HHNT

HODGES, HARBIN, NEWBERRY & TRIBBLE, INC.

Consulting Engineers

May 1, 2023

US Army Corps of Engineers
Columbia Regulatory Office
2567 Essayons Way
Fort Jackson, South Carolina 29207

Re: Luck Companies / Saluda Quarry
Batesburg-Leesville, Saluda County, SC
Delineation Concurrence Request
HHNT Project Number: 4780-021

To Whom It May Concern:

On behalf of Luck Companies, Hodges, Harbin, Newberry & Tribble, Inc., (HHNT) is herein submitting the enclosed Delineation Concurrence for the above-referenced site. The study area for the project, henceforth referred to as Saluda Quarry, is a ~ 331.01-acre tract of land located to the west of Double Bridges Road and to the east of State Road S-41-26 in Batesburg-Leesville, Saluda County, South Carolina (Figures 1 & 2).

Attached please find all appropriate mapping and documentation of the project area and a GPS delineation map overlaid on an aerial photograph. It is the opinion of HHNT that all the U.S. Army Corps of Engineers (USACE) Waters of the United States limits have been identified and flagged within the project study area consistent with current jurisdictional guidelines. Furthermore, in HHNT's opinion, none of the delineated features could be considered isolated wetlands.

At your earliest convenience, we respectfully request that the attached Delineation Concurrence be processed for the subject property. Please contact us to schedule a field visit and for access to the property, if necessary. In advance, we thank you for your timely review of this project and if you should have any questions or require additional information, please do not hesitate to call.

Sincerely,

HODGES, HARBIN, NEWBERRY & TRIBBLE, INC.

Brandon F. Smith, PWS
Senior Environmental Consultant

BFS/MM/TW

cc: Bruce Smith
Encl. (9)

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:	**Columbia Office:**	**Conway Office:**	**Greenville Office:**
69A Hagood Avenue	2567 Essayons Way	1949 Industrial Park Road, Room 140	150 Executive Center Drive, Suite 205
Charleston, SC 29403	Fort Jackson, SC 29207	Conway, SC 29526	Greenville, SC 29615
843-329-8044	803-253-3444	843-365-4239	864-609-4326
SAC.RD.Charleston@usace.army.mil	**SAC.RD.Columbia@usace.army.mil**	**SAC.RD.Conway@usace.army.mil**	**SAC.RD.Greenville@usace.army.mil**

I. PROPERTY AND AGENT INFORMATION

A. Site Details/Location:

Site Name: Luck Companies Saluda Quarry Date: 4/27/2023

City/Township/Parish: Batesburg-Leesville County: Saluda

Latitude/Longitude: 33.97183, -81.59429 Acreage: 331.01

Tax Map Sequence (TMS) #(s): 174-00-00-006

Property Address(es): East side of State Road S-41-26

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: Mark Williams Company Name (*if applicable*): Luck Companies

Address: PO Box 29682, Richmond, VA, 23242

Phone: (804) 641-9458 Email: MarkDWilliams@luckcompanies.com

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: Brandon Smith

Company Name: Hodges, Harbin, Newberry & Tribble Inc.

Address: 17 Park of Commerce Blvd. Suite 110, Savannah GA 31405 Phone: (912) 596-3743

Email: bsmith@hhnt.com

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 Concurrence[1]
- ☐ 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 Concurrence[1]
- ☐ 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 regulated[4]

☐ **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.

PO Box 29682, Richmond, VA, 23242	174-00-00-006
Mailing Address	Property Address / TMS #(s)
MarkDWilliams@luckcompanies.com	(804) 476-6404
Email Address	Daytime Phone Number
Mark D Williams	Mark Williams - May 1, 2023
*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.
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.

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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Appendix D

Waters_Name	Cowadin_Code	HGM_Code	Measurement_Type	Amount	Units	Waters_Types	Latitude	Longitude	Local_Waterway
Non-Wetland Water SFD (Intermittent)	R4	RIVERINE	Linear	1801	FOOT	DELINEATE	33.9711	-81.5954	UT Flat Rock Branch
Non-Wetland Water SMD (Intermittent)	R4	RIVERINE	Linear	261	FOOT	DELINEATE	33.9666	-81.5865	UT Flat Rock Branch
Non-Wetland Water SMB (Intermittent)	R4	RIVERINE	Linear	54	FOOT	DELINEATE	33.9666	-81.5897	UT Flat Rock Branch
Non-Wetland Water SFA (Intermittent)	R4	RIVERINE	Linear	670	FOOT	DELINEATE	33.9723	-81.5881	UT Flat Rock Branch
Non-Wetland Water SFC (Intermittent)	R4	RIVERINE	Linear	266	FOOT	DELINEATE	33.9731	-81.5878	UT Flat Rock Branch
Non-Wetland Water SMCI (Intermittent)	R4	RIVERINE	Linear	333	FOOT	DELINEATE	33.9669	-81.5889	UT Flat Rock Branch
Non-Wetland Water STA (Perennial)	R5	RIVERINE	Linear	2861	FOOT	DELINEATE	33.9707	-81.5982	Flat Rock Branch
Non-Wetland Water SMC (Perennial)	R5	RIVERINE	Linear	805	FOOT	DELINEATE	33.9669	-81.5889	UT Flat Rock Branch
Non-Wetland Water SMA (Perennial)	R5	RIVERINE	Linear	1217	FOOT	DELINEATE	33.9665	-81.5915	UT Flat Rock Branch
Wetland FA	PFO1	RIVERINE	Area	0.2	ACRE	DELINEATE	33.9732	-81.5987	UT Flat Rock Branch
Wetland MC	PFO1	SLOPE	Area	0.35	ACRE	DELINEATE	33.9711	-81.599	UT Flat Rock Branch
Wetland TA	PFO1	SLOPE	Area	0.94	ACRE	DELINEATE	33.9675	-81.5984	UT Flat Rock Branch
Wetland MA	PFO1	SLOPE	Area	0.37	ACRE	DELINEATE	33.9668	-81.5871	UT Flat Rock Branch
Wetland MB	PFO1	SLOPE	Area	0.23	ACRE	DELINEATE	33.9665	-81.586	UT Flat Rock Branch

U.S. Army Corps of Engineers
Global Positioning Systems (GPS) Datasheet
Delineation of Wetlands and Non-Wetland Waters

USACE File Number

Date of Delineation: March 9-10, 2023

Name of Delineator Present

Myles McKnight, Brandon Smith, Tabitha Williams, HHNT

Make and Model of GPS Device Used (must be capable of sub-meter accuracy)

Juniper System Archer 2

Geographic Coordinate System Used

NAD 83, South Carolina

Name of Continually Operated Reference Station Used for Post-processing

p779

Date Post-processing Performed

March 13, 2023

Percent Dilution of Position (PDOP) (6 or less is required)

1.45

Name and Coordinates of Known Property Corner and/or Monument

GPS Reading of Known Property Corner and/or Monument

Frequency of Waypoints Taken During Survey

1 every second to 100 readings, then averaged.

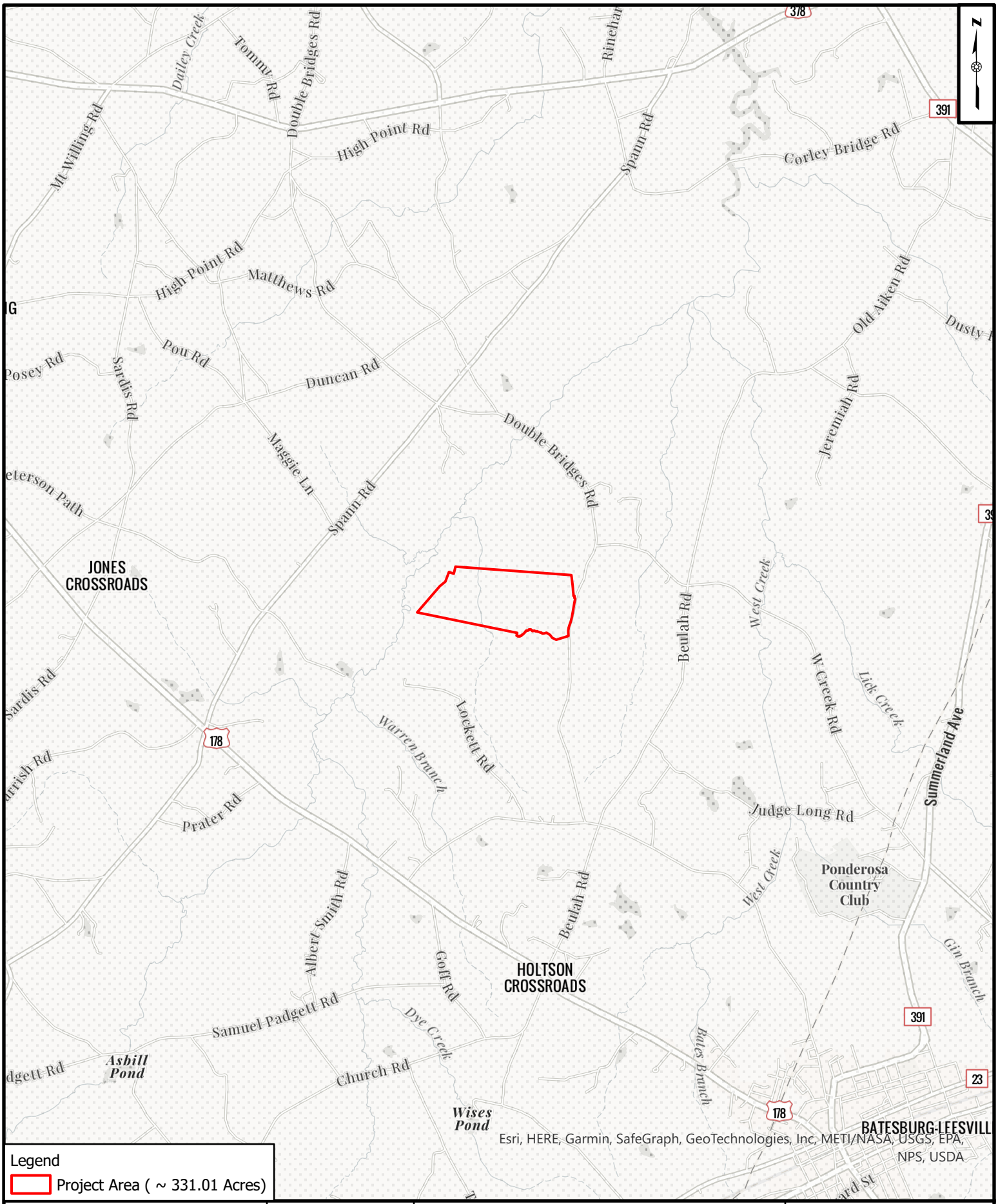
Note: GPS data must be provided, if requested. If GPS data and/or GPS delineation is determined unacceptable, a survey sealed by a surveyor licensed in South Carolina will be required.

APPENDICES

Appendix A: Figures
Appendix B: Wetland Data Forms
Appendix C: Upland Data Forms
Appendix D: Non-Wetland Waters Data Forms
Appendix E: Site Photographs
Appendix F: Precipitation and Drought Data

APPENDIX A FIGURES

1. Location Map
2. USGS Topographic Map
3. Soils Map
4. NWI Map
5. FEMA Map
6. Delineation Map
7. Photo Location Map



Legend

Project Area (~ 331.01 Acres)

DISCLAIMER:
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Figure 1

4/13/2023

0 0.5 1

1 inch equals 1 Mile

Location Map
Luck Companies
Saluda Quarry
Saluda County, SC

HHNT
HODGES, HARBIN, NEWBERRY & TRIBBLE, INC.
Consulting Engineers

Path: S:\ArcGIS\Luckstone\Saluda GDP\Aquatic Resource Review\Maps\SaludaAquaticResourceReview.aprx User: tgwilliams

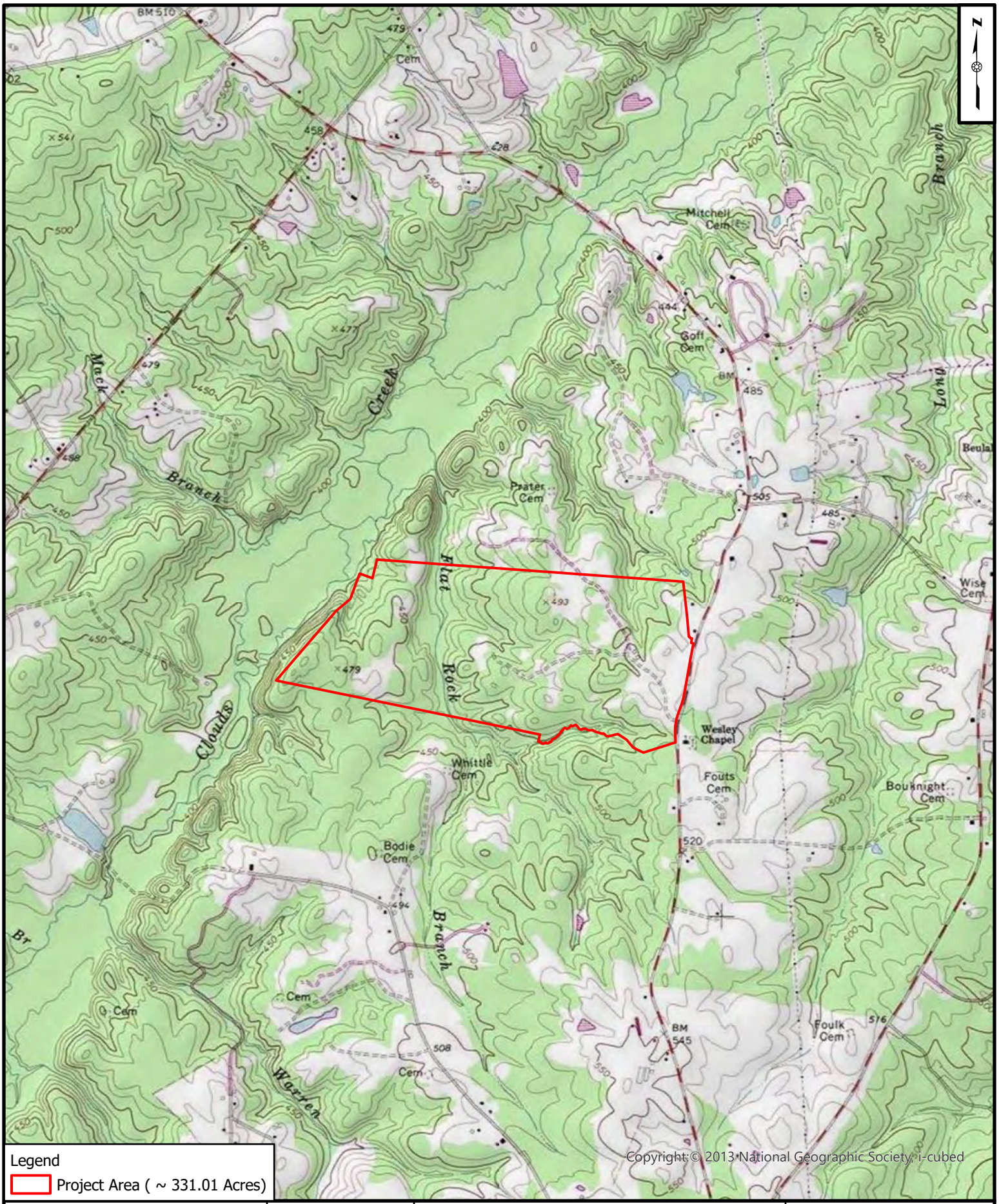

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Figure 2

4/7/2023

0 1,000 2,000

1 inch equals 2,000 Feet

USGS Topographic Map
Luck Companies
Saluda Quarry
Saluda County, SC

HHNT
HODGES, HARBIN, NEWBERRY & TRIBBLE, INC.
Consulting Engineers

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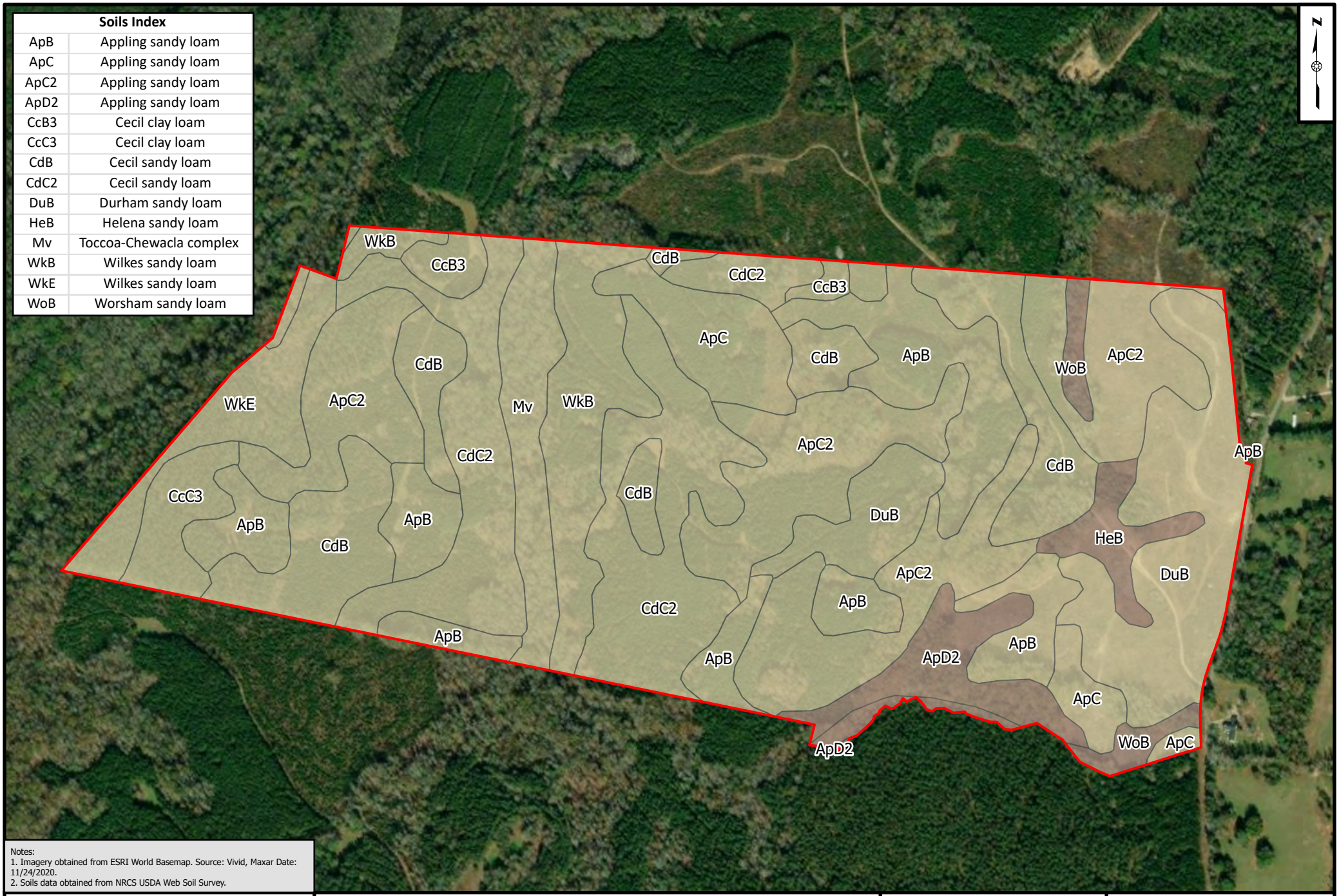

Notes:
1. Imagery obtained from ESRI World Basemap. Source: Vivid, Maxar Date: 11/24/2020.
2. Soils data obtained from NRCS USDA Web Soil Survey.

Figure 3 - Soils Map

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700 350 0 700 Feet

Project Area (~ 331.01 Acres)

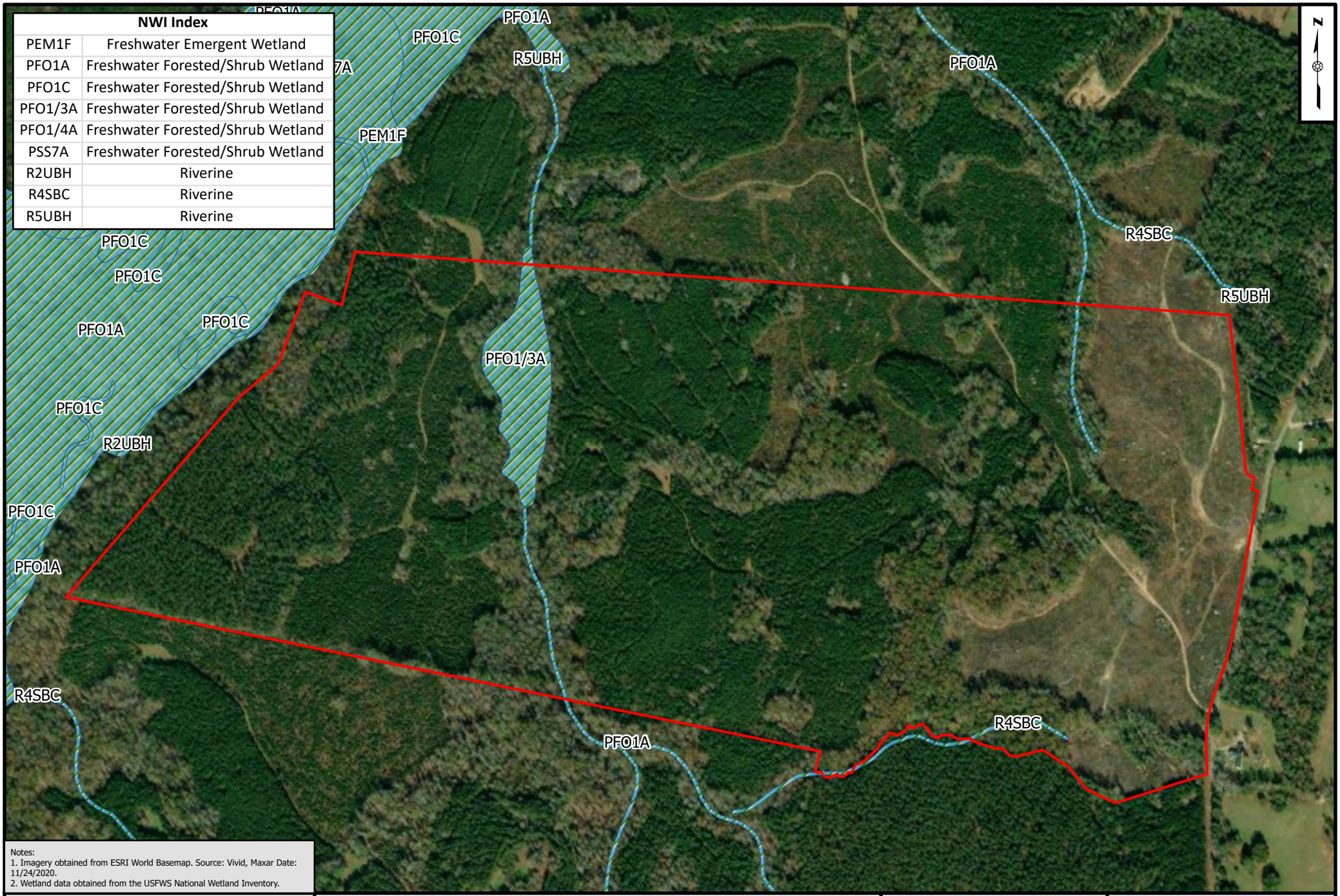
Soils - Drainage Class

Moderately well drained

Well drained

Luck Companies
Saluda Quarry
Saluda County, SC
4/7/2023

HHNT
Hodges, Harbin, Newberry & Tribble, Inc.
Consulting Engineers



NWI Index	
PEM1F	Freshwater Emergent Wetland
PFO1A	Freshwater Forested/Shrub Wetland
PFO1C	Freshwater Forested/Shrub Wetland
PFO1/3A	Freshwater Forested/Shrub Wetland
PFO1/4A	Freshwater Forested/Shrub Wetland
PSS7A	Freshwater Forested/Shrub Wetland
R2UBH	Riverine
R4SBC	Riverine
R5UBH	Riverine

Notes:
1. Imagery obtained from ESRI World Basemap. Source: Vivid, Maxar Date: 11/24/2020.
2. Wetland data obtained from the USFWS National Wetland Inventory.

Figure 4 - NWI Map

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700 350 0 700 Feet

Project Area (~ 331.01 Acres)
NWI Wetlands

Luck Companies
Saluda Quarry
Saluda County, SC
4/7/2023

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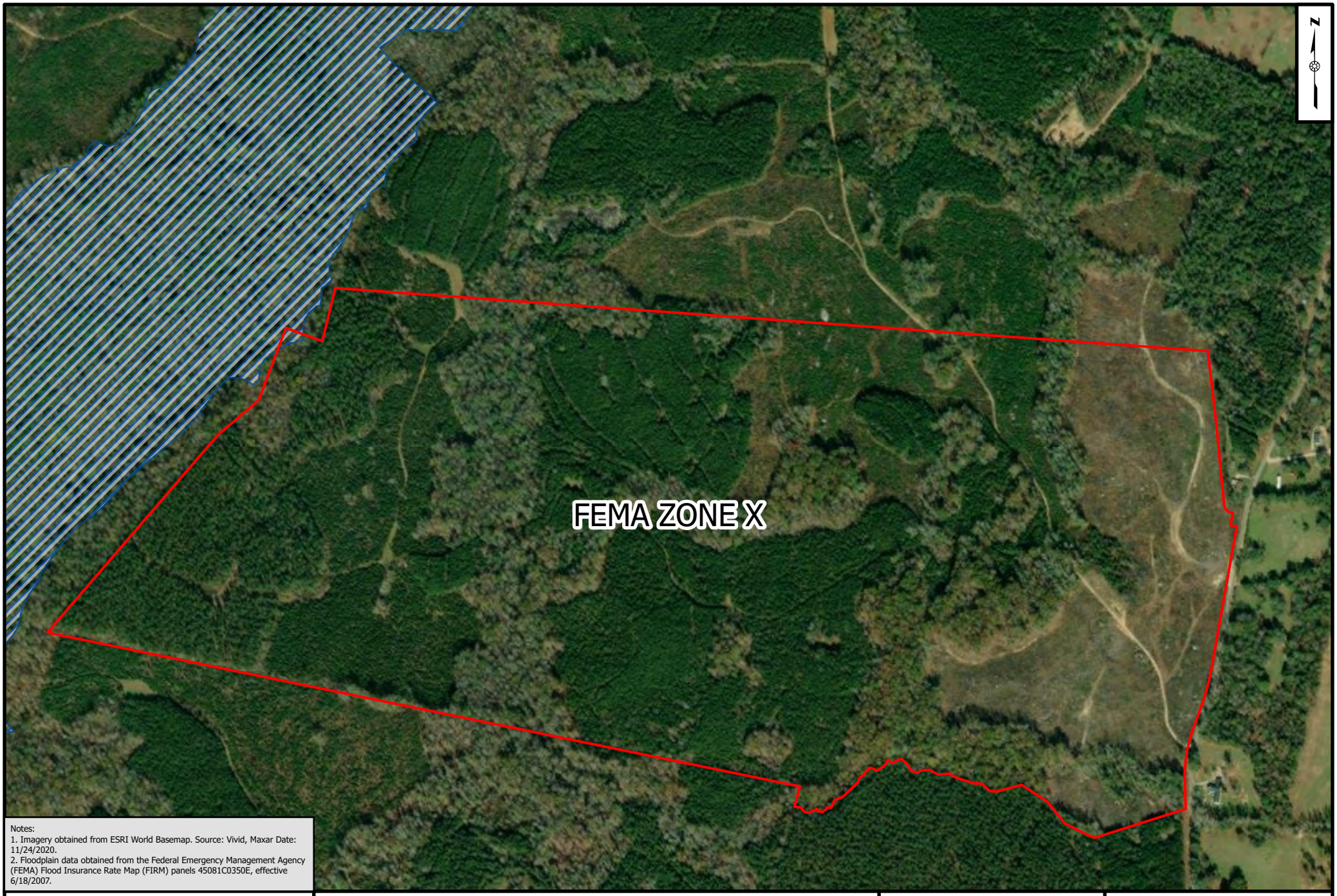

Notes:
1. Imagery obtained from ESRI World Basemap. Source: Vivid, Maxar Date: 11/24/2020.
2. Floodplain data obtained from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panels 45081C0350E, effective 6/18/2007.

Figure 5 - FEMA Map

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700 350 0 700 Feet

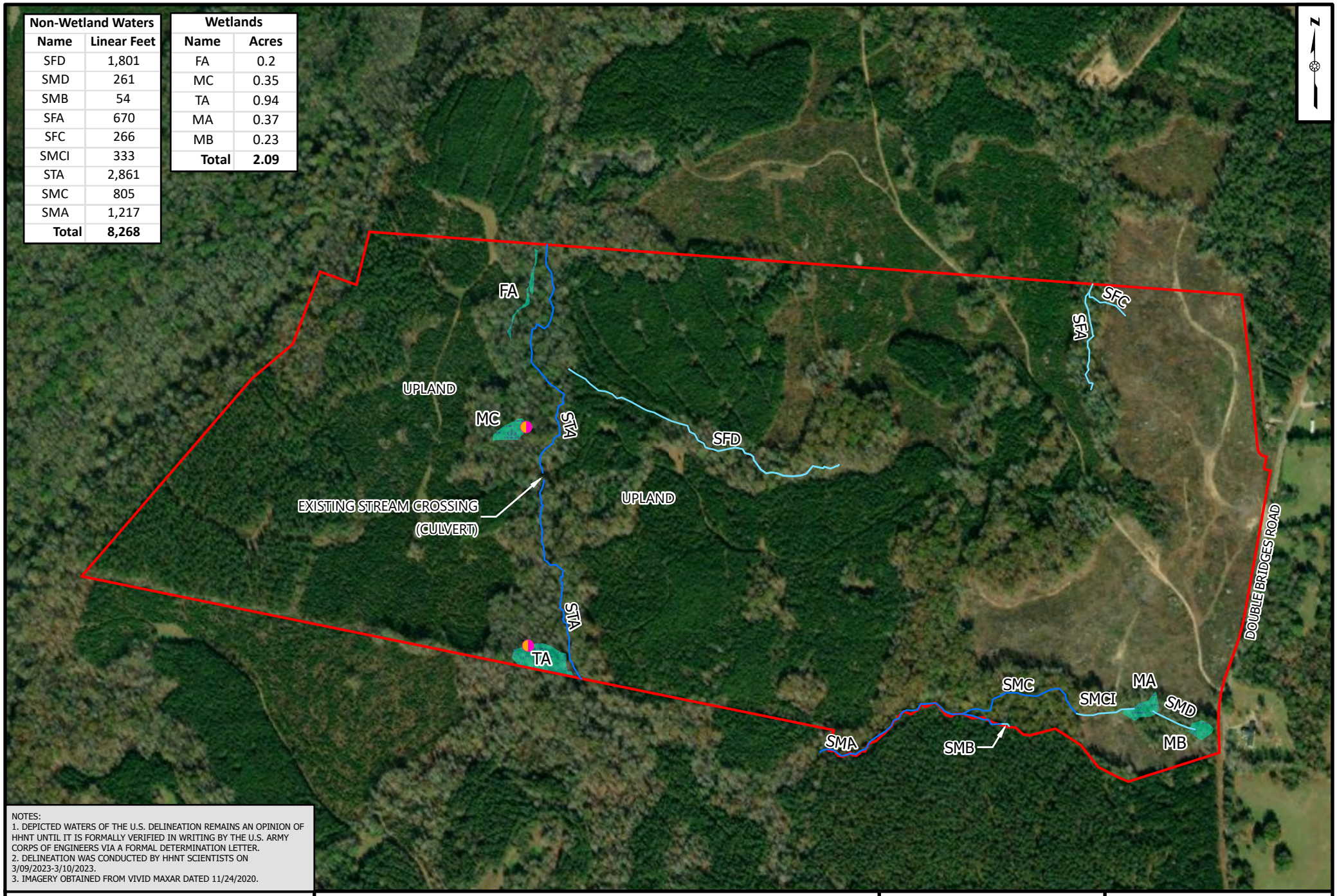
Project Area (~ 331.01 Acres)
FEMA Flood Zone A

Luck Companies
Saluda Quarry
Saluda County, SC
4/7/2023

HHNT
Hodges, Harbin, Newberry & Tribble, Inc.
Consulting Engineers

Non-Wetland Waters	
Name	Linear Feet
SFD	1,801
SMD	261
SMB	54
SFA	670
SFC	266
SMCI	333
STA	2,861
SMC	805
SMA	1,217
Total	**8,268**

Wetlands	
Name	Acres
FA	0.2
MC	0.35
TA	0.94
MA	0.37
MB	0.23
Total	**2.09**



NOTES:
1. DEPICTED WATERS OF THE U.S. DELINEATION REMAINS AN OPINION OF HHNT UNTIL IT IS FORMALLY VERIFIED IN WRITING BY THE U.S. ARMY CORPS OF ENGINEERS VIA A FORMAL DETERMINATION LETTER.
2. DELINEATION WAS CONDUCTED BY HHNT SCIENTISTS ON 3/09/2023-3/10/2023.
3. IMAGERY OBTAINED FROM VIVID MAXAR DATED 11/24/2020.

Figure 6 - Delineation Map

DISCLAIMER:
This drawing and the information contained herein is for general presentation purposes only and is a compilation of shapefile(s) provided by various source(s). The source and accuracy of the file(s) has not been verified by HHNT and therefore the drawing is not intended for use as a engineering drawing of for design purposes.

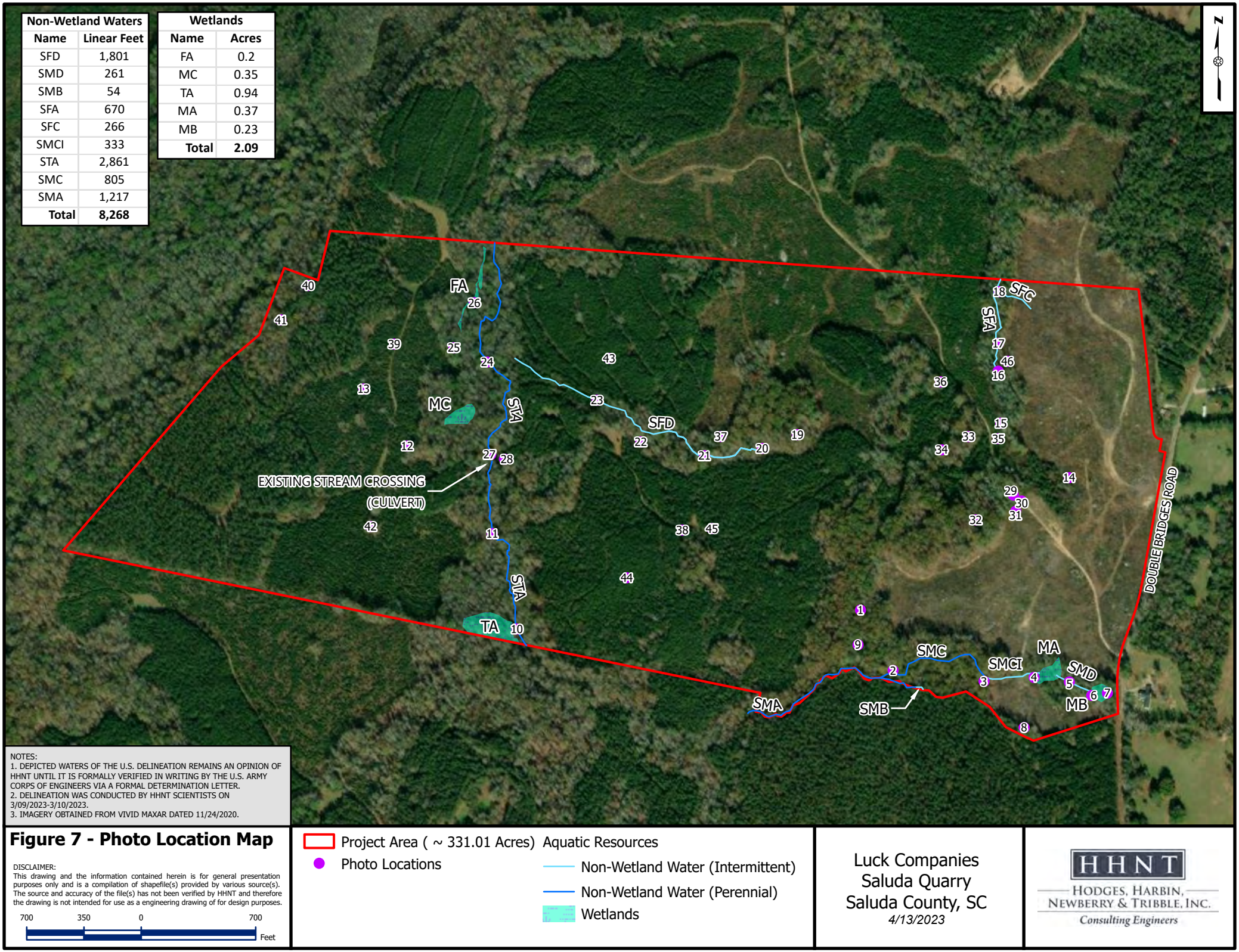
700 350 0 700 Feet

Project Area (~ 331.01 Acres)
Data Form Locations

Aquatic Resources
Non-Wetland Water (Intermittent)
Non-Wetland Water (Perennial)
Wetlands

Luck Companies
Saluda Quarry
Saluda County, SC
4/13/2023

HHNT
Hodges, Harbin, Newberry & Tribble, Inc.
Consulting Engineers


Non-Wetland Waters
Name | Linear Feet
SFD | 1,801
SMD | 261
SMB | 54
SFA | 670
SFC | 266
SMCI | 333
STA | 2,861
SMC | 805
SMA | 1,217
Total | 8,268
Wetlands
Name | Acres
FA | 0.2
MC | 0.35
TA | 0.94
MA | 0.37
MB | 0.23
Total | 2.09
N
FA
MC
TA
SFD
SFC
SFA
STA
SMA
SMB
SMC
SMCI
MA
SMD
MB
EXISTING STREAM CROSSING
(CULVERT)
DOUBLE BRIDGES ROAD
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
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NOTES:
1. DEPICTED WATERS OF THE U.S. DELINEATION REMAINS AN OPINION OF HHNT UNTIL IT IS FORMALLY VERIFIED IN WRITING BY THE U.S. ARMY CORPS OF ENGINEERS VIA A FORMAL DETERMINATION LETTER.
2. DELINEATION WAS CONDUCTED BY HHNT SCIENTISTS ON 3/09/2023-3/10/2023.
3. IMAGERY OBTAINED FROM VIVID MAXAR DATED 11/24/2020.
Figure 7 - Photo Location Map
DISCLAIMER:
This drawing and the information contained herein is for general presentation purposes only and is a compilation of shapefile(s) provided by various source(s). The source and accuracy of the file(s) has not been verified by HHNT and therefore the drawing is not intended for use as a engineering drawing of for design purposes.
700 350 0 700
Feet
Project Area (~ 331.01 Acres)
Photo Locations
Aquatic Resources
Non-Wetland Water (Intermittent)
Non-Wetland Water (Perennial)
Wetlands
Luck Companies
Saluda Quarry
Saluda County, SC
4/13/2023
HHNT
Hodges, Harbin, Newberry & Tribble, Inc.
Consulting Engineers

APPENDIX B WETLAND DATA FORMS

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; 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)

Project/Site: Saluda Quarry City/County: Saluda Sampling Date: 3/10/23
Applicant/Owner: Luck Companies State: SC Sampling Point: MC11 Wet
Investigator(s): M. McKnight Section, Township, Range:
Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): Concave Slope (%): 2%
Subregion (LRR or MLRA): LRR N Lat: 33.9712 Long: -81.5987 Datum: NAD83
Soil Map Unit Name: Mv - Toccoa-Chewacla complex NWI classification: PFO1/3A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
According to the Antecedent Precipitation Calculator, conditions were normal during the time of the delineation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- X 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)
- X Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ True Aquatic Plants (B14)
- ____ 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)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Drainage Patterns (B10)
- X Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 4

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: MC11 Wet

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carpinus caroliniana*	10	Yes	FAC
2. *Quercus nigra*	8	Yes	FAC
3. *Liquidambar styraciflua*	5	No	FAC
4. *Ilex opaca*	3	No	FACU
5. *Quercus rubra*	1	No	FACU
6.			
7.			
	27	=Total Cover	
50% of total cover: 14		20% of total cover:	6
Sapling/Shrub Stratum (Plot size: 30')			
1. *Ligustrum sinense*	5	Yes	FACU
2. *Quercus nigra*	3	Yes	FAC
3. *Ilex opaca*	2	No	FACU
4. *Carpinus caroliniana*	3	Yes	FAC
5.			
6.			
7.			
8.			
9.			
	13	=Total Cover	
50% of total cover: 7		20% of total cover:	3
Herb Stratum (Plot size: 30')			
1. *Ligustrum sinense*	10	Yes	FACU
2. *Polystichum acrostichoides*	1	No	FACU
3. *Woodwardia areolata*	7	Yes	FACW
4. *Sagittaria calycina*	5	Yes	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	23	=Total Cover	
50% of total cover: 12		20% of total cover:	5
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	7	x 2 =	14
FAC species	29	x 3 =	87
FACU species	22	x 4 =	88
UPL species	0	x 5 =	0
Column Totals:	63 (A)		194 (B)

Prevalence Index = B/A = 3.08

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[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 or equal to 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** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: MC11 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	90	10YR 3/6	10	C	M	Loamy/Clayey	Sandy loam
6-18	10YR 3/2	80	10YR 3/6	20	C	M	Loamy/Clayey	Sandy loam

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ 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** X **No** ___

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; 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)

Project/Site: Saluda Quarry City/County: Saluda Sampling Date: 3/9/2023
Applicant/Owner: Luck Companies State: SC Sampling Point: TA3 Wet
Investigator(s): T. Williams Section, Township, Range:
Landform (hillside, terrace, etc.): Seep Local relief (concave, convex, none): Concave Slope (%): 6%
Subregion (LRR or MLRA): LRR N Lat: 33.9678 Long: -81.5986 Datum: NAD83
Soil Map Unit Name: ApB - Appling sandy loam NWI classification: PFO1
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
According to the Antecedent Precipitation Calculator, conditions were normal during the time of the delineation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ True Aquatic Plants (B14)
- ____ 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)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 2
Water Table Present?	Yes X	No ____	Depth (inches): 2
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: TA3 Wet

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus nigra*	5	Yes	FAC
2. *Liquidambar styraciflua*	10	Yes	FAC
3. *Cornus amomum*	5	Yes	FACW
4. *Carpinus caroliniana*	3	No	FAC
5.			
6.			
7.			
	23	=Total Cover	
50% of total cover: 12		20% of total cover:	5
Sapling/Shrub Stratum (Plot size: 30')			
1. *Ilex opaca*	3	Yes	FACU
2. *Quercus nigra*	5	Yes	FAC
3. *Carpinus caroliniana*	2	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	10	=Total Cover	
50% of total cover: 5		20% of total cover:	2
Herb Stratum (Plot size: 30')			
1. *Woodwardia areolata*	20	Yes	FACW
2. *Arundinaria gigantea*	3	No	FACW
3. *Aralia spinosa*	1	No	FAC
4. *Sagittaria calycina*	10	Yes	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	34	=Total Cover	
50% of total cover: 17		20% of total cover:	7
Woody Vine Stratum (Plot size: 30')			
1. *Smilax laurifolia*	2	No	OBL
2.			
3.			
4.			
5.			
	2	=Total Cover	
50% of total cover: 1		20% of total cover:	1

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	12	x 1 =	12
FACW species	28	x 2 =	56
FAC species	26	x 3 =	78
FACU species	3	x 4 =	12
UPL species	0	x 5 =	0
Column Totals:	69 (A)		158 (B)

Prevalence Index = B/A = 2.29

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[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 or equal to 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** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TA3 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 6/1	90	10YR 7/8	10	C	M	Loamy/Clayey	Sandy loam
6-12	10YR 7/1	80	10YR 7/8	20	C	M	Loamy/Clayey	Sandy loam

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ 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** X **No** ___

Remarks:

Soil very dry and rocky, difficult to obtain past 14 inches.

APPENDIX C UPLAND DATA FORMS

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; 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)

Project/Site: Saluda Quarry City/County: Saluda Sampling Date: 3/10/23

Applicant/Owner: Luck Companies State: SC Sampling Point: MC11 Up

Investigator(s): M. McKnight Section, Township, Range:

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope (%): 4%

Subregion (LRR or MLRA): LRR N Lat: 33.9710781 Long: -81.5986136 Datum: NAD83

Soil Map Unit Name: Mv - Toccoa-Chewacla complex 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 ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
According to the Antecedent Precipitation Calculator, conditions were normal during the time of the delineation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ 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)
- ___ True Aquatic Plants (B14)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: MC11 Up

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus rubra*	5	Yes	FACU
2. *Juniperus virginiana*	5	Yes	FACU
3. *Carpinus caroliniana*	3	No	FAC
4. *Ilex opaca*	10	Yes	FACU
5.			
6.			
7.			
	23	=Total Cover	
50% of total cover: 12		20% of total cover:	5
Sapling/Shrub Stratum (Plot size: 30')			
1. *Ligustrum sinense*	10	Yes	FACU
2. *Ilex opaca*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	20	=Total Cover	
50% of total cover: 10		20% of total cover:	4
Herb Stratum (Plot size: 30')			
1. *Polystichum acrostichoides*	2	No	FACU
2. *Ligustrum sinense*	20	Yes	FACU
3. *Oxalis violacea*	15	Yes	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	37	=Total Cover	
50% of total cover: 19		20% of total cover:	8
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	3	x 3 =	9
FACU species	62	x 4 =	248
UPL species	15	x 5 =	75
Column Totals:	80 (A)		332 (B)

Prevalence Index = B/A = 4.15

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[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 or equal to 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** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: MC11 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/4	100					Loamy/Clayey	
6-18	10YR 4/4	100					Loamy/Clayey	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ 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** X

Remarks:

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; 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)

Project/Site: Saluda Quarry City/County: Saluda Sampling Date: 3/9/2023

Applicant/Owner: Luck Companies State: SC Sampling Point: TA3 Up

Investigator(s): T. Williams Section, Township, Range:

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope (%): 7%

Subregion (LRR or MLRA): LRR N Lat: 33.9678 Long: -81.5987 Datum: NAD83

Soil Map Unit Name: ApB - Appling sandy loam 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 ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
According to the Antecedent Precipitation Calculator, conditions were normal during the time of the delineation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ 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)
- ___ True Aquatic Plants (B14)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: TA3 Up

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus nigra*	5	Yes	FAC
2. *Liquidambar styraciflua*	10	Yes	FAC
3. *Fagus grandifolia*	5	Yes	FACU
4. *Carpinus caroliniana*	5	Yes	FAC
5. *Ilex opaca*	2	No	FACU
6. *Quercus rubra*	2	No	FACU
7.			
	29	=Total Cover	
50% of total cover: 15		20% of total cover:	6
Sapling/Shrub Stratum (Plot size: 30')			
1. *Ilex opaca*	3	Yes	FACU
2. *Quercus nigra*	5	Yes	FAC
3. *Carpinus caroliniana*	2	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	10	=Total Cover	
50% of total cover: 5		20% of total cover:	2
Herb Stratum (Plot size: 30')			
1. *Trillium cuneatum*	4	Yes	UPL
2. *Salvia lyrata*	2	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	6	=Total Cover	
50% of total cover: 3		20% of total cover:	2
Woody Vine Stratum (Plot size: 30')			
1. *Vitis rotundifolia*	3	No	FAC
2.			
3.			
4.			
5.			
	3	=Total Cover	
50% of total cover: 2		20% of total cover:	1

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 55.6% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	14	x 4 =	56
UPL species	4	x 5 =	20
Column Totals:	48 (A)		166 (B)

Prevalence Index = B/A = 3.46

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[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 or equal to 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** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TA3 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/4	100					Loamy/Clayey	Sandy loam
10-18	10YR 4/6	100					Loamy/Clayey	Sandy loam

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ 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** X

Remarks:

APPENDIX D NON-WETLAND WATERS DATA FORMS

SFA

NC DWQ Stream Identification Form Version 4.11

Date: 3/9/2023	**Project/Site**: Saluda Quarry	**Latitude:** 33.9723
Evaluator: B. Smith	**County:** Saluda County	**Longitude:** -81.5881
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 20.5	**Stream Determination (pick one)** Intermittent	**Other** *e.g. Quad Name*: Batesburg,SC (2020)

A. Geomorphology (Subtotal = 11)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2 ✓	3
2. Sinuosity of channel along thalweg	0	1	2 ✓	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1 ✓	2	3
4. Particle size of stream substrate	0	1 ✓	2	3
5. Active/relict floodplain	0 ✓	1	2	3
6. Depositional bars or benches	0 ✓	1	2	3
7. Recent alluvial deposits	0 ✓	1	2	3
8. Headcuts	0	1	2	3 ✓
9. Grade control	0	0.5	1 ✓	1.5
10. Natural valley	0	0.5	1 ✓	1.5
11. Second or greater order channel	No = 0 ✓		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 3.5)				
12. Presence of Baseflow	0	1	2 ✓	3
13. Iron oxidizing bacteria	0 ✓	1	2	3
14. Leaf litter	1.5	1 ✓	0.5	0
15. Sediment on plants or debris	0 ✓	0.5	1	1.5
16. Organic debris lines or piles	0	0.5 ✓	1	1.5
17. Soil-based evidence of high water table?	No = 0 ✓		Yes = 3	

C. Biology (Subtotal = 6)				
18. Fibrous roots in streambed	3	2	1 ✓	0
19. Rooted upland plants in streambed	3 ✓	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1 ✓	2	3
21. Aquatic Mollusks	0 ✓	1	2	3
22. Fish	0 ✓	0.5	1	1.5
23. Crayfish	0	0.5 ✓	1	1.5
24. Amphibians	0	0.5 ✓	1	1.5
25. Algae	0 ✓	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0 ✓			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

SFC

NC DWQ Stream Identification Form Version 4.11

Date: 3/9/2023	**Project/Site**: Saluda Quarry	**Latitude:** 33.9731
Evaluator: B. Smith	**County:** Saluda County	**Longitude:** -81.5878
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 19.5	**Stream Determination (pick one)** Intermittent	**Other** *e.g. Quad Name*: Batesburg,SC (2020)

A. Geomorphology (Subtotal = 10)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2 ✓	3
2. Sinuosity of channel along thalweg	0	1	2 ✓	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1 ✓	2	3
4. Particle size of stream substrate	0	1 ✓	2	3
5. Active/relict floodplain	0 ✓	1	2	3
6. Depositional bars or benches	0 ✓	1	2	3
7. Recent alluvial deposits	0 ✓	1	2	3
8. Headcuts	0	1	2 ✓	3
9. Grade control	0	0.5	1 ✓	1.5
10. Natural valley	0	0.5	1 ✓	1.5
11. Second or greater order channel	No = 0 ✓		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 2.5)				
12. Presence of Baseflow	0	1 ✓	2	3
13. Iron oxidizing bacteria	0 ✓	1	2	3
14. Leaf litter	1.5	1 ✓	0.5	0
15. Sediment on plants or debris	0 ✓	0.5	1	1.5
16. Organic debris lines or piles	0	0.5 ✓	1	1.5
17. Soil-based evidence of high water table?	No = 0 ✓		Yes = 3	

C. Biology (Subtotal = 7)				
18. Fibrous roots in streambed	3	2 ✓	1	0
19. Rooted upland plants in streambed	3 ✓	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1 ✓	2	3
21. Aquatic Mollusks	0 ✓	1	2	3
22. Fish	0 ✓	0.5	1	1.5
23. Crayfish	0	0.5 ✓	1	1.5
24. Amphibians	0	0.5 ✓	1	1.5
25. Algae	0 ✓	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0 ✓			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

SFD

NC DWQ Stream Identification Form Version 4.11

Date: 3/9/2023	**Project/Site**: Saluda Quarry	**Latitude:** 33.9711
Evaluator: B. Smith	**County:** Saluda County	**Longitude:** -81.5954
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 27.5	**Stream Determination (pick one)** Intermittent	**Other** *e.g. Quad Name*: Batesburg,SC (2020)

A. Geomorphology (Subtotal = 15)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2 ✓	3
2. Sinuosity of channel along thalweg	0	1	2	3 ✓
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2 ✓	3
4. Particle size of stream substrate	0	1	2 ✓	3
5. Active/relict floodplain	0	1 ✓	2	3
6. Depositional bars or benches	0	1 ✓	2	3
7. Recent alluvial deposits	0 ✓	1	2	3
8. Headcuts	0	1	2 ✓	3
9. Grade control	0	0.5 ✓	1	1.5
10. Natural valley	0	0.5	1	1.5 ✓
11. Second or greater order channel	No = 0 ✓		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 4)				
12. Presence of Baseflow	0	1	2 ✓	3
13. Iron oxidizing bacteria	0 ✓	1	2	3
14. Leaf litter	1.5 ✓	1	0.5	0
15. Sediment on plants or debris	0 ✓	0.5	1	1.5
16. Organic debris lines or piles	0	0.5 ✓	1	1.5
17. Soil-based evidence of high water table?	No = 0 ✓		Yes = 3	

C. Biology (Subtotal = 8.5)				
18. Fibrous roots in streambed	3 ✓	2	1	0
19. Rooted upland plants in streambed	3 ✓	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1 ✓	2	3
21. Aquatic Mollusks	0 ✓	1	2	3
22. Fish	0	0.5 ✓	1	1.5
23. Crayfish	0	0.5 ✓	1	1.5
24. Amphibians	0	0.5 ✓	1	1.5
25. Algae	0 ✓	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0 ✓			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

SMA

NC DWQ Stream Identification Form Version 4.11

Date: 3/9/2023	**Project/Site**: Saluda Quarry	**Latitude:** 33.9665
Evaluator: M. McKnight	**County:** Saluda County	**Longitude:** -81.5915
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 41.5	**Stream Determination (pick one)** Perennial	**Other** *e.g. Quad Name*: Batesburg,SC (2020)

A. Geomorphology (Subtotal = 22.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	No = 0		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 7)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 12)				
18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

SMB

NC DWQ Stream Identification Form Version 4.11

Date: 3/10/2023	**Project/Site**: Saluda Quarry	**Latitude:** 33.9666
Evaluator: M. McKnight, B. Smith, T. Williams	**County:** Saluda County	**Longitude:** -81.5897
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 23	**Stream Determination (pick one)** Intermittent	**Other** *e.g. Quad Name*: Batesburg,SC (2020)

A. Geomorphology (Subtotal = 12.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2 ✓	3
2. Sinuosity of channel along thalweg	0	1	2 ✓	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1 ✓	2	3
4. Particle size of stream substrate	0	1	2 ✓	3
5. Active/relict floodplain	0 ✓	1	2	3
6. Depositional bars or benches	0 ✓	1	2	3
7. Recent alluvial deposits	0 ✓	1	2	3
8. Headcuts	0	1	2	3 ✓
9. Grade control	0	0.5	1 ✓	1.5
10. Natural valley	0	0.5	1	1.5 ✓
11. Second or greater order channel	No = 0 ✓		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 2.5)				
12. Presence of Baseflow	0	1 ✓	2	3
13. Iron oxidizing bacteria	0 ✓	1	2	3
14. Leaf litter	1.5	1 ✓	0.5	0
15. Sediment on plants or debris	0 ✓	0.5	1	1.5
16. Organic debris lines or piles	0	0.5 ✓	1	1.5
17. Soil-based evidence of high water table?	No = 0 ✓		Yes = 3	

C. Biology (Subtotal = 8)				
18. Fibrous roots in streambed	3 ✓	2	1	0
19. Rooted upland plants in streambed	3 ✓	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1 ✓	2	3
21. Aquatic Mollusks	0 ✓	1	2	3
22. Fish	0 ✓	0.5	1	1.5
23. Crayfish	0	0.5 ✓	1	1.5
24. Amphibians	0	0.5 ✓	1	1.5
25. Algae	0 ✓	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0 ✓			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

SMC

NC DWQ Stream Identification Form Version 4.11

Date: 3/9/2023	**Project/Site**: Saluda Quarry	**Latitude:** 33.9669
Evaluator: M. McKnight	**County:** Saluda County	**Longitude:** -81.5914
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 30	**Stream Determination (pick one)** Perennial	**Other** *e.g. Quad Name*: Batesburg,SC (2020)

A. Geomorphology (Subtotal = 15)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2	3 ✓
2. Sinuosity of channel along thalweg	0	1	2	3 ✓
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2 ✓	3
4. Particle size of stream substrate	0	1 ✓	2	3
5. Active/relict floodplain	0 ✓	1	2	3
6. Depositional bars or benches	0	1	2 ✓	3
7. Recent alluvial deposits	0 ✓	1	2	3
8. Headcuts	0	1	2 ✓	3
9. Grade control	0	0.5 ✓	1	1.5
10. Natural valley	0	0.5	1	1.5 ✓
11. Second or greater order channel	No = 0 ✓		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 6)				
12. Presence of Baseflow	0	1	2	3 ✓
13. Iron oxidizing bacteria	0 ✓	1	2	3
14. Leaf litter	1.5 ✓	1	0.5	0
15. Sediment on plants or debris	0	0.5 ✓	1	1.5
16. Organic debris lines or piles	0	0.5	1 ✓	1.5
17. Soil-based evidence of high water table?	No = 0 ✓		Yes = 3	

C. Biology (Subtotal = 9)				
18. Fibrous roots in streambed	3 ✓	2	1	0
19. Rooted upland plants in streambed	3 ✓	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1 ✓	2	3
21. Aquatic Mollusks	0 ✓	1	2	3
22. Fish	0 ✓	0.5	1	1.5
23. Crayfish	0	0.5	1 ✓	1.5
24. Amphibians	0	0.5	1 ✓	1.5
25. Algae	0 ✓	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0 ✓			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

SMCI

NC DWQ Stream Identification Form Version 4.11

Date: 3/9/2023	**Project/Site**: Saluda Quarry	**Latitude:** 33.9669
Evaluator: M. McKnight	**County:** Saluda County	**Longitude:** -81.5889
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 22	**Stream Determination (pick one)** Intermittent	**Other** *e.g. Quad Name*: Batesburg,SC (2020)

A. Geomorphology (Subtotal = 10)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	No = 0		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 4)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 8)				
18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

SMD

NC DWQ Stream Identification Form Version 4.11

Date: 3/9/2023	**Project/Site**: Saluda Quarry	**Latitude:** 33.9666
Evaluator: M. McKnight	**County:** Saluda County	**Longitude:** -81.5865
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 22	**Stream Determination (pick one)** Intermittent	**Other** *e.g. Quad Name*: Batesburg,SC (2020)

A. Geomorphology (Subtotal = 10)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2 ✓	3
2. Sinuosity of channel along thalweg	0	1 ✓	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1 ✓	2	3
4. Particle size of stream substrate	0	1 ✓	2	3
5. Active/relict floodplain	0	1 ✓	2	3
6. Depositional bars or benches	0 ✓	1	2	3
7. Recent alluvial deposits	0 ✓	1	2	3
8. Headcuts	0	1	2 ✓	3
9. Grade control	0	0.5	1 ✓	1.5
10. Natural valley	0	0.5	1 ✓	1.5
11. Second or greater order channel	No = 0 ✓		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 3.5)				
12. Presence of Baseflow	0	1	2 ✓	3
13. Iron oxidizing bacteria	0 ✓	1	2	3
14. Leaf litter	1.5	1 ✓	0.5	0
15. Sediment on plants or debris	0 ✓	0.5	1	1.5
16. Organic debris lines or piles	0	0.5 ✓	1	1.5
17. Soil-based evidence of high water table?	No = 0 ✓		Yes = 3	

C. Biology (Subtotal = 8.5)				
18. Fibrous roots in streambed	3 ✓	2	1	0
19. Rooted upland plants in streambed	3 ✓	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1 ✓	2	3
21. Aquatic Mollusks	0 ✓	1	2	3
22. Fish	0 ✓	0.5	1	1.5
23. Crayfish	0	0.5 ✓	1	1.5
24. Amphibians	0	0.5	1 ✓	1.5
25. Algae	0 ✓	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0 ✓			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

STA

NC DWQ Stream Identification Form Version 4.11

Date: 3/9/2023	**Project/Site**: Saluda Quarry	**Latitude:** 33.9707
Evaluator: T. Williams	**County:** Saluda County	**Longitude:** -81.5982
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 43	**Stream Determination (pick one)** Perennial	**Other** *e.g. Quad Name*: Batesburg,SC (2020)

A. Geomorphology (Subtotal = 22.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	No = 0		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 7.5)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 13)				
18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

APPENDIX E SITE PHOTOGRAPHS

PHOTO 1: Typical Project Upland - Forested

PHOTO 2: Non-Wetland Water SMC (Perennial)

PHOTO 3: Non-Wetland Water SMCI (Intermittent)

PHOTO 4: Wetland MA

PHOTO 5: Non-Wetland Water SMD (Intermittent)

PHOTO 6: Wetland MB

PHOTO 7: Wetland MB

PHOTO 8: Project Boundary

PHOTO 9: Typical Project Upland - Rock Outcrops

PHOTO 10: Non-Wetland Water STA (Perennial)

PHOTO 11: Non-Wetland Water STA (Perennial)

PHOTO 12: Typical Project Upland - Hardwoods and Planted Pines

PHOTO 13: Typical Project Upland - Planted Pines

PHOTO 14: Typical Project Upland - Forested

PHOTO 15: Typical Project Upland - Planted Pines

PHOTO 16: Non-Wetland Water SFA (Intermittent)

PHOTO 17: Non-Wetland Water SFA (Intermittent)

PHOTO 18: Non-Wetland Water SFC (Intermittent)

PHOTO 19: Typical Project Upland - Rock Outcrops

PHOTO 20: Non-Wetland Water SFD (Intermittent)

PHOTO 21: Non-Wetland Water SFD (Intermittent)

PHOTO 22: Typical Project Upland - Forested

PHOTO 23: Non-Wetland Water SFD (Intermittent)

PHOTO 24: Non-Wetland Water STA (Perennial)

PHOTO 25: Typical Project Upland – Flat Rock Branch Floodplain

PHOTO 26: Wetland FA

PHOTO 27: Culvert Associated With Non-Wetland Water STA (Perennial) Road Crossing

PHOTO 28: Road Crossing Associated With Non-Wetland Water STA (Perennial)

PHOTO 29: Typical Project Upland – Forested

PHOTO 30: Site Entrance Road

PHOTO 31: Typical Project Upland – Planted Pines

PHOTO 32: Typical Project Upland – Rock Outcrops

PHOTO 33: Typical Project Upland – Rock Outcrops

PHOTO 34: Typical Project Upland – Rock Outcrops

PHOTO 35: Typical Project Upland – Planted Pines

PHOTO 36: Typical Project Upland – Rock Outcrops

PHOTO 37: Typical Project Upland - Forested

PHOTO 38: Typical Project Upland – Planted Pines

PHOTO 39: Typical Project Upland – Planted Pines

PHOTO 40: Typical Project Upland - Forested

PHOTO 41: Typical Project Upland – Rock Outcrops

PHOTO 42: Typical Project Upland – Forested

PHOTO 43: Typical Project Upland – Planted Pines

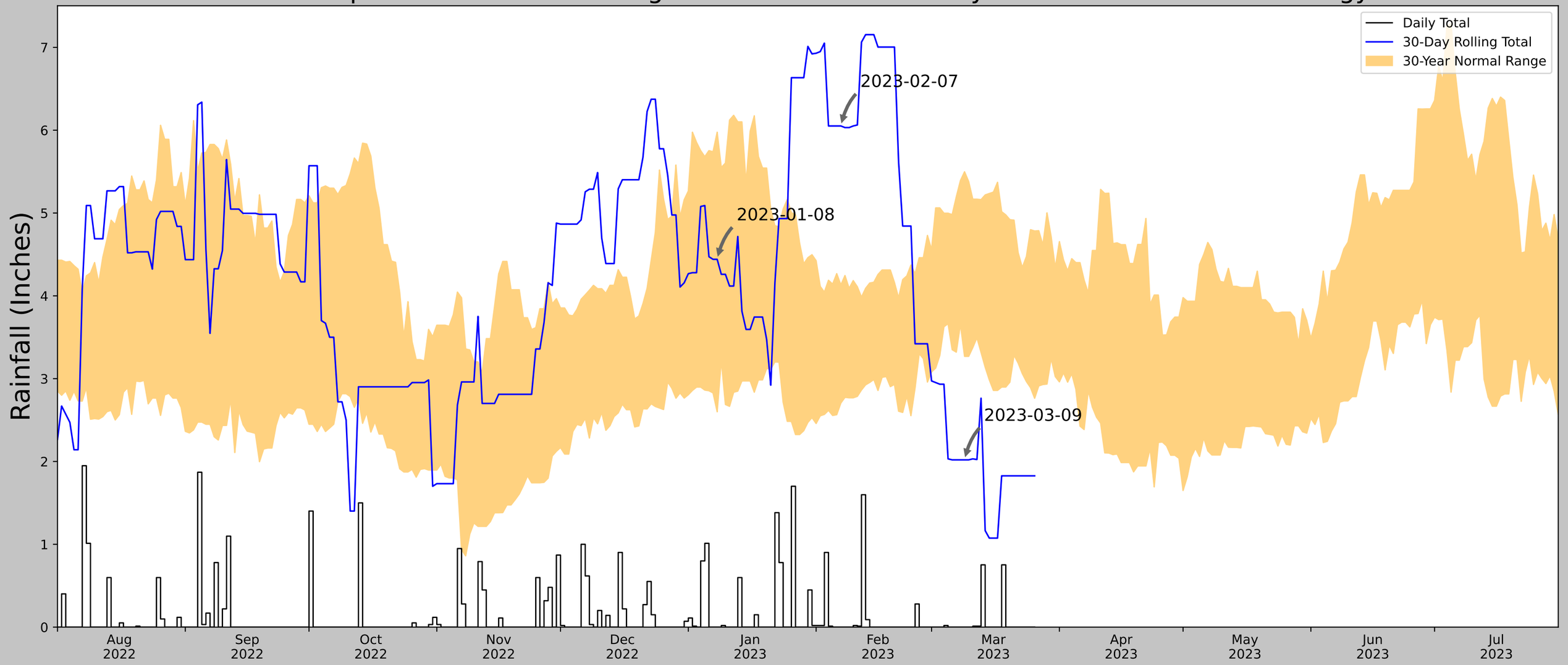
PHOTO 44: Typical Project Upland – Planted Pines

PHOTO 45: Typical Project Upland – Planted Pines

PHOTO 46: Typical Project Upland – Rock Outcrops

APPENDIX F PRECIPITATION AND DROUGHT DATA

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



Coordinates	33.9702, -81.5945
Observation Date	2023-03-09
Elevation (ft)	463.025
Drought Index (PDSI)	Incipient wetness (2023-02)
WebWIMP H_2O Balance	Wet Season

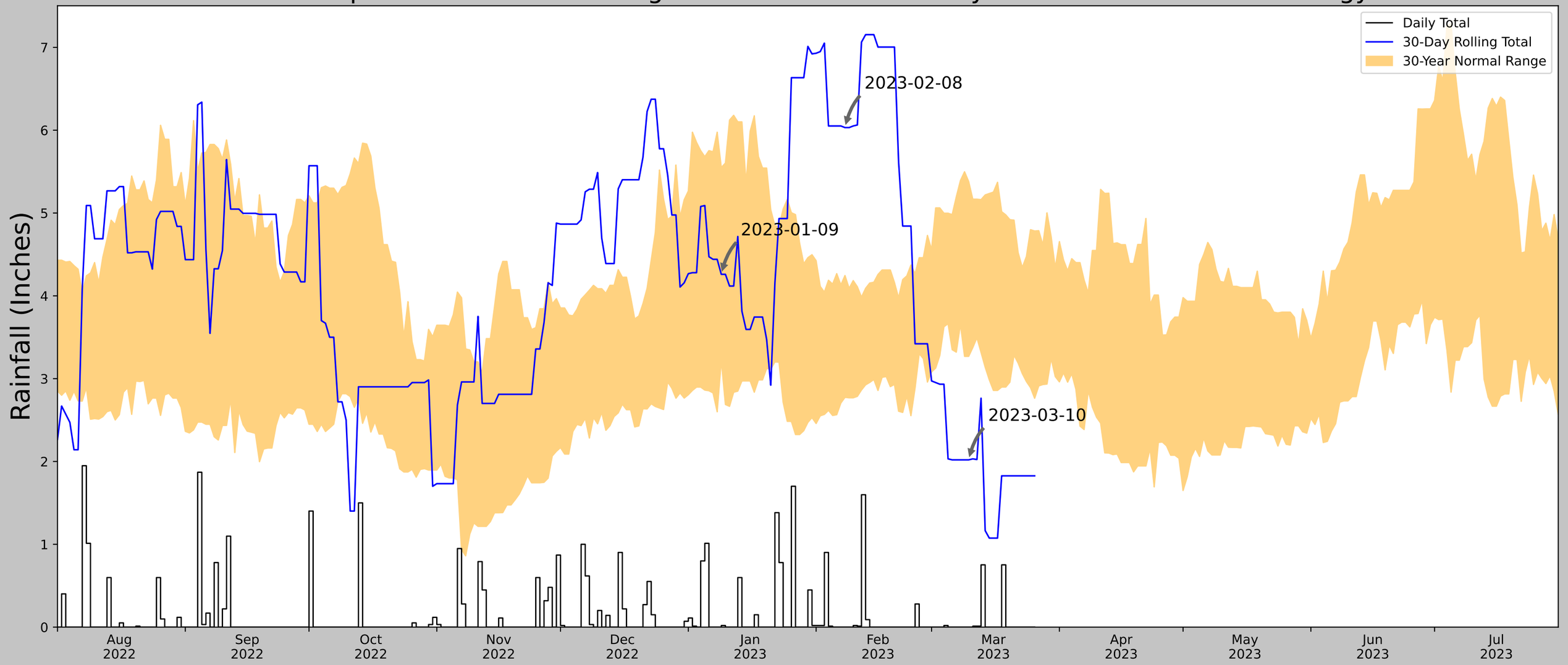
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-03-09	3.268898	5.498032	2.019685	Dry	1	3	3
2023-02-07	2.705906	4.13189	6.051181	Wet	3	2	6
2023-01-08	2.599606	5.976378	4.440945	Normal	2	1	2
Result							Normal Conditions - 11

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
BATESBURG	33.9, -81.5389	660.105	5.804	197.08	3.756	11061	90
BATESBURG 1.8 SSW	33.8839, -81.561	651.903	1.686	8.202	0.773	47	0
BATESBURG 3.2 NW	33.9422, -81.5838	554.134	3.89	105.971	2.163	35	0
LEESVILLE 5.2 SE	33.8703, -81.4417	520.013	5.941	140.092	3.506	3	0
RIDGE SPRING 0.4 SSW	33.84, -81.6663	632.874	8.403	27.231	4.01	59	0
GILBERT 0.0 NE	33.9244, -81.3931	533.136	8.528	126.969	4.92	1	0
GILBERT 1.2 SSW	33.9071, -81.4009	485.892	7.929	174.213	4.949	17	0
GILBERT 1.0 SE	33.915, -81.3813	493.11	9.097	166.995	5.613	1	0
SALUDA	33.9919, -81.7714	479.987	14.762	180.118	9.302	129	0

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



Coordinates	33.9702, -81.5945
Observation Date	2023-03-10
Elevation (ft)	463.025
Drought Index (PDSI)	Incipient wetness (2023-02)
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-03-10	3.268898	5.380315	2.019685	Dry	1	3	3
2023-02-08	2.77441	4.245669	6.031496	Wet	3	2	6
2023-01-09	3.222047	5.549606	4.259843	Normal	2	1	2
Result							Normal Conditions - 11

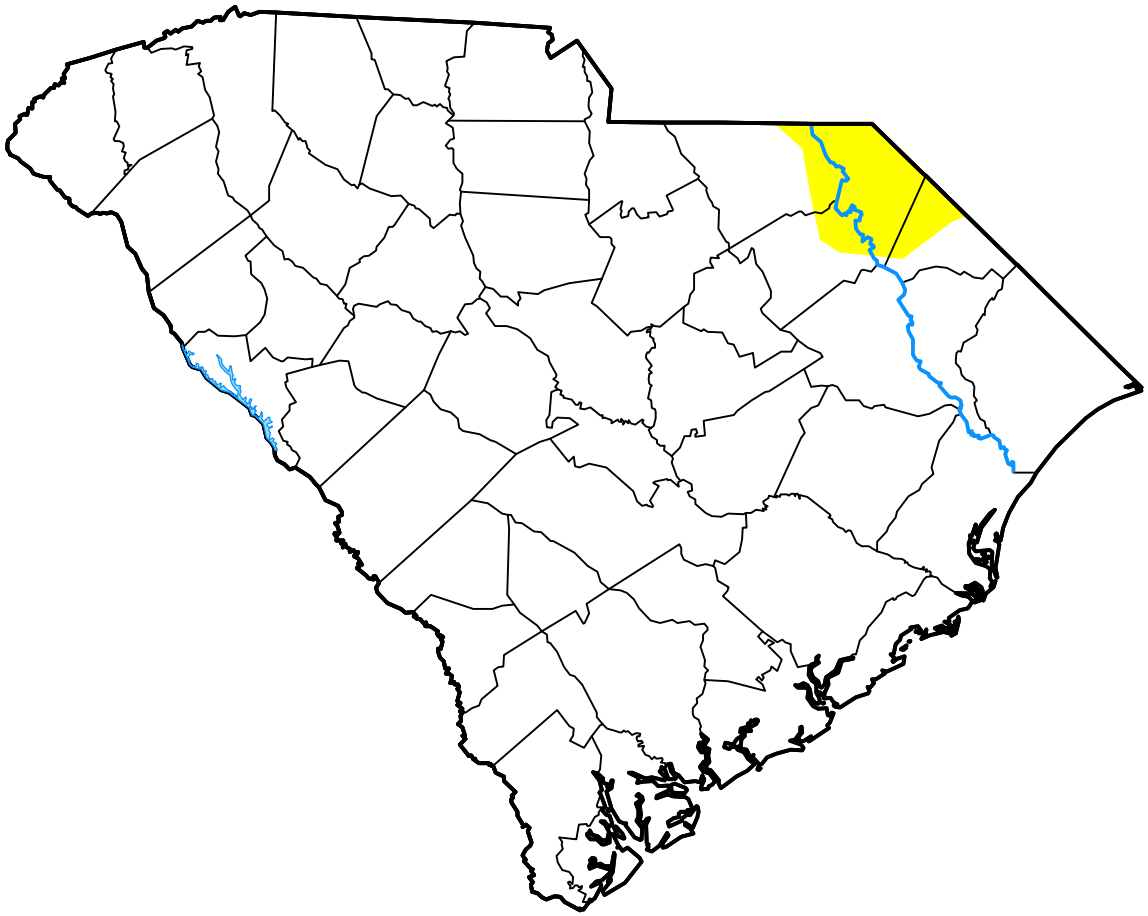
Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

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
BATESBURG	33.9, -81.5389	660.105	5.804	197.08	3.756	11061	90
BATESBURG 1.8 SSW	33.8839, -81.561	651.903	1.686	8.202	0.773	47	0
BATESBURG 3.2 NW	33.9422, -81.5838	554.134	3.89	105.971	2.163	35	0
LEESVILLE 5.2 SE	33.8703, -81.4417	520.013	5.941	140.092	3.506	3	0
RIDGE SPRING 0.4 SSW	33.84, -81.6663	632.874	8.403	27.231	4.01	59	0
GILBERT 0.0 NE	33.9244, -81.3931	533.136	8.528	126.969	4.92	1	0
GILBERT 1.2 SSW	33.9071, -81.4009	485.892	7.929	174.213	4.949	17	0
GILBERT 1.0 SE	33.915, -81.3813	493.11	9.097	166.995	5.613	1	0
SALUDA	33.9919, -81.7714	479.987	14.762	180.118	9.302	129	0

U.S. Drought Monitor

South Carolina



March 14, 2023

(Released Thursday, Mar. 16, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	97.12	2.88	0.00	0.00	0.00	0.00
Last Week *03-07-2023*	97.12	2.88	0.00	0.00	0.00	0.00
3 Months Ago *12-13-2022*	39.97	60.03	10.67	0.00	0.00	0.00
Start of Calendar Year *01-03-2023*	49.44	50.56	10.67	0.00	0.00	0.00
Start of Water Year *09-27-2022*	63.65	36.35	4.72	0.00	0.00	0.00
One Year Ago *03-15-2022*	26.41	73.59	37.78	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

Brad Rippey

U.S. Department of Agriculture

droughtmonitor.unl.edu