

PITTMAN ENVIRONMENTAL SERVICES, LLC

# Mitigation Bank Prospectus Pearl River Mitigation Bank Phase III

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MVK-2014-640

**Berg Mitigation Banks, LLC**

2/09/2016



## **I. SITE LOCATION AND REGIONAL SIGNIFICANCE**

Berg Mitigation Banks, LLC, Mississippi's first private compensatory mitigation bank proposes Phase III of the Pearl River Mitigation Bank. The purpose of the proposed bank is to provide compensatory mitigation credits to offset unavoidable losses to wetland/stream functions within the Pearl River Basin with the restoration/enhancement of a bottomland hardwood wetland complex. The proposed wetland mitigation bank site is located near the Pearl River in the town of Edinburg in Leake County, Mississippi (see Figure 1, Sections 24- Township 11 North- Range 9 East, Latitude 32.7903 Longitude -89.3291). The property is 270.8 acres and is located immediately south of State Highway 16, west of State Highway 427, and east of the Pearl River (see Figure 2). The subject property is approximately two miles east of the existing Berg Pearl River Wetland Mitigation Bank Phase I & II in Leake County. This project will be part of a greater ongoing conservation effort in the Upper Pearl River watershed.

The proposed mitigation bank site is located immediately south of the intersection of State Highway 16 and State Highway 427. Some commercial properties are located at this intersection and future development is possible as residential density increases within the area. Leake County currently has no zoning restrictions and the intersection would be a logical location for future development. The establishment of this mitigation bank and proposed mitigation actions would restore wetland and stream functions lost to silviculture practices and habitat fragmentation. The location of this mitigation bank would limit the future development potential of the immediate area. This site location also provides the potential for bank expansion by incorporating wetland properties immediately adjacent to the site that would be suitable for restoration/enhancement activities.

### **A. BACKGROUND AND CURRENT SITE CONDITIONS**

The property is located within the 100-year floodplain of the Pearl River in an area labeled as Palmetto Flats on U.S. Geological Survey (USGS) topographic maps. The area is primarily utilized for planted pines with a row crop field in the northwest corner and with hardwood slough in the center of the property. Two perennial streams transect the site flowing to the Pearl River. The riparian buffers of these streams have been significantly impacted by current land uses. A small ridge topped with a food plot is found near the western edge of the property. With planted pines as the dominant land use, these stands tend to be devoid of high quality food and cover resources for wildlife.

FIGURE 1, PROJECT LOCATION

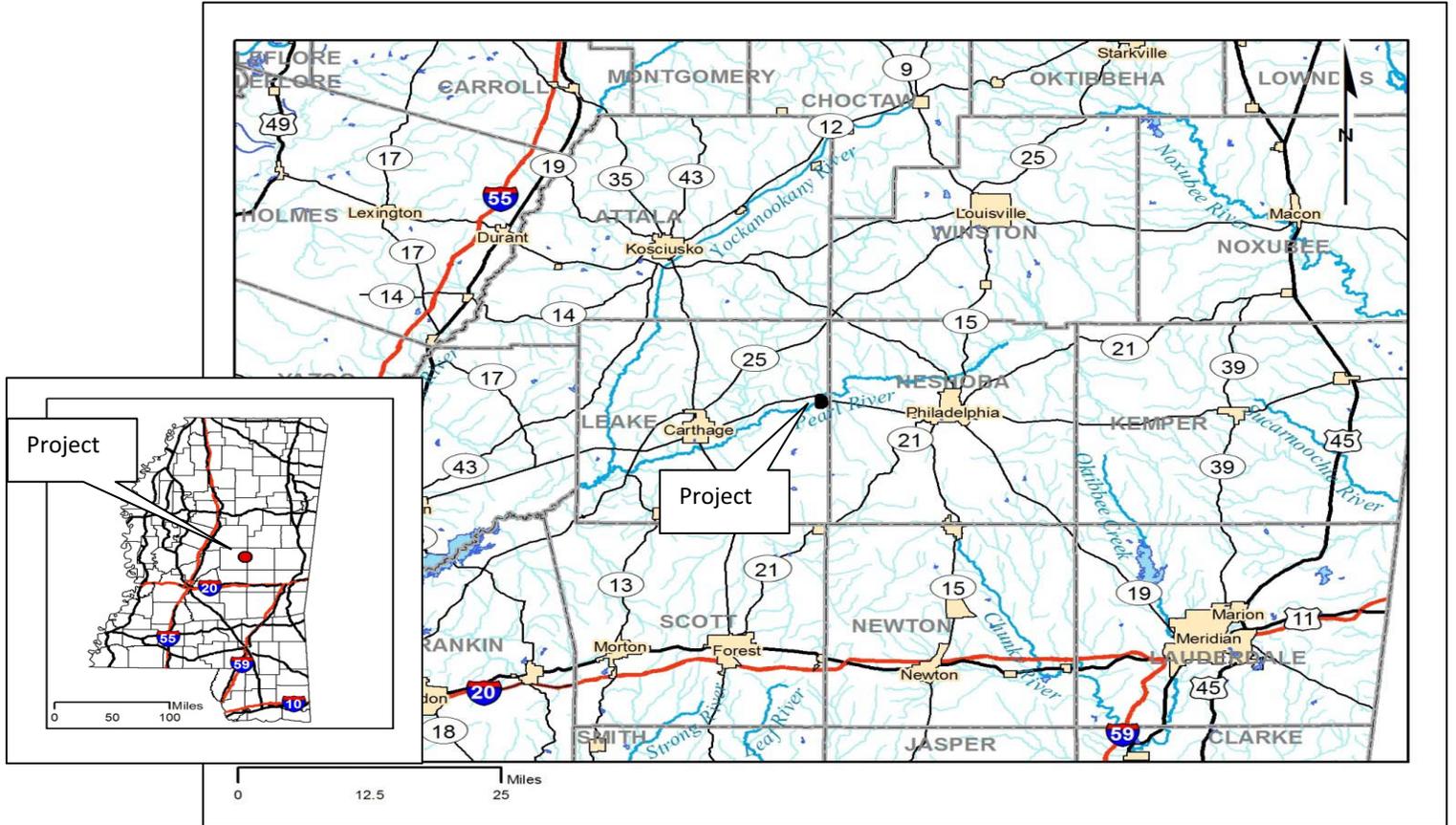
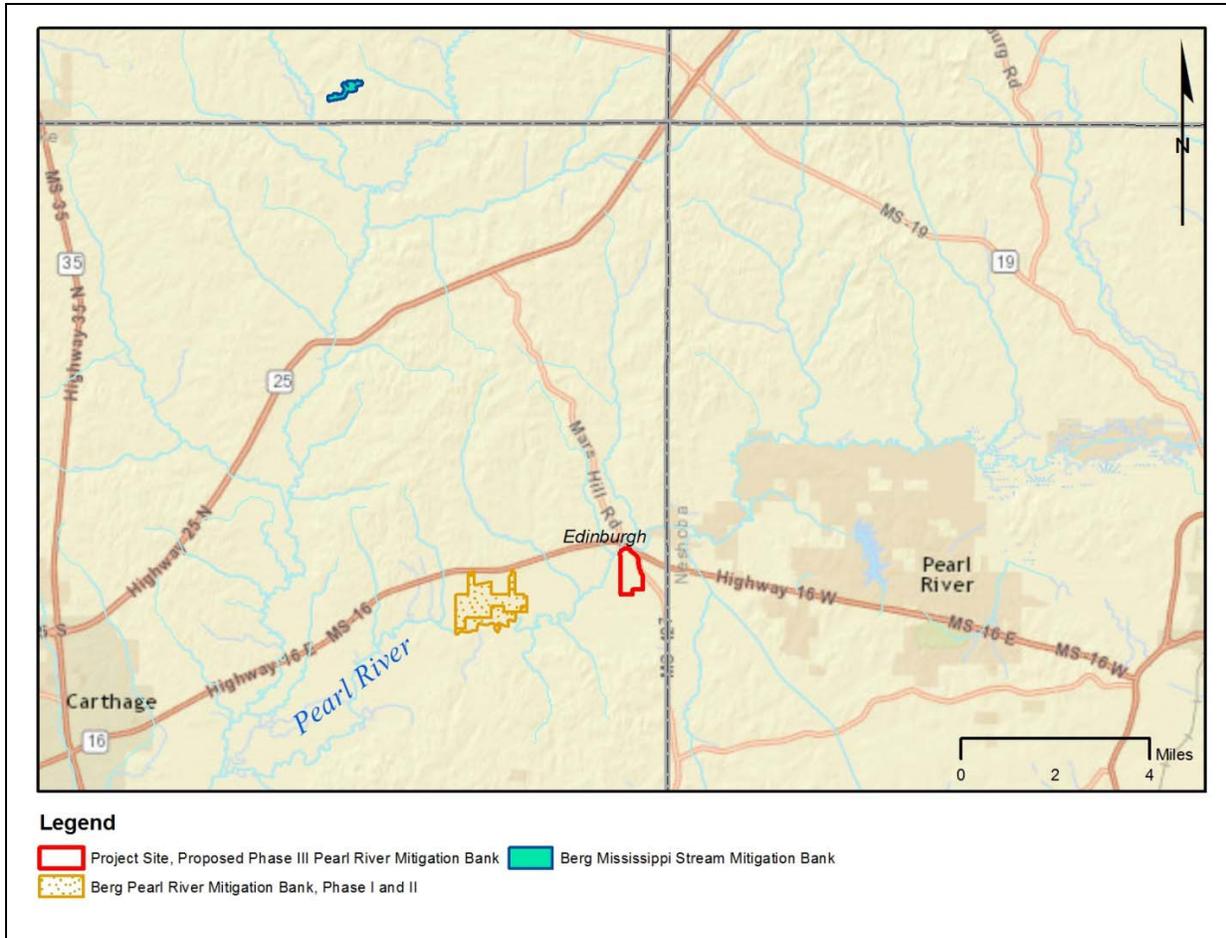


FIGURE 2, LOCATION OF POTENTIAL BANK IN RELATION TO AUDUBON PROPERTIES (BASEMAP, ESRI PROVIDED STREET MAP)



## B. PROJECT AREA & SERVICE AREA

The project area and surrounding land use is predominantly a combination of silviculture, agriculture, and low density residential. Some commercial properties are located at the intersection of Highway 16 and Highway 427. Leake County currently has no zoning restrictions and the intersection would be a logical location for future development. The establishment of this mitigation bank would limit the future development potential of the area. The project's proposed primary service area is the Upper Pearl River Watershed which will serve the Jackson Metropolitan Area and areas north (USGS HUC Codes: 03180001 and 03180002 as primary service areas). Mitigation will be allowed outside of the primary service area on a case by case basis.

FIGURE 3, PRIMARY SERVICE AREA

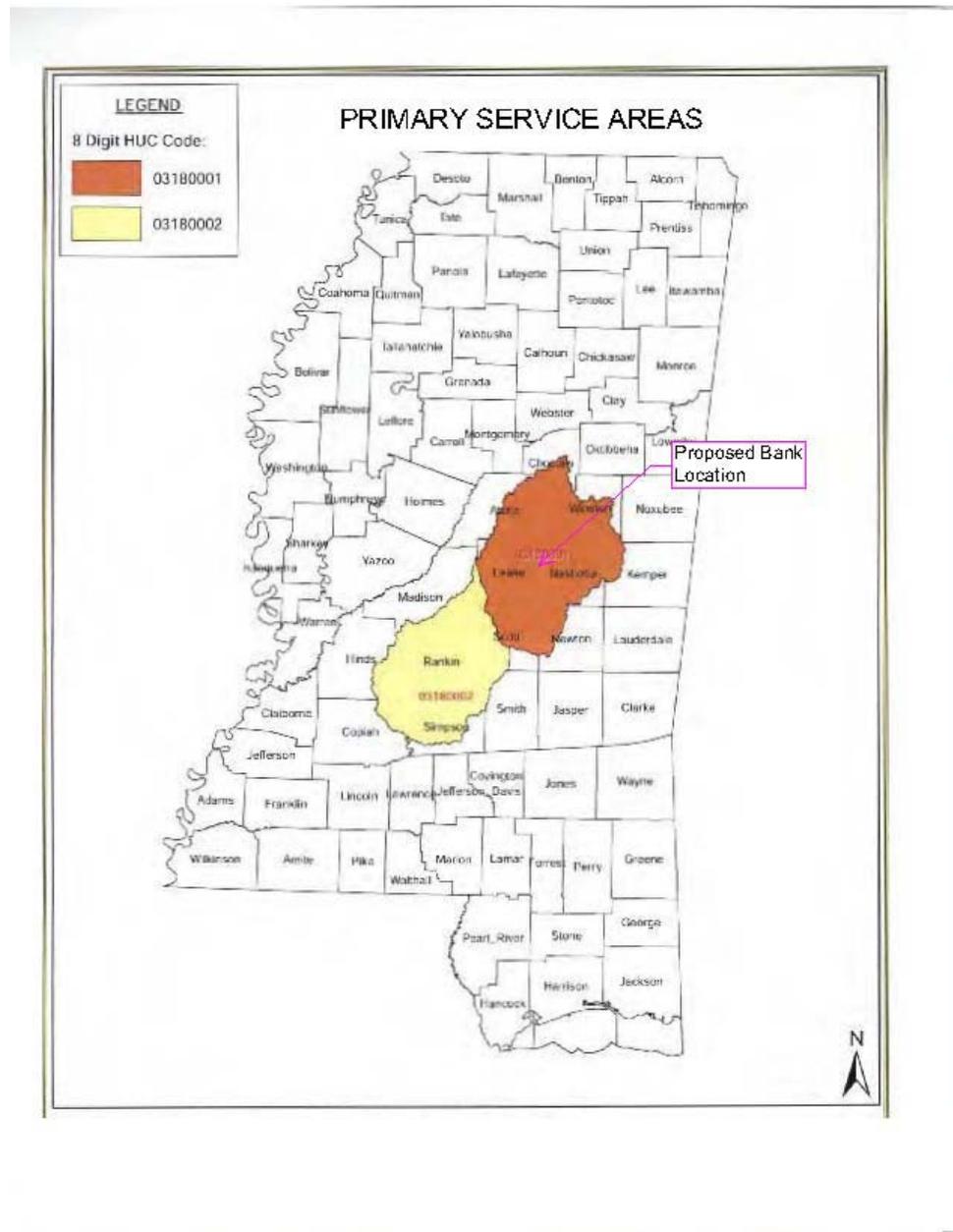
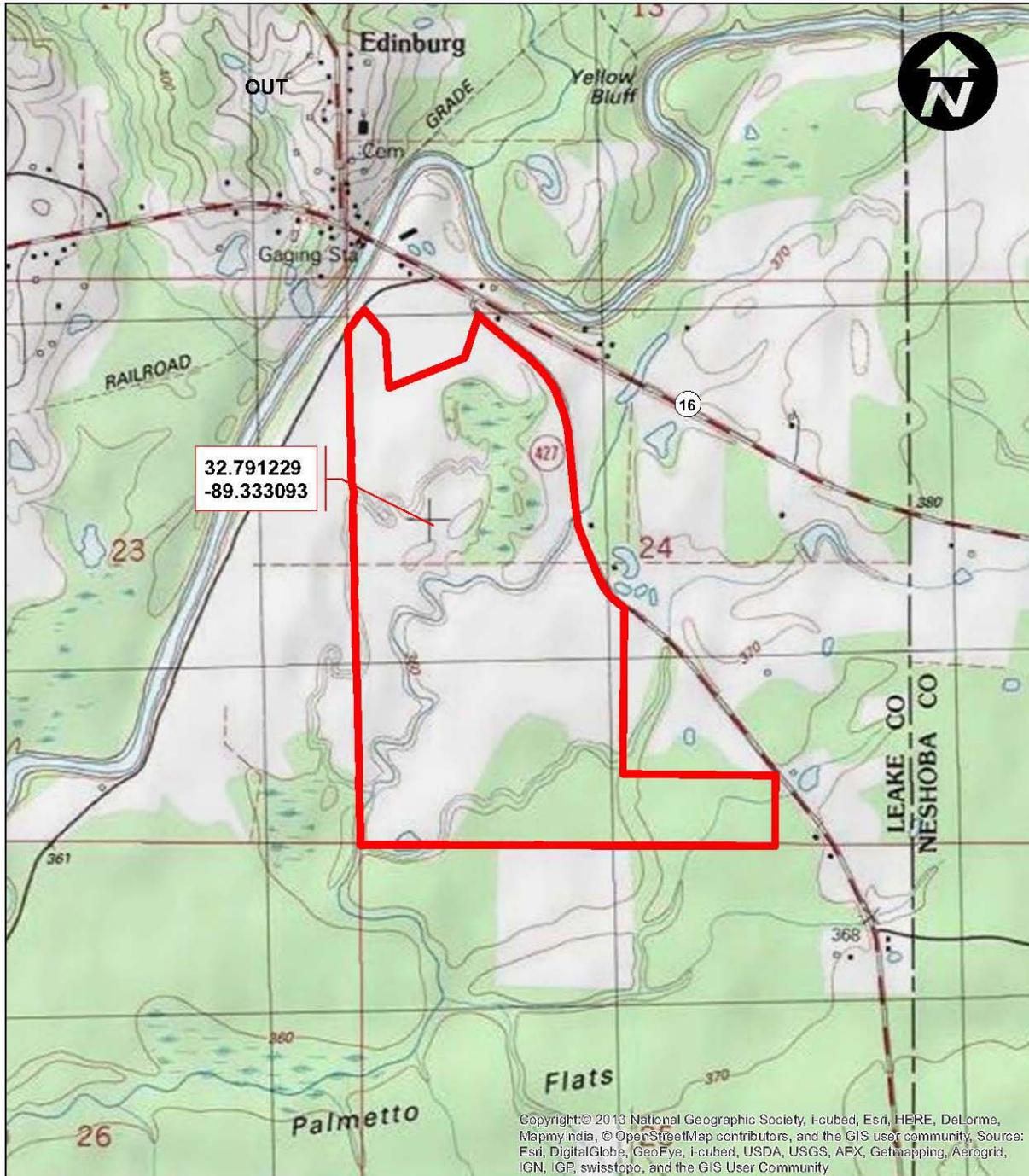


FIGURE 4, USGS TOPOGRAPHIC MAP



**Legend**

 PRMB Phase III, 270.8 Acres

**PEARL RIVER MITIGATION BANK, PHASE III  
LEAKE COUNTY, MISSISSIPPI  
PROPOSED MITIGATION ACTIONS**

## C. SOILS

Soils found within the site include:

Jena-Kirkville-Kinston complex, undulating, frequently flooded (JkB)- 70 hydric rating

Rosebloom silt loam (Rb)- 90 hydric rating

Rosebloom and Arkabutla soils, frequently flooded- 100 hydric rating

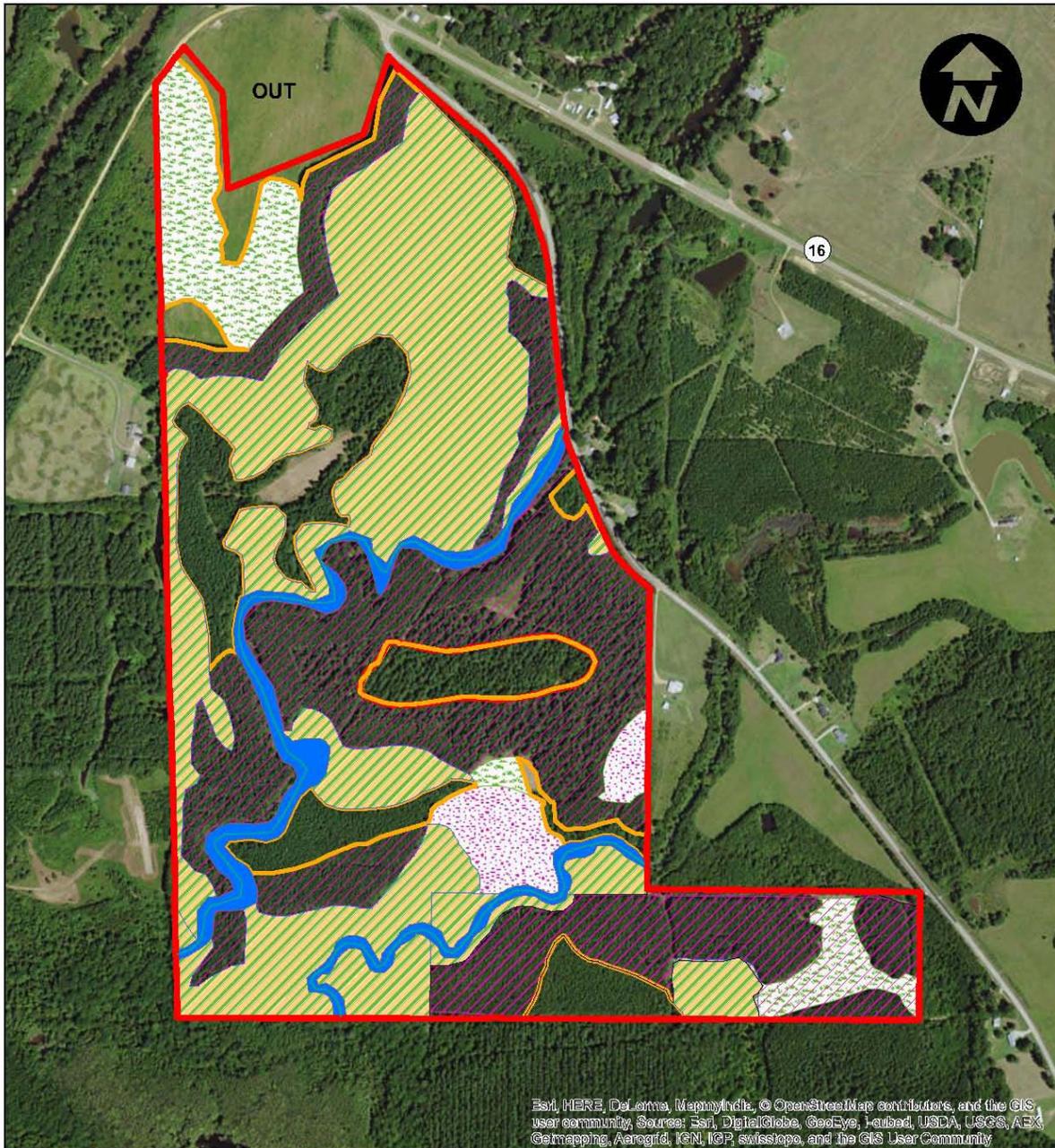
## II. SUMMARY OF PROPOSED MITIGATION ACTIONS

The objective of the proposed mitigation actions is the restoration/enhancement of a contiguous 270.8 acre parcel. Approximately 225.55 acres of this parcel is comprised of jurisdictional wetland and Other Waters. Approximately 45.25 acres on non-wetland is intermingled within this parcel. Two perennial other waters transect the proposed bank site for a total of ±7,927 linear feet. The wetland area is comprised of areas planted in loblolly pine, PSS wetland, PEM wetland, and PFO/BLH wetland; see current conditions map **Figure 5**.

Historically the entire site would have been comprised of bottomland hardwood species. Various oak s and soft mast would have dominated the less frequently flooded areas and cypress/gum would dominate the frequently flooded and inundated areas. The less frequently flooded areas (approximately 120.25 acres) have been mostly converted to pine plantation and agriculture. The frequently flooded and inundated areas (approximately 92 acres) have been impacted by invasive species, beaver activity, and loss of protective buffers.

The proposed mitigation actions include the conversion from the current land use of primarily agriculture and restoring bottomland hardwood functions. Specific mitigation actions will include the removal of planted pine, site prep. & invasive species control, removing impediments to hydrology, restoring riparian buffers, and restoring upland buffers. Native BLH species will be planted to restore the historic vegetative community within the site; see proposed mitigation actions map **Figure 6**.

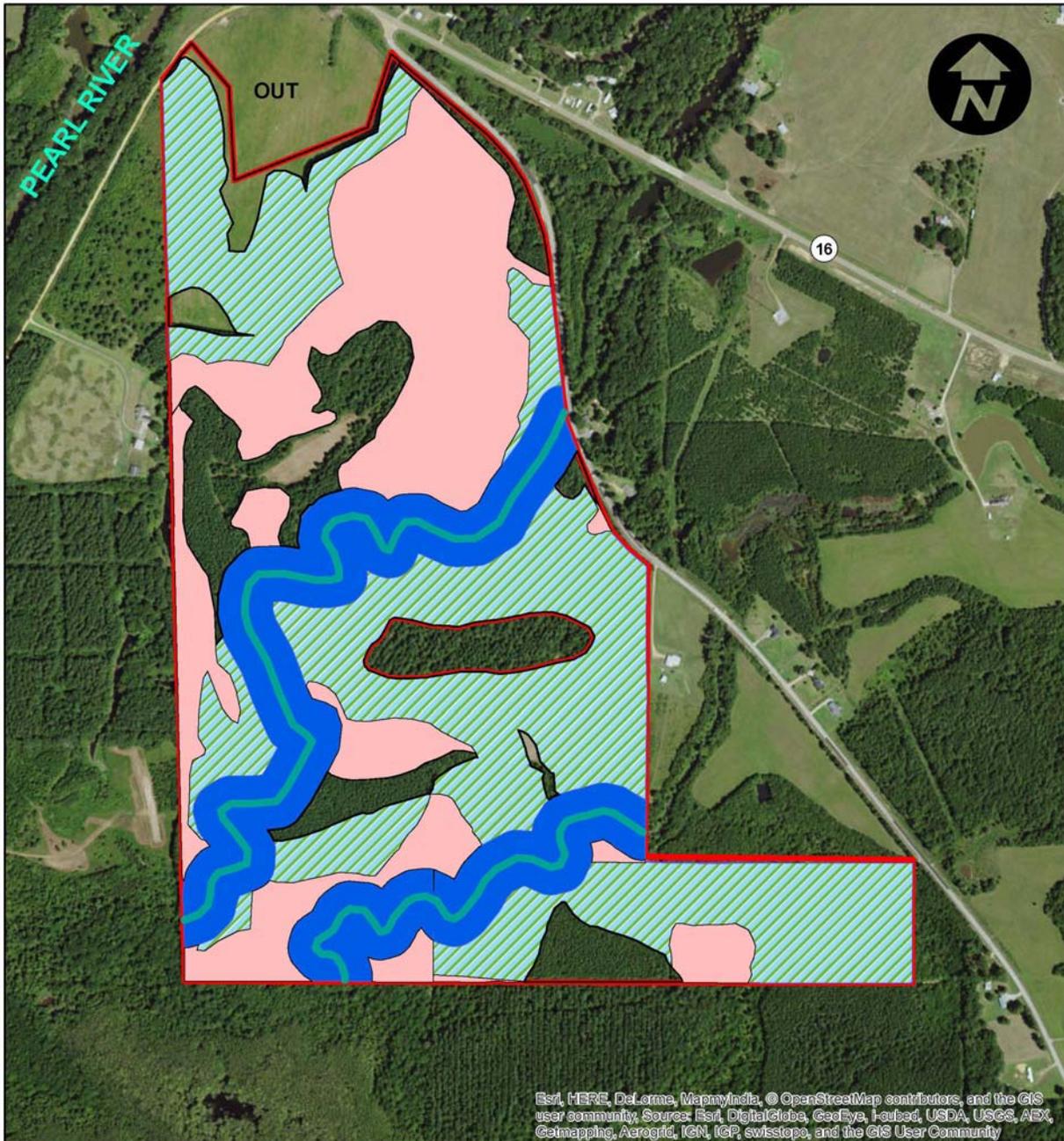
Figure 5. CURENT CONDITIONS



**PEARL RIVER MITIGATION BANK, PHASE III  
LEAKE COUNTY, MISSISSIPPI  
CURRENT CONDITIONS**

Legend	
 PRMB Phase III 270.8 Acres	 Pine Plantation Wetland 96.2 Acres
 BLH Wetland 92 Acres	 Other Waters 12.71 Acres 7,927 LF
 PSS Wetland 8.3 Acres	 Upland 45.25 Acres
 PEM Wetland 15.8 Acres	

Figure 6. PROPOSED MITIGATION ACTIONS



Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, IGN, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Legend	
	PRMB Phase III 270.8 Acres
	BLH Restoration 103 Acres
	BLH Enhancement 73.5 Acres
	Stream-Riparian Buffer 7,927 LF, 53 Acres (300' Wide Riparian Corridor)
	Upland 41.3 Acres

PEARL RIVER MITIGATION BANK  
 PHASE III  
 LEAKE COUNTY, MISSISSIPPI  
 PROPOSED MITIGATION ACTIONS

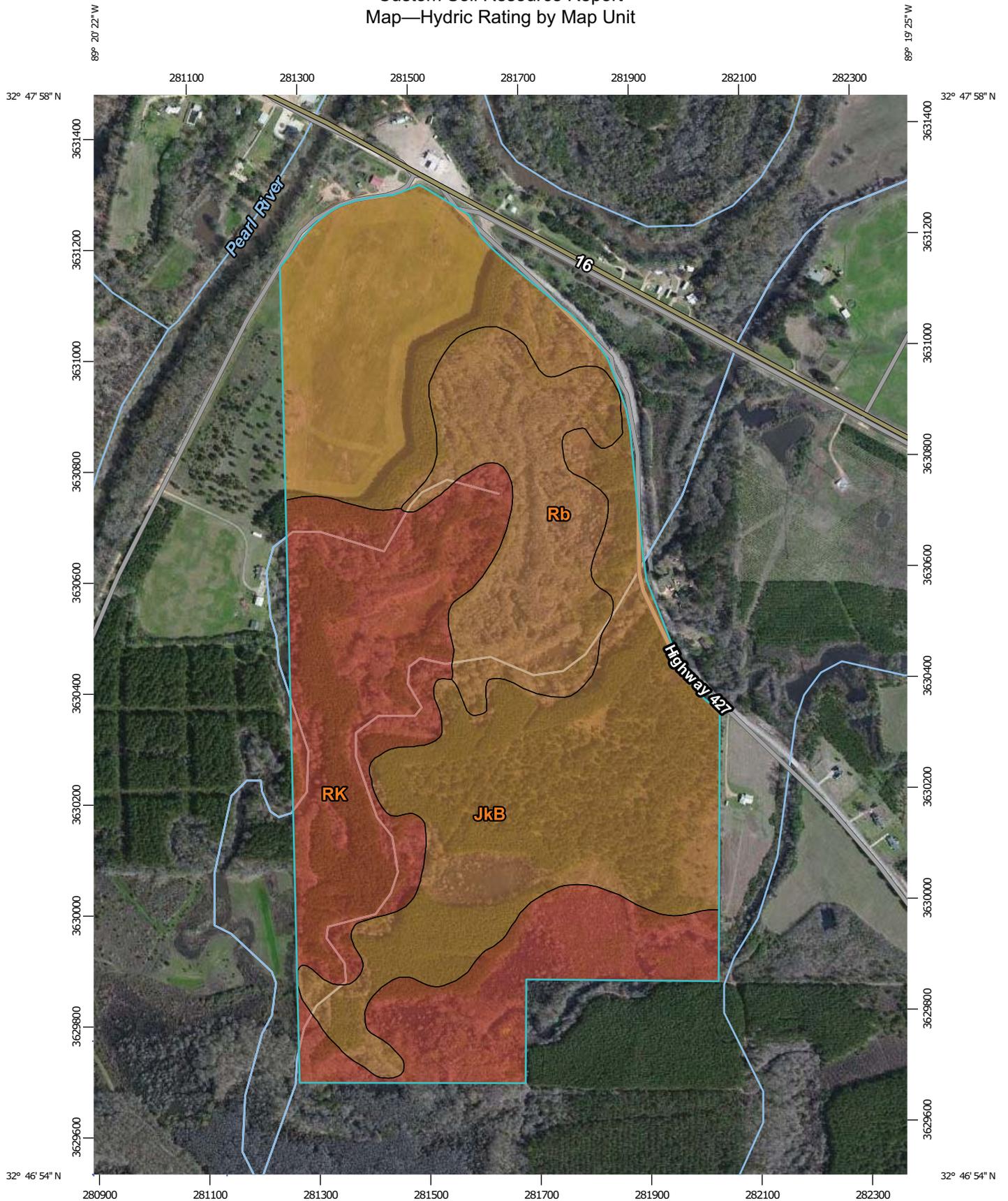
### **III. BANK ESTABLISHMENT AND OPERATION**

The subject property will be owned fee-simple by Berg Mitigation Banks, LLC. The mitigation bank instrument (MBI) and evaluation timeline will follow the guidelines provided within Federal Register Vol.73, No.70 April 10, 2008, 332.8. A restrictive covenant/protective instrument will be placed on the property and a long term management fund will be established. Currently, only one COE approved wetland mitigation bank with available credits is located within the upper Pearl River basin. The establishment of this bank would provide a second source for applicants to meet their compensatory mitigation requirements within the Pearl River watershed.

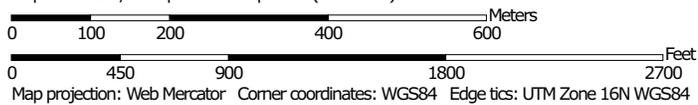
## APPENDIX- MAPS

- Soil Maps
- Topographical Map
- Land Use Maps
- Site Pictures

# Custom Soil Resource Report Map—Hydric Rating by Map Unit

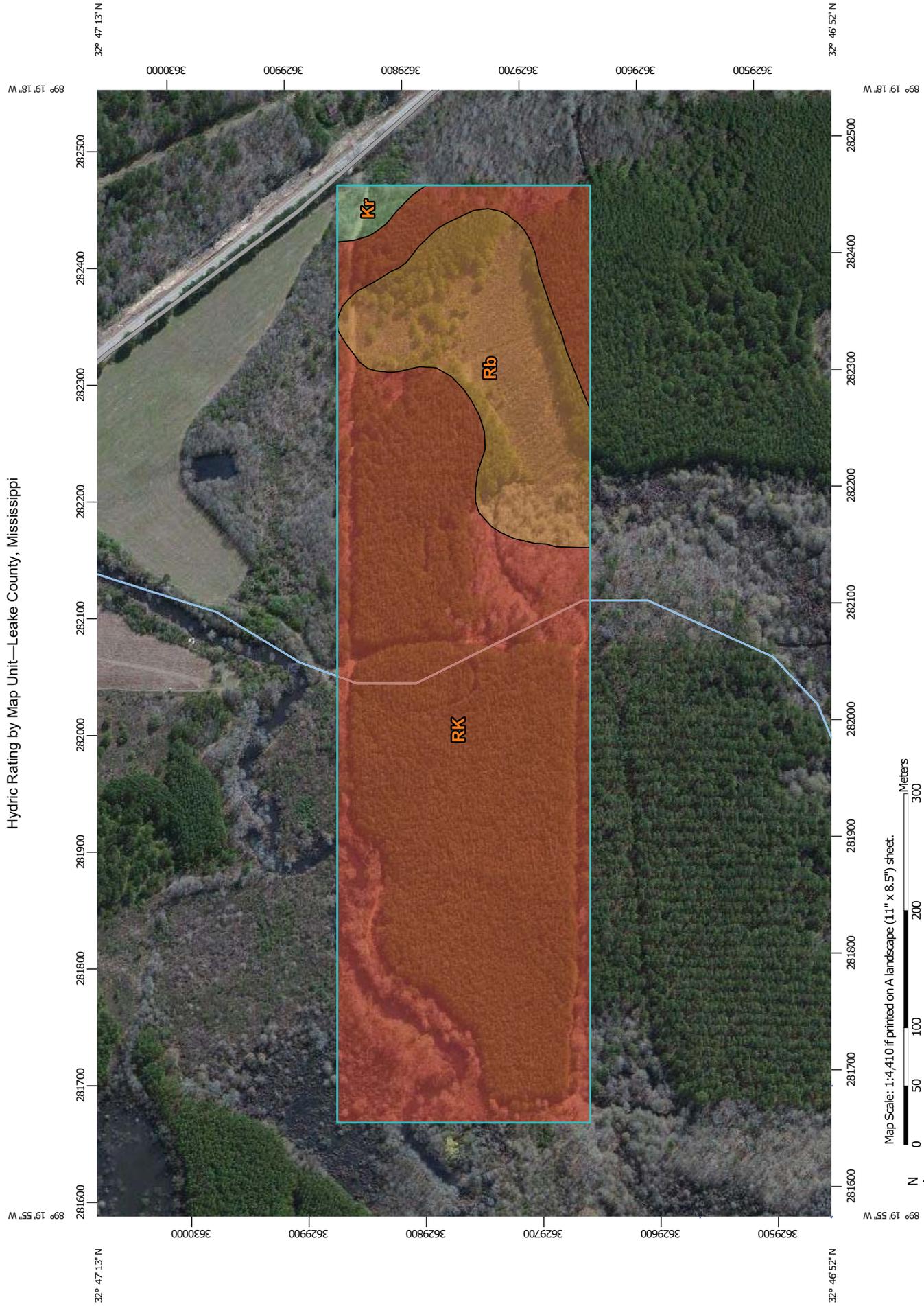


Map Scale: 1:9,500 if printed on A portrait (8.5" x 11") sheet.



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

Hydric Rating by Map Unit—Leake County, Mississippi



## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Leake County, Mississippi  
 Survey Area Data: Version 9, Dec 24, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 4, 2010—Mar 25, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map-unit boundaries may be evident.

## MAP LEGEND

 Area of Interest (AOI)	 Predominantly Hydric (66 to 99%)
<b>Soils</b>	 Partially hydric (33 to 65%)
<b>Soil Rating Polygons</b>	 Predominantly nonhydric (1 to 32%)
 Hydric (100%)	 Nonhydric (0%)
 Predominantly Hydric (66 to 99%)	 Not rated or not available
 Partially hydric (33 to 65%)	<b>Water Features</b>
 Predominantly nonhydric (1 to 32%)	 Streams and Canals
 Nonhydric (0%)	<b>Transportation</b>
 Not rated or not available	 Rails
<b>Soil Rating Lines</b>	 Interstate Highways
 Hydric (100%)	 US Routes
 Predominantly Hydric (66 to 99%)	 Major Roads
 Partially hydric (33 to 65%)	 Local Roads
 Predominantly nonhydric (1 to 32%)	<b>Background</b>
 Nonhydric (0%)	 Aerial Photography
 Not rated or not available	
<b>Soil Rating Points</b>	
 Hydric (100%)	

**Table—Hydric Rating by Map Unit**

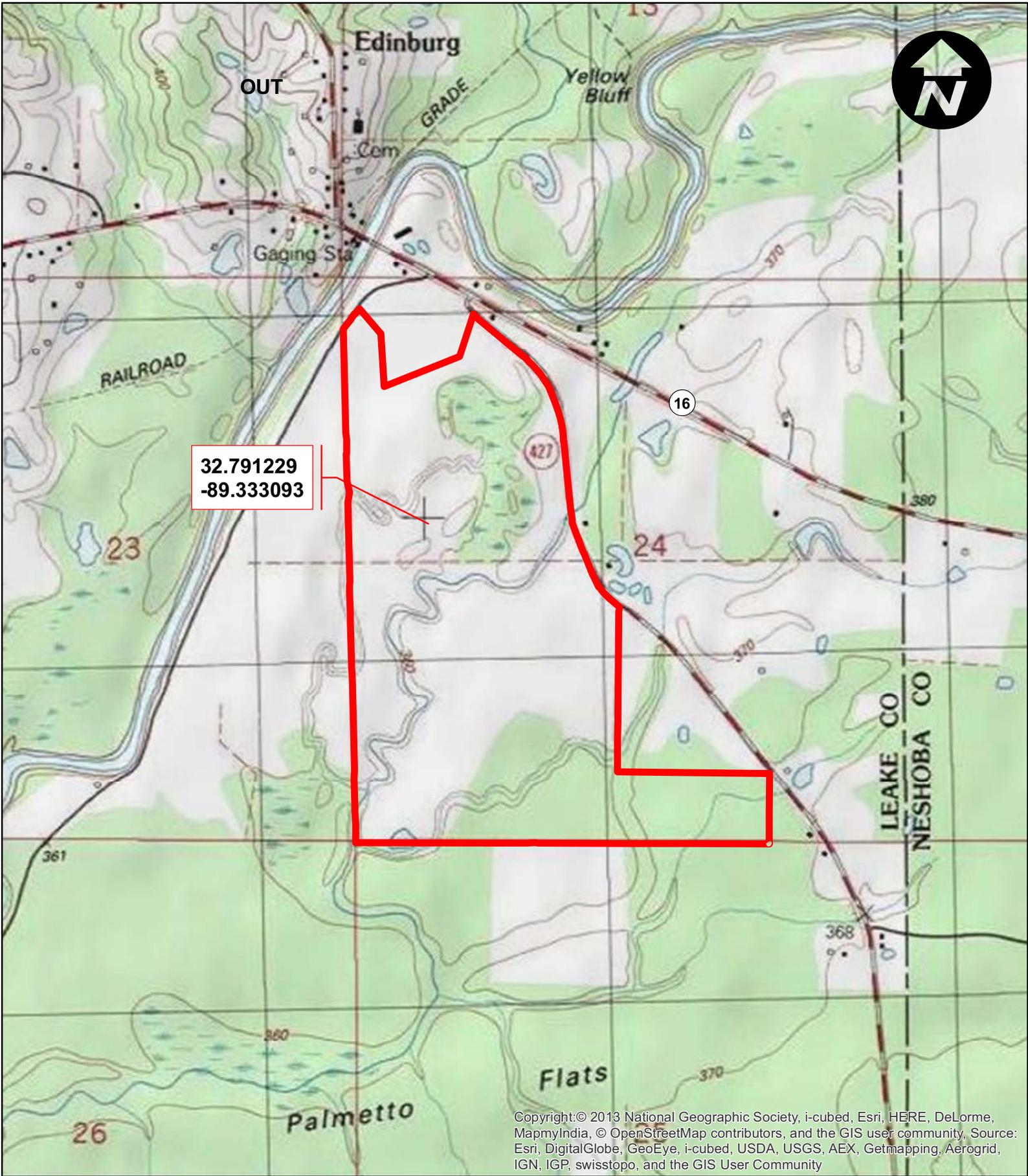
<b>Hydric Rating by Map Unit— Summary by Map Unit — Leake County, Mississippi (MS079)</b>				
<b>Map unit symbol</b>	<b>Map unit name</b>	<b>Rating</b>	<b>Acres in AOI</b>	<b>Percent of AOI</b>
JkB	Jena-Kirkville-Kinston complex, undulating, frequently flooded	70	123.8	50.4%
Rb	Rosebloom silt loam, ponded	90	38.7	15.7%
RK	Rosebloom and Arkabutla soils, frequently flooded	100	83.1	33.8%
<b>Totals for Area of Interest</b>			<b>245.5</b>	<b>100.0%</b>

**Rating Options—Hydric Rating by Map Unit**

*Aggregation Method:* Percent Present

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Lower

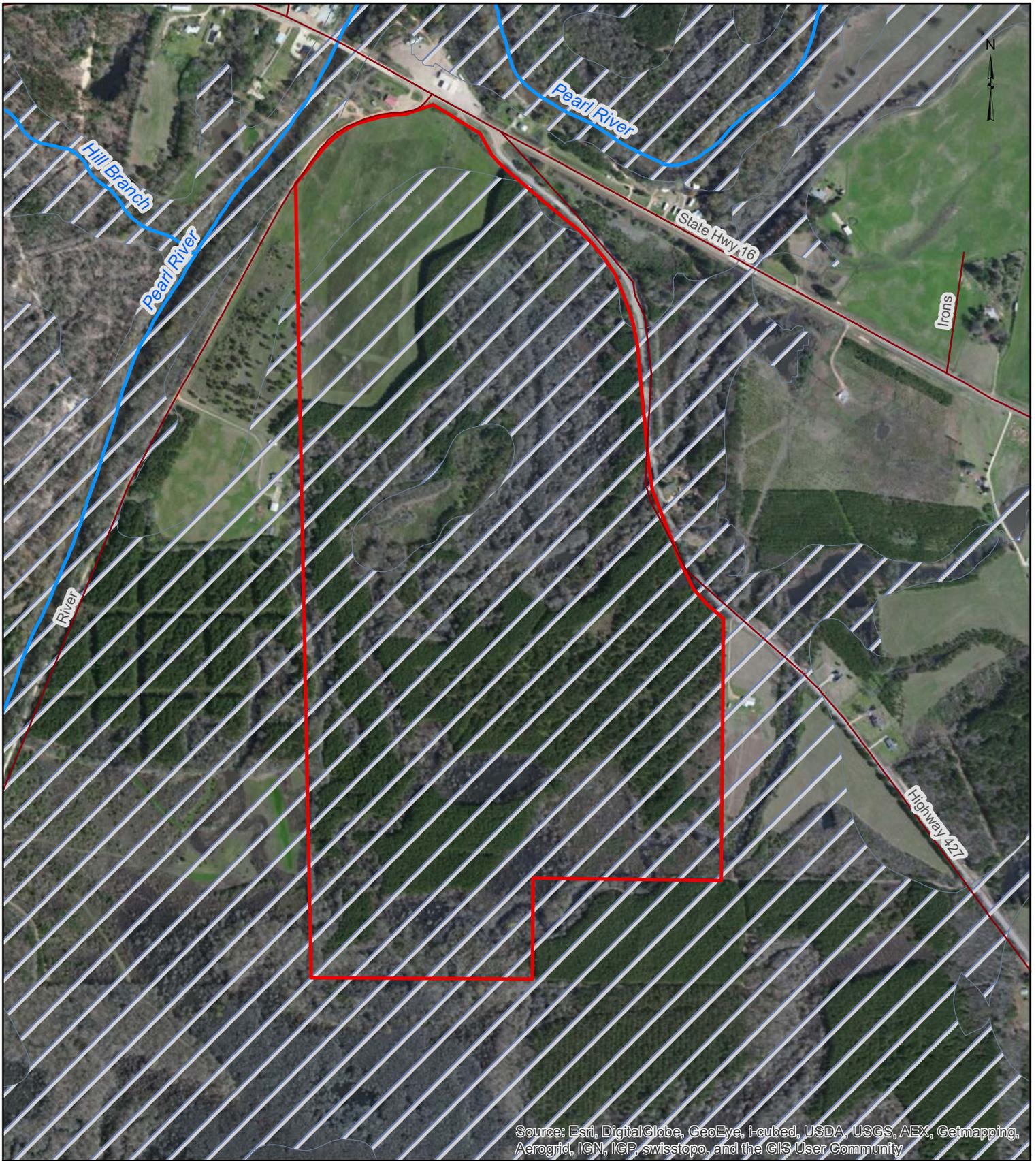


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**Legend**

 PRMB Phase III, 270.8 Acres

**PEARL RIVER MITIGATION BANK, PHASE III  
LEAKE COUNTY, MISSISSIPPI  
PROPOSED MITIGATION ACTIONS**

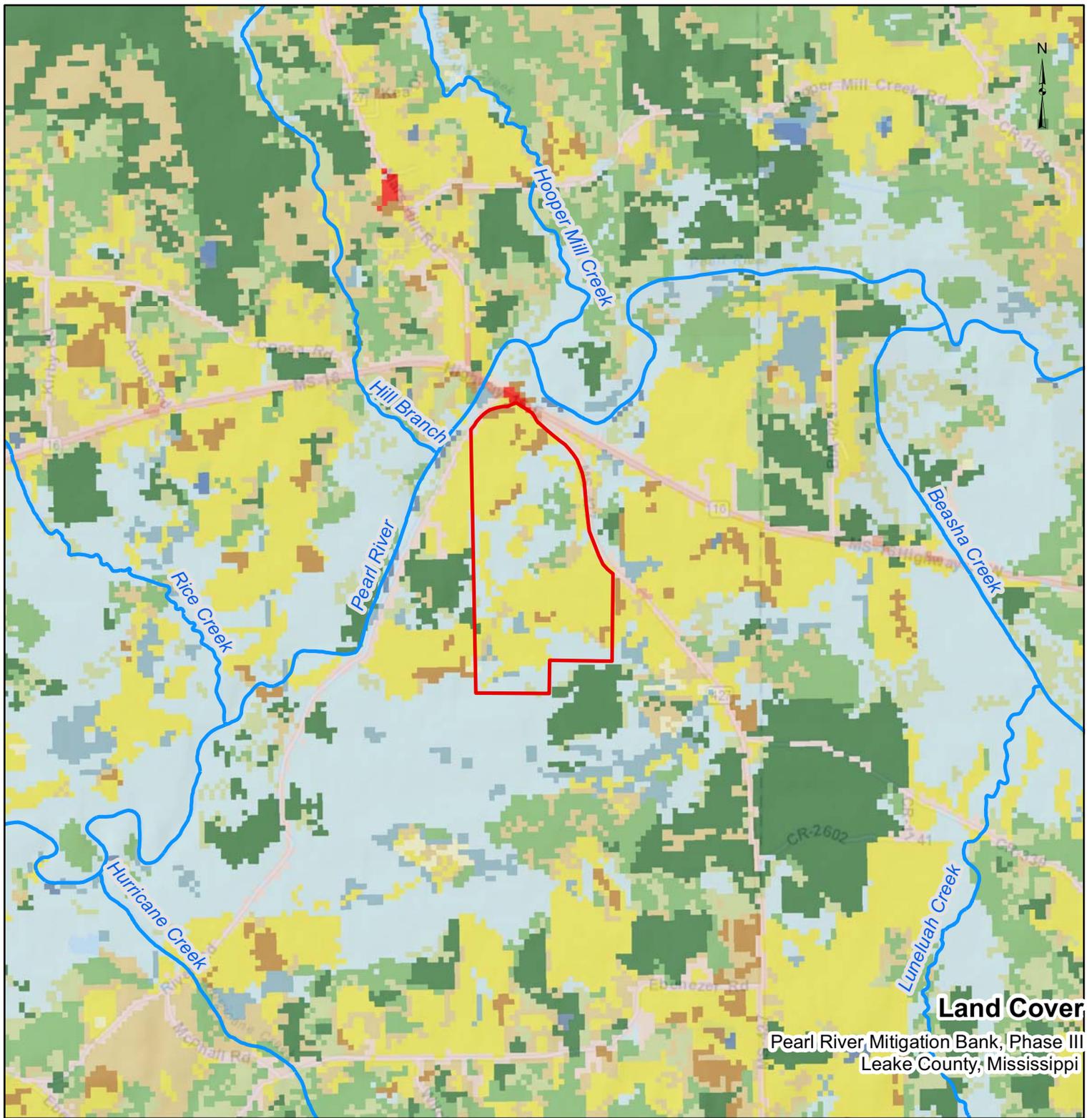


**Legend**

- Bank Site
- 100 year Floodzone
- Named Streams (nhd)

**Floodplain Map**

Pearl River Mitigation Bank, Phase III  
Leake County, Mississippi



**Legend**

- |                                    |                             |                              |
|------------------------------------|-----------------------------|------------------------------|
| Bank Site                          | Developed, Medium Intensity | Shrub-Scrub                  |
| Named Streams (nhd)                | Developed, High Intensity   | Grassland/ Herbaceous        |
| <b>National Land Cover Dataset</b> | Barren                      | Pasture/ Hay                 |
| Open Water                         | Deciduous Forest            | Cultivated Crops             |
| Developed, Open Space              | Evergreen Forest            | Woody Wetlands               |
| Developed, Low Intensity           | Mixed Forest                | Emergent Herbaceous Wetlands |



## SITE PHOTOGRAPHS

**Typical  
Dense  
Young  
Planted  
Pines**



Looking south across wetland portions of planted pines.

**Typical  
Dense  
Young  
Planted  
Pines**



Looking across planted pines.

**Agriculture  
Field in  
North West  
Corner of  
Property**



Looking south toward data point 10.

**Agriculture  
Field**



Drift deposits at data point 10 in April of 2014.

**Pearl River**



Pearl River near subject property and south of Highway 16 at flood stage.

**Slough**



Typical slough running through property, April 2014.

**Upland  
Ridge**



High upland ridge near center of property.

**Bottomland  
Hardwoods**



Typical bottomland hardwoods found throughout property.

**Hardwoods**



Beaver impacted hardwoods, cypress growing in central portions of beaver areas.

**Emergent  
wetlands**



Emergent wetland area found on southern end of property.



PEM/PSS wetland at DP-1



Hydric Soil at DP-1

Pittman Environmental Services, LLC	PROJECT:	40 Acre Parcel, Berg Mitigation Bank LLC
	TITLE:	SITE PHOTOGRAPHS
		PHOTOS 1-2



Non-Wetland at DP-2



Non-Hydric Soil at DP-2

<b>Pittman Environmental Services, LLC</b>	PROJECT: 40 Acre Parcel, Berg Mitigation Bank LLC	PHOTOS 3-4
	TITLE: SITE PHOTOGRAPHS	



Wetland at DP-3



Hydric Soil at DP-3

<b>Pittman Environmental Services, LLC</b>	PROJECT:	40 Acre Parcel, Berg Mitigation Bank LLC	PHOTOS 5-6
	TITLE:	SITE PHOTOGRAPHS	



Wetland at DP-4



Hydric Soil at DP-4

Pittman Environmental Services, LLC	PROJECT:	40 Acre Parcel, Berg Mitigation Bank LLC	PHOTOS 7-8
	TITLE:	SITE PHOTOGRAPHS	