



August 2, 2022

The Loudermilk Companies
Attn: Mr. Charlie Loudermilk
309 East Paces Ferry Road, NE
Suite 1200
Atlanta, GA 30305

**Subject: Jurisdictional Waters Delineation Findings Report
4.36-Acre Darien Highway Site
Glynn County, Georgia
CEG Project No. 04-071522**

Dear Mr. Loudermilk:

Corblu Ecology Group, LLC (CEG) is pleased to submit to The Loudermilk Companies (Client) this letter report regarding the jurisdictional waters delineation of an approximate 4.36-acre site located off of Darien Highway (US 17) north of Brunswick, Glynn County, Georgia (Figures 1 and 2). Access to the site is off Darien Highway heading south towards Brunswick in the parking lot of Shupe Surveying Company, PC. Lat/Long coordinates for the center of the review area are 31.206974°N, -81.467640°W. The Site is being assessed for the presence of streams and/or wetlands to assist the Client with their due diligence for potential development opportunities.

Methods

Jurisdictional Waters

CEG personnel (Mr. Shane Keebaugh) conducted a field delineation of the project site for jurisdictional waters on July 27, 2022. This delineation included a field reconnaissance of the entire site to identify and investigate any potential areas that exhibited the characteristics and requirements of jurisdictional waters. More detailed investigations were then conducted in any identified areas and a determination was made based on the guidance presented below.

Jurisdictional waters of the U.S., including streams, wetlands, lakes, and ponds, are defined by 33 CFR Part 328.3 and protected by Section 404 of the Clean Water Act (33 USC 1344), which is administered and enforced by the U.S. Army Corps of Engineers (USACE), Savannah District. Jurisdictional waters were delineated in the field using the 1987 USACE Wetlands Delineation

Manual¹, the Atlantic and Gulf Coastal Plain Region Regional Supplement², and other current regulatory guidance. The referenced manuals use a multi-parameter wetland identification process, including positive evidence of three criteria: 1) hydrophytic vegetation; 2) hydric soils; and 3) wetland hydrology. Any areas exhibiting all three criteria for wetland determination, as well as seasonal streams and ponds, are considered jurisdictional waters regulated by the USACE. Potentially jurisdictional waters were marked in the field with pink survey tape and GPS located with a handheld Trimble Geo-7x GPS unit capable of submeter accuracy.

Determinations were also made as to whether any identified areas qualified as State Waters requiring buffers. State Waters of Georgia, including streams and ponds, are defined by Chapter 391-3-7-.01(x) of the Georgia Department of Natural Resources, Environmental Protection Division (EPD) Rules for Erosion and Sedimentation Control. Jurisdictional streams and tributary systems were assessed using a combination of the EPD, Watershed Protection Branch *Field Guide for Determining the Presence of State Waters that Require a Buffer*³ and the North Carolina Division of Water Quality (NCDWQ) *Identification Methods for the Origins of Intermittent and Perennial streams*⁴. Perennial and intermittent streams, as well as ponds, are considered state waters that require a 25-foot protected vegetated buffer.

Please note that any federal and state jurisdictional waters boundaries identified in the field are not official until verified by the USACE and/or the EPD, respectively. No Local Issuing Authority (LIA) is designated for the project area, therefore EPD would serve as the LIA.

Results

Site Conditions

Site conditions were assessed through a desktop review of available environmental information (Figures 2-5) and a physical reconnaissance of the site. The interior of the site was dominated by sandy loam soils with mature aged live oaks and dense shrub and herbaceous cover. Hardwood trees tended to dominate the stands on site. No structures were observed on site.

The USGS topographic map depicts the site as gradually sloping towards the west and southwest. Drainage from the site is in an overall western direction and into wetland systems associated with two intermittent streams. Soils within the site were mapped by U.S Department of Natural Resources, Natural Resource Conservation Service (NRCS) as Mandarin fine sand (Ma), Pelham loamy sand (Pe), and Pottsburg sand (Po). According to USDA's Web Soil Survey, Pottsburg sand is the only soil type within the review area that is listed as having hydric components. Based on the National Wetlands Inventory (NWI) map, no wetlands are mapped on the site (Figure 5).

¹ Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. U.S. Army Corps of Engineers, Washington D.C. 100 pp. plus appendices.

² U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C.V. Noble. ERDC/EL TR-10-20. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

³ Georgia Department of Natural Resources Environmental Protection Division Watershed Protection Branch Non-Point Source Program. 2017. *Field Guide for Determining the Presence of State Waters That Require a Buffer*. April 2017.

⁴ NC Division of Water Quality. 2010. *Methodology for Identification of Intermittent and Perennial Streams and their Origins, Version 4.11*. North Carolina Department of Environment and Natural Resources, Division of Water Quality. Raleigh, NC.

The USACE Antecedent Rainfall Tool was used to determine whether the conditions at the time of the delineation were normal, drier than normal, or wetter than normal. The antecedent rainfall tool determined that the conditions at the time of the delineation were normal, based on comparisons of rainfall from the previous three months to the 30-year normal rainfall range. The antecedent rainfall tool report is attached for reference.

Jurisdictional Waters

Based on the July 27, 2022 field survey, no wetlands or jurisdictional areas were identified on site. Photographs taken during site reconnaissance can be viewed in the attached photographic log depicting all aquatic resources referenced above.

Discussion

Based on the current USACE guidance, it is the opinion of CEG that no wetlands or jurisdictional waters are located on the site. Please note that these findings and any Waters of the US determinations are not official until formally verified by the USACE.

CEG appreciates the opportunity to assist you with this project. Upon review of this information, if you have any questions regarding the findings discussed in this report and/or how these findings may affect anticipated future activities on-site, please contact our office at (770) 682-9731.

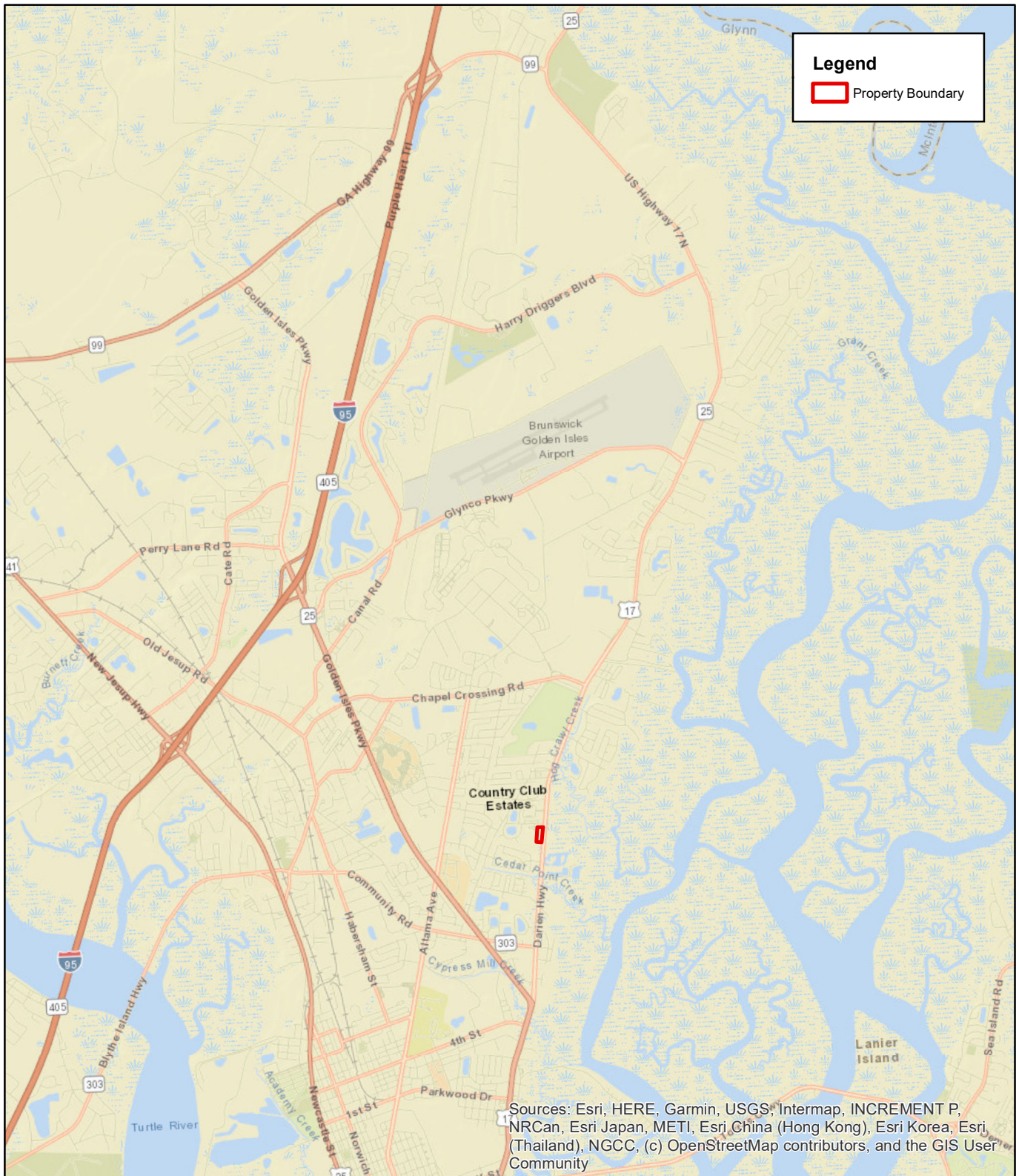
Sincerely,


CORBLU ECOLOGY GROUP, LLC

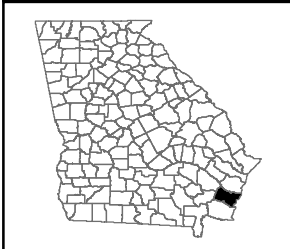


Shane Keebaugh
Principle

Enclosures: Figure 1 - Location Map
Figure 2 - Aerial Map
Figure 3 - Topographic Map
Figure 4 - Soils Map
Figure 5 - NWI Map
FEMA Firmette
Photographic Log
Antecedent Rainfall Tool Report

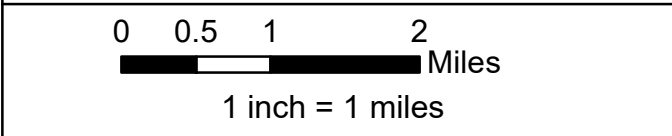


Legend
 Property Boundary



**Darien Highway Site
 Glynn County, Georgia**

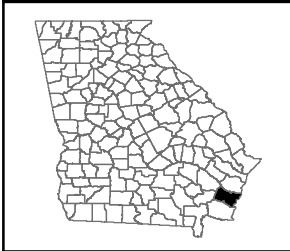
**Figure 1
 Location Map**




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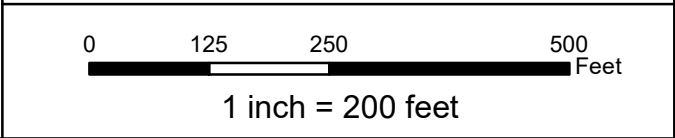


Esri, HERE, Garmin, (c) OpenStreetMap contributors, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

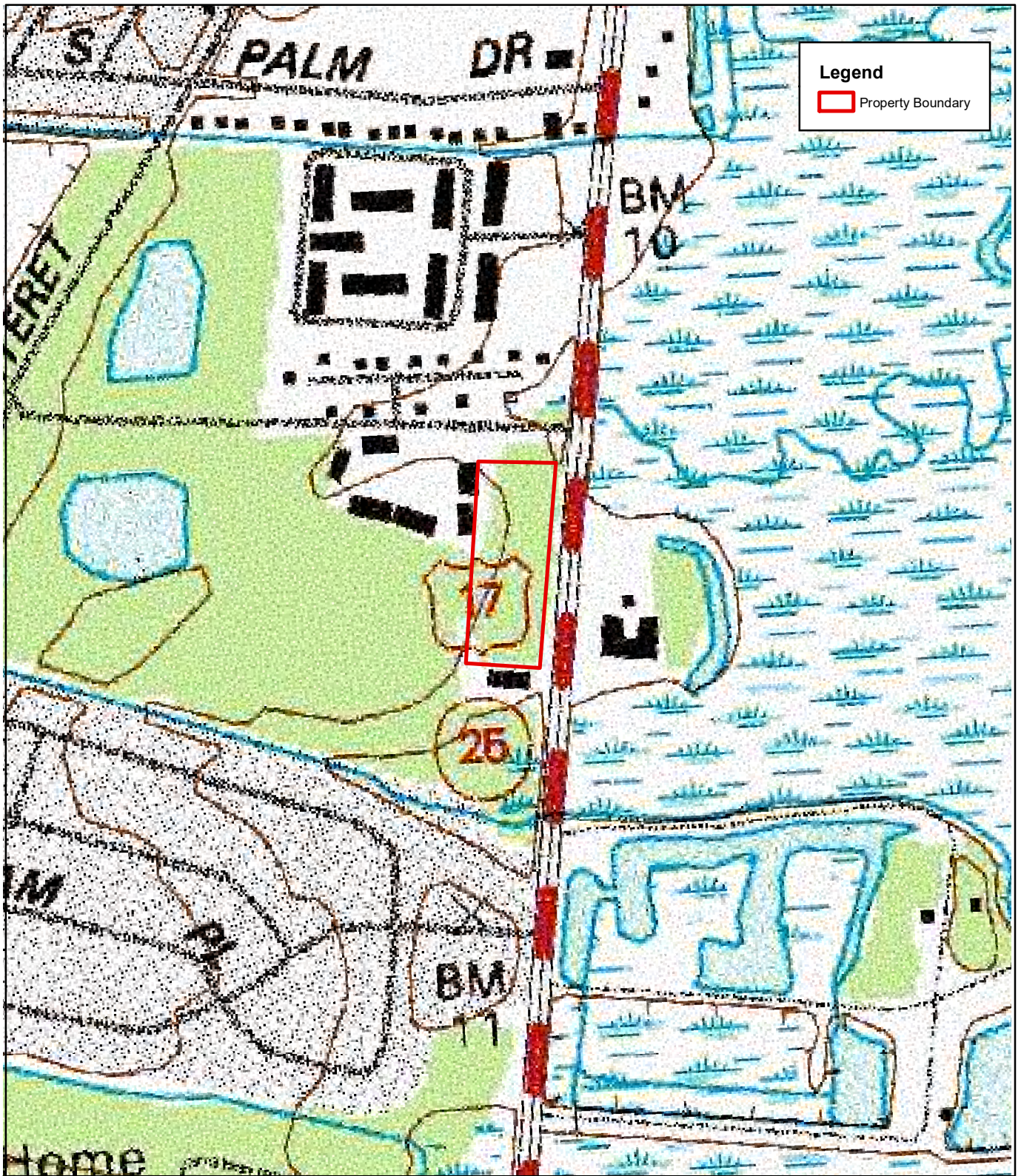



Darien Highway Site
Glynn County, Georgia

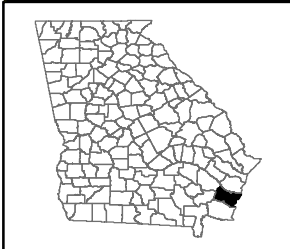
Figure 2
Aerial Map



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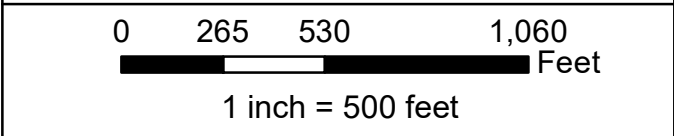


Legend
 Property Boundary



Darien Highway Site
 Glynn County, Georgia

Figure 3
 Topographic Map



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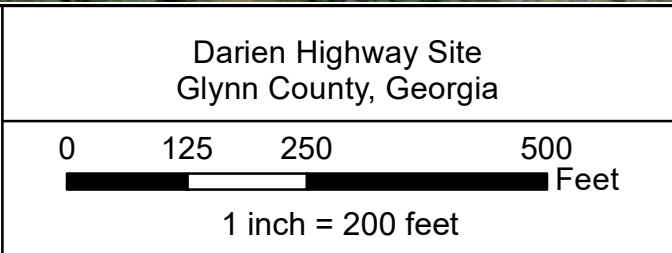
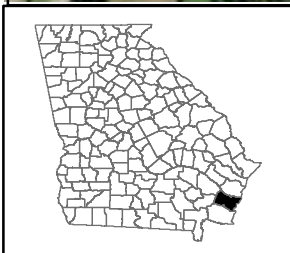
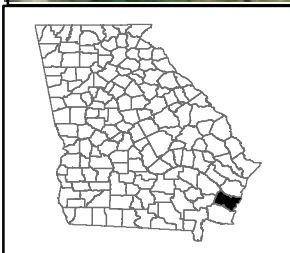


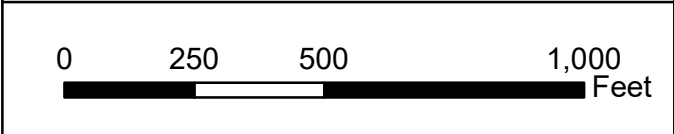
Figure 4
Soils Map

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Darien Highway Site
Glynn County, Georgia

Figure 5
NWI Map

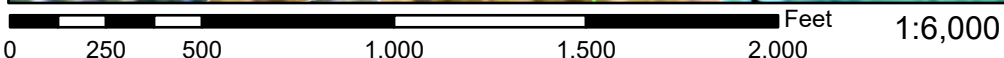


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National Flood Hazard Layer FIRMMette



81°28'23"W 31°12'41"N



81°27'45"W 31°12'11"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/1/2022 at 5:19 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



Photograph 1. Typical vegetation July 2022



Photograph 2. Typical vegetation July 2022



Photograph 3. Typical vegetation July 2022



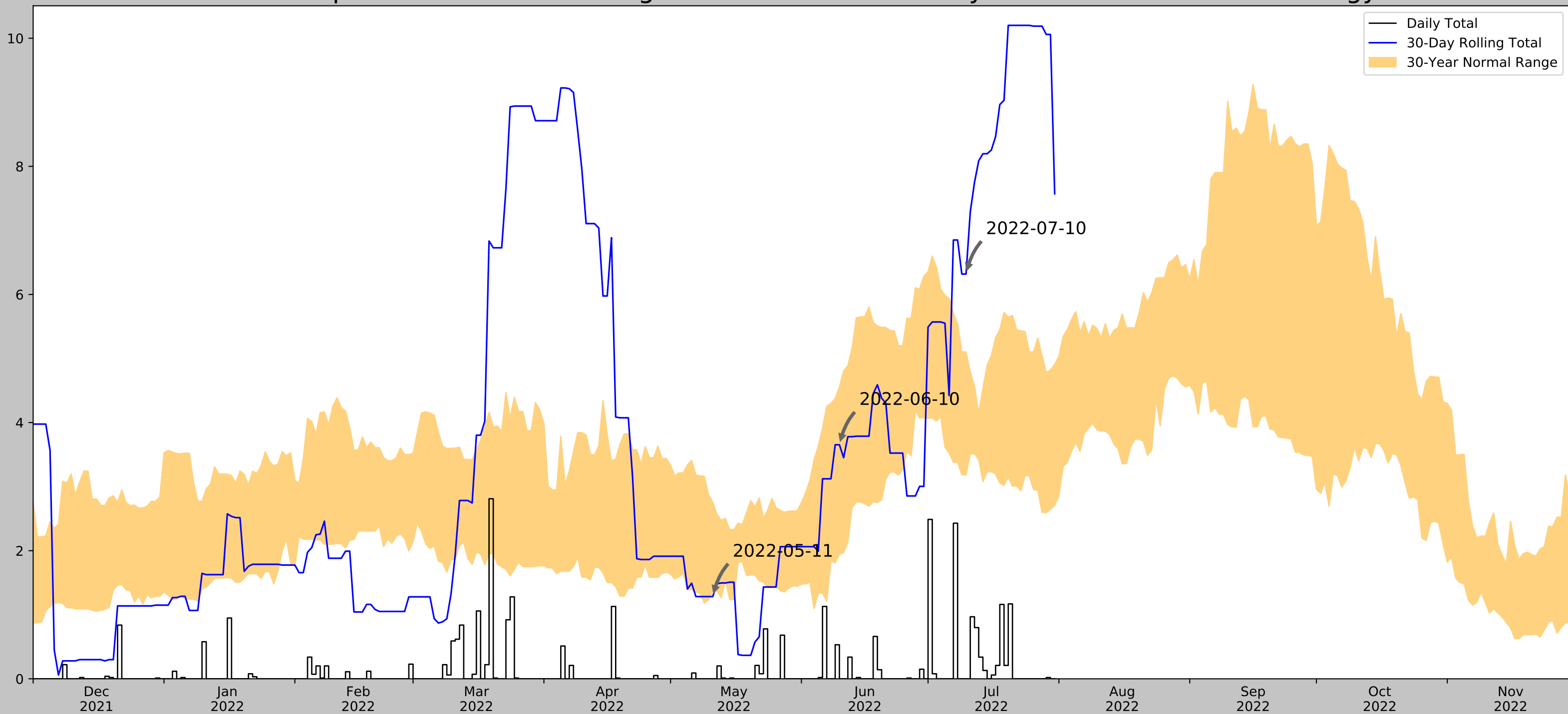
Photograph 4. Typical vegetation along Darien Highway July 2022



Photograph 5. Typical vegetation July 2022

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

Rainfall (Inches)



Coordinates	31.206974, -81.467640
Observation Date	2022-07-10
Elevation (ft)	8.66
Drought Index (PDSI)	Mild drought (2022-06)

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-07-10	3.183465	5.10315	6.318898	Wet	3	3	9
2022-06-10	1.943307	4.552362	3.653543	Normal	2	2	4
2022-05-11	1.364961	2.757874	1.283465	Dry	1	1	1
Result							Normal Conditions - 14




Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
BRUNSWICK MALCOLM MCKINNON AP	31.1522, -81.3908	16.076	5.912	7.416	2.704	11351	90
BRUNSWICK	31.1681, -81.5022	13.123	6.678	2.953	3.025	2	0