS

Conclusions of this wetland identification/delineation study are:

1. A total of **8.77** acres of the 13.10-acre tract qualifies as wetlands, distributed as shown on Figure 2. These are jurisdictional wetlands.
2. The total area of nonwetlands on the property is **8.77** acres, distributed as shown on Figure 2. These areas are not subject to jurisdiction under Section 404 of the Clean Water Act of 1977 (as amended).

REFERENCES

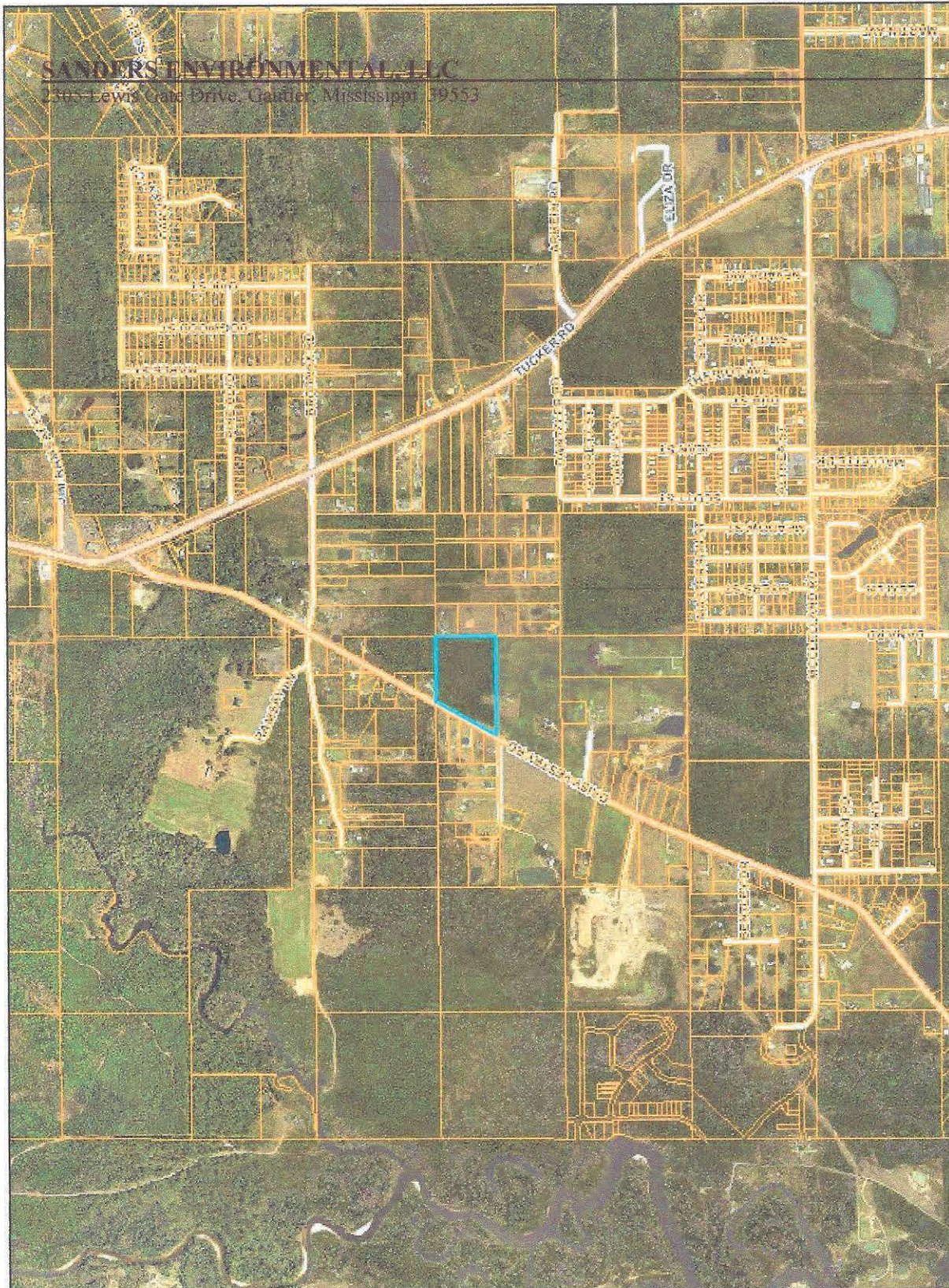
- Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," U. S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- NRCS. 1990. "Soil Survey of Jackson County, Mississippi," USDA Natural Resources Conservation Service [formerly Soil Conservation Service], Washington, D.C.
- NRCS. 1991. "Hydric Soils of the United States of America:1991," USDA Natural Resources Conservation Service [formerly Soil Conservation Service], Washington, D.C.
- U. S. Army Corps of Engineers. 2010. "Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region." Eds. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-20. Vicksburg,] MS. U. S. Army Engineer Research and Development Center.
- USDA-NRCS. 2012. "National List of Vascular Plant Species that Occur in Wetlands-Region 2: Atlantic and Gulf Coastal Plant Region. "U. S. Department of the Agriculture, Natural Resources Conservation Service, Washington, D. C.

If you have questions or comments regarding this letter report, please contact me at (228) 588-1244 or (228) 623-9714.

Sincerely,

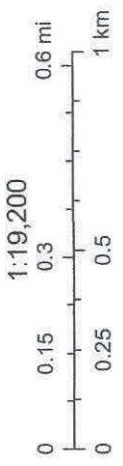
Dana R. Sanders, Jr.

FIGURE 1. SITE LOCATION MAP FOR KEVIN JARVIS PROPERTY



February 13, 2024

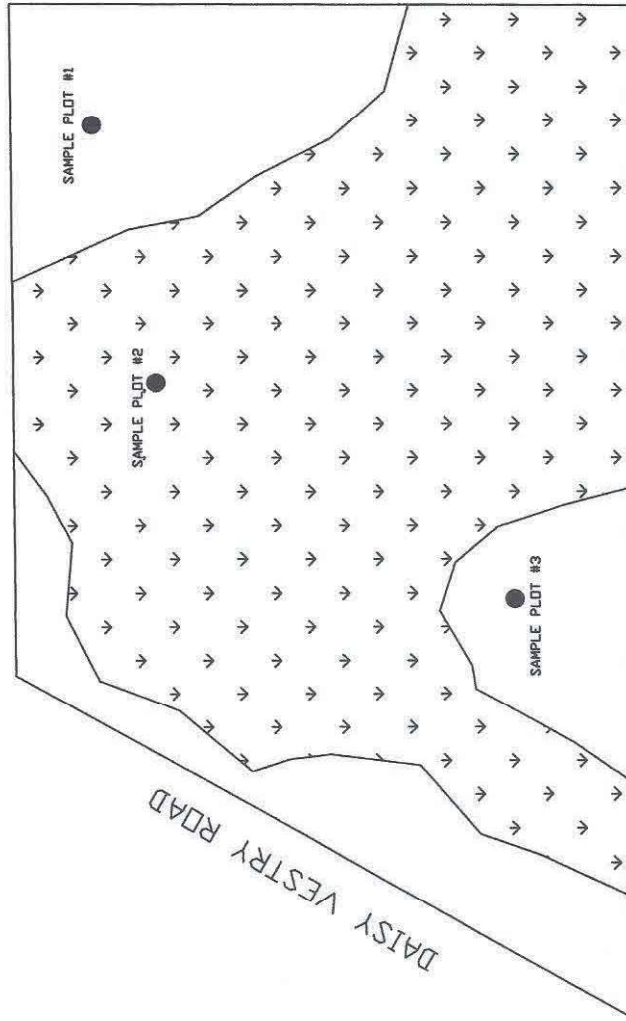
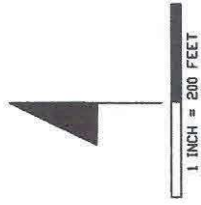
- Parcels
- Primary Roads
- Major
- Center Lines



Jackson County GIS, v.1

Bus: 228-623-9714 e-mail: drsawet@bellsouth.net

WETLAND DELINEATION MAP FOR KEVIN JARVIS
 PROPERTY, JACKSON COUNTY, MS 12/7/23



NONWETLAND - 4.33 ACRES

WETLAND - 8.77 ACRES

DELINEATION BY DANA SANDERS

APPENDIX A
FIELD DATA SHEETS

Field Data Sheets

GPS Points

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: KEVIN JARVIS DAISY VESTRY PROPERT City/County: LATIMER, JACKSON Sampling Date: 12/723
 Applicant/Owner: KEVIN JARVIS State: MS Sampling Point: 1
 Investigator(s): DANA SANDERS, JR. Section, Township, Range: SECT 27 T 6 SOUTH, R 9 WEST
 Landform (hillslope, terrace, etc.): RIDGESLOPE Local relief (concave, convex, none): CONVEX Slope (%): 1%
 Subregion (LRR or MLRA): _____ Lat: 30.490120868 Long: -88.867011345 Datum: NAD83
 Soil Map Unit Name: ESCAMBIA NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: SAMPLE PLOT IN SOUTHEAST CORNER OF PROPERTY ON RIDGESLOPE	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) (LRR U) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>NONE</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>NONE</u> Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>NONE</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Nonwetland Hydrology Present	

VEGETATION – Use scientific names of plants.

Sampling Point: 1

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot sizes: <u>60' X 60'</u>)				
1. <u>NA</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				_____ = Total Cover
Sapling Stratum (<u>30' X 30'</u>)				
1. <u>NA</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				_____ = Total Cover
Shrub Stratum (<u>30' X 30'</u>)				
1. <u>NA</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				_____ = Total Cover
Herb Stratum (<u>6' X 6'</u>)				
1. <u>Andropogon virginicus</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
				<u>20</u> = Total Cover
Woody Vine Stratum (<u>60' X 60'</u>)				
1. <u>NA</u>				
2. _____				
3. _____				
4. _____				
5. _____				
				_____ = Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (If observed, list morphological adaptations below).

SITE HAS RECENTLY BEEN CLEARED AND SMOOTHED AND MOSTLY VOID OF ALL VEGETATION.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	2.5Y3/2							Sandy Loam
2-16	2.5y5/4							Sandy Loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No _____
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Remarks:
 Nonhydric Soils

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: KEVIN JARVIS DAISY VESTRY PROPERT City/County: LATIMER, JACKSON Sampling Date: 12/723
 Applicant/Owner: KEVIN JARVIS State: MS Sampling Point: 2
 Investigator(s): DANA SANDERS, JR. Section, Township, Range: SECT 27 T 6 SOUTH, R 9 WEST
 Landform (hillslope, terrace, etc.): DEPRESSION Local relief (concave, convex, none): CONAVE Slope (%): 1%
 Subregion (LRR or MLRA): _____ Lat: 30.489983262 Long: -88.867851554 Datum: NAD83
 Soil Map Unit Name: BAYOU NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: SAMPLE PLOT IN WITHIN A DEPRESSION AREA WHICH HAS BEEN CLEARED OF ALL STRATUM.	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary Indicators (minimum of two required)</u></p> <table style="width:100%;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)																												
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)																												
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)																												
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																												
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)																												
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)																												
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																												
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)																												
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)																												
<input type="checkbox"/> Surface Soil Cracks (B6)																													
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																													
<input type="checkbox"/> Drainage Patterns (B10)																													
<input type="checkbox"/> Moss Trim Lines (B16)																													
<input type="checkbox"/> Dry-Season Water Table (C2)																													
<input type="checkbox"/> Crayfish Burrows (C8)																													
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																													
<input type="checkbox"/> Geomorphic Position (D2)																													
<input type="checkbox"/> Shallow Aquitard (D3)																													
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)																													
<p>Field Observations:</p> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>NONE</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____																												
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																													
Remarks: WETLAND																													

VEGETATION – Use scientific names of plants.

Sampling Point: 2

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot sizes: <u>60' X 60'</u>)					
1. <u>NA</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling Stratum (<u>30' X 30'</u>)					
1. <u>NA</u>					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
Shrub Stratum (<u>30' X 30'</u>)					
1. <u>NA</u>					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
_____ = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Herb Stratum (<u>6' X 6'</u>)					
1. <u>SMILAX LAURIFOLIA</u>	<u>10</u>	<u>yes</u>	<u>FACW</u>		
2. <u>SARRACENIA FLAVA</u>	<u>10</u>	<u>yes</u>	<u>FACW</u>		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
_____ = Total Cover					
Woody Vine Stratum (<u>60' X 60'</u>)					
1. <u>NA</u>					
2. _____					
3. _____					
4. _____					
5. _____					
_____ = Total Cover					

Remarks: (If observed, list morphological adaptations below).

SITE HAS RECENTLY BEEN CLEARED AND SMOOTHED AND MOSTLY VOID OF ALL VEGETATION.

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	2.5Y3/1	95	10YR5/6	5	C	PL	Sandy Loam	
2-16	2.5Y4/2	95	10YR5/6	5	C	PL	Sandy Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12) (LRR T, U)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDRIC

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: KEVIN JARVIS DAISY VESTRY PROPERT City/County: LATIMER, JACKSON Sampling Date: 12/723
 Applicant/Owner: KEVIN JARVIS State: MS Sampling Point: 3
 Investigator(s): DANA SANDERS, JR . Section, Township, Range: SECT 27 T 6 SOUTH, R 9 WEST
 Landform (hillslope, terrace, etc.): RIDGESLOPE Local relief (concave, convex, none): CONVEX Slope (%): 2%
 Subregion (LRR or MLRA): _____ Lat: 30.488912860 Long: -88.868585717 Datum: NAD83
 Soil Map Unit Name: BAYOU NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: SAMPLE PLOT IS A NONHYDRIC INCLUSION WITHIN A HYDRIC SOIL MAPPING UNIT	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) (LRR U) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>NONE</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NONE</u> Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>NONE</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: NONWETLAND	

VEGETATION – Use scientific names of plants.

Sampling Point: 3

Tree Stratum (Plot sizes: <u>60' X 60'</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>QUERCUS NIGRA</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
_____ = Total Cover			
Sapling Stratum (<u>30' X 30'</u>)	_____	_____	_____
1. <u>NA</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
_____ = Total Cover			
Shrub Stratum (<u>30' X 30'</u>)	_____	_____	_____
1. <u>NA</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
_____ = Total Cover			
Herb Stratum (<u>6' X 6'</u>)	_____	_____	_____
1. <u>PANICUM VIRGATUM</u>	<u>60</u>	<u>yes</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
_____ = Total Cover			
Woody Vine Stratum (<u>60' X 60'</u>)	_____	_____	_____
1. <u>NA</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (If observed, list morphological adaptations below).

SITE HAS RECENTLY BEEN CLEARED AND SMOOTHED AND MOSTLY VOID OF ALL VEGETATION.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	2.5Y3/2							Sandy Loam
2-16	2.5Y4/4							Sandy Loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
---	---

Remarks:
NONHYDRIC

SANDERS ENVIRONMENTAL, LLC

~~Jarvis King, Daisy Vesery 13 acres Wetland Delineation GPS Point
2305 Lewis Gate Drive, Gautier, Mississippi 39553~~
file:

1
-88.868215210,30.488580255,-18.160, , ,11.467
"END "
2
-88.868272155,30.488767896,-21.617, , ,8.010
"END "
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"END "
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"END "
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"END "
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"END "
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"END "
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"END "
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"END "
17

SANDERS ENVIRONMENTAL, LLC

2305 Lewis Gate Drive, Gautier, Mississippi 39553

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Appendix A

Preliminary Jurisdictional Determination

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

- A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): December 8, 2023**
- B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD: KEVIN JARVIS, 15504 STANLEY ROAD, VANCLEAVE, MS 39565**
- C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Mobile USACE**
- D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:** Project location is Kevin Jarvis property on Daisy Vestry Road. The site has no address and gps coordinates are below. The site was previously forested with a mature canopy of hardwood/pine and has been totally cleared of all vegetation including stumps. There has been a road installed in the center of the property which at this point is construction material with no covering. The site is 13.10 acres, of which 8.77 acres is wetland and 4.33 is nonwetland.

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State:MS County/parish/borough: Jackson City: Latimer, MS.

Center coordinates of site (lat/long in degree decimal format): Lat. 30.489125° **Pick List**, Long. -88.863721° **Pick List**.

Universal Transverse Mercator:

Name of nearest waterbody: Cypress Creek

Identify (estimate) amount of waters in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Cowardin Class:

Stream Flow:

Wetlands: 8.77 acres.

Cowardin Class: PFO1A

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: NA

Non-Tidal: None

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date
 Field Determination. Date(s): 12/8/23

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

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

to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply)

- checked items should be included in case file and, where checked and requested, appropriately reference sources below):

Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:

Data sheets prepared/submitted by or on behalf of the applicant/consultant.

Office concurs with data sheets/delineation report.

Office does not concur with data sheets/delineation report.

Data sheets prepared by the Corps:

Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas:

USGS NHD data.

USGS 8 and 12 digit HUC maps.

U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Gulfport North Quadrangle Maps.

USDA Natural Resources Conservation Service Soil Survey.

Citation: USDA-NRCS Web Soil Survey, <http://websoilsurvey.nrcs.usda.gov>. Accessed 3/17/2015

National wetlands inventory map(s). Cite name:

State/Local wetland inventory map(s):

FEMA/FIRM maps:

100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

Photographs: Aerial (Name & Date): GOOGLE EARTH (periodically 3/17/2015

or Other (Name & Date):

Previous determination(s).

Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory Project Manager
(REQUIRED)

Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining
the signature is impracticable)

SAMPLE

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
	30.489607	-864612	PFO1A	8.77 acres	Non-section 10- Wetland

Part II

Individual Permit Application

Adjacent Land Owners

Individual Permit Application

Attachment "A" Drawings

Attachment A
Project Description

ATTACHMENT A

PROJECT DESCRIPTION FOR JARVIS ESTATES SUBDIVISION, VANCLEAVE, (JACKSON COUNTY, MS)

The proposed project consists of the development of a 13.10 acre, multi family development located in the Vancleave area of Jackson County, MS (Figure 1). The proposed project property is located west of Daisy Vestry Road in western Jackson County at 30.489125/-88.863721. The entire 13.10 acres has been cleared of all vegetation and stumps. Portions of the site have fill material and a central roadbed installed.

The total area of wetlands on the property (Part II, Attachment A, Figure 2) is 13.10 acres.

Part II of this package consists of a permit application form, along with Attachments A (Project Description), B (Agent Authorization letter), and C (Environmental Assessment and Mitigation Plan). A Wetlands Rapid Assessment Procedure (WRAP) also has been performed, and a WRAP data form is provided herein.

Project Design

A plan view of the proposed project layout is provided in Figure 2. Figure 3 shows a cross-section of a typical lot.

As shown in Figure 2, the lot layout consists of 11 large lots of approximately 1 acre each. The central road originates at Daisy Vestry Road and extends through the center of the property which all lots access. This project has the benefit of public water and sewer utilities and has access from Daisy Vestry Road. The proposed project has been considered a *Wetland Violation* by the U. S. Army Corps of Engineers, Mobile District with Chris Pickering being the Project Manager. This proposed permit is an "After The Fact Permit" which is to correct the current 404 Violation. The project proposes to construct 11 single family residence homes on one acre lots.

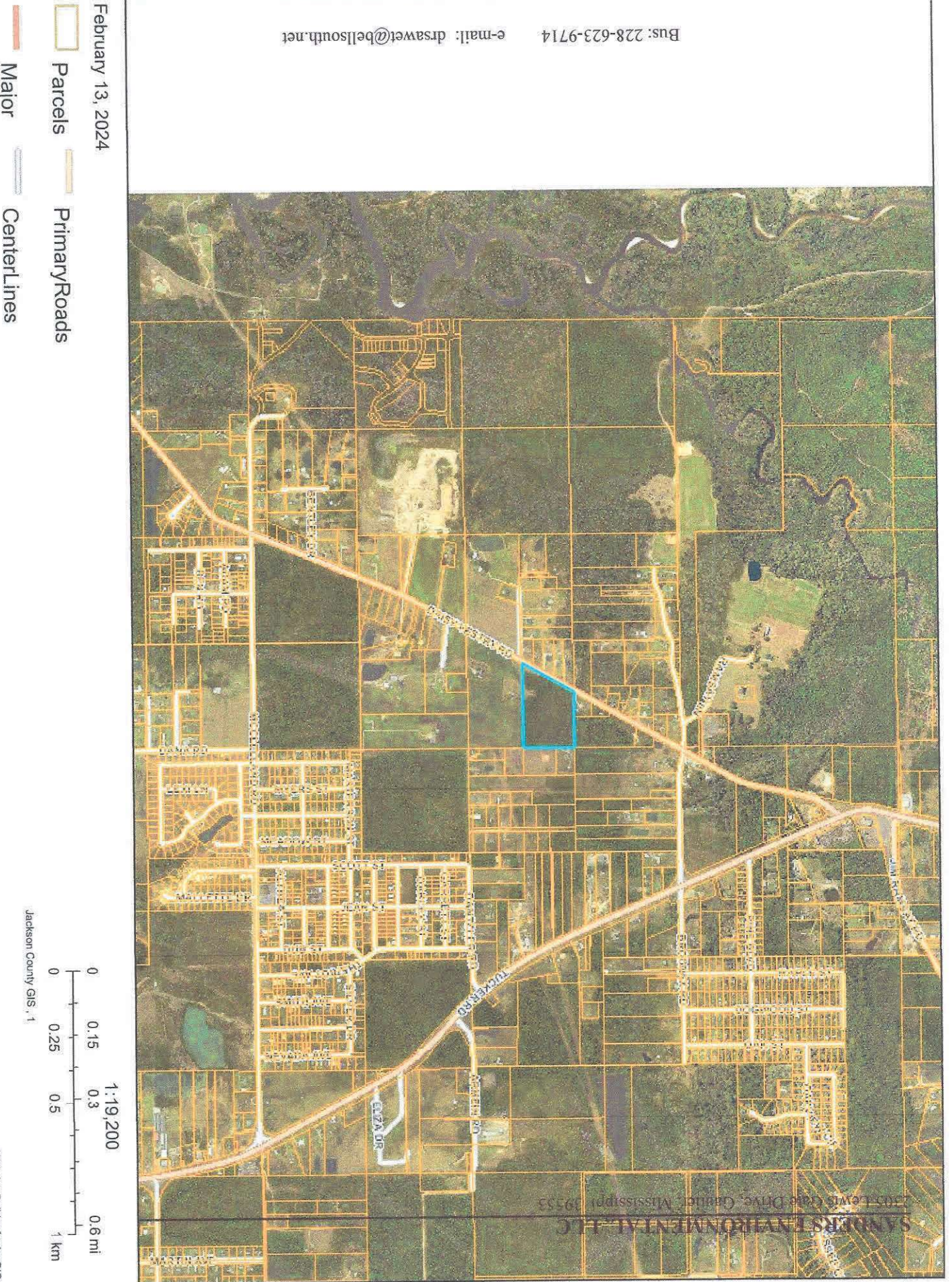
Wetland Impacts

The spatial distribution of wetlands to be filled is shown on Figure 3. A total of 13.10 acres of impacted, low quality pine savanna wetlands are proposed to be permanently impacted by the project.

Best Management Practices

Best management practices will be implemented during and following all construction activities. Silt fences and other appropriate materials will be installed to block erosion and sedimentation in wetlands outside the project area. Disturbed surfaces will be planted to grass mixtures, except in areas to be sodded. Planting and/or sodding will be undertaken as soon as possible after preparation of the project area.

FIGURE 1. SITE LOCATION MAP FOR KEVIN JARVIS PROPERTY



JARVIS ESTATES PROJECT LAYOUT WITH IMPACTS
JACKSON COUNTY, MS

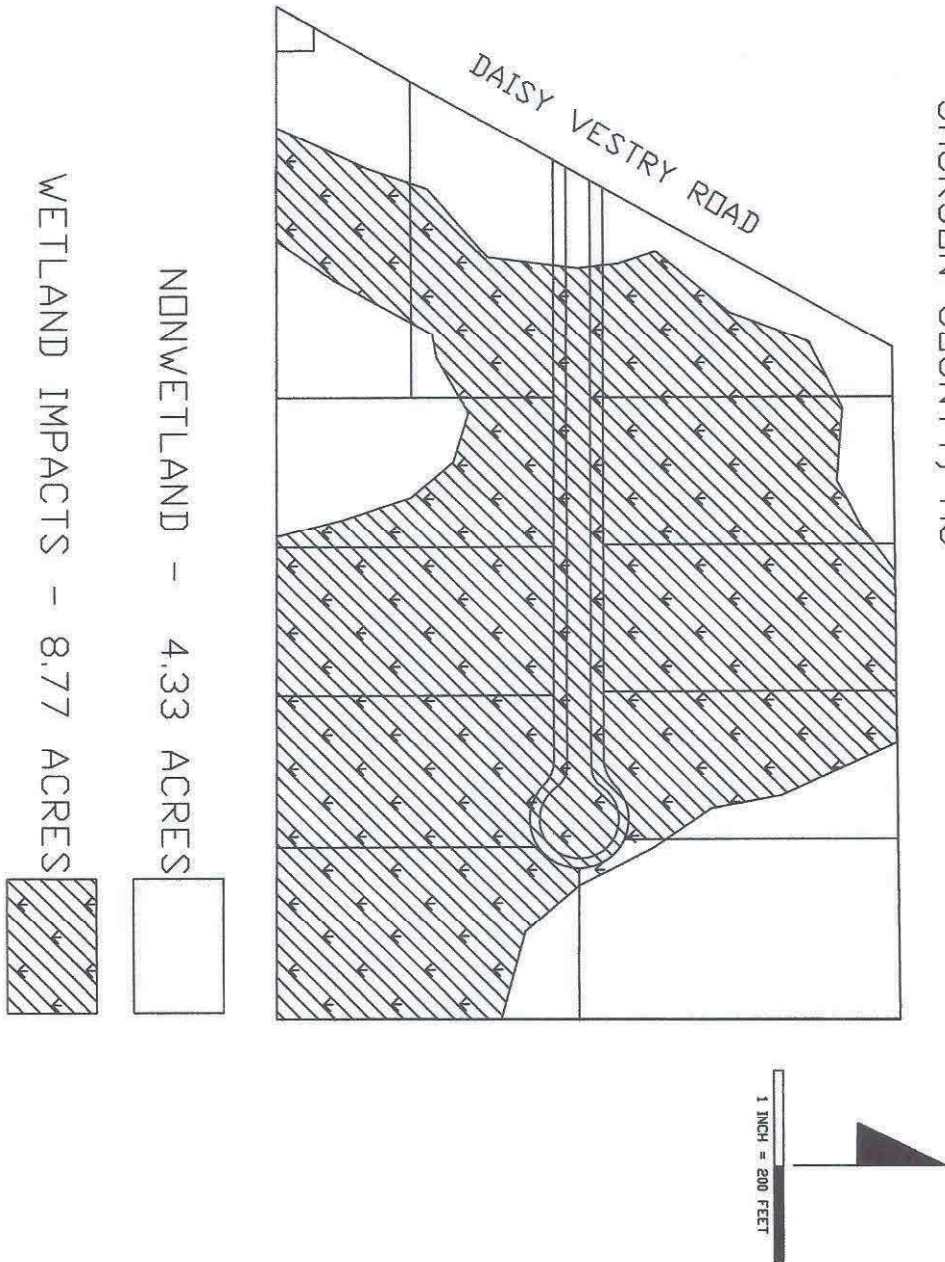
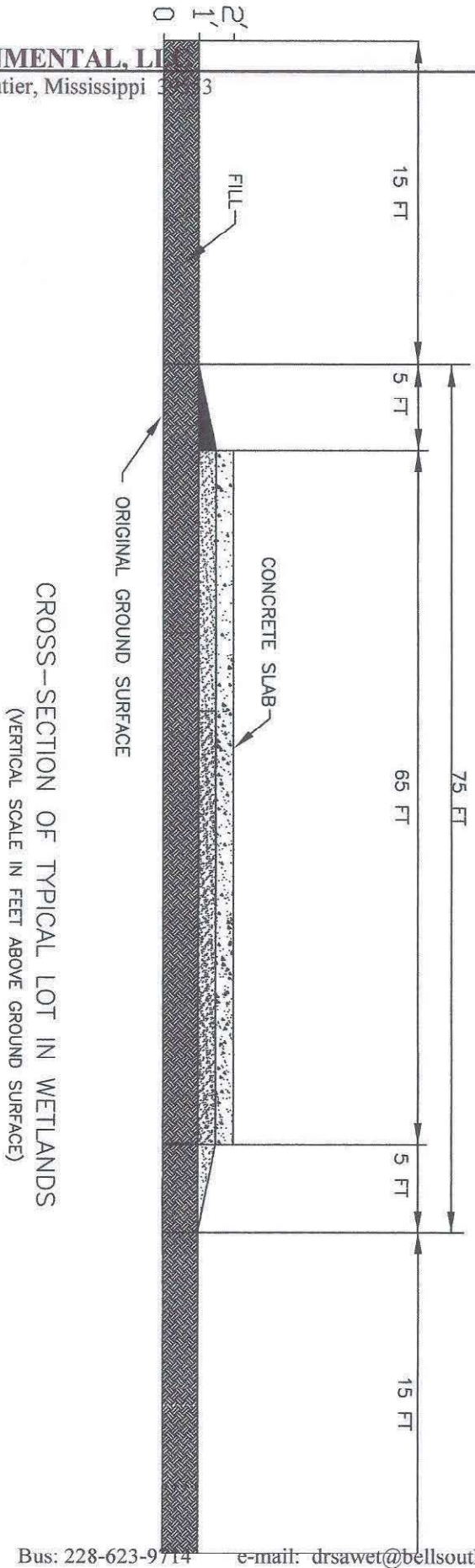
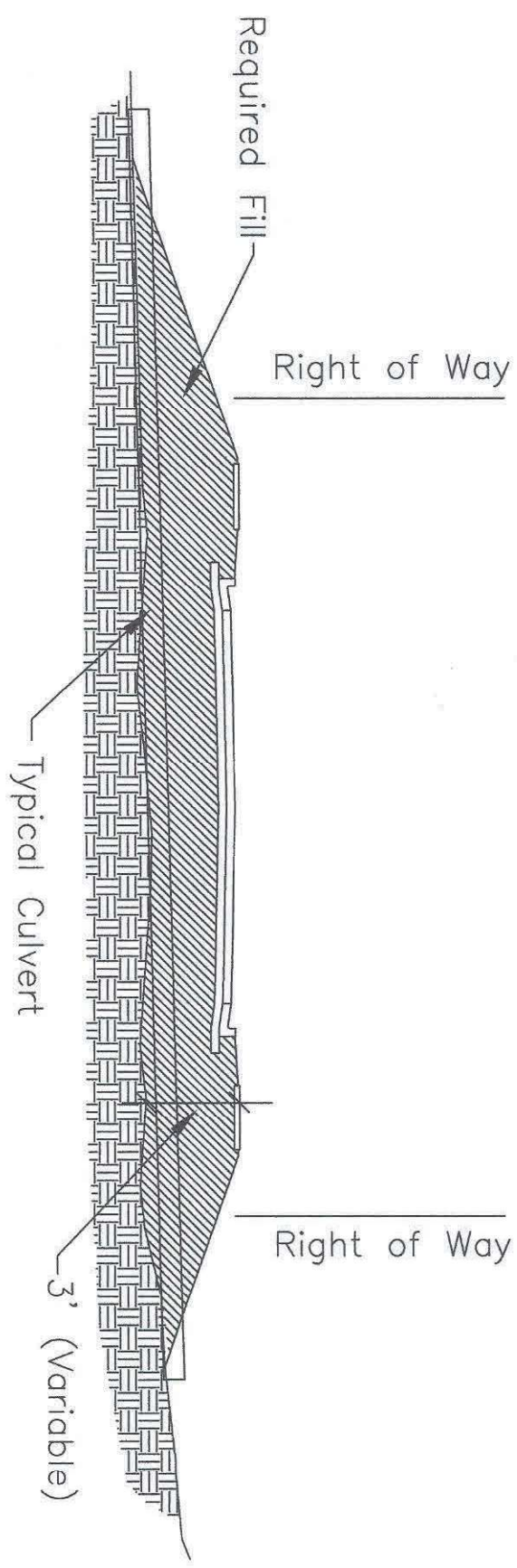


FIGURE 3. CROSS-SECTION OF TYPICAL LOT IN WETLANDS, JARVIS ESTATES
SUBDIVISION PROJECT, JACKSON COUNTY, MS



CROSS-SECTION OF TYPICAL LOT IN WETLANDS
(VERTICAL SCALE IN FEET ABOVE GROUND SURFACE)

FIGURE 4. JARVIS ESTATES SUBDIVISION ROAD CROSS SECTION OVER WETLANDS



Attachment B
Agent Authorization Letter

SANDERS ENVIRONMENTAL, LLC
2305 Lewis Gate Drive, Gautier, Mississippi 39553

AGENT AUTHORIZATION

I authorize the person(s) and/or company listed below to act as our agent regarding the U. S. Army Corps of Engineers 404 Permit at the location listed below:

Dana R. Sanders, Jr.
Sanders Environmental, LLC
(name of agent)

Jarvis Estates Project

2305 Lewis Gate Drive
Gautier, MS 39553
(city, state, zip code)

Kevin Jarvis -APPLICANT

228/623-9714
Agent telephone number

KEVIN JARVIS
Applicant's Name (Printed)


Applicant's Signature

14 FEB 24
Date

Attachment C

Environmental Assessment and Wetland Mitigation

Wetland Rapid Assessment Procedure (WRAP)

Threatened/Endangered Species Survey

Alternative Site Analysis

Environmental Assessment
And
Wetland Mitigation

ATTACHMENT C

**ENVIRONMENTAL ASSESSMENT AND WETLAND MITIGATION
PROPOSAL FOR KEVIN JARVIS PROPERTY
JACKSON COUNTY, MISSISSIPPI**

This subdivision project is located on the Kevin Jarvis property located in Ocean Springs, MS. (See Figure 1).

Scope of Project

The applicant proposes (Figure 2) the development of a portion of a 13.10 acre parcel which will be the location of a subdivision project (See Attached).

The applicant will conform to all building codes and will construct the project to meet or exceed the base flood elevations that may be adopted by the City of Ocean Springs and/or the Jackson County Board of Supervisors.

Current Environmental Status

The 13.10 acre tract is owned by Kevin Jarvis and is located east of Daisy Vestry Road. The tract is currently 100 percent cleared and has only new growth herbs growing where recent clearing has taken place. All vegetation and stumpage has been removed and leveled. The dominant vegetation on the site consists of broomsedge (*Andropogon virginicus*)(FAC), greenbrier (*Smilax laurifolia*)(FACW), pitcher plant (*Sarracenia flava*)(FACW) and panic grass (*Panicum virgatum*)(FAC).

Soils of the site consist of Bayou series which are classified as hydric soil and meet hydric soil criteria and have wetland hydrology primary indicators.

The applicant has already impacted all wetlands on the 13.10 acre site and will be seeking an After the Fact Individual Permit to offset his actions. Best Management Practices will be implemented during all phases of project construction. The applicant proposes to compensate for the wetland impacts by purchasing the required wetland mitigation credits from a bank approved by the Corps of Engineers.

Wetland Impacts of Proposed Project

The proposed project will result in the clearing and an amount of fill into 8.77 acres of pine savanna wetlands within the project area (Figure 2). Impacts will involve the 100 percent impact of all wetlands within the project area, resulting in the elimination of all wetlands characteristics.

Proposed Mitigation for Wetland Impacts

The proposed mitigation for wetland impacts associated with the proposed project in the Ocean Springs area of Jackson County, Mississippi is to provide compensatory mitigation for unavoidable wetland impacts. The wetlands have already been impacted and requires an After the Fact Individual Permit as instructed by the USACE Mobile District

Proposed Compensatory Wetlands Mitigation. The total area of wetlands impacted within the project area is 8.77 acres (Figure 2 in Attachment A). Based on my best professional judgment, all 8.77 acres of the proposed wetlands to be impacted by this project have **LOW** wetlands quality. The total number of required wetland credits to offset impacts to the **LOW** quality wetlands at a ratio of 2:1 is **17.54 wetland mitigation credits.**

Wetland Rapid Assessment Procedure

- PROPOSED
- EXISTING CONDITIONS

WETLAND RAPID ASSESSMENT PROCEDURE

COUNTY: JACKSON PROJECT DATE REVIEWER FLUCCS CODE
 APP. #: KEVIN JARVIS 12/8/2023 DANA SANDERS JR WETLAND TYPE: FORESTED Non-Forested

LAND USE CATEGORY	WETLAND AREA	SECONDARY IMPACTS	MELALEUCA INVASION >50%
SUBDIVISION	8.77 ACRES	<input type="checkbox"/> NO <input type="checkbox"/> YES % = 0	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
	8.77 ACRES OF IMPACT	0 ACRES	

WILD LIFE UTILIZATION 0

WETLAND CANOPY 2.5

WETLAND GROUND COVER 0

HABITAT SUPPORT / BUFFER 1.75

BUFFER TYPE	SCORE	% AREA	SUB TOTAL
UNDEVELOPED ACREAGE	2	75	1.5
SUBDIVISION/ROAD	1	25	0.25
			0
			0
			0

WRAP SCORE

48.96%

FIELD HYDROLOGY 2

WATER QUALITY INPUT & TREATMENT 2.5625

LAND USE CATEGORY	SCORE	% AREA	SUB TOTAL
UNDEVELOPED ACREAGE	3	75	2.25
SINGLE FAMILY RESIDENTIAL	1.5	25	0.375
			0
			0
			0
			0
LU TOTAL			2.625

PRETREATMENT CATEGORY	SCORE	% AREA	SUB TOTAL
WET DETENTION WITH SWELLS	2.5	100	2.5
			0
			0
			0
			0
PT TOTAL			2.5

WILDLIFE UTILIZATION	NO EVIDENCE OF WILDLIFE DUE TO CURRENT CONDITIONS AND LOCATION
WETLAND CANOPY	ALL WETLAND CANOPY HAS BEEN REMOVED THROUGH LAND CLEARING ACTIVITY
WETLAND GROUND COVER	WETLAND HAS LIMITED AMOUNT OF WETLAND HERBS DUE TO CURRENT CONDITIONS
HABITAT SUPPORT/BUFFER	WETLAND IS ADJACENT TO UNDEVELOPED ACREAGE TO THE NORTH WITH PRIVATE RESIDENCE TO THE SOUTH, EAST AND DAISY VESTRY ROAD TO THE WEST.
FIELD HYDROLOGY	HYDROLOGY SUFFICIENT TO MAINTAIN A VIABLE WETLAND SYSTEM, BUT ROAD DITCHES AND CURRENT CONDITIONS HAVE ALTERED HYDROLOGY
WQ INPUT & TREATMENT	INPUT: LOW VOLUME RESIDENTIAL TREATMENT: WET DENTION WITH SWELLS

Threatened/Endangered Species Survey

SANDERS ENVIRONMENTAL, LLC

2305 Lewis Gate Drive, Gautier, Mississippi 39553

December 10, 2023

Mr. Kevin Jarvis
15540 Stanley Road
Vanceleave, MS 39565

RE: Survey for Federally Listed Species for Kevin Jarvis Subdivision Project Located in the St. Martin area of Jackson County, Mississippi.

Dear Sirs:

This letter will serve as my report for the above captioned survey. I visited the site recently and performed an Endangered Species Survey to satisfy the requirement for your 404 Permit on the 13.10 acre tract which is proposed for the subdivision project. The study area is located in Section 27, Township 6 South, Range 9 West at 30.489125° North, -88.863721 West.

Terrestrial species that are federally listed under the Endangered Species Act of 1973, as amended and that may occur in this part of Jackson County Mississippi, include the following:

Red-cockaded woodpecker (*Picoides borealis*)- Endangered
Louisiana quillwort (*Isoetes louisianensis*)- Endangered
Gopher tortoise (*Gopherus polyphemus*)- Threatened
Louisiana Black Bear (*Ursus americanus luteolus*) - Threatened
Mississippi Sandhill Crane (*Grus canadensis pulla*) - Endangered
Alabama Red Bellied Turtle (*Pseudemys alabamensis*) - Endangered
Dusky Gopher Frog (*Rana sevosa*) - Endangered

The study area consists of 13.10 acres which has recently been cleared of all vegetation with equipment. The project area is located east of Daisy Vestry Road and surrounded by private residence, improved pasture, private residence and the road to the west. Soils on the study area consists Bayou and Escambia both of which can and do support pine savanna wetland in areas with a 0-2 percent slope. Pine Savanna wetland acreage makes up 8.77 acres of the study area with the remaining 4.33 acres is nonwetland.

Of the listed species above, the Gopher Tortoise is the only one that is known to occur in the local area. No vegetation such as turkey oak (*Quercus laevis*), pore joe (*Diodea teres*), prickley pear (*Opuntia sp.*) or gopher apple (*Licania michauxii*) were found on the site or in any surrounding areas. The soils on the site are Poarch which is a marginal soil for gopher tortoise habitat. Per my field survey, a 100 percent inspection of the property, my findings are that there are no gopher tortoises on the site.

SANDERS ENVIRONMENTAL, LLC

2305 Lewis Gate Drive, Gautier, Mississippi 39553

The red-cockaded woodpecker requires over-mature live pine timber for nesting/roosting cavities. The larger saw timber on this site was inspected for evidence of roosting/nesting cavities and no such evidence was found. This species uses younger (i.e., 10 DBH+) pine timber as foraging substrate, which does occur on the site. However, any small patches of timber that could be considered as potential foraging substrate are disconnected by 0.25 miles or more of open space from any *potential* adjacent potential habitat. Consequently, this species cannot be considered as using any aspect of the project site as a supporting habitat element, and accordingly requires no further consideration to insure potential development activities do not adversely affect the species.

The Louisiana quillwort occurs in lower coastal plain streams (locally termed "blackwater" or "bayhead streams"). Some wetlands on the site have the specific habitat features and, in particular, water flow characteristics that are prerequisite to occurrence of Louisiana quillwort. Other habitat features that include species composition, canopy closure and overflow topography are well documented as crucial aspects of known occupied quillwort habitat in the lower coastal plain. The conclusion of a quillwort survey conducted on this site is that none exists as the study area lacks quillwort habitat.

A 100 percent ESA was performed on this site for any species considered Threatened or Endangered, as mentioned above. My findings are that none are present, nor does habitat exist for the species listed above.

I trust this addresses any concerns you or others may have with regard to your proposed use of the land and compliance with Section 7 of the Endangered Species Act of 1973, as amended. If you or others have any questions about this report, please let me know.

Sincerely,

Dana R Sanders Jr.

Alternative Site Analysis

SANDERS ENVIRONMENTAL, LLC

2305 Lewis Gate Drive, Gautier, Mississippi 39553

**ALTERNATIVES ANALYSIS FOR
JARVIS ESTATES PROJECT
VANCLEAVE (JACKSON COUNTY), MISSISSIPPI**

An analysis of alternative project site locations and designs (alternatives analysis) was conducted to determine whether or not an alternative site or more practicable project design could be chosen or implemented for construction of the proposed Jarvis Estates Property (Site 1 on Figure 1 herein). The project consists of 13.10 acres which will be divided into 11 large lots with a central roadway which will also be the access for utilities. It should be noted that the applicant already owns the subject property and that this proposed 404 Permit is the result of a Wetland Violation considering the applicant has already cleared and impacted all 13.10 acres of the project area. The permit is required by the USACE in order to rectify the impacts. When considering an alternatives analysis, three approaches are necessary: (1) No-Project alternative; (2) Off-site alternatives; and (3) On-site alternatives.

No-Project Alternative

The project area has been 100 percent cleared and made void of all trees, shrubs and many herbs as the site has been cleared for construction. Portions of the wetlands on the property have been cleared and graded with construction grade fill placed for the purpose of a road. Under the present condition, wetlands have been impacted and displaced and the USACE is requiring the applicant to apply for an "After the Fact Individual Permit".

A No-Project alternative means that the property would remain undeveloped, in its present condition, with the wetlands existing as severely-disturbed forested wetlands. In time, the site will remain in a Wetland Violation status which would remain with the property.

While the No-Project alternative would maintain the status quo, selection of the No-Project alternative would not satisfy the USACE requirements for an existing Wetland Violation and deprive the landowner of nearly all economically-beneficial uses of the property.

Conclusion

The No-Project Alternative was considered and rejected.

Evaluation Criteria

Factors associated with selecting the subject site for this project from a group of potential sites include the size, targeted population, target zone, accessibility, visibility, environmental considerations, local traffic considerations, availability, and cost.

1. Size. The minimum amount of land required for the proposed project is at least 13 acres. If a potential location has a size of less than 13 acres, it would receive a rating of LOW (1). If a potential location consists of greater than 13 acres and has no possibility of being divided, it would receive a rating of MODERATE (2). If a potential location has a size of 13 acres to 30 acres of potentially usable land, it would be rated as HIGH (3).

2. Target Client Population. This proposed project was designed to target all socio-economic groups in the Vancleave/Ocean Springs area. All evaluated sites received a HIGH (3) rating for this factor.

3. Target Zone. The target service zone for the project is the City of Ocean Springs but particularly the central Gulf Coast area within 30 minutes commute. All potential sites receive a HIGH (3) rating for this factor.

4. Accessibility. The selected location should be located adjacent to one of the major streets in the Vancleave/Ocean Springs area, namely Tucker Road/Daisy Vestry or any of the adjoining cross streets in the area.

5. Environmental and Cultural Factors. Major environmental and cultural concerns to be considered in site selection consisted of the quantity and quality of wetlands that may be present, the potential presence of threatened or endangered species, and the potential presence of archeological resources. The presence of large quantities of higher quality wetlands, the presence of threatened or endangered species, or the presence of significant cultural resources could effectively delay or eliminate a site from further consideration. A site having more than 75% wetlands would receive a rating of LOW (1), regardless of the presence/absence of threatened/endangered species. A site having more than 25% wetlands, but less than 75% wetlands and no threatened/endangered species would receive a rating of MODERATE (2). A site having less than 25% wetlands and no threatened/endangered species would receive a rating of HIGH (3). A site that was known to have either Louisiana quillwort (*Isoetes louisianensis*) or dusky gopher frog (*Rana capito* var. *sevosa*) would likely be eliminated from further consideration.

6. Site Availability. To be considered as a potentially viable alternative, a site had to be available, either currently owned or available for purchase at a reasonable cost.

“Reasonable cost” means that the cost was in the same price range as other potential sites. A site already owned or under contract would be preferred to one that potentially could be purchased. To suggest that an applicant would be required to sell its existing property and purchase some other site was not considered to be practicable. A site that met the above criteria, but was not available for purchase, would not be a viable alternative. Although land in local ownership was considered as a potential alternative in this analysis, in reality landowners have been increasingly unwilling to sell because of their own future goals for the land value to appreciate, lack of consensus among joint-owners, or sentimental ties to the land. A presumption was that any site presently developed, under development, or for which a recently-developed plan was known to exist, would not be available. Finally, sites owned by federal, state, or local government agencies were excluded from consideration as being unavailable. A rating of LOW (1) was assigned to any sites that were not for sale, sites that had already been developed, sites that were in the process of being developed, or sites that were owned by a government entity. A rating of MODERATE (2) was assigned to any site that was not currently owned by the applicant, but which could be purchased for a reasonable price. A rating of HIGH (3) was assigned to any site already owned by, or under contract to, the applicant.

7. Cost. The estimated cost to develop the project became a factor in the analysis. If the overall development costs were excessive, the project was considered unfeasible. Generally, three factors influenced the impact of cost in the analysis. One development factor was cost of the land. A site became unfeasible if excessively high-priced land had to be used for the development. This factor eliminated some potential tracts due to the great increase in land values, and the amount of development that had occurred in the area during the past 15 years. A second factor that weighed significantly into the development cost was the cost of wetland mitigation. The cost of wetland mitigation had to be added to the cost of the land to obtain a realistic total cost to develop an acre of wetlands. The third factor in considering overall cost of a project was the effect of site characteristics on actual construction costs. Examples of these costs included the need for storm water detention basins, the amount of required fill to reach minimum construction elevations, land-preparation costs in wetlands, utilities, etc. The latter category also included any special construction costs based on location (e.g., amount of required road construction to gain access to the site). If overall costs were relatively high, a rating of LOW (1) was assigned. If overall costs were relatively moderate, a site was assigned a rating of MODERATE (2). If the overall costs of acquiring a site and developing a project on it were relatively low (considering the above factors), a rating of HIGH (3) would be assigned.

Sites Considered

Some, but not all, undeveloped sites within the area were found to be potentially available with some sites being owned by the property owner of the subject property. All undeveloped sites in the Interstate 10 corridor were considered in the target

area (Figure 1), but many of the more environmentally-compatible sites had already been developed.

Potential sites were selected using a 1987 US Geological Survey topographic map, Google Earth, Real Estate listings, NRCS websoilsurvey.com, the Jackson County land parcel maps, and general knowledge of the area. I conducted Preliminary Wetland Evaluations for all of the alternative sites before the applicant decided on the subject property which is the object of this permit. For each location, the site was located on the appropriate county parcel maps to identify the parcel size. Each parcel or combination of adjacent parcels was located on web soil survey maps to determine size and the percentage of the site that was mapped as hydric soils (based on the soil mapping units). The following specific sites were considered at each interchange:

1. Site 1. Winona Aguzin Property #03534260.000. This site (Site 1 on Figure 1)(30 acres) is at the intersection of Daisy Vestry Road and McClellan Road in Section 34, Township 6 and Range 9 at 30.480976/-88.872726.
2. Site 2. Thomas Davis Property #03536010.000. This 23- acre site (Site 2 on Figure 1) is located on Tucker Road in Sect.36, Township 6 South, Range 9 West (latitude 30.477658° N, longitude -88.848003 W).
3. Site 3. Kevin Jarvis Property. Site 3, consists of 13.10 acres (Site 3 on Figure 1). This site is the subject of this permit. Detailed information for this site can be found within the permit package.

Further evaluation of the 3 potential sites follows in the next section.

Detailed Evaluation of Potential Sites. Evaluation of the 3 specific sites using the seven evaluation criteria follows (Sites were evaluated as they now exist) follows:

Site 1. Site 1. Winona Aguzin Property #03534260.000. This site (Site 1 on Figure 1)(30 acres) is at the intersection of Daisy Vestry Road and McClellan Road in Section 34, Township 6 and Range 9 at 30.480976/-88.872726

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a. Size. The overall size of the proposed project was 13.10 acres. Because the size of the project is between 13 and 30 acres the appropriate rating for Size is 3 (HIGH).

b. Target Client Population. This site will accommodate the needs of a broad segment of user and socio-economic groups in the Vancleave/Ocean Springs area and will support the needs of the various groups of potential customers. The rating for this factor is 3 (HIGH).

c. Target Service Zone. Site 1 is ideally situated to serve the target service zone because it was centrally located. The assigned rating for Site 1 for target service zone was 3 (HIGH).

d. Accessibility. This site has good access from Daisy Vestry Road and McClellan Road. It will be easily accessed from the east and from the rapidly-developing northern part of the City of Diberville. The site was assigned an accessibility rating of 3(HIGH).

e. Environmental and Cultural Considerations. Virtually 100 percent of this property is wetland based on my field examination and soils data. Therefore, the site was assigned a rating of 1 (LOW),

f. Site Availability. The site is not owned by the applicant but could be bought at an above average price therefore the appropriate rating for site availability is 1 (LOW).

g. Cost. Based on the fact that property is not owned by the applicant and the amount of wetland on the site, the cost associated with permitting and mitigation for this sight would be very high, therefore the appropriate rating for cost would be 1 (LOW).

Overall Rating: The cumulative rating for Site 1 , based on rating criteria, was 15.

Site 2. Site 2. Thomas Davis Property #03536010.000. This 23- acre site (Site 2 on Figure 1) is located on Tucker Road in Sect.36, Township 6 South, Range 9 West (latitude 30.477658o N, longitude -88.848003 W).

a. Size. The site consists of 23 acres. Because the size of the project is between 13 and 30 acres the appropriate rating for Size is 3 (HIGH).

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- b. Target Client Population. This site will accommodate the needs of a broad segment of user and socio-economic groups in the Vancleave/Ocean Springs area and will support the needs of the various groups of potential customers. The rating for this factor is 3 (HIGH).
- c. Target Service Zone. Site 2 is ideally situated to serve the target service zone because it was centrally located. The assigned rating for Site 2 for target service zone was 3 (HIGH).
- d. Accessibility. This site is located on Tucker Road 1.5 miles from Interstate 10 and has good accessibility therefore will be easily accessed from the south and from the rapidly-developing northern part of the City of Diberville as well as northern portions of Ocean Springs. The site was assigned an accessibility rating of 3(HIGH).
- e. Environmental and Cultural Considerations. The conclusion of a Preliminary Wetland Evaluation performed by myself was that approximately 20 acres of this property was wetland with approximately 3 acres having nonwetland. Due to the large amount of wetland the site was assigned a rating of 1 (LOW).
- h. Site Availability. Site 2 is not owned by the applicant but is for sale by owner therefore the rating for this criteria is 2 (MODERATE).
- i. Cost. Based on the cost of acquisition, the large area of wetland fill required to construct the project, and the high cost of wetlands mitigation, the appropriate rating for cost would be 1 (LOW).

k. Overall Rating: The cumulative rating for Site 2 was 16.

Site 3. Site 3. Kevin Jarvis Property. Site 3, consists of 13.10 acres (Site 3 on Figure 1). This site is the subject of this permit. Detailed information for this site can be found within the permit package.

- a. Size. The site consists of 13.10 acres, which is the minimum acreage needed to construct the proposed project. Thus, the site was assigned a rating of 3 (HIGH).
- b. Target Client Population. This site will accommodate the needs of a broad segment of user and socio-economic groups in the Diberville/Ocean Springs area and will support the needs of the various groups of potential customers. The rating for this factor is 3 (HIGH).

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- c. Target Service Zone. Site 3 is ideally situated to serve the target service zone because it was centrally located. The assigned rating for Site 3 for target service zone was 3 (HIGH).

- d. Accessibility. This site borders Daisy Vestry Road and has good access. The site is only 2 miles from Interstate 10 and 4 miles to Diberville. The site was assigned an accessibility rating of 2 (MODERATE).

- e. Environmental and Cultural Considerations. I had opportunity to perform a wetland delineation on the site and found 4.33 acres of nonwetlands with 8.77 acres of wetland. The project site has no Endangered Species issues nor Cultural Resource issues therefore the site was assigned a rating of 2 (MODERATE).

- f. Site Availability. Site 3 is owned by the applicant, therefore Site 3 was assigned a rating of 3 (HIGH) for availability.

- g. Cost. Since the applicant owns the property and there are nonwetlands to work into the project, development costs and wetland mitigation will be reduced. Considering there will be wetland mitigation the assigned rating for Cost is 2 (MODERATE).

h. Overall Rating: The cumulative rating for Site 3 was 18.

<u>Site</u>	<u>Score</u>	<u>Rank</u>
1. Winona Aguzin Property	15	3
2. Thomas Davis Property	16	2
3. Kevin Jarvis Property	18	1

As shown above, Site 3, the proposed project site, was ranked the highest of the 3 sites, having a score of 18, based on 7 evaluation factors. Since **Site 3** (Figure 1), scored highest with respect to the evaluation, Site 3 was concluded to be the best-suited, most practicable alternative site for locating the proposed project.

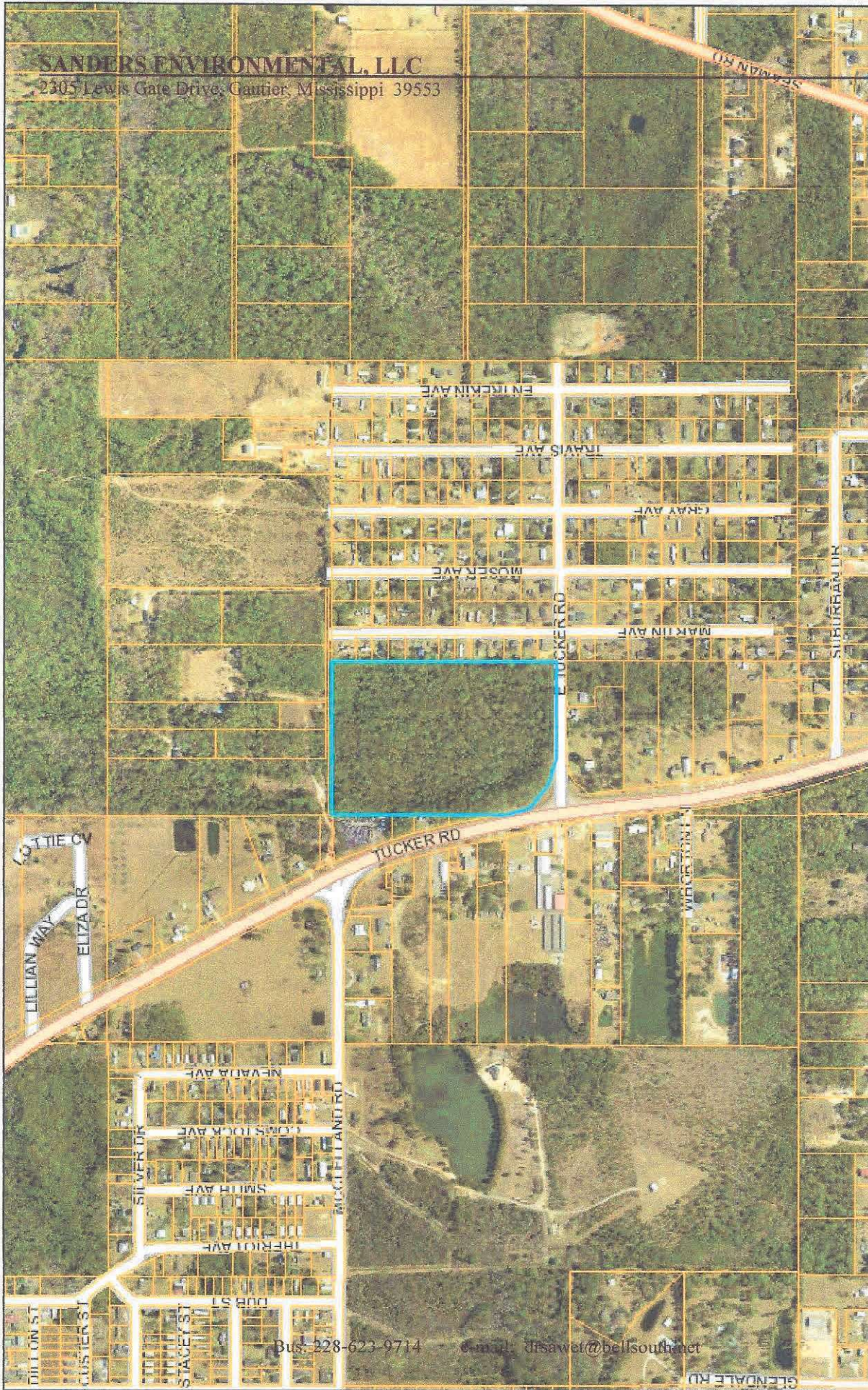
Consideration of Onsite Alternatives

Onsite alternatives must consider the possibility that an alternative project configuration would achieve the same or similar project goals as the proposed project with fewer environmental impacts. Due to the location of the site, the high value of the property, and the configuration of wetlands and nonwetlands on the property, the applicant desired to include as much of the total nonwetlands acreage of the property as possible and practicable, while avoiding wetlands to the extent possible. Unfortunately, a false wetland delineation which was used as the guiding factor for clearing resulted in the applicant clearing the site of wetlands which triggered the USACE. A USACE project manager visited the site and determined that there was a wetland violation on the site. A wetland delineation performed by myself concluded that 8.77 acres of the 13.10 acres is jurisdictional wetland and will require mitigation. The On Site Alternative is not a consideration as all 8.77 acres have been cleared and some filled. At this point, the objective is to offset the wetland violation with mitigation from a USACE approved Mitigation Bank.

Overall Conclusions

My overall conclusion is that the selected site (Site 3 on Figure 1) is the most practicable, cost effective alternative for the proposed project, and that the applicant should the construct the project plan view as shown as described within the permit package.

ALTERNATIVE SITE #2 THOMAS DAVIS PROPERTY, VANCLEAVE, MS

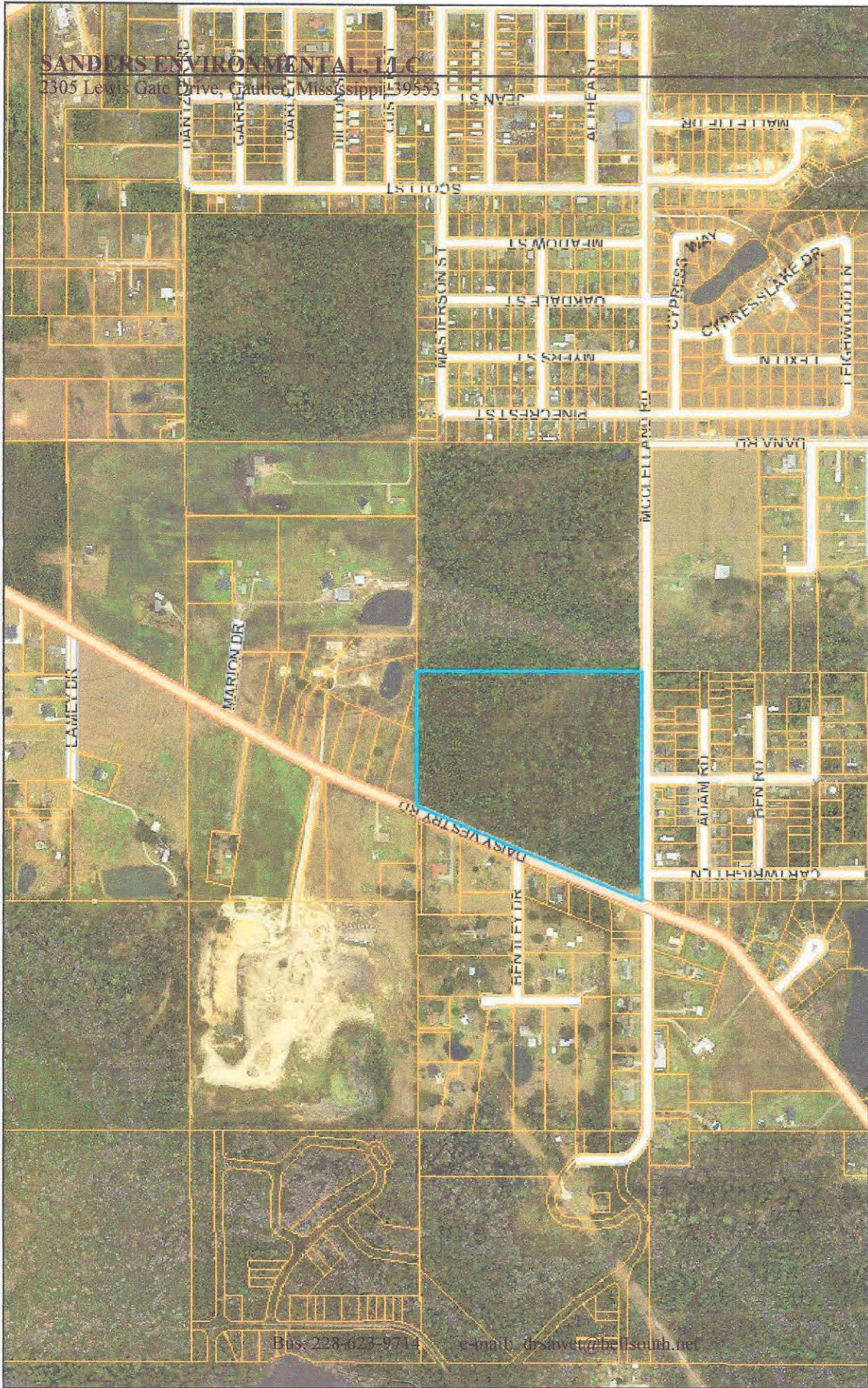


February 13, 2024

- Parcels
- Primary Roads
- Major
- Center Lines

Jackson County, Jackson County GIS

ALTERNATE SITE #1 AGUZIN PROPERTY, DAISY VESTRY ROAD



Soil Map—Jackson County, Mississippi
(ALTERNATIVE SITE #2 SOILS MAP)

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Soil Map may not be valid at this scale.

Map Scale: 1:2,360 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Bus: 228-623-9714

e-mail: drsawet@bellsouth.net



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

2/13/2024
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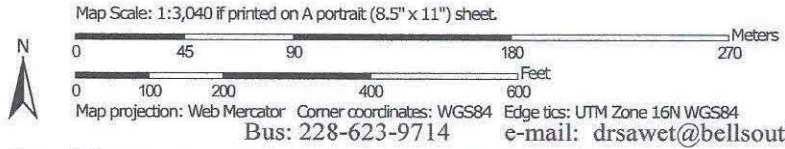
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
28	Vancleave loamy sand, 0 to 2 percent slopes	3.6	13.9%
32	Escambia very fine sandy loam, 0 to 2 percent slopes	14.4	55.1%
226	Bayou sandy loam, 0 to 1 percent slopes	8.1	31.0%
Totals for Area of Interest		26.0	100.0%

Soil Map—Jackson County, Mississippi
(ALTERNATIVE SITE #1 SOILS MAP)

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Atmore loam, 1 to 3 percent slopes	4.1	12.8%
5	Benndale fine sandy loam, 0 to 2 percent slopes	4.2	13.1%
29	Vanderveer loamy sand, 2 to 5 percent slopes	1.9	6.1%
32	Escambia very fine sandy loam, 0 to 2 percent slopes	21.6	67.9%
88	Croatan and Johnston soils, 0 to 2 percent slopes, frequently flooded	0.0	0.1%
Totals for Area of Interest		31.8	100.0%

