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July 20, 2024

U.S. Army Corp of Engineers, Charleston District
ATTN: Regulatory Division
69A Hagood Ave.
Charleston, SC 29403

RE: Request for Aquatic Resource Delineation Review (ARDR)

Kato Bay Rd—10 Acres
Hardeeville, SC (Jasper County)
PIN No. 042-00-02-024
ES&T Project: 24-0218

ES&T recently conducted a wetland delineation for a 10-acre property on Kato Bay Road in Hardeeville, South Carolina (Jasper County). The subject property contains 7.7 acres of uplands and 2.3 acres of wetlands. Three forested (non-tidal) wetlands have been marked in the field with fluorescent pink flags and surveyed using a sub-meter accurate GPS. We request a USACE representative provide written concurrence of the delineated wetland boundary. The following information is included for your review:

- | | |
|--|---|
| 1. Aquatic Resource Delineation Review Request Form | 8. Contour Map (Approx Ground Elevations) |
| 2. Wetland Delineation Map with Points & Data Form Soil Sampling Locations | 9. NRCS Soils Map |
| 3. Wetland Delineation Map with Coordinates Table | 10. NRCS Hydric Soils Map |
| 4. Boundary Survey prepared by Surveying Consultants (Jan 2024) | 11. FEMA Floodplain Map |
| 5. USGS Topographic Map | 12. Past Aerial Photographs (2006-2022) |
| 6. USFWS National Wetland Inventory Map | 13. Site Photographs |
| 7. LIDAR Aerial Map | 14. Field Data Forms for Wetland A & C |
| | 15. Shapefiles for Wetlands A-C & Property Boundary |

If you require further information to process an ARDR for this property, please do not hesitate to contact me at 912-224-7312 or tmerrill@est-savannah.com.

Best Regards,

A handwritten signature in black ink, appearing to read "Tara R. Merrill".

Tara R. Merrill
Water Resource Specialist

Cc: Kato Bay Investments LLC
Attn: Brian Russo & Joe Fischer
121 Arabian Court, St. Augustine, FL 32095

U.S. Army Corps of Engineers – Charleston District - Regulatory Division
REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD) / DELINEATION
(For Jurisdictional Status and Identifying Wetlands and Other Aquatic Resources)

The Regulatory Division is now offering paperless/electronic documents as a primary means of accepting project submittals and responding to requests. While electronic submittals are preferred, we will continue to accept paper documents that meet our file requirements in order to accommodate those with limited computer access. Depending on the project location, requests should be submitted to the appropriate office below. Please visit <https://www.sac.usace.army.mil/Missions/Regulatory/Electronic-Submittals/> for additional information on electronic submittals.

Charleston Office: 69A Hagood Avenue Charleston, SC 29403 843-329-8044 SAC.RD.Charleston@usace.army.mil	Columbia Office: 1519 Taylor Street Columbia, SC 29201 803-253-3444 SAC.RD.Columbia@usace.army.mil	Conway Office: 1949 Industrial Park Road, Room 140 Conway, SC 29526 843-365-4239 SAC.RD.Conway@usace.army.mil	Greenville Office: 750 Executive Center Dr, Suite 103 Greenville, SC 29615 864-609-4326 SAC.RD.Greenville@usace.army.mil
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I. PROPERTY AND AGENT INFORMATION

A. Site Details/Location:

Site Name: _____ Date: _____
City/Township/Parish: _____ County: _____
Latitude/Longitude: _____ Acreage: _____
Tax Map Sequence (TMS) #(s): _____
Property Address(es): _____

An accurate depiction of the review area must be provided (survey, tax map, **OR** GPS coordinates). Tax maps may only be used if the site includes the entire tax map parcel. **See the attached Checklist for information that should be submitted for a complete and proper submittal.**

B. Requestor of Jurisdictional Determination/Delineation (if there are multiple property owners, please attach additional pages)

Name: _____ Company Name (if applicable): _____
Address: _____
Phone: _____ Email: _____
Check one: ☐ I currently own this property ☐ I plan to purchase this property ☐ Other: _____

C. Agent/Environmental Consultant Acting on Behalf of the Requestor (if applicable):

Consultant/Agent Name: _____
Company Name: _____
Address: _____ Phone: _____
Email: _____

II. REASON FOR REQUEST (check all that apply):

- ☐ I intend to construct/develop a project or perform activities on this site which would be designed to avoid all aquatic resources.
- ☐ I intend to construct/develop a project or perform activities on this site which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
- ☐ I intend to construct/develop a project or perform activities on this site which may require authorization from the Corps, and the Jurisdictional Determination would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- ☐ I intend to construct/develop a project or perform activities on this site which may require authorization from the Corps; this request is accompanied by my permit application and the jurisdictional determination is to be used in the permitting process.
- ☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is subject to the ebb and flow of the tide.
- ☐ A Corps jurisdictional determination is required in order to obtain my local/state authorization.
- ☐ I intend to contest jurisdiction over a particular aquatic resource and the request the Corps to confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- ☐ I believe that the site may be comprised entirely of dry land.
- ☐ Other: _____

*Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an jurisdictional determination cannot be evaluated nor can a jurisdictional determination be issued.

III. TYPE OF REQUEST:

¹**Delineation Concurrence (DC)** – A DC provides concurrence that the delineated boundaries of wetlands on a property are a reasonable representation of the aquatic resources on-site. A DC does not address the jurisdictional status of the aquatic resources. (NOTE: A DC is generally the quickest type of standalone request for the Corps to review and process.)

²**Approved** – An AJD is defined in Corps regulations at 33 CFR 331.2. As explained in further detail in RGL 16-01, an AJD is used to indicate that this office has identified the presence or absence of wetlands and/or other aquatic resources on a site, including their accurate location(s) and boundaries, as well as their jurisdictional status. AJDs are valid for 5 years.

³**Preliminary** – A PJD is defined in Corps regulations at 33 CFR 331.2. As explained in further detail in RGL 16-01, a PJD is used to indicate that this office has identified the approximate location(s) and boundaries of wetlands and/or other aquatic resources on a site that are presumed to be subject to regulatory jurisdiction of the Corps of Engineers. Unlike an AJD, a PJD does not represent a definitive, official determination that there are, or that there are not, jurisdictional aquatic resources on a site, and does not have an expiration date.

⁴ **“No Permit Required” (NPR) Letter**- A NPR letter may be provided by the Corps to notify the requestor that an activity will not require a permit (authorization) from the Corps; this letter can only be used if the proposed activity is not a regulated activity, regardless of where the activity may occur. A NPR letter cannot be used to indicate the presence or absence of wetlands and/or other aquatic resources, nor can it be used to determine their jurisdictional status.

NOTE 1: Pre-approved Delineations and/or JDs are NOT a pre-requisite for submitting a DA permit application. Requests for JDs and/or DCs that are not associated with a DA permit application (Standalone Delineation / JD requests) will be reviewed and processed as time allows and based on available resources.

NOTE 2: Although not a requirement, it is recommended that Standalone requests be prepared and submitted by an environmental consultant to expedite the review process.

Select the Appropriate Request:

☐ **Pre-Construction Notification or Department of the Army permit application**

- ☐ with Delineation only (no written concurrence of delineation)
- ☐ with Delineation Concurrence¹
- ☐ with Preliminary Jurisdictional Determination (PJD)³
- ☐ with Approved Jurisdictional Determination (AJD)²

☐ **Standalone Delineation / Jurisdictional Determination**

Standalone Delineation / Jurisdictional Determination requests will be reviewed and processed as time allows and based on available resources.

- ☐ Delineation Concurrence¹
- ☐ Preliminary Jurisdictional Determination (PJD)³
- ☐ Approved Jurisdictional Determination (AJD)²

☐ I request that the **Corps delineate** the wetlands and/or other aquatic resources that may be present on my property.

These requests have historically been conducted as a courtesy for private property owners for minor actions. Due to current workload and priorities, the Charleston District Regulatory Division will only provide this service on a limited basis for private individuals on small tracts of land (typically 1 acre or less).

- ☐ with the attached Pre-Construction Notification or Department of the Army permit application
(This may delay processing times. The review of the permit application will not start until the delineation has been completed by the Corps.)
- ☐ with a Delineation Only, an AJD or PJD

☐ **“No Permit Required” (NPR) Letter** as I believe my proposed activity is not regulated⁴

☐ **Unclear** and require additional information to inform my decision.

IV. LEGAL RIGHT OF ENTRY

By signing below, I am indicating that I have the authority, or am acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant U.S. Army Corps of Engineers personnel right of entry to legally access the property(ies) subject to this request for the purposes of conducting on-site investigations (e.g., digging and refilling shallow holes) and issuing a jurisdictional determination. I acknowledge that my signature is an affirmation that I possess the requisite property rights to request a jurisdictional determination on the properties subject to this request.

Mailing Address

Property Address / TMS #(s)

Email Address

Daytime Phone Number

*Signature:

Printed Name and Date

***Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

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JURISDICTIONAL DETERMINATION AND DELINEATION CHECKLIST:

This checklist is to assist prospective requesters in submitting complete and proper information. This is NOT a comprehensive list nor are all items mandatory for all projects. However, the list contains general information typically necessary for this office to confirm jurisdictional and/or wetland delineations *as part of the permitting process*. Required items are indicated by an asterisk (*). To reduce delays in verifying Jurisdictional Determinations and Delineations, it is recommended that the information provided is a complete and true representation of wetlands and other aquatic resources that may be present onsite. It is also recommended that submissions be prepared and submitted by an environmental consultant. Although this is not a requirement, it will significantly expedite the review process.

Following these standards will help to expedite our review. Flexibility of these standards may be determined by the Regulatory Division on a case-by-case basis only. Please note the Corps has the ability to reject delineation work that is incomplete or inaccurate.

☐ *Completed Request For Corps Jurisdictional Determination (JD) / Delineation AND Legal Right of Entry

☐ Site Information:

- ☐ ***Location Maps:** large-scale and small-scale maps, including streets, intersections, cities and an accurate depiction of the site boundary shown.

Note: Only contiguous/adjoining parcels can be submitted under one JD request. If there is an area not within the JD request that separates the areas of review (i.e., a road, utility line, etc.), a separate JD request should be submitted each area.

- ☐ ***Overlay of site boundary** on aerial photo, USGS topographic map, soil survey, NWI Map, etc.
- ☐ ***Site's coordinates** should be based on a standard coordinate system, i.e., Geographic (at least to the nearest tenth of a second), State Plane or UTM. Indicate the coordinate system (and zone for UTM), units (English or metric) and the corresponding geodetic datum, either NAD27 or NAD83.
- ☐ ***Property lines with measurements** illustrating all existing land features, including streams, ditches, trails, etc.
- ☐ **Landscape photos** of representative upland areas and aquatic resources, with the photo locations and directions of photos marked on a depiction.
- ☐ Current land use and plant communities located on and adjacent to the area under review (i.e., agricultural, industrial, residential, cropland, lawn, forested, etc.). If known, a brief history of the previous land use will be helpful.
- ☐ Proposed & existing structures clearly defined as such.
- ☐ Dimensions of proposed structures such as a driveway, house, garage, and other structures which are proposed in wetlands.
- ☐ Sewage/septic system: location, dimensions and type.
- ☐ Drainage ditches and/or berms: location and dimensions.

- ☐ ***Wetland Determination Data Forms:** Record wetland delineation information for both the upland and wetland side of various points along the boundary. Current version from appropriate Regional Supplement found at:
<https://www.sac.usace.army.mil/Missions/Regulatory.aspx>

☐ Elements for Depictions of All Sites:

- ☐ ***Title Block** with project name, applicant, county, state, date.
- ☐ ***North arrow**
- ☐ ***Solid bold line** depicting project area boundary with label. The project area boundary should be accurate and may be represented by survey, tax map, or GPS coordinates with coordinates provided. Please note that a survey is NOT required. Tax maps may only be used if the project area includes the entire parcel(s). Include the Tax Map Parcel Numbers, Property Identification Numbers, etc., the source of the map, and date of preparation (print date).
- ☐ ***Clearly marked boundaries** of all wetlands and/or other aquatic resources and other pertinent features that are present (Wetlands, Tributaries, Lakes, Borrow Pits, Ponds, Rivers, Drainage Features, Ditches) and have been flagged in the field. Surveyed or GPS coordinates of the boundaries should be provided. (At a minimum, potentially non-jurisdictional linear features should be included on a supplement sketch/depiction.)
- ☐ ***Labels of wetlands and/or other aquatic resources.** Refer to the below tables for the standardized labels that should be used for AJDs, PJDs and/or Delineation Concurrence.
- ☐ ***Size (acres) and length (linear feet)** of each individual wetlands or aquatic resource included on the depiction.
- ☐ ***Wetland Determination Data Form point locations with labels.** (At a minimum, this should be included on a supplement sketch/depiction.)

***Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

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***Standardized Labels for Depictions of Wetlands and Aquatic Resources**

Table 1: Labels for PJDs and Delineation Concurrence

Label	Description
Wetland X (tidal, non-tidal)	All wetlands, including tidal wetlands.
Non-wetlands waters X (tidal, non-tidal)	All non-wetland aquatic resources (ponds, linear features, tributaries, tidal open water.
Upland	Uplands should be labeled
Non-aquatic resource X (Optional) *	Features determined by the Corps to be non-aquatic resources.

Table 2: Labels for AJDs

Jurisdictional Feature Label	Description
TNW X	Traditionally Navigable Water, tidal wetland, or and/or OCRM Critical Area Wetland
Jurisdictional Tributary X	Tributary, relatively permanent water, or stream bed
Jurisdictional Wetland X	Meeting 3-parameters per 1987 Delineation Manual
Other Jurisdictional WOUS X	Other Waters of the United States such as ponds, lakes, ditches, impoundments, etc.
Non-jurisdictional Wetland X	Wetland determined by the Corps to be non-jurisdictional
Non-jurisdictional Feature X (Optional)*	Non-jurisdictional ponds, borrow-pits, linear features, ditches, etc.
Upland	Uplands should be labeled when wetlands or other waters, regardless of jurisdictional status, are present. When no wetlands or other waters are present, the "Upland" label is not necessary.

***Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

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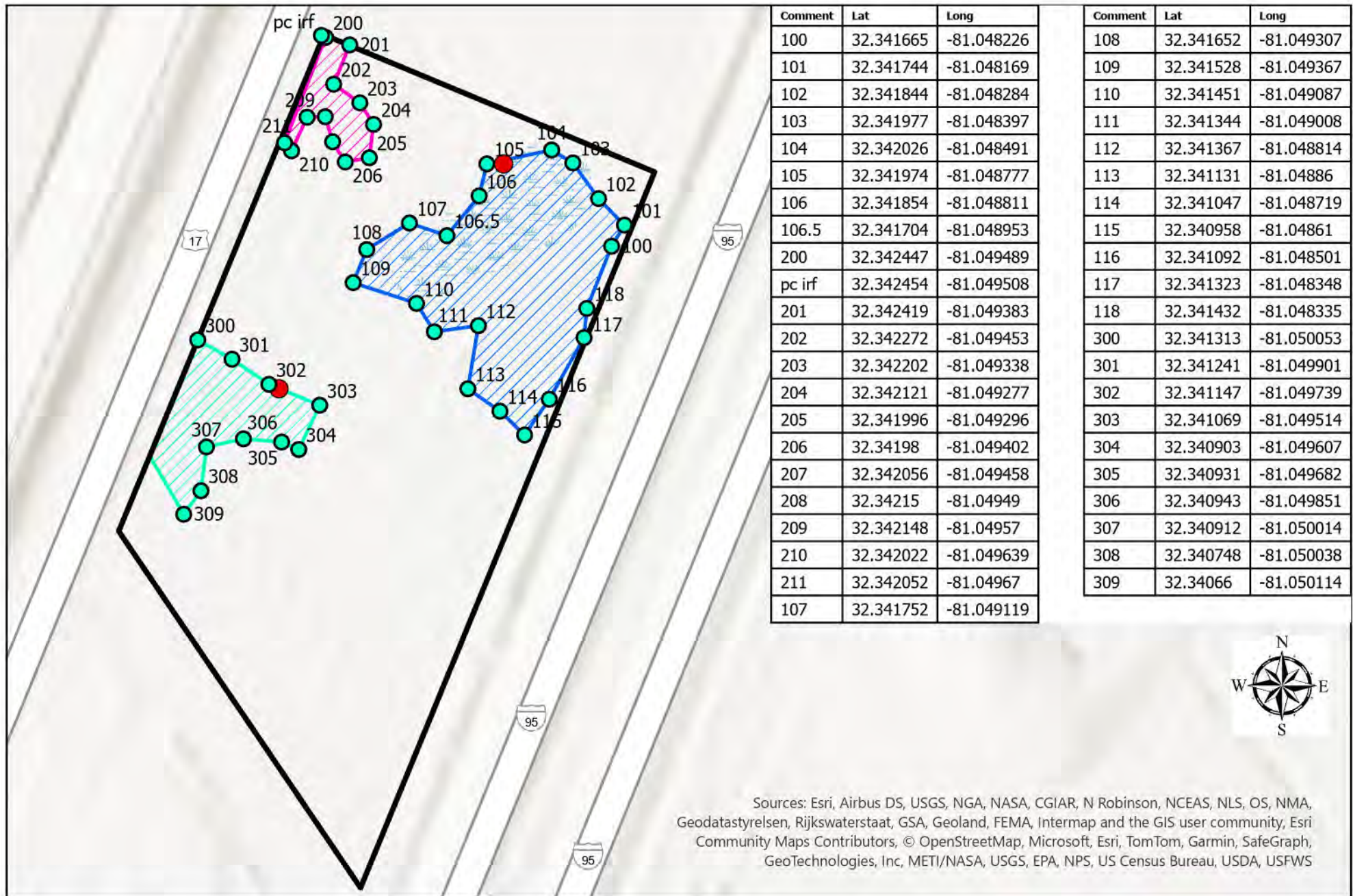
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an jurisdictional determination cannot be evaluated nor can a jurisdictional determination be issued.



Prepared by ES&T Inc.
 June 1, 2024
 Project No. 24-0218
 Main@EST-Savannah.com
 912-224-7312

**Kato Bay Rd-10 Acres
 Hardeeville, SC
 Wetland Delineation Map**

Property Boundary	Wetland B (1.6 Acres)
Uplands (7.7 Acres)	Wetland C (0.5 Acres)
Wetland A (0.2 Acres)	



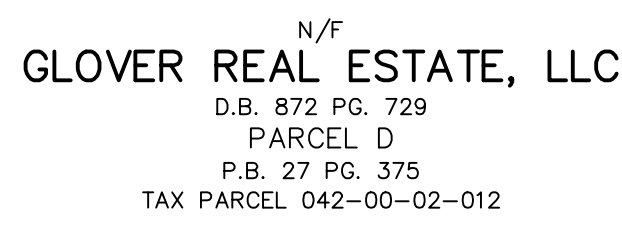
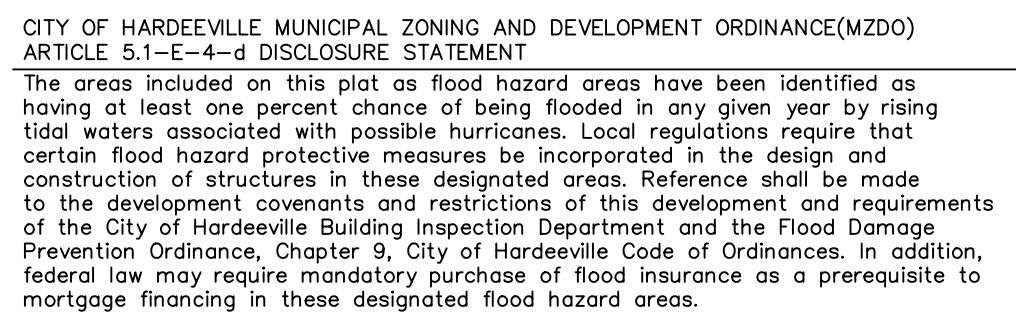
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodastystyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS



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July 1, 2024
Project No. 24-0218
Main@EST-Savannah.com
912-224-7312

Kato Bay Rd-10 Acres Hardeeville, SC Wetland Delineation Map with Coordinates Table

- Wetland Flags
- Data Form Point
- Property Boundary
- Wetland A (0.2 Acres)
- Wetland B (1.6 Acres)
- Wetland C (0.5 Acres)



9.99 ACRES
IGEN LEASING SYSTEMS, LLC
D.B. 1110 PG. 1095
P.B. 38 PG. 434

N/F
ALAN A. ULMER, JR., TRUSTEE
D.B. 865 PG. 982
LOT 2C
P.B. 31 PG. 312
TAX PARCEL 042-00-02-014

U.S. HIGHWAY 17
KATO BAY ROAD
R/W VARIES

- 1) I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF, THE SURVEY SHOWN HEREIN WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS "A" SURVEY AS SPECIFIED THEREIN; ALSO THERE ARE NO OBVIOUS, APPARENT OR VISIBLE ENCRUMPTIONS OR PROJECTIONS OTHER THAN SHOWN.
- 2) AS OF THE DATE OF THIS SURVEY THIS PROPERTY IS LOCATED IN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.25% FLOOD HAZARD ZONE). THE FLOOD HAZARD ZONE MAP NUMBER FOR THIS AREA IS 4505C033850, COMMUNITY NUMBER 450112, DATED 10/18/2019. FLOOD HAZARD ZONE AND BASE ELEVATION SHOULD BE VERIFIED BY PROPER TOWN OR COUNTY BUILDING INSPECTIONS DEPARTMENT.
- 3) BUILDING SETBACKS WHICH EXIST FOR THIS LOT, ARE SHOWN PER CITY OF HARDEEVILLE MUNICIPAL ZONING AND DEVELOPMENT ORDINANCES. EASEMENTS & SETBACKS SHOWN SHOULD BE VERIFIED THRU THE APPROPRIATE ARCHITECTURAL REVIEW BOARD OR BUILDING AGENCY. SURVEYING CONSULTANTS DOES NOT CERTIFY TO THE BUILDING SETBACKS SHOWN ON THIS PLAT, BUT HIGHLY RECOMMENDS THE SAME (HIGHLY COMMERCIAL).
- 4) UNDERGROUND UTILITIES NOT LOCATED EXCEPT AS SHOWN AND ARE APPROXIMATE. SURVEYING CONSULTANTS DOES NOT CERTIFY TO THE EXACT LOCATION OF ANY UNDERGROUND UTILITY.
- 5) NO SUBSURFACE OR ENVIRONMENTAL INVESTIGATION OR WETLAND SURVEYS WERE PERFORMED FOR THIS PLAT. THEREFORE THIS PLAT DOES NOT REFLECT THE EXISTENCE OR NONEXISTENCE OF WETLANDS, CONTAMINATION, OR OTHER CONDITIONS WHICH MAY AFFECT THIS PROPERTY.
- 6) SURVEYING CONSULTANTS CERTIFIES TO THE BOUNDARY AND ASBLUT INFORMATION PROVIDED HEREON AS OF THE DATE OF SURVEY. IF THIS DOCUMENT IS TO BE PROVIDED AS A BASE MAP FOR OTHERS, INFORMATION ADDED AFTER THE DATE OF THIS SURVEY IS NOT THE RESPONSIBILITY OF SURVEYING CONSULTANTS.
- 7) THIS SURVEY WAS CONDUCTED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE, THEREFORE THERE MAY BE OTHER EASEMENTS, RIGHT-OF-WAY, SETBACK LINES, AGREEMENTS, RESERVATIONS, RESTRICTIONS, OR OTHER SIMILAR MATTERS OF PUBLIC RECORD, NOT REFLECTED ON THIS PLAT.
- 8) GPS WRS NETWORK OBSERVATIONS WERE TAKEN 01/17/2024 TO DETERMINE THE HORIZONTAL DATUM. SURVEY IS ORIENTED TO THE S.C. STATE PLANE COORDINATE GRID NAD 83 DATUM.

(1) A PLAT OF THE WEST SIDE OF THE ARGENT TRACT (5,313.466 ACRES BEING A PORTION OF REALITY ID #042-00-02-012, CITY OF HARDEEVILLE, JASPER COUNTY, SOUTH CAROLINA, DATED: 08/28/2003,
BY: BOYCE L YOUNG, S.C.P.L.S. NO. 11079,
RECORDED: P.B. 27, PG. 375, DATE: 09/30/2004.

(2) A SUBDIVISION PLAT OF A PORTION OF PARCEL D, A PORTION OF THE WEST ARGENT TRACT, TMS: 042-00-02-014, EXISTING HERBERT PARK, PHASE TWO, CITY OF HARDEEVILLE, JASPER COUNTY, SOUTH CAROLINA, DATED: 01/07/2008,
BY: MICHAEL JM GARDNER, S.C.R.L.S. NO. 12239,
RECORDED: P.B. 31, PG. 312, DATE: 01/27/2009.

(3) A DIVISION OF A PORTION OF TAX MAP # 042-00-02-012, NORTH OF HARDEEVILLE, JASPER COUNTY, SOUTH CAROLINA, DATED: 08/23/2022,
BY: THOMAS G STANLEY, S.C.P.L.S. NO. 18269,
RECORDED: P.B. 38, PG. 434, DATE: 09/02/2022.

I.O.	IRON PIPE, OLD (FOUND)
B.S.L.	BUILDING SETBACK LINE
COM	CLEANOUT MARKER
GW	GUY WIRE
NTS	NOT TO SCALE
N/F	NOW OR FORMERLY
PP	POWER POLE
R/W	RIGHT OF WAY
SECG	SOUTH CAROLINA ELECTRIC & GAS COMPANY
SN	SIGN
SN NO PL	WARNING NATURAL GAS PIPELINE
SN UG FO	WARNING UNDERGROUND FIRE OPTC
TEL	TELEPHONE JUNCTION BOX
WV	WATER VALVE
WVM	WATER VALVE MARKER
	FENCE LINE
DHP	OVERHEAD POWER LINE



ADDRESS: KATO BAY ROAD
TAX PARCEL I.D. NO. 042-00-02-024

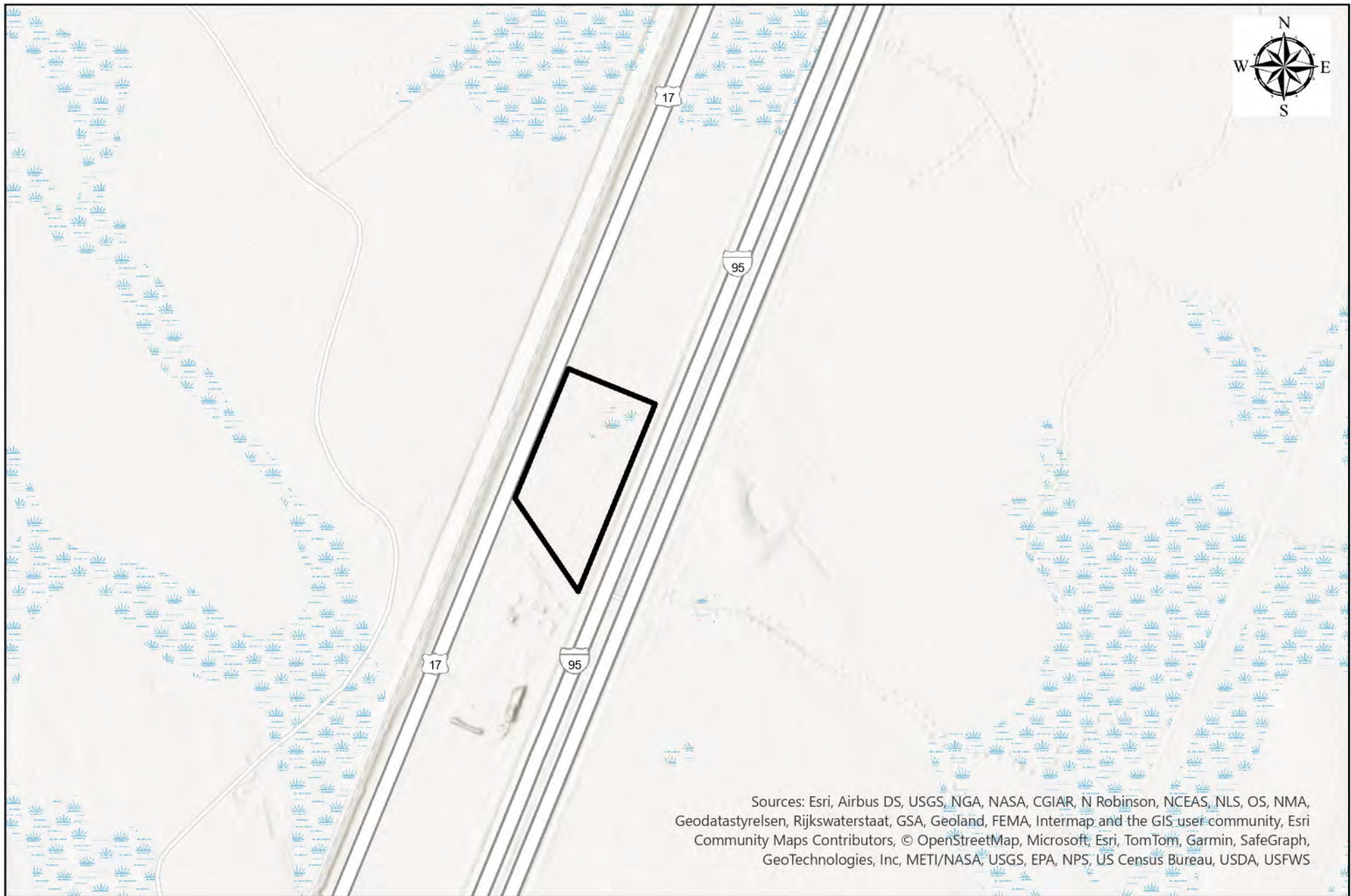
 **SURVEYING CONSULTANTS**

GA Telephone: (912) 826-2775
www.Germania-Conventions.com

www.SurveyingConsultants.com
Email: SC@SurveyingConsultants.com

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Email: SC@SurveyingConsultants.com

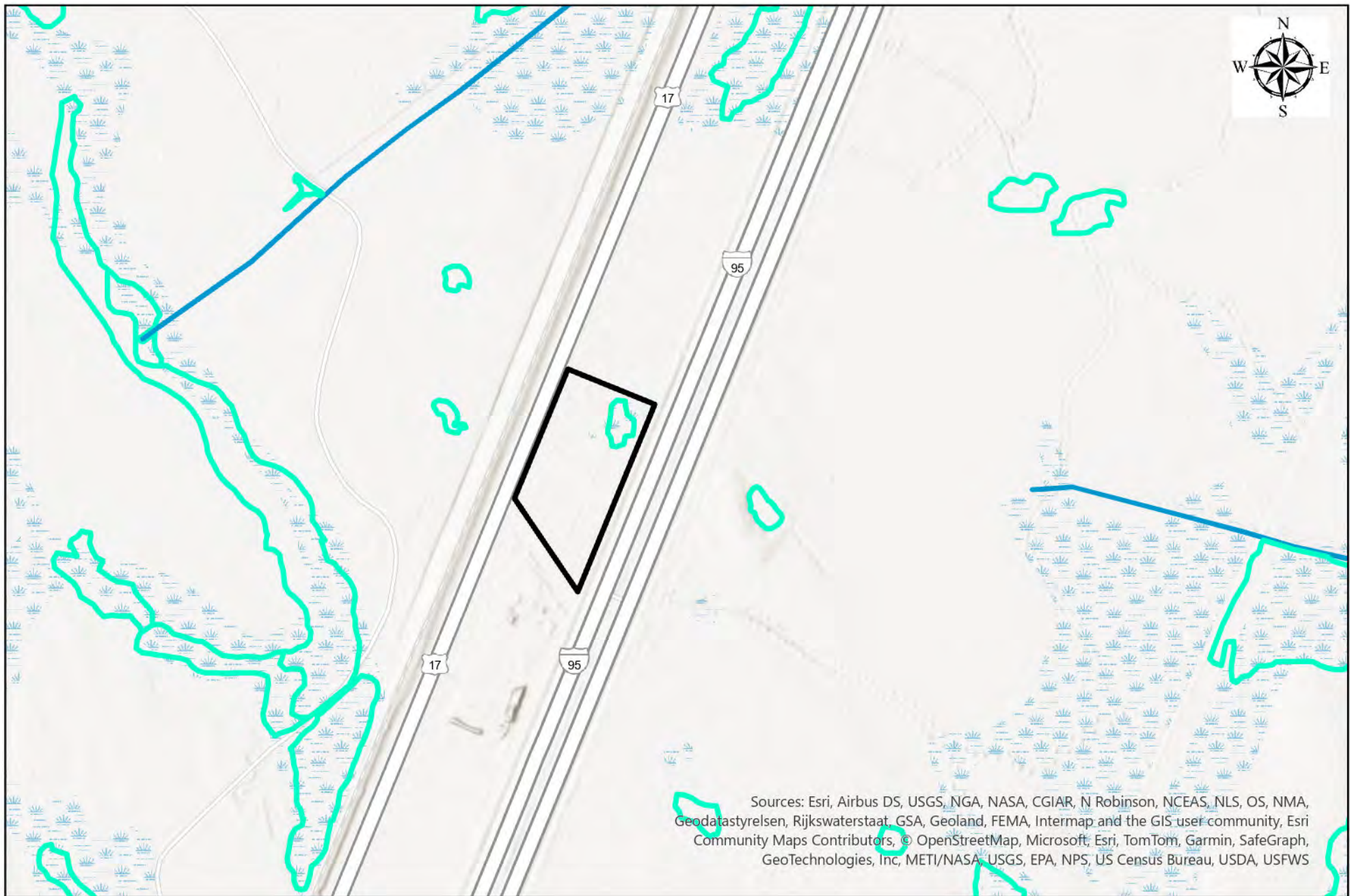
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Kato Bay Rd-10 Acres
Hardeeville, SC
USGS Topographical Map

 Property Boundary



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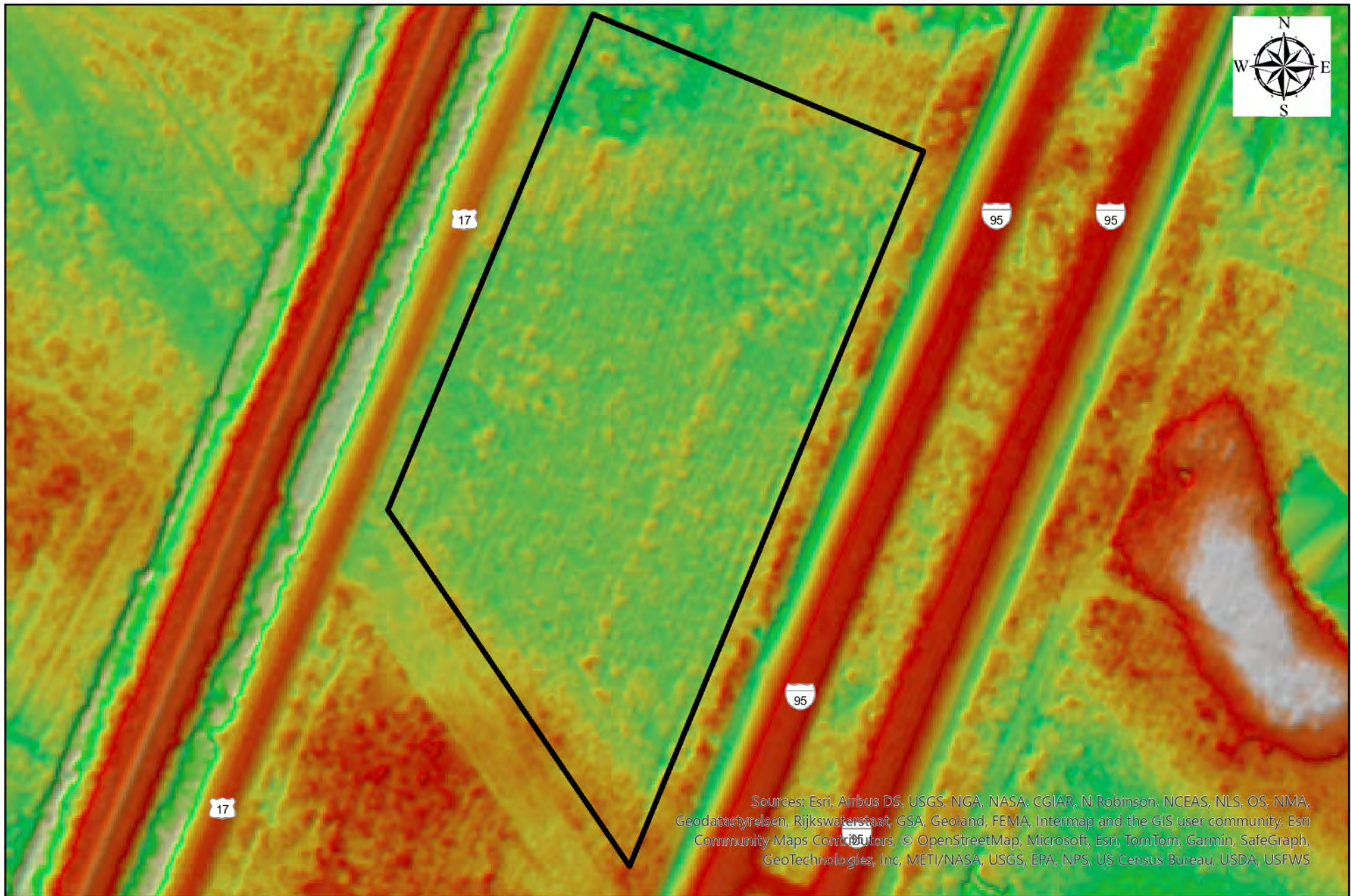
**Kato Bay Rd-10 Acres
 Hardeeville, SC
 National Wetland Inventory Map**

Property Boundary

National Wetland Inventory

Marine

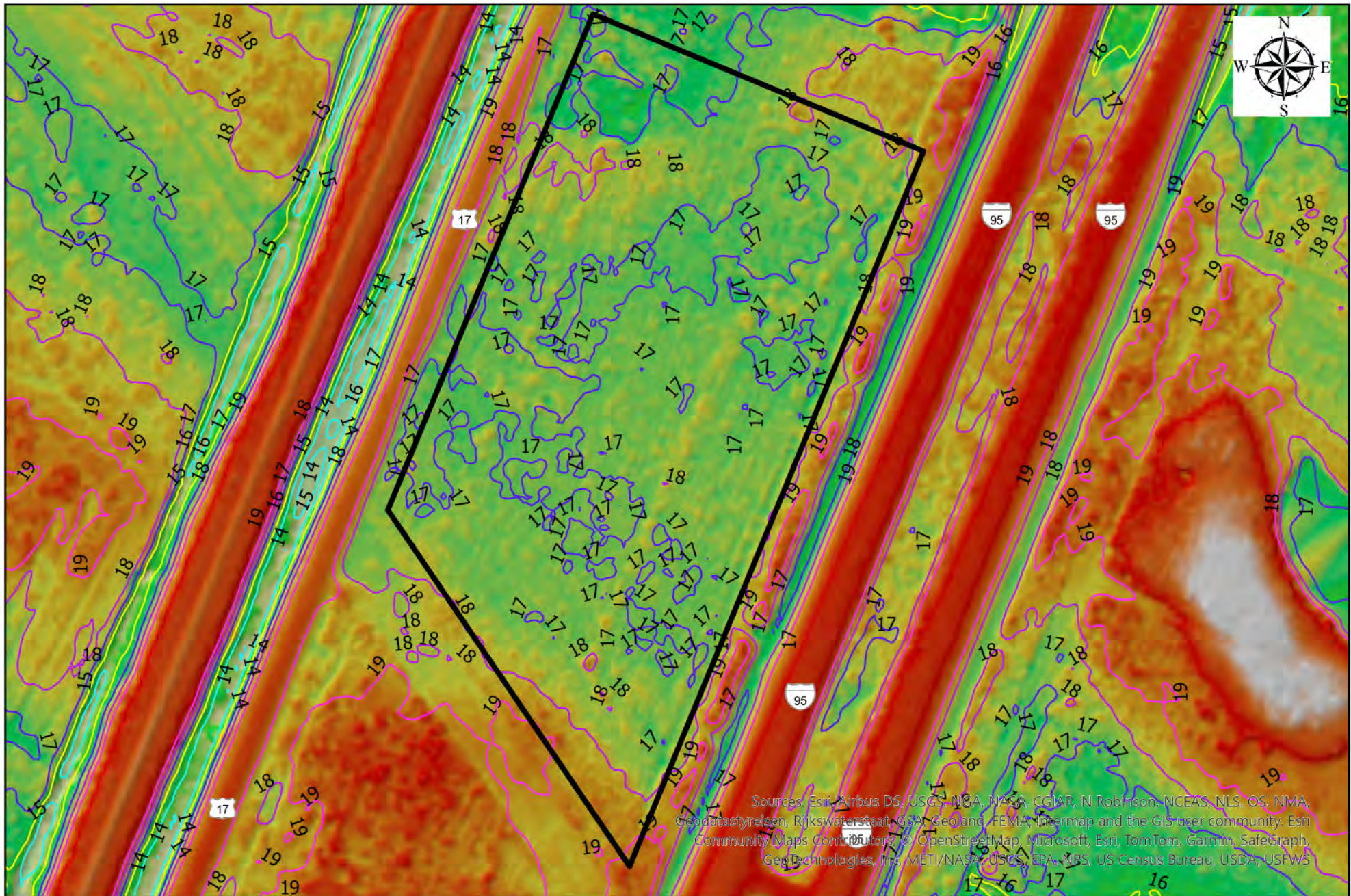
Estuary
 Marsh, Swamp, Bog, Prairie
 River
 Lake, Reservoir



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Kato Bay Rd-10 Acres
Hardeeville, SC
LIDAR Aerial Map

 Property Boundary



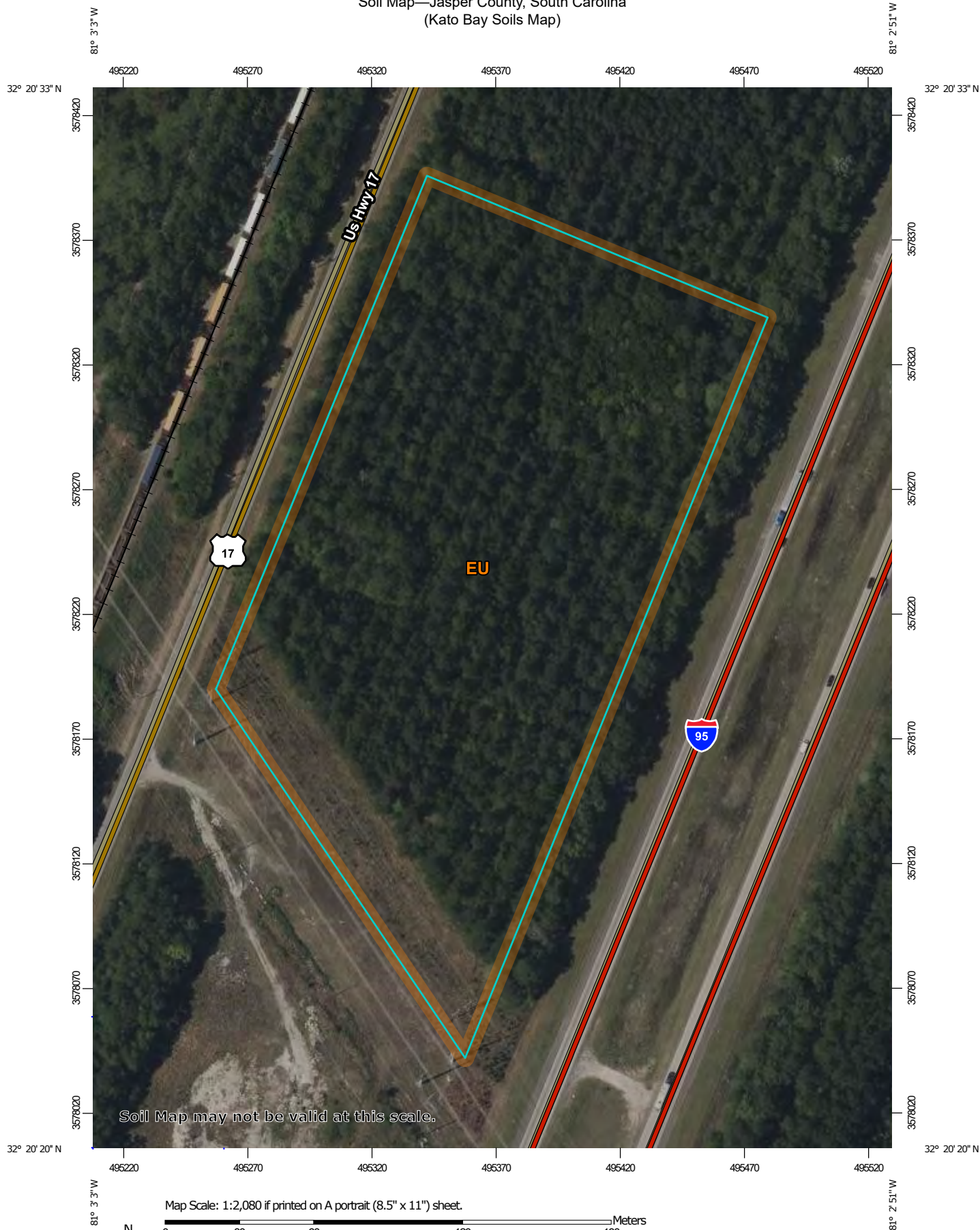
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Kato Bay Rd-10 Acres
Hardeeville, SC
Contour Map
Approx. Elevation in Feet

Ground Contours (in Feet)

Elevation
 12 - 15
 15.01 - 16
 16.01 - 17
 17.01 - 18
 18.01 - 19

Soil Map—Jasper County, South Carolina (Kato Bay Soils Map)



Soil Map—Jasper County, South Carolina
(Kato Bay Soils Map)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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:

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: Jasper County, South Carolina

Survey Area Data: Version 19, Aug 29, 2023

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

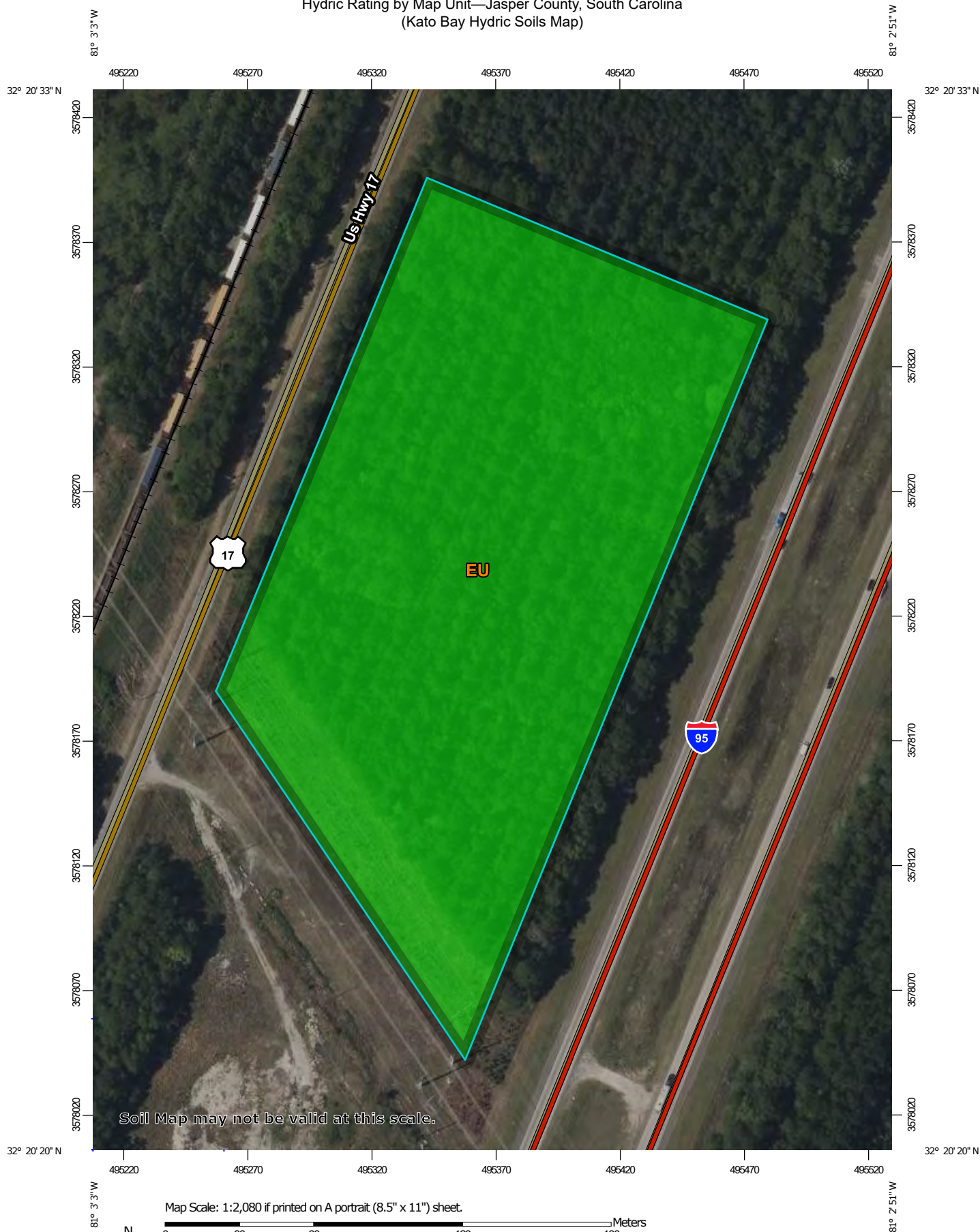
Date(s) aerial images were photographed: Apr 15, 2022—Jun 2, 2022

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.

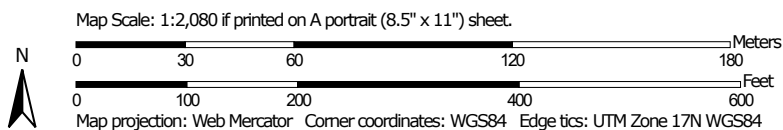
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EU	Eulonia association	10.0	100.0%
Totals for Area of Interest		10.0	100.0%

Hydric Rating by Map Unit—Jasper County, South Carolina (Kato Bay Hydric Soils Map)



Soil Map may not be valid at this scale.



Hydric Rating by Map Unit—Jasper County, South Carolina
(Kato Bay Hydric Soils Map)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 Hydric (100%)
 Hydric (66 to 99%)
 Hydric (33 to 65%)
 Hydric (1 to 32%)
 Not Hydric (0%)
 Not rated or not available

Soil Rating Lines

 Hydric (100%)
 Hydric (66 to 99%)
 Hydric (33 to 65%)
 Hydric (1 to 32%)
 Not Hydric (0%)
 Not rated or not available

Soil Rating Points

 Hydric (100%)
 Hydric (66 to 99%)
 Hydric (33 to 65%)
 Hydric (1 to 32%)
 Not Hydric (0%)
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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:
 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: Jasper County, South Carolina
 Survey Area Data: Version 19, Aug 29, 2023

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

Date(s) aerial images were photographed: Apr 15, 2022—Jun 2, 2022

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.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
EU	Eulonia association	0	10.0	100.0%
Totals for Area of Interest			10.0	100.0%

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower



Prepared by ES&T Inc.
July 1, 2024
Project No. 24-0218
Main@EST-Savannah.com
912-224-7312

**Kato Bay Rd-10 Acres
Hardeeville, SC
FEMA Floodplain Map**

FEMA Floodplain

- 0.2% Annual Chance Flood Hazard
- 1% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Area with Reduced Risk Due to Levee
- Special Floodway

Kato Bay Rd

2006 Aerial

Legend



Google Earth

Image USDA/FPAC/GEO



500 ft

Kato Bay Rd

2008 Aerial

Legend



Google Earth

Image U.S. Geological Survey

500 ft

Kato Bay Rd

2011 Aerial

Legend



Google Earth

500 ft



Kato Bay Rd

2018 Aerial

Legend



Google Earth



500 ft

Kato Bay Rd

2022 Aerial

Legend



Google Earth

Image © 2023 Maxar Technologies



500 ft



Figure 1: Standing at eastern property line, facing east towards I-95.

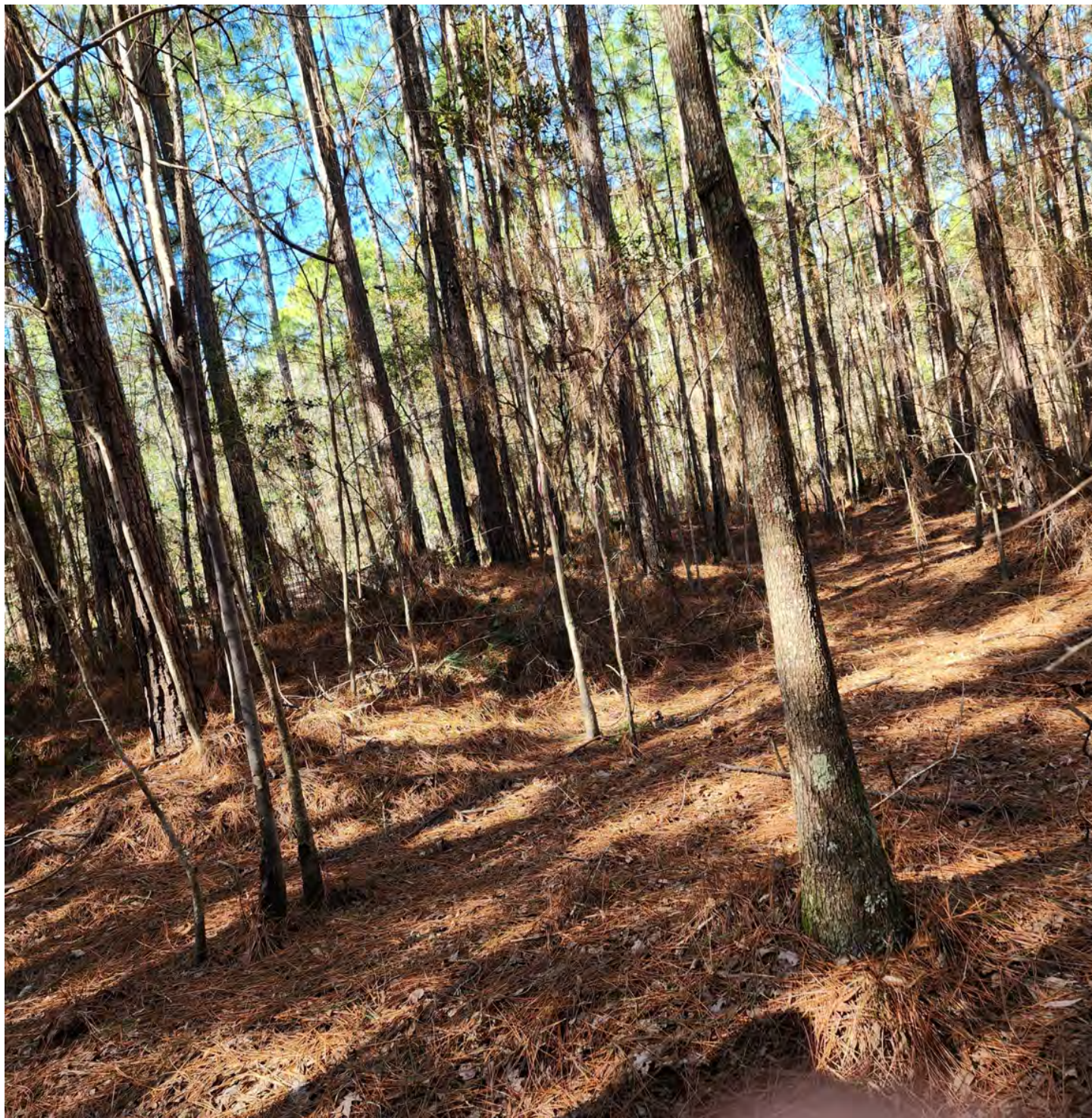


Figure 2: Mid-Property facing west towards Kato Bay Rd.



Figure 3: Cut line for acquired utility easement, Facing west towards Kato Bay Rd



Figure 4: Cut line for acquired utility easement, Facing east towards I-95



Figure 5: Planted Pine Crops (planted North to South)



Figure 6: Facing west along off-site utility easement on southern property line



Figure 7: Wetland B-Facing toward I-95 (East)



Figure 8: Wetland B-Facing Northeast



Figure 9: Upland Soil-Eulonia Series (Upper 10")



Figure 10: Upland Soil-Eulonia Series (Upper 10")



Figure 11: Upland Soil-Eulonia Series (Upper 24")



Figure 12: Upland Soil-Eulonia Series (Upper 24")



Figure 13: Wetland Soil-Argent Series (Upper 6")



Figure 14: Wetland Soil-Argent Series (10" to 20")

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: <u>Kato Bay Rd (PIN # 042-00-02-024)</u>	City/County: <u>Hardeeville/Jasper</u>	Sampling Date: <u>2-13-24</u>
Applicant/Owner: <u>Brian Russo/Kato Bay Investments LLC</u>	State: <u>SC</u>	Sampling Point: <u>Wet C-302</u>
Investigator(s): <u>T. Merrill, M. Williams, I. Mitchell</u> Section, Township, Range: _____		
Landform (hillside, terrace, etc.): <u>Coastal Plain</u>	Local relief (concave, convex, none): <u>Concave</u>	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>LRR T</u>	Lat: <u>32.341147</u>	Long: <u>-81.049739</u> Datum: <u>WGS 84</u>
Soil Map Unit Name: <u>Argent</u> NWI classification: <u>PFO4/1C</u>		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No _____ (If no, explain in Remarks.)		
Are Vegetation <u>X</u> , Soil <u>X</u> , or Hydrology <u>X</u> significantly disturbed? Are "Normal Circumstances" present? Yes _____ No <u>X</u>		
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 <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	<table style="width: 100%;"> <tr> <td style="width: 60%;">Is the Sampled Area within a Wetland?</td> <td style="width: 40%;">Yes <u>X</u> No _____</td> </tr> </table>	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____		
Remarks: Planted Pine Stands--evidence of silvicultural activities (mechanical site prep including subsurface plowing/tilling of soils, bedding, clearing, ditching, logging trails, and staging areas.			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Aquatic Fauna (B13) _____ High Water Table (A2) _____ Marl Deposits (B15) (LRR U) <u>X</u> Saturation (A3) _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) _____ Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) _____ Iron Deposits (B5) _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)	<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) <u>X</u> Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) <u>X</u> FAC-Neutral Test (D5) _____ Sphagnum Moss (D8) (LRR T, U)		
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> (includes capillary fringe)	<table style="width: 100%;"> <tr> <td style="width: 60%;">Wetland Hydrology Present?</td> <td style="width: 40%;">Yes <u>X</u> No _____</td> </tr> </table>	Wetland Hydrology Present?	Yes <u>X</u> No _____
Wetland Hydrology Present?	Yes <u>X</u> No _____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: 2022 LiDAR imagery shows wetland saturation. 2006 Aerial indicates the site was cleared and replanted with pine trees in 2007.			

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Wet C-302

Tree Stratum (Plot size: <u>40x40</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Liquidambar styraciflua</u>	25	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. <u>Acer rubrum</u>	25	Yes	FAC																	
3. <u>Persea borbonia</u>	10	No	FACW																	
4. <u>Pinus taeda</u>	10	No	FAC																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
70 =Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>35</u></td> <td>x 2 = <u>70</u></td> </tr> <tr> <td>FAC species <u>60</u></td> <td>x 3 = <u>180</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>250</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.63</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>35</u>	x 2 = <u>70</u>	FAC species <u>60</u>	x 3 = <u>180</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>250</u> (B)	Prevalence Index = B/A = <u>2.63</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>35</u>	x 2 = <u>70</u>																			
FAC species <u>60</u>	x 3 = <u>180</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>95</u> (A)	<u>250</u> (B)																			
Prevalence Index = B/A = <u>2.63</u>																				
50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																				
Sapling/Shrub Stratum (Plot size: <u>40x40</u>)																				
1. <u>Ilex glabra</u>	25	Yes	FACW																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
25 =Total Cover																				
50% of total cover: <u>13</u> 20% of total cover: <u>5</u>																				
Herb Stratum (Plot size: _____)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
_____ =Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				
Woody Vine Stratum (Plot size: _____)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
_____ =Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				

Hydrophytic Vegetation Indicators:
1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
 _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____
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Remarks: (If observed, list morphological adaptations below.)

The site was cleared in 2006 and replanted with pine trees the next year. Pine rows are planted north to south.

SOIL

Sampling Point: Wet C-302

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		
0-10	10YR 2/1	100					Loamy/Clayey	
10-24	10YR 5/1	75	10YR 6/8	25	RM	M	Loamy/Clayey	Prominent redox

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.
²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils³:
☐ 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) ☐ Barrier Islands 1 cm Muck (S12) ☐ (MLRA 153B, 153D) ☐ 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 Floodplain Soils (F20) ☐ (MLRA 149A, 153C, 153D) ☐ Very Shallow Dark Surface (F22) ☐ (MLRA 138, 152A in FL, 154)
☐ 1 cm Muck (A9) (LRR O) ☐ 2 cm Muck (A10) (LRR S) ☐ Coast Prairie Redox (A16) ☐ (outside MLRA 150A) ☐ Reduced Vertic (F18) ☐ (outside MLRA 150A, 150B) ☐ Piedmont Floodplain Soils (F19) (LRR P, T) ☐ Anomalous Bright Floodplain Soils (F20) ☐ (MLRA 153B) ☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (F22) ☐ (outside MLRA 138, 152A in FL, 154) ☐ Barrier Islands Low Chroma Matrix (TS7) ☐ (MLRA 153B, 153D) ☐ Other (Explain in Remarks)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:
 The presence of a reduced matrix within 12" of the soil surface indicates that this soil is hydric based on the hydric soil definition: "a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part".

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Kato Bay Rd (PIN # 042-00-02-024) City/County: Hardeeville/Jasper Sampling Date: 2-13-24

Applicant/Owner: Brian Russo/Kato Bay Investments LLC State: SC Sampling Point: Upland 302

Investigator(s): T. Merrill, M. Williams, I. Mitchell Section, Township, Range: _____

Landform (hillside, terrace, etc.): Coastal Plain Local relief (concave, convex, none): Convex Slope (%): 2-5%

Subregion (LRR or MLRA): LRR T Lat: 32.341147 Long: -81.049739 Datum: WGS 84

Soil Map Unit Name: Eulonia NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

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 _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; text-align: center;"> Is the Sampled Area within a Wetland? </td> <td style="width: 40%; text-align: center;"> Yes _____ No <u>X</u> </td> </tr> </table>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>		
Remarks: Planted Pine Stands--evidence of silvicultural activities (mechanical site prep including subsurface plowing/tilling of soils, bedding, clearing, ditching, logging trails, and staging areas.			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Aquatic Fauna (B13) _____ High Water Table (A2) _____ Marl Deposits (B15) (LRR U) _____ Saturation (A3) _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) _____ Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) _____ Iron Deposits (B5) _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)	<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) _____ Sphagnum Moss (D8) (LRR T, U)		
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; text-align: center;"> Wetland Hydrology Present? </td> <td style="width: 40%; text-align: center;"> Yes _____ No <u>X</u> </td> </tr> </table>	Wetland Hydrology Present?	Yes _____ No <u>X</u>
Wetland Hydrology Present?	Yes _____ No <u>X</u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: 2006 Aerial indicates the site was cleared and replanted with pine trees.			

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Upland 302

Tree Stratum (Plot size: <u>40x40</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Pinus taeda</i></u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>40</u> =Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>65</u></td> <td>x 3 = <u>195</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>315</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.32</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>65</u>	x 3 = <u>195</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>315</u> (B)	Prevalence Index = B/A = <u>3.32</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>65</u>	x 3 = <u>195</u>																			
FACU species <u>30</u>	x 4 = <u>120</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>95</u> (A)	<u>315</u> (B)																			
Prevalence Index = B/A = <u>3.32</u>																				
50% of total cover: <u>20</u> 20% of total cover: <u>8</u>																				
Sapling/Shrub Stratum (Plot size: <u>40x40</u>)																				
1. <u><i>Morella cerifera</i></u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)																
2. <u><i>Serenoa repens</i></u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>35</u> =Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
50% of total cover: <u>18</u> 20% of total cover: <u>7</u>																				
Herb Stratum (Plot size: _____)																				
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u> </u> =Total Cover				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
50% of total cover: _____ 20% of total cover: _____																				
Woody Vine Stratum (Plot size: <u>40x40</u>)																				
1. <u><i>Pteridium aquilinum</i></u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
<u>20</u> =Total Cover																				
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																				

 Remarks: (If observed, list morphological adaptations below.)
 2006 site was cleared and replanted with pine trees.

SOIL

Sampling Point: Upland 302

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		
0-10	2.5Y 4/2	100					Sandy	
10-24	10YR 6/4	100					Sandy	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.							² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)							Indicators for Problematic Hydric Soils³:	
☐ Histosol (A1)			☐ Thin Dark Surface (S9) (LRR S, T, U)			☐ 1 cm Muck (A9) (LRR O)		
☐ Histic Epipedon (A2)			☐ Barrier Islands 1 cm Muck (S12)			☐ 2 cm Muck (A10) (LRR S)		
☐ Black Histic (A3)			☐ (MLRA 153B, 153D)			☐ Coast Prairie Redox (A16)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Mucky Mineral (F1) (LRR O)			☐ (outside MLRA 150A)		
☐ Stratified Layers (A5)			☐ Loamy Gleyed Matrix (F2)			☐ Reduced Vertic (F18)		
☐ Organic Bodies (A6) (LRR P, T, U)			☐ Depleted Matrix (F3)			☐ (outside MLRA 150A, 150B)		
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)			☐ Redox Dark Surface (F6)			☐ Piedmont Floodplain Soils (F19) (LRR P, T)		
☐ Muck Presence (A8) (LRR U)			☐ Depleted Dark Surface (F7)			☐ Anomalous Bright Floodplain Soils (F20)		
☐ 1 cm Muck (A9) (LRR P, T)			☐ Redox Depressions (F8)			☐ (MLRA 153B)		
☐ Depleted Below Dark Surface (A11)			☐ Marl (F10) (LRR U)			☐ Red Parent Material (F21)		
☐ Thick Dark Surface (A12)			☐ Depleted Ochric (F11) (MLRA 151)			☐ Very Shallow Dark Surface (F22)		
☐ Coast Prairie Redox (A16) (MLRA 150A)			☐ Iron-Manganese Masses (F12) (LRR O, P, T)			☐ (outside MLRA 138, 152A in FL, 154)		
☐ Sandy Mucky Mineral (S1) (LRR O, S)			☐ Umbric Surface (F13) (LRR P, T, U)			☐ Barrier Islands Low Chroma Matrix (TS7)		
☐ Sandy Gleyed Matrix (S4)			☐ Delta Ochric (F17) (MLRA 151)			☐ (MLRA 153B, 153D)		
☐ Sandy Redox (S5)			☐ Reduced Vertic (F18) (MLRA 150A, 150B)			☐ Other (Explain in Remarks)		
☐ Stripped Matrix (S6)			☐ Piedmont Floodplain Soils (F19) (MLRA 149A)					
☐ Dark Surface (S7) (LRR P, S, T, U)			☐ Anomalous Bright Floodplain Soils (F20)					
☐ Polyvalue Below Surface (S8)			☐ (MLRA 149A, 153C, 153D)					
☐ (LRR S, T, U)			☐ Very Shallow Dark Surface (F22)					
			☐ (MLRA 138, 152A in FL, 154)					
Restrictive Layer (if observed):								
Type: _____								
Depth (inches): _____						Hydric Soil Present? Yes ____ No <u>X</u>		
Remarks: 								

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: <u>Kato Bay Rd (PIN # 042-00-02-024)</u>	City/County: <u>Hardeeville/Jasper</u>	Sampling Date: <u>2-13-24</u>
Applicant/Owner: <u>Brian Russo/Kato Bay Investments LLC</u>	State: <u>SC</u>	Sampling Point: <u>Wet B-105</u>
Investigator(s): <u>T. Merrill, M. Williams, I. Mitchell</u> Section, Township, Range: _____		
Landform (hillside, terrace, etc.): <u>Coastal Plain</u>	Local relief (concave, convex, none): <u>Concave</u>	Slope (%): <u>0-2%</u>
Subregion (LRR or MLRA): <u>LRR T</u>	Lat: <u>32.341974</u>	Long: <u>-81.048777</u> Datum: <u>WGS 84</u>
Soil Map Unit Name: <u>Argent</u>		NWI classification: <u>PFO1/C</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No _____ (If no, explain in Remarks.)		
Are Vegetation <u>X</u> , Soil <u>X</u> , or Hydrology <u>X</u> significantly disturbed? Are "Normal Circumstances" present? Yes _____ No <u>X</u>		
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 <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Planted Pine Stands--evidence of silvicultural activities (mechanical site prep including subsurface plowing/tilling of soils, bedding, clearing, ditching, logging trails, and staging areas.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☒ Surface Water (A1) ☐ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ 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) ☐ Sphagnum Moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>12</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: 2022 LiDAR imagery shows wetland saturation. 2006 Aerial indicates the site was cleared and replanted with pine trees in 2007.	

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Wet B-105

Tree Stratum (Plot size: <u>40x40</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Liquidambar styraciflua</u>	25	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. <u>Acer rubrum</u>	25	Yes	FAC																	
3. <u>Persea borbonia</u>	10	No	FACW																	
4. <u>Magnolia virginiana</u>	10	No	FACW																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
70 =Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>45</u></td> <td>x 2 = <u>90</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>240</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.53</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>45</u>	x 2 = <u>90</u>	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>240</u> (B)	Prevalence Index = B/A = <u>2.53</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>45</u>	x 2 = <u>90</u>																			
FAC species <u>50</u>	x 3 = <u>150</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>95</u> (A)	<u>240</u> (B)																			
Prevalence Index = B/A = <u>2.53</u>																				
50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																				
Sapling/Shrub Stratum (Plot size: <u>40x40</u>)																				
1. <u>Ilex glabra</u>	25	Yes	FACW	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
25 =Total Cover																				
50% of total cover: <u>13</u> 20% of total cover: <u>5</u>																				
Herb Stratum (Plot size: _____)																				
1. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
_____ =Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				
Woody Vine Stratum (Plot size: _____)																				
1. _____				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
_____ =Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				

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

The site was cleared in 2006 and replanted with pine trees the next year. Pine rows are planted north to south.

SOIL

Sampling Point: Wet B-105

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		
0-10	10YR 3/1	100					Loamy/Clayey	
10-24	10YR 5/1	75	10YR 6/8	25	RM	M	Loamy/Clayey	Prominent redox
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ 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) ☐ Barrier Islands 1 cm Muck (S12) (MLRA 153B, 153D) ☐ 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 Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ☐ Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) Indicators for Problematic Hydric Soils³: ☐ 1 cm Muck (A9) (LRR O) ☐ 2 cm Muck (A10) (LRR S) ☐ Coast Prairie Redox (A16) (outside MLRA 150A) ☐ Reduced Vertic (F18) (outside MLRA 150A, 150B) ☐ Piedmont Floodplain Soils (F19) (LRR P, T) ☐ Anomalous Bright Floodplain Soils (F20) (MLRA 153B) ☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (F22) (outside MLRA 138, 152A in FL, 154) ☐ Barrier Islands Low Chroma Matrix (TS7) (MLRA 153B, 153D) ☐ Other (Explain in Remarks) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
Restrictive Layer (if observed): Type: _____ Depth (inches): _____							Hydric Soil Present? Yes ☒ No _____	
Remarks: The presence of a reduced matrix within 12" of the soil surface indicates that this soil is hydric based on the hydric soil definition: "a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part".								

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R	<i>OMB Control #: 0710-0024, Exp: 11/30/2024</i> <i>Requirement Control Symbol EXEMPT:</i> <i>(Authority: AR 335-15, paragraph 5-2a)</i>
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Project/Site: Kato Bay Rd (PIN # 042-00-02-024) City/County: Hardeeville/Jasper Sampling Date: 2-13-24

Applicant/Owner: Brian Russo/Kato Bay Investments LLC State: SC Sampling Point: Upland

Investigator(s): T. Merrill, M. Williams, I. Mitchell Section, Township, Range: _____

Landform (hillside, terrace, etc.): Coastal Plain Local relief (concave, convex, none): Convex Slope (%): 2-5%

Subregion (LRR or MLRA): LRR T Lat: 32.341974 Long: -81.048777 Datum: WGS 84

Soil Map Unit Name: Eulonia NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

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 _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
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Remarks:
 Planted Pine Stands--evidence of silvicultural activities (mechanical site prep including subsurface plowing/tilling of soils, bedding, clearing, ditching, logging trails, and staging areas.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ 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) ☐ Sphagnum Moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 2006 Aerial indicates the site was cleared and replanted with pine trees.

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Upland

Tree Stratum (Plot size: <u>40x40</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Pinus taeda</i></u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
40 = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>85</u></td> <td>x 3 = <u>255</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>135</u> (A)</td> <td><u>475</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.52</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>85</u>	x 3 = <u>255</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>135</u> (A)	<u>475</u> (B)	Prevalence Index = B/A = <u>3.52</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>85</u>	x 3 = <u>255</u>																			
FACU species <u>30</u>	x 4 = <u>120</u>																			
UPL species <u>20</u>	x 5 = <u>100</u>																			
Column Totals: <u>135</u> (A)	<u>475</u> (B)																			
Prevalence Index = B/A = <u>3.52</u>																				
50% of total cover: <u>20</u> 20% of total cover: <u>8</u>																				
Sapling/Shrub Stratum (Plot size: <u>40x40</u>)																				
1. <u><i>Morella cerifera</i></u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)																
2. <u><i>Serenoa repens</i></u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
35 = Total Cover																				
50% of total cover: <u>18</u> 20% of total cover: <u>7</u>																				
Herb Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ = Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				
Woody Vine Stratum (Plot size: <u>40x40</u>)																				
1. <u><i>Pteridium aquilinum</i></u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.																
2. <u><i>Gelsemium sempervirens</i></u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u><i>Rubus allegheniensis</i></u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
60 = Total Cover																				
50% of total cover: <u>30</u> 20% of total cover: <u>12</u>																				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																				

 Remarks: (If observed, list morphological adaptations below.)
 2006 site was cleared and replanted with pine trees.

SOIL

Sampling Point: Upland**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		
0-10	2.5Y 4/2	100					Sandy	
10-24	10YR 6/4	100					Sandy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)	☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Histic Epipedon (A2)	☐ Barrier Islands 1 cm Muck (S12)
☐ Black Histic (A3)	(MLRA 153B, 153D)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)
☐ Organic Bodies (A6) (LRR P, T, U)	☐ Depleted Matrix (F3)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)	☐ Redox Dark Surface (F6)
☐ Muck Presence (A8) (LRR U)	☐ Depleted Dark Surface (F7)
☐ 1 cm Muck (A9) (LRR P, T)	☐ Redox Depressions (F8)
☐ Depleted Below Dark Surface (A11)	☐ Marl (F10) (LRR U)
☐ Thick Dark Surface (A12)	☐ Depleted Ochric (F11) (MLRA 151)
☐ Coast Prairie Redox (A16) (MLRA 150A)	☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Sandy Mucky Mineral (S1) (LRR O, S)	☐ Umbric Surface (F13) (LRR P, T, U)
☐ Sandy Gleyed Matrix (S4)	☐ Delta Ochric (F17) (MLRA 151)
☐ Sandy Redox (S5)	☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Stripped Matrix (S6)	☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Dark Surface (S7) (LRR P, S, T, U)	☐ Anomalous Bright Floodplain Soils (F20)
☐ Polyvalue Below Surface (S8)	(MLRA 149A, 153C, 153D)
(LRR S, T, U)	☐ Very Shallow Dark Surface (F22)
	(MLRA 138, 152A in FL, 154)

Indicators for Problematic Hydric Soils³:

☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Coast Prairie Redox (A16)
(outside MLRA 150A)
☐ Reduced Vertic (F18)
(outside MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (LRR P, T)
☐ Anomalous Bright Floodplain Soils (F20)
(MLRA 153B)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
(outside MLRA 138, 152A in FL, 154)
☐ Barrier Islands Low Chroma Matrix (TS7)
(MLRA 153B, 153D)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: