3516 Greensboro Avenue
Tuscaloosa, AL 35401
205.345.0816
www.ttlusa.com

June 19, 2020

Transmitted Via: Email (Holly.A.Ross@usace.army.mil)

Ms. Holly Ross, Sr. Project Manager
U.S. Army Corps of Engineers
Savannah District - Regulatory Division
1104 N. Westover Blvd. Unit 9
Albany, Georgia 31707

Subject: ***Individual Permit Application***
Twin Pines Minerals, LLC
Saunders Demonstration Mine
Saint George, Charlton County, GA
USACE Project No.: SAS-2018-00554
TTL Project No.: 00180200804.00

Dear Ms. Ross,

As a result of the completion of updated studies, including a delineation conducted by TTL on March 23-24, 2020 and an updated threatened and endangered species habitat assessment report, TTL provides the following summary of revisions:

a. A revised Figure 75 which provides the revised Proposed Project Aquatic Features Impact Map based on the results of the delineation of the chip mill and haul road.

b. There was a net increase of 0.224 acres to the permanent wetland impacts (#17 increased from 0.645 to 0.869). This is the wetland impact area along the haul road.

c. The new total permanent infrastructure impact area is 25.348 acres.

d. The new mitigation credits required is now 120.80 for permanent infrastructure impacts.

e. An additional 31 gopher tortoise burrows were identified on the chip mill property.

Please let TTL representatives know if additional information or revisions are needed for the project.

Sincerely,

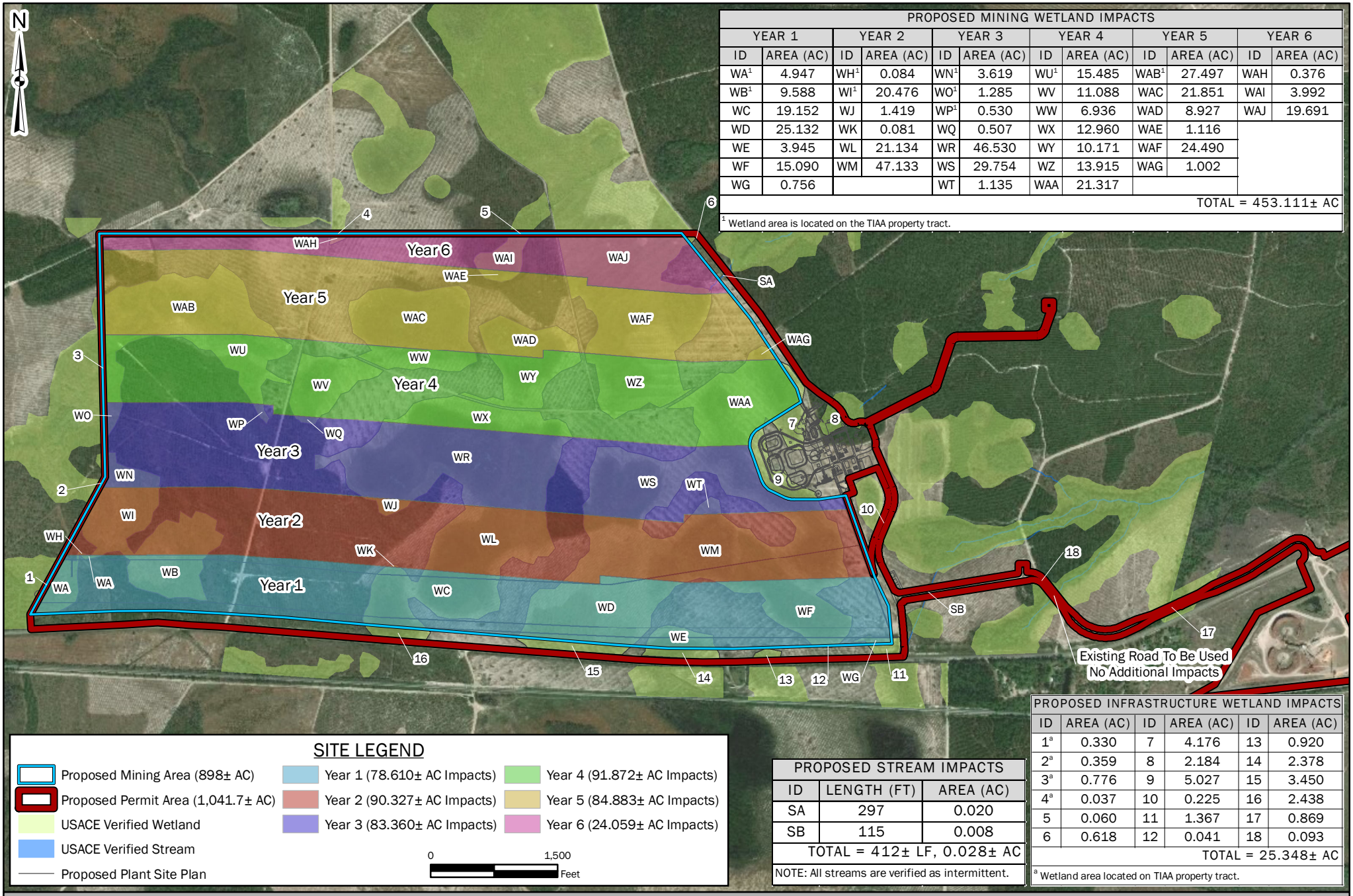
TTL, Inc.

Christopher Terrell
Project Professional

Chris Stanford
Project Professional

Cindy House-Pearson
Vice President

Enclosed: *Figure 75 Proposed Project Aquatic Feature Impact Areas Map*
Threatened & Endangered Species Habitat Assessment Report of the Chip Mill & Haul Road
Waters of the U.S. Delineation of the Chip Mill & Haul Road



PROPOSED MINING WETLAND IMPACTS											
YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		YEAR 6	
ID	AREA (AC)	ID	AREA (AC)	ID	AREA (AC)	ID	AREA (AC)	ID	AREA (AC)	ID	AREA (AC)
WA[1]	4.947	WH[1]	0.084	WN[1]	3.619	WU[1]	15.485	WAB[1]	27.497	WAH	0.376
WB[1]	9.588	WI[1]	20.476	WO[1]	1.285	WV	11.088	WAC	21.851	WAI	3.992
WC	19.152	WJ	1.419	WP[1]	0.530	WW	6.936	WAD	8.927	WAJ	19.691
WD	25.132	WK	0.081	WQ	0.507	WX	12.960	WAE	1.116		
WE	3.945	WL	21.134	WR	46.530	WY	10.171	WAF	24.490		
WF	15.090	WM	47.133	WS	29.754	WZ	13.915	WAG	1.002		
WG	0.756			WT	1.135	WAA	21.317				
TOTAL = 453.111± AC											

[1] Wetland area is located on the TIAA property tract.

SITE LEGEND

- Proposed Mining Area (898± AC)
- Proposed Permit Area (1,041.7± AC)
- USACE Verified Wetland
- USACE Verified Stream
- Proposed Plant Site Plan
- Year 1 (78.610± AC Impacts)
- Year 2 (90.327± AC Impacts)
- Year 3 (83.360± AC Impacts)
- Year 4 (91.872± AC Impacts)
- Year 5 (84.883± AC Impacts)
- Year 6 (24.059± AC Impacts)

PROPOSED STREAM IMPACTS		
ID	LENGTH (FT)	AREA (AC)
SA	297	0.020
SB	115	0.008
TOTAL = 412± LF, 0.028± AC		

NOTE: All streams are verified as intermittent.

PROPOSED INFRASTRUCTURE WETLAND IMPACTS					
ID	AREA (AC)	ID	AREA (AC)	ID	AREA (AC)
1[a]	0.330	7	4.176	13	0.920
2[a]	0.359	8	2.184	14	2.378
3[a]	0.776	9	5.027	15	3.450
4[a]	0.037	10	0.225	16	2.438
5	0.060	11	1.367	17	0.869
6	0.618	12	0.041	18	0.093
TOTAL = 25.348± AC					

[a] Wetland area located on TIAA property tract.

TTL

FIGURE 75: PROPOSED PROJECT AQUATIC FEATURE IMPACT AREAS MAP

TWIN PINES MINERALS

ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: DigitalGlobe, 3/24/2018 (0.46 m Resolution).

DRAWN BY:	DEK
CHECKED BY:	CMS
DRAWING DATE:	2/28/2020
REVISION DATE:	4/1/2020
TTL JOB NO.:	000180200804.00
APPROX. SCALE:	1 in = 1,500 ft

THREATENED & ENDANGERED SPECIES HABITAT ASSESSMENT REPORT

APPROXIMATELY 53.095-ACRE CHIP MILL PROPERTY SAINT GEORGE, CHARLTON COUNTY, GEORGIA

Submitted to:

Twin Pines Minerals, LLC

Attn: Mr. Steve Ingle, P.E.
2100 Southbridge Parkway
Birmingham, Alabama 35209

SAS-2018-00554
TTL Project No. 000180200804.00

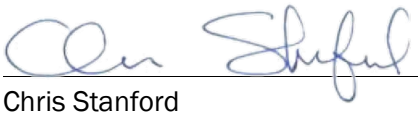
June 19, 2020

TTL

3516 Greensboro Avenue | Tuscaloosa, Alabama 35401 | Telephone 205-345-0816

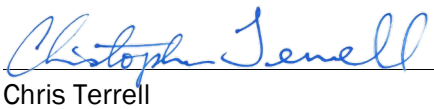
SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

TTL, Inc. has performed a Threatened and Endangered Species Survey within the project site. Environmental professionals with specialized understanding of the listed species and the habitats of concern conducted the survey and developed this report.



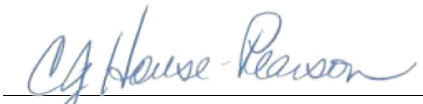
Chris Stanford
Project Professional

June 19, 2020
Date



Chris Terrell
Project Professional

June 19, 2020
Date



Cindy House-Pearson
Senior Natural Resources
Client Manager

June 19, 2020
Date

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1.0 INTRODUCTION

TTL, Inc. (TTL) was contracted by Twin Pines Minerals, LLC (Twin Pines) to perform habitat assessment for federally listed threatened or endangered species within the proposed project area. Twin Pines proposes to convert an existing lumber chip mill into a material processing facility for a proposed heavy mineral mining operation in Saint George, Charlton County, Georgia. TTL conducted the field activities for this project from March 23, 2020 to March 25, 2020. The U.S. Army Corps of Engineers (USACE) project number is SAS-2018-00554.

A list of federally protected species is maintained by the U.S. Fish and Wildlife Service (USFWS) for each county within the U.S. Consultation with the USFWS is required if project activities have the potential to impact listed species. The purpose of the survey is to observe the presence or probable absence of listed species and to evaluate the potential for suitable habitat. Site photographs are included in Appendix A.

2.0 SITE DESCRIPTION

The site is an approximately 53.095-acre area depicted on the U.S. Geological Survey (USGS) 7.5-minute Topographic Map of Saint George, Georgia (Figure 1). The center of the site is located near latitude 30.518411 and longitude -82.087495. According to the USGS Topographic Map, the elevation at the site ranges from approximately 120 to 155 feet above mean sea level.

The northern portion of the delineation area is located north of Highway 94. The southern portion of the review area is located between Highway 94 and the railroad right-of-way.

Driving directions to the site are as follows: from the intersection of GA-23 and GA-94 (in St. George, GA), travel west along GA-94 for approximately 2.96 miles and the chip mill is located along the southern portion of GA-94 (Figure 2).

3.0 LITERATURE AND RECORDS REVIEW

Prior to conducting the field effort, TTL performed a literature and records review to develop an understanding of the potential for the presence of ecosystems that may support species identified by the USFWS. These data sources and the review findings are described below.

3.1 Soils

The Natural Resource Conservation Service (NRCS) maintains a database of soil types (map units) for most areas of the U.S. The map unit descriptions, along with the maps, can be used to determine the composition and properties of the unit which represents a large area dominated by one or more major soil types. Map units are useful for planning purposes to provide an overall understanding of whether the soils that occur in a general area are likely to provide habitat support for listed species. Table 1 presents the soil map unit within the survey area. A map of the onsite and adjacent soils with the hydric rating classification is presented in Figure 3.

Table 1: Soil Map Unit Classification

Map Symbol	Map Unit Description
LeA	Leon Fine Sand, 0 to 2 percent slopes
LyA	Lynn Haven Fine Sand, 0 to 2 percent slopes
MaA	Mandarin Fine Sand, 0 to 2 percent slopes

3.2 Wetlands & Waters

The U.S. Fish and Wildlife Service (USFWS) created and maintains the National Wetland Inventory (NWI) database of information on the characteristics, extent, and status of the wetlands and deepwater habitats within the U.S. This information is useful for planning purposes and provides an overall understanding of the habitats that may be present in or around the site. The NWI classifies habitat types as marine, estuarine, riverine, lacustrine or palustrine with additional modifiers as appropriate to identify the water regime, water chemistry, soil or other characteristics based on *Classification of Wetlands and Deepwater Habitats of the U.S.* (Cowardin, 1979).

TTL reviewed the NWI data for the site using the USFWS NWI Wetlands Mapper web-based tool to determine the potential for wetlands to exist on the site. The USFWS NWI Mapper identified numerous stream features along the locations of constructed roadside and railroad right-of-way within the review area boundary as well as a small area of forested wetland along the southeastern

portion of the review area. Figure 4 depicts the NWI Map, and Table 2 summarizes the habitat below.

Table 2: NWI Classifications

Map Unit Symbol	Description of Habitat
R4SBC	Riverine; Intermittent; Streambed; Seasonally flooded.
PFO6F	Palustrine; Forested, Deciduous; Semipermanently Flooded

Furthermore, from March 23, 2020 to March 25, 2020 TTL delineated waters of the United States (WOTUS) on the property. The review area contains one, approximately 3.604-acre, wetland and one, approximately 1.247-acre, constructed storm water basin. The wetland is located on the northwestern portion of the review area (Figure 5). The hydrology for this area is supported by localized stormwater and a shallow water table. The wetland vegetation communities within the delineation area vary from large areas of bedded, planted pine habitat [dominated by slash pine (*Pinus elliottii*) whose growth has been stunted due to hydric conditions, inkberry (*Ilex glabra*), red maple (*Acer rubrum*), Carolina redroot (*Lachnanthes caroliniana*), loblolly bay (*Gordonia* lasianthus), broomsedge (*Andropogon virginicus*) and Virginia chain fern (*Woodwardia virginica*)], to forested bayhead/riparian habitat that exhibited few signs of silvicultural activities [dominated by pond cypress (*Taxodium ascendens*), swamp tupelo (*Nyssa biflora*), large gallberry (*Ilex coriacea*), myrtle leaf holly (*Ilex myrtifolia*), manyhead rush (*Juncus polycephalus*) and Virginia chain fern].

3.3 Ecoregion

Areas with generally similar ecosystems, with respect to the type, quality and quantity of environmental resources have been divided into “ecoregions” by the U.S. Environmental Protection Agency (EPA). The U.S. is divided and sub-divided into successively smaller regions: Level I is the coarsest scale and Level IV is the finest scale of division. The project site is located within the Sea Island Flatwoods (75f) Level IV ecoregion within the Southern Coastal Plain Level III ecoregion (Griffith et al., 2001).

The Southern Coastal Plain ecoregion is described below:

> *The Southern Coastal Plain extends from South Carolina and Georgia through much of central Florida, and along the Gulf coast lowlands of the Florida Panhandle, Alabama, and Mississippi. From a national perspective, it appears to be mostly flat plains, but it is a heterogeneous region*

also containing barrier islands, coastal lagoons, marshes, and swampy lowlands along the Gulf and Atlantic coasts. In Florida, an area of discontinuous highlands contains numerous lakes. This ecoregion is generally lower in elevation with less relief and wetter soils than ecoregion 65. Once covered by a variety of forest communities that included trees of longleaf pine, slash pine, pond pine, beech, sweetgum, southern magnolia, white oak, and laurel oak, land cover in the region is now mostly slash and loblolly pine with oak-gum-cypress forest in some low lying areas, citrus groves, pasture for beef cattle, and urban. (Griffith et al., 2001)

The Sea Island Flatwoods ecoregion is described below:

*The **Sea Island Flatwoods** are poorly-drained flat plains with lower elevations and less dissection than 65l. Pleistocene sea levels rose and fell several times creating different terraces and shoreline deposits. Spodosols and other wet soils are common, although small areas of better-drained soils add some ecological diversity. Trail Ridge is in this region, forming the boundary with 75g. Loblolly and slash pine plantations cover much of the region. Water oak, willow oak, sweetgum, blackgum and cypress occur in wet areas.* (Griffith et al., 2001)

4.0 POTENTIAL SPECIES AND HABITAT DESCRIPTION

4.1 Potential Species Overview

According to information maintained by the U.S. Fish & Wildlife Service (USFWS) Environmental Conservation Online System (ECOS) IPaC Species List **(Consultation Code: 04EG1000-2020-SLI-1378**, **Event Code: 04EG1000-2020-E-02535)**, four (4) federally-listed species may be located within the project area; there are no critical habitats identified within the project area. A copy of the Official Species List Letter is included as Appendix A. The species list is also provided in the table below:

Group	Name	Status
Reptiles	**Eastern Indigo Snake (*Drymarchon coraris couperi*)**	**Threatened**
	Gopher Tortoise (*Gopherus polyphemus*)	**Candidate**
Amphibians	**Frosted Flatwoods Salamander (*Ambystoma cingulatum*)**	**Threatened**

Group	Name	Status
Birds	**Red-cockaded Woodpecker (*Picoides borealis)***	**Endangered**

4.2 Gopher Tortoise

The Gopher tortoise is a large brownish-gray land turtle. The gopher tortoise grows slowly, with female shells (carapace) reaching at least nine inches in length while male carapaces can be slightly smaller. The gopher tortoise has large flipper-like, heavily scaled front legs and strong toenails for digging while the back legs are muscular. In North America, there are four extant species (desert tortoise, Texas tortoise, Bolson tortoise and the gopher tortoise), all occurring in deep sand habitats.

The largest populations of gopher tortoises occur in deep, dry sandy soils with a moderately open tree canopy such as the longleaf pine-scrub oak-wiregrass sand hills that are frequently burned. This habitat is ideal for digging deep burrows and allows sufficient sunlight to reach the ground to provide thermo-regulation necessary for nesting and incubation of the eggs. This open canopy also allows abundant herbaceous vegetation necessary for their preferred herbivorous diet.

Clear cuts that are created by timber harvesting activities may support a small population for a few years, but as the canopy closes, the tortoises move toward areas with a more open canopy. Dense hardwood and unburned pine/hardwood areas are not suitable habitat. While agricultural fields provide support for a few individuals, it is considered marginal habitat.

Gopher tortoise survey methods closely followed those recommended by Smith et al. (2009). From a review of soil maps and vegetation, combined with initial field reconnaissance, it became apparent that, on-site, gopher tortoise burrows were limited to habitats underlain by the soil type classified as Mandarin Fine Sand (MAA). Mandarin is classified as a suitable soil, but not as a preferred soil, for the tortoise (U.S. Department of Agriculture Natural Resources Conservation Service, 2013).

To locate burrows, TTL walked line transects, with observers spaced approximately 5 meters apart, through all areas of potential habitat. TTL flagged and collected geospatial data for all active (i.e., intact burrows with fresh tortoise tracks) and inactive (i.e., intact burrows, but lacking fresh tracks) tortoise burrows on the Chip Mill property.

TTL identified 31 active and inactive gopher tortoise burrows in close proximity to the railroad spur right-of-way as shown on Figure 6. Site photographs are provided in Appendix A.

4.3 Eastern Indigo Snake

Due to known occurrences in the region and gopher tortoise burrows present onsite, wintering habitat may be present for the eastern indigo snake. Although not surveyed for due to the time of year of the field inspection, no specimens, associated fresh snake tracks, or snake shed skins of the eastern indigo snake were observed during the field inspections.

4.4 Frosted Flatwoods Salamander

The frosted flatwoods salamander is endemic to mesic longleaf pine-wiregrass flatwoods and savannahs where it breeds in isolated, ephemeral depressional wetlands (Palis 1997; Jensen and Stevenson 2008). Optimal breeding habitats are kept open-canopied by occasional fire events and the basins of these wetlands are typically carpeted with graminaceous vegetation (Bishop and Haas 2005, Palis 1997; US FWS 1999). Adult salamanders spend over 90% of their lives in fire-maintained, mesic longleaf/slash pine−wiregrass flatwoods surrounding breeding sites (Palis and Means 2005). Late winter-early spring surveys for larvae are the most effective and efficient way to document the presence of this salamander (Bishop et al. 2006, Bevelhimer et al. 2008).

TTL reviewed the on-site wetland habitats for their suitability of potential breeding pond habitats for the frosted flatwoods salamander (i.e., isolated depressional wetlands forested with pond cypress (*Taxodium ascendens*), black gum (*Nyssa biflora*), slash pine (*Pinus elliottii*), and myrtle-leaved holly (*Ilex myrtifolia*). The on-site forested wetland was evaluated as to its potential suitability for the frosted flatwoods salamander based on a ranking system developed by Palis (2002). For each wetland; the hydrology, fire history, presence/absence of graminaceous vegetation within the pond basin (including *Carex*, *Rhynchospora*, *Eriocaulon*, *Xyris*, *Panicum* spp.) as well as the condition of pine uplands (e.g., fire history, integrity of ground cover, soil type and disturbance) surrounding the wetland was considered. TTL did not identify any suitable habitat for breeding sites within the review area. The onsite forested wetland appeared riparian in nature and was not an isolated, depressional feature.

4.5 Red-cockaded Woodpecker

Red-cockaded woodpecker are residents of the Okefenokee National Wildlife Refuge. Suitable habitat consists of well-drained, sandy areas dominated by old-growth, longleaf pine communities with sparse mid-story vegetation and dense diverse herbaceous groundcover. Pine trees must be of sufficient size and spatial distribution to be inhabited by red-cockaded woodpeckers. Due to the site's current use as a commercial forestry operation (north of Highway 94) and chip mill (south of

Highway 94), this habitat does not exist within the review area. No red-cockaded woodpeckers, cavity trees, or signs were observed during field reconnaissance.

5.0 CONCLUSIONS

Within the survey review area, TTL observed 31 gopher tortoise burrows, which are located in close proximity to the railroad rail spur right-of-way. Therefore, potential wintering habitat is present onsite for the eastern indigo snake. No suitable habitat was observed onsite for the frosted flatwoods salamander or the red-cockaded woodpecker.

Due to the historic use of this property as an industrial facility and no proposed construction within burrow areas, this project may affect but is not likely to adversely affect the gopher tortoise or the eastern indigo snake.

6.0 REFERENCES

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FIGURES

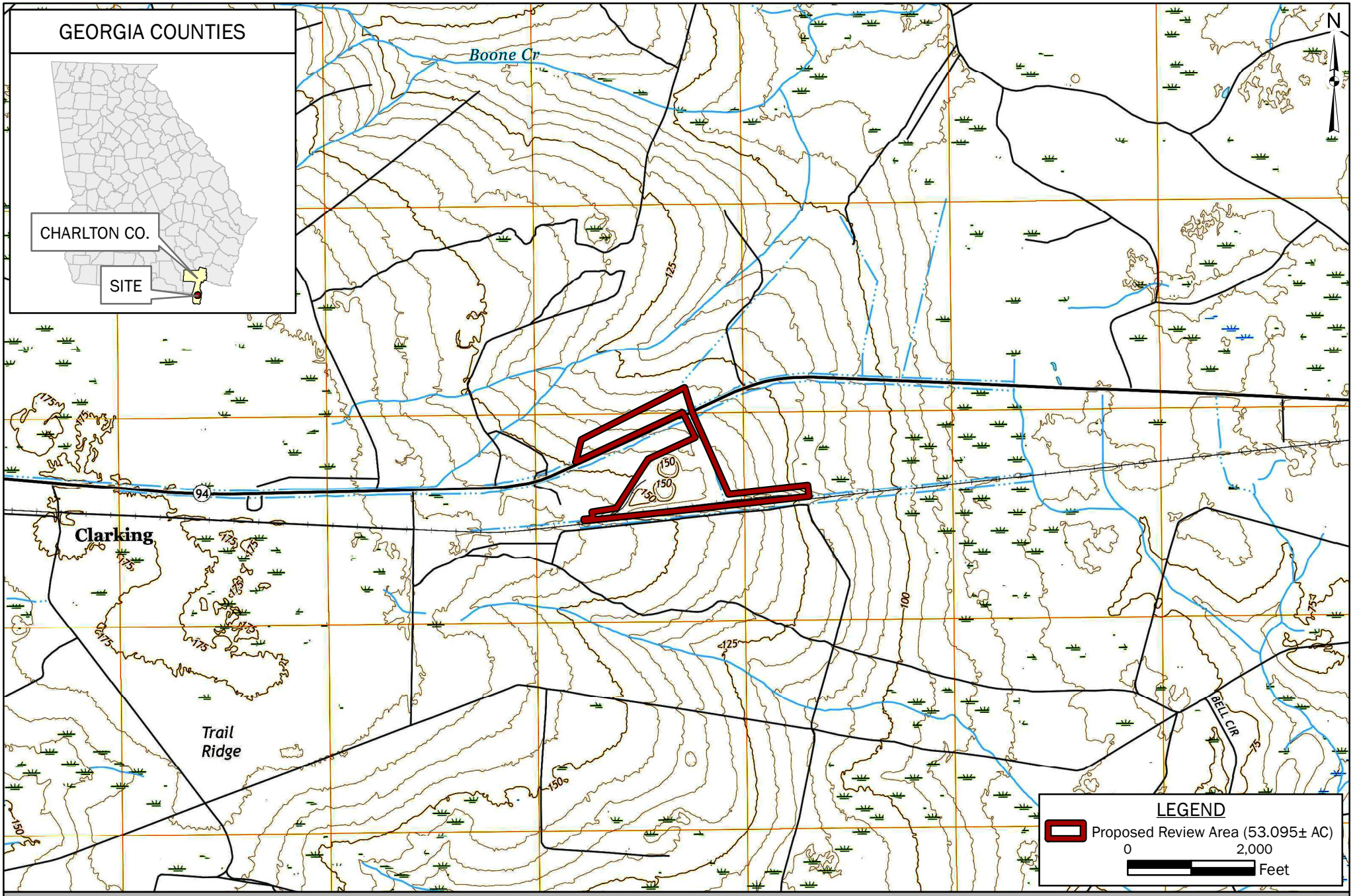

FIGURE 1: SITE LOCATION & TOPOGRAPHIC MAP

THREATENED & ENDANGERED SPECIES REPORT

TWIN PINES MINERALS

ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: Saint George, Georgia USGS 7.5 Minute Quadrangle Map, 2017 (5-ft Contour Interval).

DRAWN BY:	DEK
CHECKED BY:	CMS
DRAWING DATE:	6/17/2020
REVISION DATE:	N/A
TTL JOB NO.:	000180200804.00
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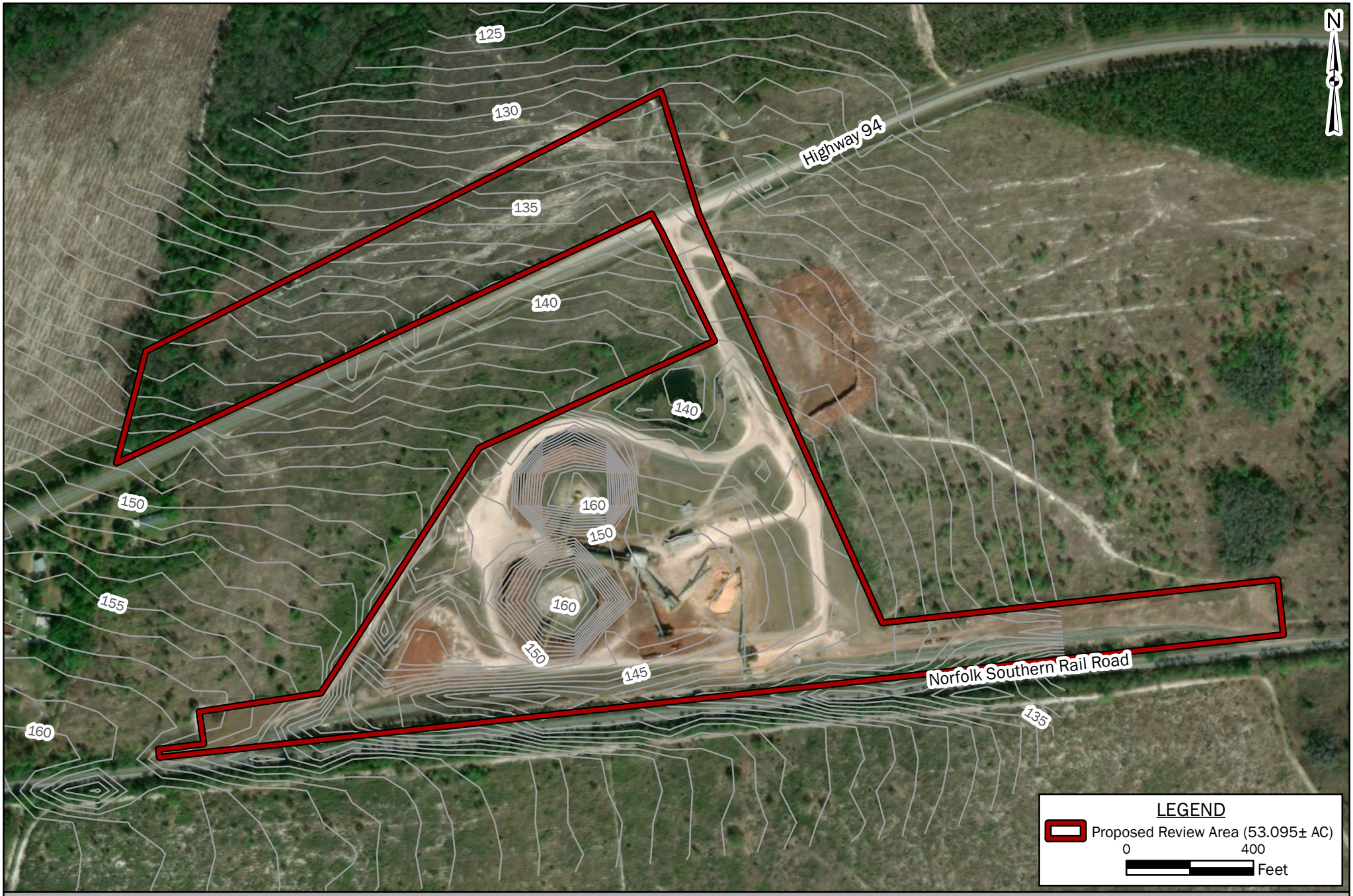

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FIGURE 2: SITE LOCATION & AERIAL PHOTOGRAPH

THREATENED & ENDANGERED SPECIES REPORT

TWIN PINES MINERALS

ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: Maxar, Vivid Imagery, 3/24/2018 (0.46 m Resolution).

DRAWN BY:	DEK
CHECKED BY:	CMS
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REVISION DATE:	N/A
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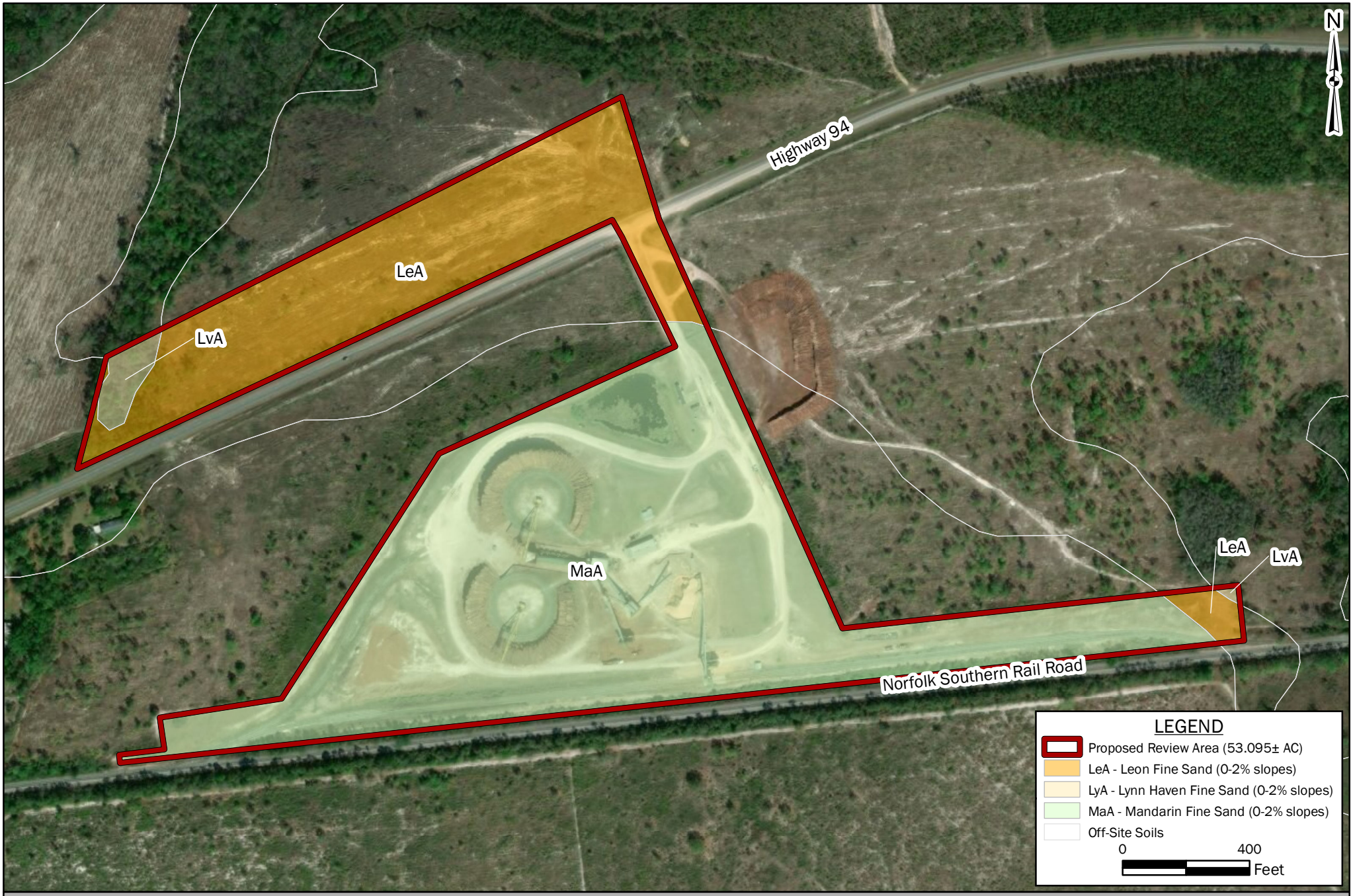

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FIGURE 3: NATURAL RESOURCES CONSERVATION SERVICES (NRCS) SOIL MAP

THREATENED & ENDANGERED SPECIES REPORT

TWIN PINES MINERALS

ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: Maxar, Vivid Imagery, 3/24/2018 (0.46 m Resolution).

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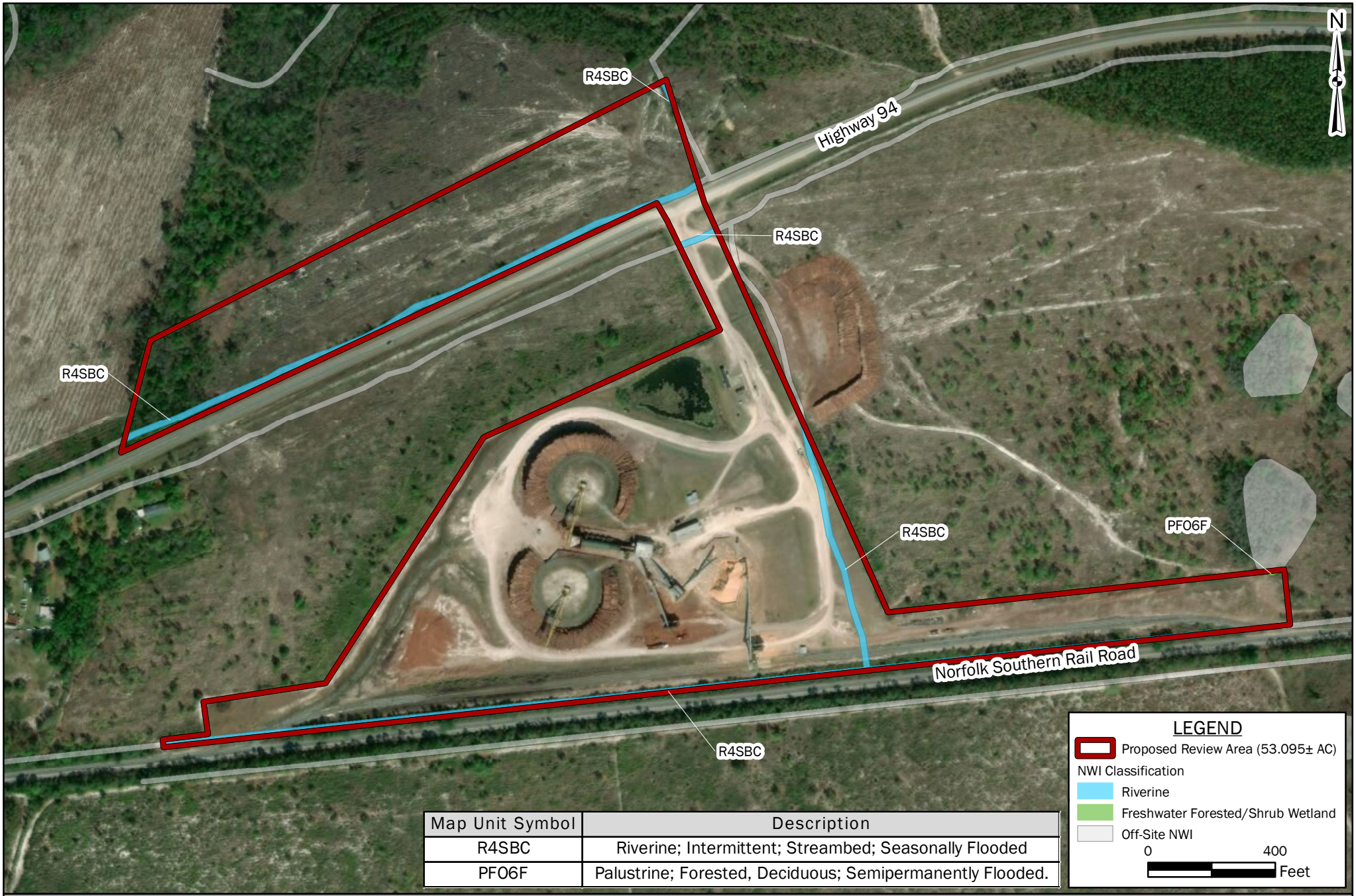

Map Unit Symbol	Description
R4SBC	Riverine; Intermittent; Streambed; Seasonally Flooded
PFO6F	Palustrine; Forested, Deciduous; Semipermanently Flooded.

TTL

FIGURE 4: NATIONAL WETLAND INVENTORY (NWI) MAP

THREATENED & ENDANGERED SPECIES REPORT

TWIN PINES MINERALS

ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: Maxar, Vivid Imagery, 3/24/2018 (0.46 m Resolution).

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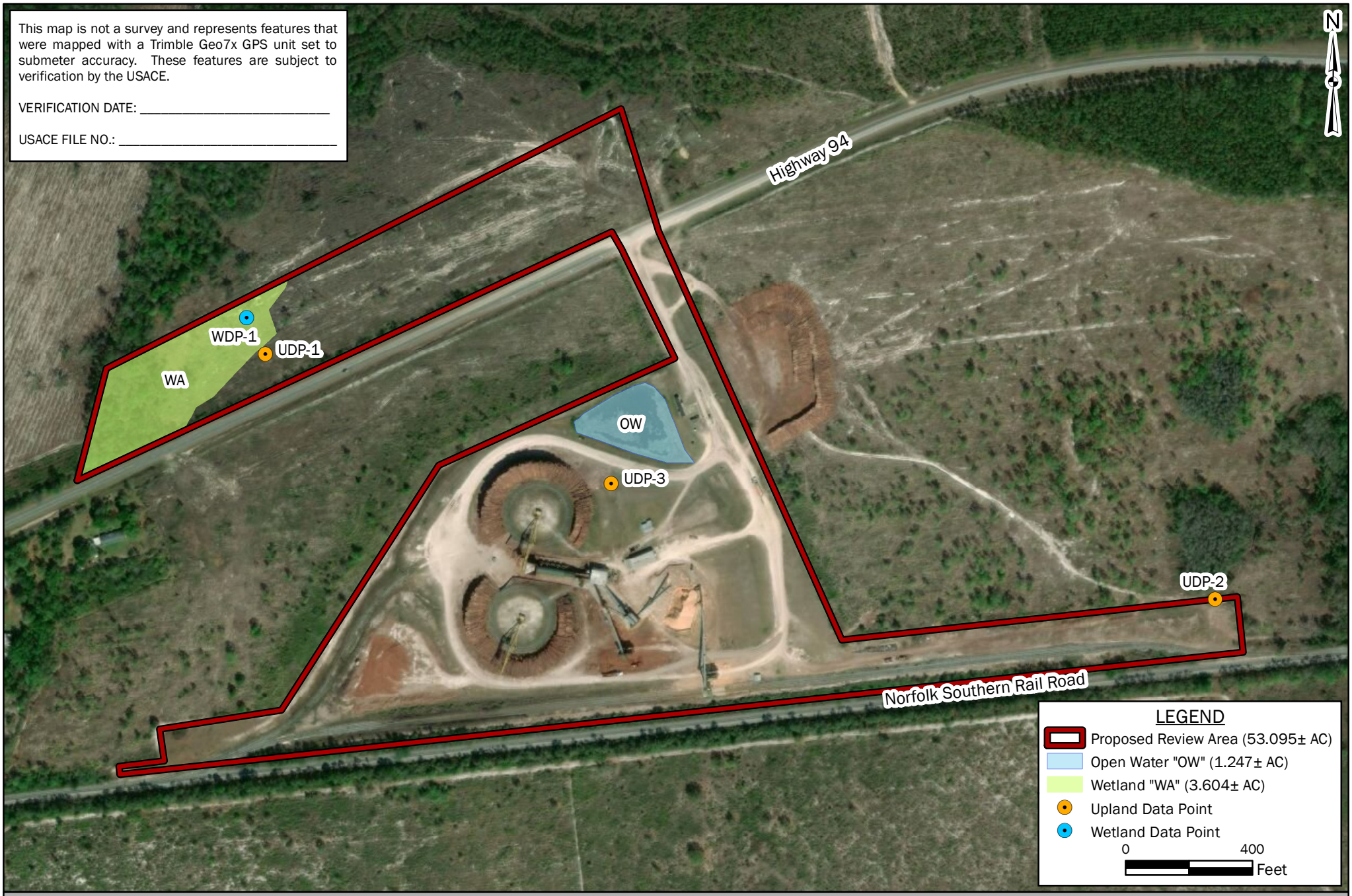

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FIGURE 5: WATERS OF THE U.S. DELINEATION MAP

THREATENED & ENDANGERED SPECIES REPORT

TWIN PINES MINERALS

ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: Maxar, Vivid Imagery, 3/24/2018 (0.46 m Resolution).

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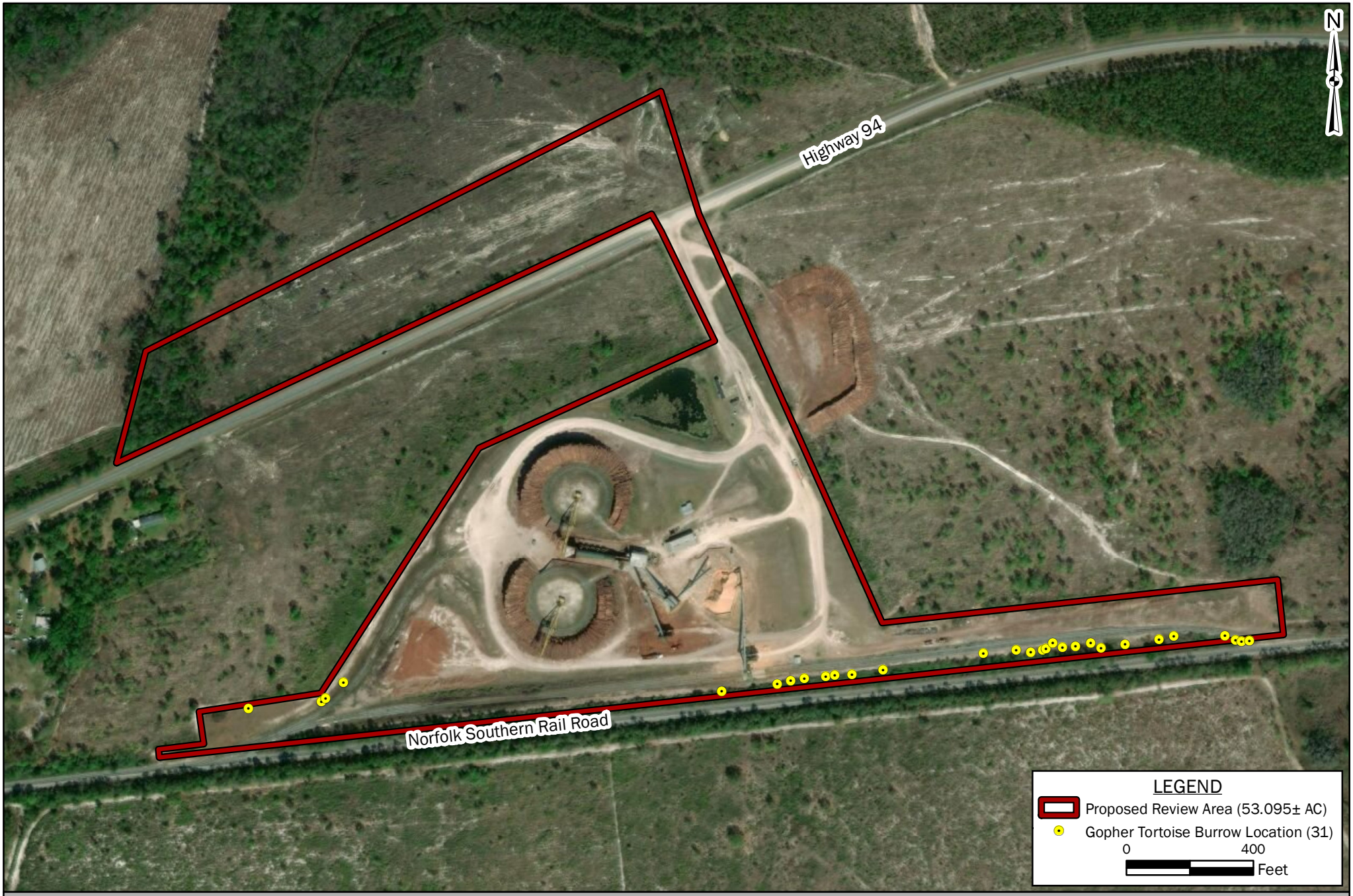
APPROX. SCALE:	1 in = 400 ft



TTL

FIGURE 6: GOPHER TORTOISE BURROW LOCATION MAP

THREATENED & ENDANGERED SPECIES REPORT

TWIN PINES MINERALS

ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: Maxar, Vivid Imagery, 3/24/2018 (0.46 m Resolution).

DRAWN BY:	DEK
CHECKED BY:	CMS
DRAWING DATE:	6/17/2020
REVISION DATE:	N/A
TTL JOB NO.:	000180200804.00
APPROX. SCALE:	1 in = 400 ft

APPENDIX A

SITE PHOTOGRAPHS

Site Photographs

Threatened & Endangered Species Habitat Assessment: Chip Mill Property
TTL Project No. 000180200804.00
Twin Pines Minerals ● Charlton County, Georgia
Photos taken March 23, 2020 – March 25, 2020

Photograph 1: View of Wetland Data Point 1 (WDP-1) location.

Photograph 2: View of Upland Data Point 1 (UDP-1) location.

Photograph 3: View westward of the southeastern portion of the delineation area.

Photograph 4: View of Upland Data Point 2 (UDP-2) location.

Photograph 5: View of the constructed recirculation open water located on the central portion of the delineation area.

Photograph 6: View of Upland Data Point 3 (UDP-3) location.

Photograph 7: View of gopher tortoise burrow in close proximity to rail spur along the southeastern portion of the review area.

Photograph 8: View of gopher tortoise burrow in close proximity to rail spur along the southwestern portion of the review area .

WATERS OF THE UNITED STATES DELINEATION REPORT

APPROXIMATELY 53.095-ACRE CHIP MILL PROPERTY SAINT GEORGE, CHARLTON COUNTY, GEORGIA

Submitted to:

Twin Pines Minerals, LLC

Attn: Mr. Steve Ingle, P.E.
2100 Southbridge Parkway
Birmingham, Alabama 35209

Prepared by:

TTL, Inc.
2743-B Gunter Park Drive West
Montgomery, Alabama 36109

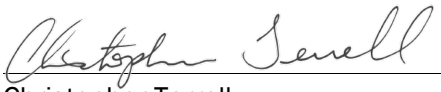
Project No. 000180200804.00

April 7, 2020

TTL

SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

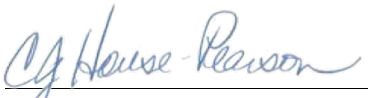
TTL, Inc. has performed a waters of the United States (WOTUS) delineation in general conformance with the scope and limitations of the *U. S. Army Corps of Engineers Wetland Delineation Manual, 1987 Edition*, and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0* (2010). Identification of ephemeral, intermittent and perennial streams has been performed in general conformance with methodology outlined in *Methodology for Identification of Intermittent and Perennial Streams and their Origins, Version 4.11* (2010).



April 7, 2020

Christopher Terrell
Environmental Professional

Date



April 7, 2020

Cindy House-Pearson
Senior Natural Resources
Client Manager

Date

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APPENDICES

1.0 INTRODUCTION

TTL, Inc. (TTL) was contracted by Twin Pines Minerals, LLC (Twin Pines) to perform a delineation of the waters of the United States (WOTUS) associated with a proposed use of converting an existing lumber chip mill into a material processing facility for a proposed heavy mineral mining operation in Saint George, Charlton County, Georgia (Figure 1). TTL conducted the field activities for this project from March 23, 2020 to March 25, 2020. The U.S. Army Corps of Engineers (USACE) project number is SAS-2018-00554.

Activities within jurisdictional WOTUS are regulated by the USACE. Authority to permit discharges (fill) within jurisdictional wetlands or non-navigable waters of the U.S. is granted under Section 404 of the Clean Water Act (CWA) of 1972. Authority to permit work and placement of structures in navigable WOTUS is granted under Sections 9 and 10 of the Rivers and Harbors Act of 1899. For regulatory purposes under the CWA, wetlands are defined by the USACE as:

> Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

2.0 SITE DESCRIPTION

The site is an approximately 53.095-acre area depicted on the U.S. Geological Survey (USGS) 7.5-minute Topographic Map of Saint George, Georgia (Figure 1). The center of the site is located near latitude 30.518411 and longitude -82.087495. According to the USGS Topographic Map, the elevation at the site ranges from approximately 120 to 155 feet above mean sea level.

The northern portion of the delineation area is located north of Highway 94. The southern portion of the delineation area is located between Highway 94 and the railroad right-of-way. The primary sources of hydrology for the delineation area are onsite rainfall and local surface water flow.

Driving directions to the site are as follows: from the intersection of GA-23 and GA-94 (in St. George, GA), travel west along GA-94 for approximately 2.96 miles and the chip mill is located along the southern portion of GA-94.

3.0 LITERATURE AND RECORDS REVIEW

Prior to conducting the field effort, TTL performed a literature and records review to develop an understanding of the potential for the presence of WOTUS on the subject site or surrounding properties. These data sources and the review findings are described below.

3.1 Hydric Soils

The Natural Resources Conservation Service (NRCS) maintains a database of soil types (map units) for most areas of the U.S. (NRCS, 2017). The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit which represents a large area dominated by one or more major types of soil. Map units are further classified with a rating of hydric, partially hydric or non-hydric. Map units are useful for planning purposes to provide an overall understanding of the soils that occur in a general area. However, due to the natural variability of the landscape, direct observation of the soils profile is necessary to identify hydric soil indicators.

A classification of hydric means that the soil components listed for a given map unit are rated as being hydric. “Predominantly hydric” means that more than 66 percent to less than 100 percent of soil components are hydric. "Partially hydric" means that more than 33 percent to less than 65 percent of soil components are hydric. “Predominantly non-hydric” means that more than 0 percent and less than 32 percent of soil components are hydric. "Not hydric" means that all soil components are rated as not hydric. "Unknown hydric" indicates that at least one component is not rated so a definitive rating for the map unit cannot be made. A NRCS map of the soils located on the site with the associated hydric rating is presented in Figure 3 and summarized in Table 1 below.

Table 1: Soil Map Units Classifications

Map Unit Symbol	Description	Hydric Rating	Hydric Description
LeA	Leon fine sand, 0 to 2 percent slopes	97	Predominantly hydric
LvA	Lynn Haven fine sand, 0 to 2 percent slopes	90	Predominantly hydric
MaA	Mandarin fine sand, 0 to 2 percent slopes	6	Predominantly non-hydric

3.2 National Wetland Inventory

The U.S. Fish and Wildlife Service (USFWS) created and maintains the National Wetland Inventory (NWI) database of information on the characteristics, extent, and status of the wetlands and deepwater habitats within the U.S. This information is useful for planning purposes and provides an

overall understanding of the habitats that may be present in or around the site. The NWI classifies habitat types as marine, estuarine, riverine, lacustrine or palustrine with additional modifiers as appropriate to identify the water regime, water chemistry, soil or other characteristics based on *Classification of Wetlands and Deepwater Habitats of the U.S*. (Cowardin, 1979).

TTL reviewed the NWI data for the site using the USFWS NWI Wetlands Mapper web-based tool to determine the potential for wetlands to exist on the site. The USFWS NWI Mapper identified numerous stream features along the locations of constructed roadside and railroad right-of-way within the delineation area boundary. Figure 4 depicts the NWI Map, and Table 2 summarizes the habitat below.

Table 2: NWI Classifications

Map Unit Symbol	Description of Habitat
R4SBC	Riverine; Intermittent; Streambed; Seasonally flooded.

3.3 Hydrologic Unit Code

The U.S. is divided and sub-divided into successively smaller hydrologic units which are classified into six levels: regions, sub-regions, accounting units, watershed, sub-watershed, and cataloging units. The hydrologic units are arranged within each other, from the smallest (cataloging unit) to the largest (regions). Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to 12 digits based on the six levels of classification in the hydrologic system (Seaber, Kapinos, Knapp, 1987). The site is located within the Boone Creek cataloging unit 12-Digit HUC 030702040603. This cataloging unit is located within the Middle Saint Mary's River sub-watershed, 10-Digit HUC 0307020406. The Middle Saint Mary's River sub-watershed is located within the St Mary's River watershed, 8-Digit HUC 03070204 (Figure 5).

3.4 Normal Weather Conditions

TTL calculates a subject site's normal weather conditions before performing site work to understand whether aquatic features in the landscape may exhibit certain characteristics related to current and near past hydrologic regime. TTL calculates data obtained from an on-line NRCS climactic database, Agricultural Applied Climate Information System (AgACIS), and derives its calculation method from the Tennessee Department of Environment and Conservation's guide for making hydrologic determinations (TDEC, 2011). An evaluation of weather conditions was performed for the three-month period prior to the field activities. Calculations for the site indicate that the weather conditions were normal for the time of year that field work was performed.

The Palmer Drought Severity Index provided by National Oceanic and Atmospheric Administration (NOAA) is accessed at http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/palmer.html and was used to cross-reference the results calculated. The Palmer Drought Severity Index indicates that the region of the site experienced no drought conditions during the weeks prior to the site visit.

As an additional cross-reference, the U.S. Drought Monitor was accessed and evaluated. The U.S. Drought Monitor is produced through a partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture (USDA), and NOAA. The most recent update of the U.S. Drought Monitor (March 24, 2020) Map of Georgia exhibited "Abnormally Dry" conditions in the vicinity of the review area.

The Normal Weather Conditions Table, AgACIS data, Palmer Drought Severity Index Map, and U.S Drought Monitor Map of Georgia are included in Appendix A.

4.0 WETLAND AND WATERS DELINEATION

4.1 Wetland Identification Methodology

TTL utilizes the *U.S. Army Corps of Engineers Wetland Delineation Manual* (USACE, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (USACE, 2010) technical guidelines for determining the presence of wetlands. This determination requires that a positive wetland indicator be present for each of the three parameters (hydrology, soil, and vegetation), with the exception of areas altered by recent human activities or natural events. During field activities, TTL assessed the project area for the presence of hydrophytic vegetation and used a Dutch hand-auger to evaluate the project area for the presence of hydric soils. TTL examined the soil for hydric soil indicators as identified in the *Field Indicators of Hydric Soils in the United States, V. 8.1* (NRCS, 2017). Additionally, TTL observed the project area for indications of inundated or saturated soils, water marks, drift lines, crayfish burrows, sediment deposits and other wetland hydrology indicators. TTL used *Wetland Determination Data Forms – Atlantic and Gulf Coastal Plain Region* (2010) to record field conditions for the soil, vegetation and hydrology for wetlands and uplands located on the site. At least one data point was established in each habitat type observed within the review area.

TTL traversed the delineation area on foot and placed orange flagging labeled with Upland Data Point (UDP) or Wetland Data Point (WDP) point identification at the data point location. The location of the data point flagging was mapped with a Trimble Geo7x Global Positioning System (GPS) unit, which was set to sub-meter tolerances. Field data was post-processed using Trimble PathfinderOffice V 5.3 and exported to ESRI's ArcMap 10.7. Area features were manually digitized in

ArcGIS using the flag locations; geographic coordinates and area quantities were calculated using ArcGIS "area" function.

4.2 Wetland Findings

The delineation area contains one wetland area (WA) consisting of approximately 3.604 acres. The boundaries of the wetland area and data point locations are depicted on Figure 6. Selected site photographs of our field observations are provided in Appendix B. Wetland Determination Data Forms are included in Appendix C. Table 3 summarizes the wetland findings below.

Table 3: Wetland Summary

Wetland ID	Cowardin Habitat Description	Area (acres)
WA	Palustrine; Forested; Broad-leaved Deciduous; Needle-Leaved Evergreen, Seasonally Flooded	3.604

Wetland WA is located on the northwestern portion of the delineation area. The soil textures within Wetland WA are sandy and meet hydric soil indicator S8 – Stripped Matrix. The hydrology for this area is supported by localized stormwater and a shallow water table. The wetland vegetation communities within the delineation area vary from large areas of bedded, planted pine habitat [dominated by slash pine (*Pinus elliottii*) whose growth has been stunted due to hydric conditions, inkberry (*Ilex glabra*), red maple (Acer rubrum), Carolina redroot (*Lachnanthes caroliniana*), loblolly bay (*Gordonia* lasianthus), broomsedge (*Andropogon virginicus*) and Virginia chain fern (*Woodwardia virginica*)], to forested pocosin habitat that exhibited few signs of silvicultural activities [dominated by pond cypress (*Taxodium ascendens*), swamp tupelo (*Nyssa biflora*), large gallberry (*Ilex coriacea*), myrtle leaf holly (Ilex myrtifolia), manyhead rush (*Juncus polycephalus*) and Virginia chain fern.

4.3 Streams Identification and Methodology

TTL used the *North Carolina Division of Water Quality – Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11, September 1, 2010 (NC Method)* technical guideline to determine the most appropriate classification of each subject stream. This technical guideline for stream identification is the preferred methodology for distinguishing between intermittent and perennial streams in the southeast United States and requires evaluation of 26 attributes of the stream and assigning a numeric score to each on the *NC DWQ Stream Identification Form Version 4.11*. A four-tiered, weighted scale is utilized for evaluating and scoring the features categorized in sets of geomorphic, hydrologic, and biological attributes. Additionally, TTL utilized the

Regulatory Guidance Letter No. 05-05: *Ordinary High Water Mark Identification* (USACE, 2005) as the basis for the delineation, mapping, and linear footage/areal estimations of on-site streams.

4.4 Stream Findings

TTL did not identify any streams within the delineation area.

4.5 Jurisdictional Determination Request

The USACE has the sole authority to determine whether wetlands or water features are "jurisdictional." Under certain circumstances, wetland areas are considered non-jurisdictional because they lack a significant nexus with other wetlands or waters of the U.S. TTL utilized the *USACE Jurisdictional Determination Form Instructional Guidebook* (USACE and EPA, 2007) to complete a *SAS APPENDIX 1: Request for Corps of Engineers Jurisdictional Determination (JD) and/or Delineation Review Form* (Appendix D).

It is TTL's opinion that the observed wetland within the delineation area is a jurisdictional feature due to its significant nexus to nearby relatively permanent waters.

TTL recommends that a preliminary jurisdictional determination of the potentially jurisdictional site features be requested from the USACE Savannah District. If the USACE is not engaged regarding a jurisdictional determination or delineation review of aquatic resources, TTL is neither responsible for the final determination of jurisdictional features within the review corridor, nor responsible for violations associated with unauthorized activities that may occur within areas deemed jurisdictional by the USACE at a later time.

5.0 CONCLUSIONS

- Approximately 3.604 acres of forested wetland were identified within the delineation area.
- Upon approval by the client, TTL will submit a request for a preliminary jurisdictional determination from the USACE of all aquatic features within the delineation area.

5.0 REFERENCES

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FIGURES

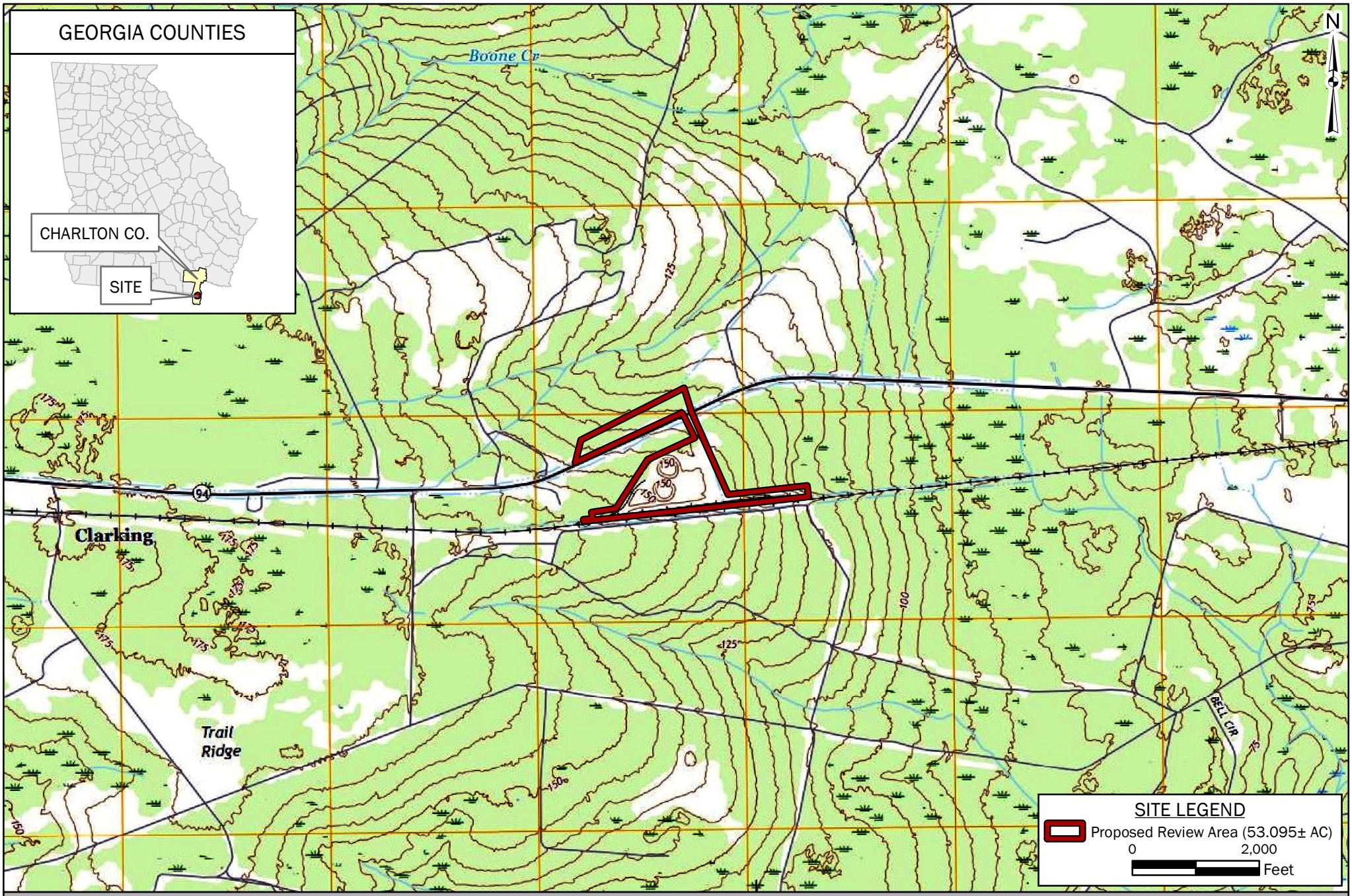

FIGURE 1: SITE LOCATION & TOPOGRAPHIC MAP

WATERS OF THE U.S. DELINEATION

TWIN PINES MINERALS

ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: Saint George, Georgia USGS 7.5 Minute Quadrangle Map, 2017 (5-ft Contour Interval).

DRAWN BY:	DEK
CHECKED BY:	CMS
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REVISION DATE:	N/A
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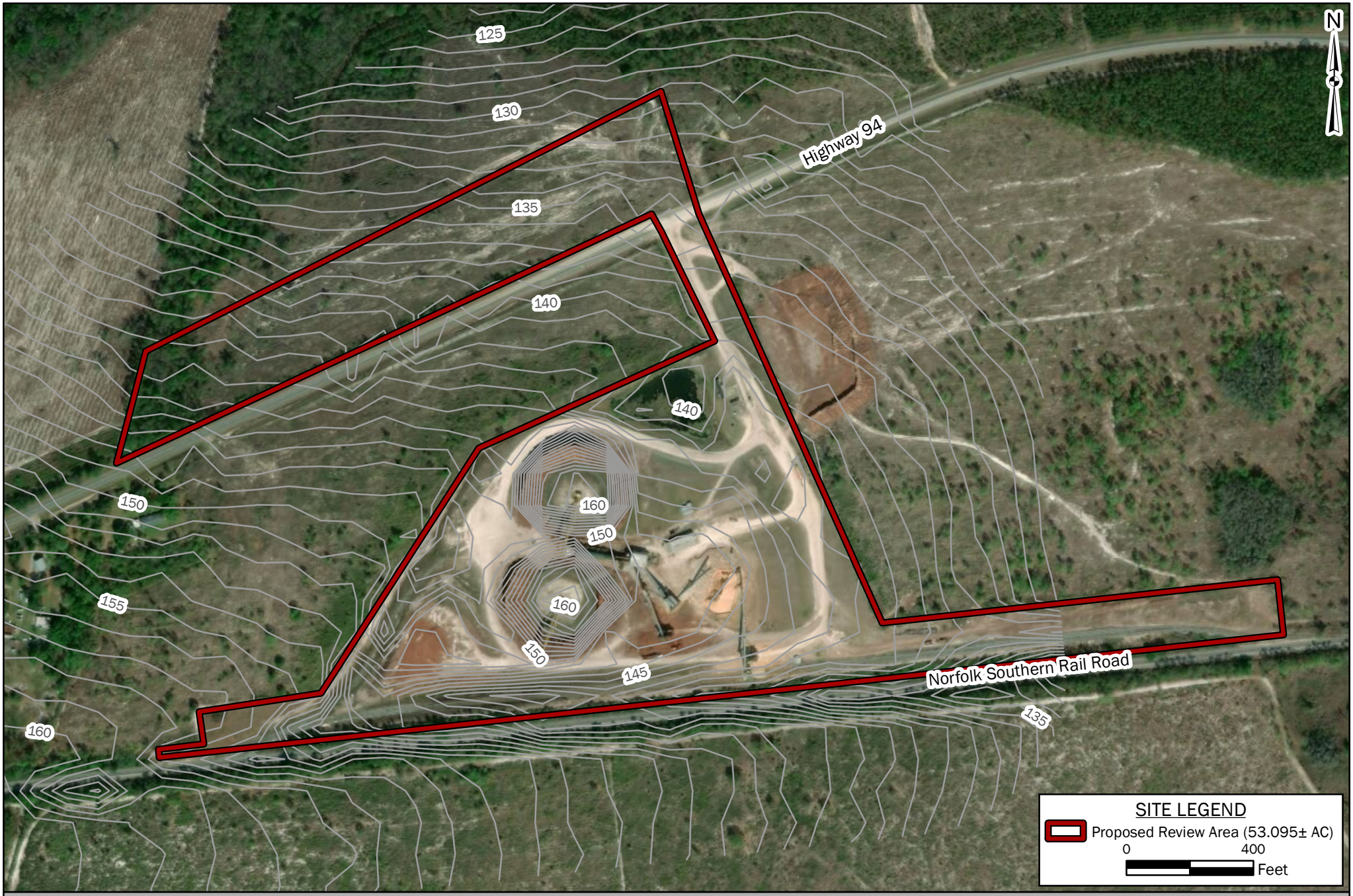

TTL

FIGURE 2: SITE LOCATION & AERIAL PHOTOGRAPH

WATERS OF THE U.S. DELINEATION MAP

TWIN PINES MINERALS

ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: DigitalGlobe, 3/24/2018 (0.46 m Resolution).

DRAWN BY:	DEK
CHECKED BY:	CMS
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TTL JOB NO.:	000180200804.00
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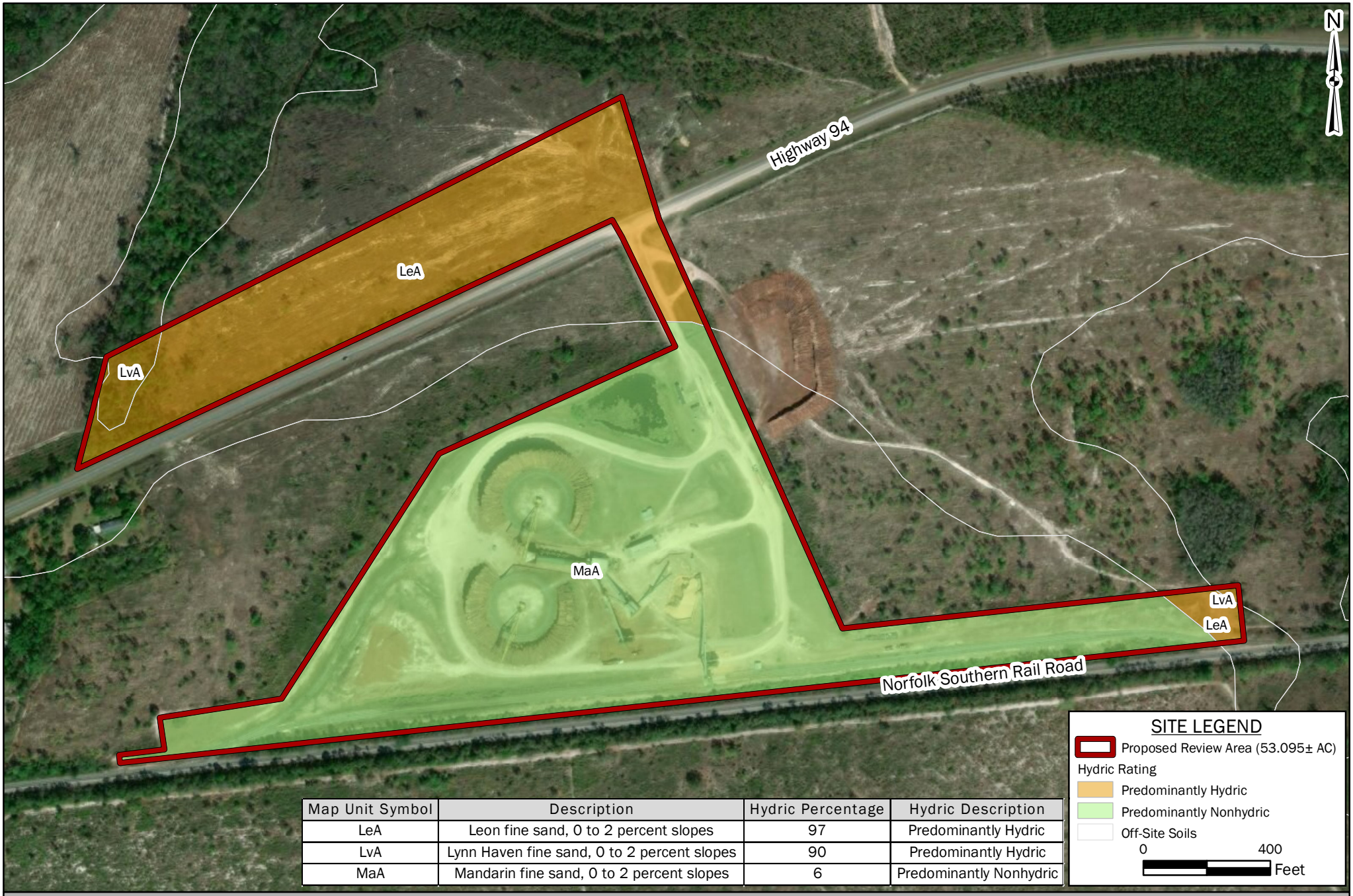

Map Unit Symbol	Description	Hydric Percentage	Hydric Description
LeA	Leon fine sand, 0 to 2 percent slopes	97	Predominantly Hydric
LvA	Lynn Haven fine sand, 0 to 2 percent slopes	90	Predominantly Hydric
MaA	Mandarin fine sand, 0 to 2 percent slopes	6	Predominantly Nonhydric

TTL

FIGURE 3: NATURAL RESOURCES CONSERVATION SERVICES (NRCS) MAP
WATERS OF THE U.S. DELINEATION MAP
TWIN PINES MINERALS
ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: DigitalGlobe, 3/24/2018 (0.46 m Resolution).

DRAWN BY:	DEK
CHECKED BY:	CMS
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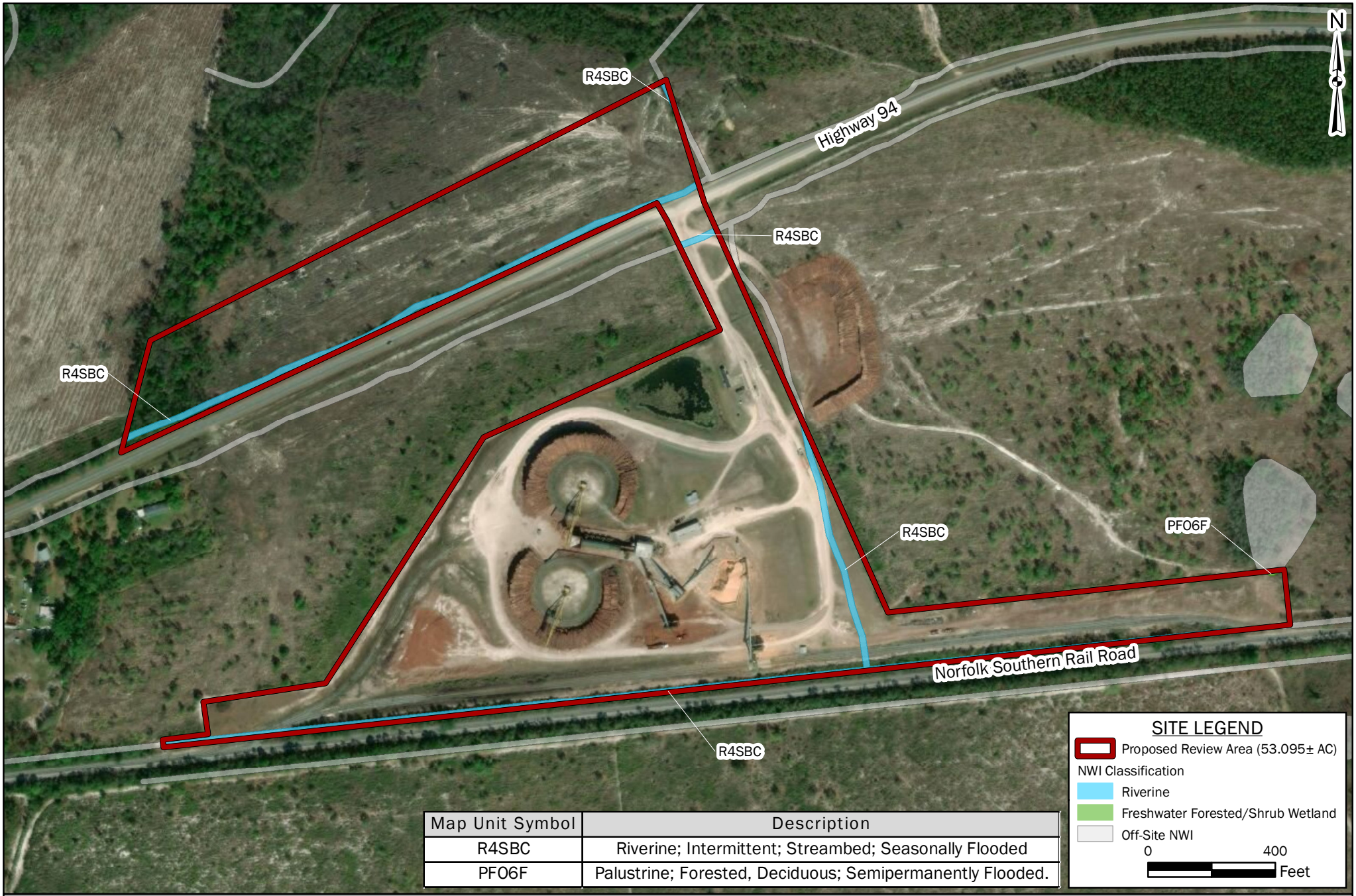


Map Unit Symbol	Description
R4SBC	Riverine; Intermittent; Streambed; Seasonally Flooded
PFO6F	Palustrine; Forested, Deciduous; Semipermanently Flooded.

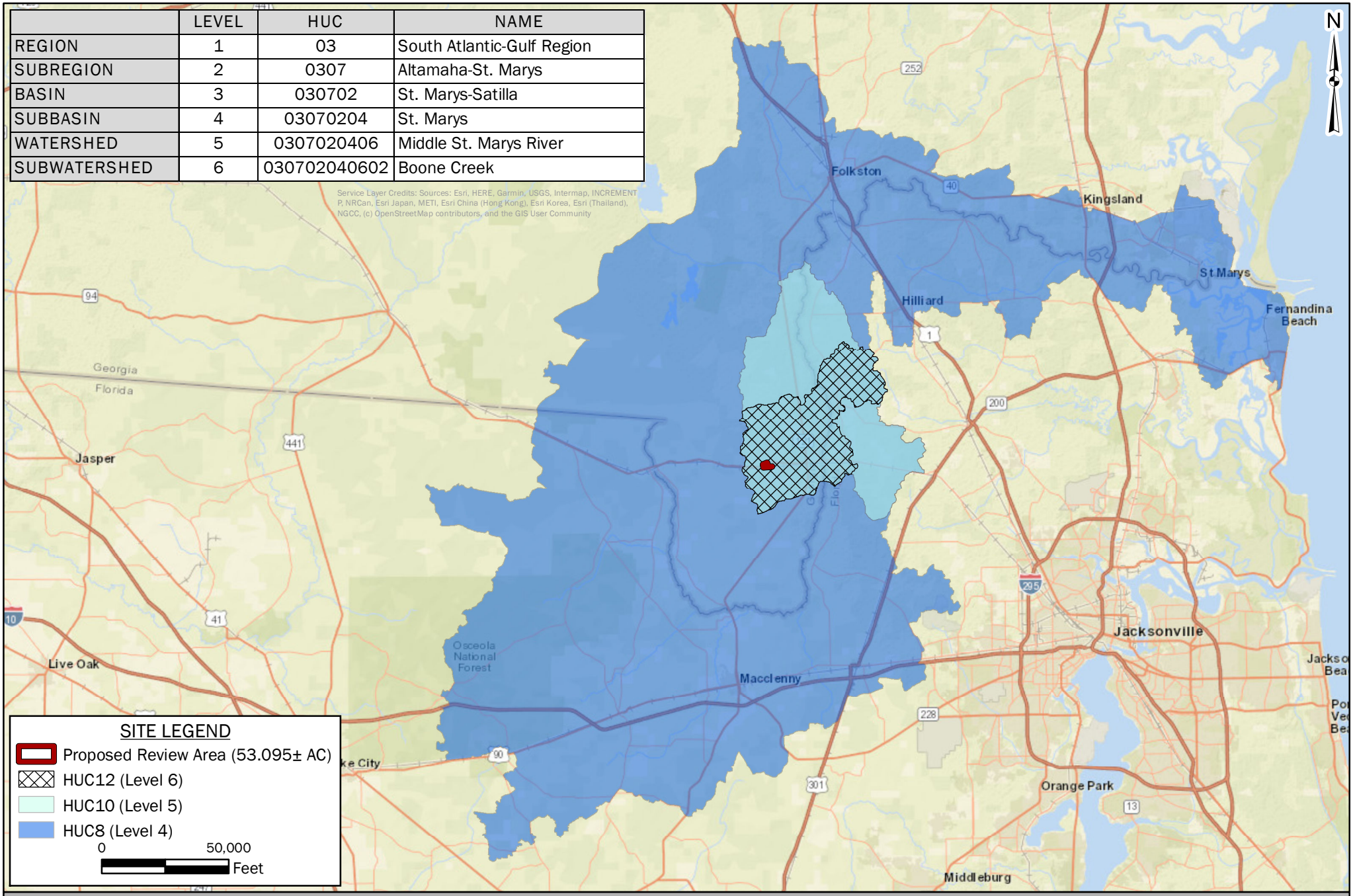
TTL

FIGURE 4: NATIONAL WETLAND INVENTORY (NWI) MAP
WATERS OF THE U.S. DELINEATION MAP
TWIN PINES MINERALS
ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: DigitalGlobe, 3/24/2018 (0.46 m Resolution).

DRAWN BY:	DEK
CHECKED BY:	CMS
DRAWING DATE:	3/25/2020
REVISION DATE:	N/A
TTL JOB NO.:	000180200804.00
APPROX. SCALE:	1 in = 400 ft

	LEVEL	HUC	NAME
REGION	1	03	South Atlantic-Gulf Region
SUBREGION	2	0307	Altamaha-St. Marys
BASIN	3	030702	St. Marys-Satilla
SUBBASIN	4	03070204	St. Marys
WATERSHED	5	0307020406	Middle St. Marys River
SUBWATERSHED	6	030702040602	Boone Creek



TTL

FIGURE 5: HYDROLOGIC UNIT CODE (HUC) MAP

WATERS OF THE U.S. DELINEATION MAP

TWIN PINES MINERALS

ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: ESRI World Street Map (See Service Layer Credits).

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CHECKED BY:	CMS
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REVISION DATE:	N/A
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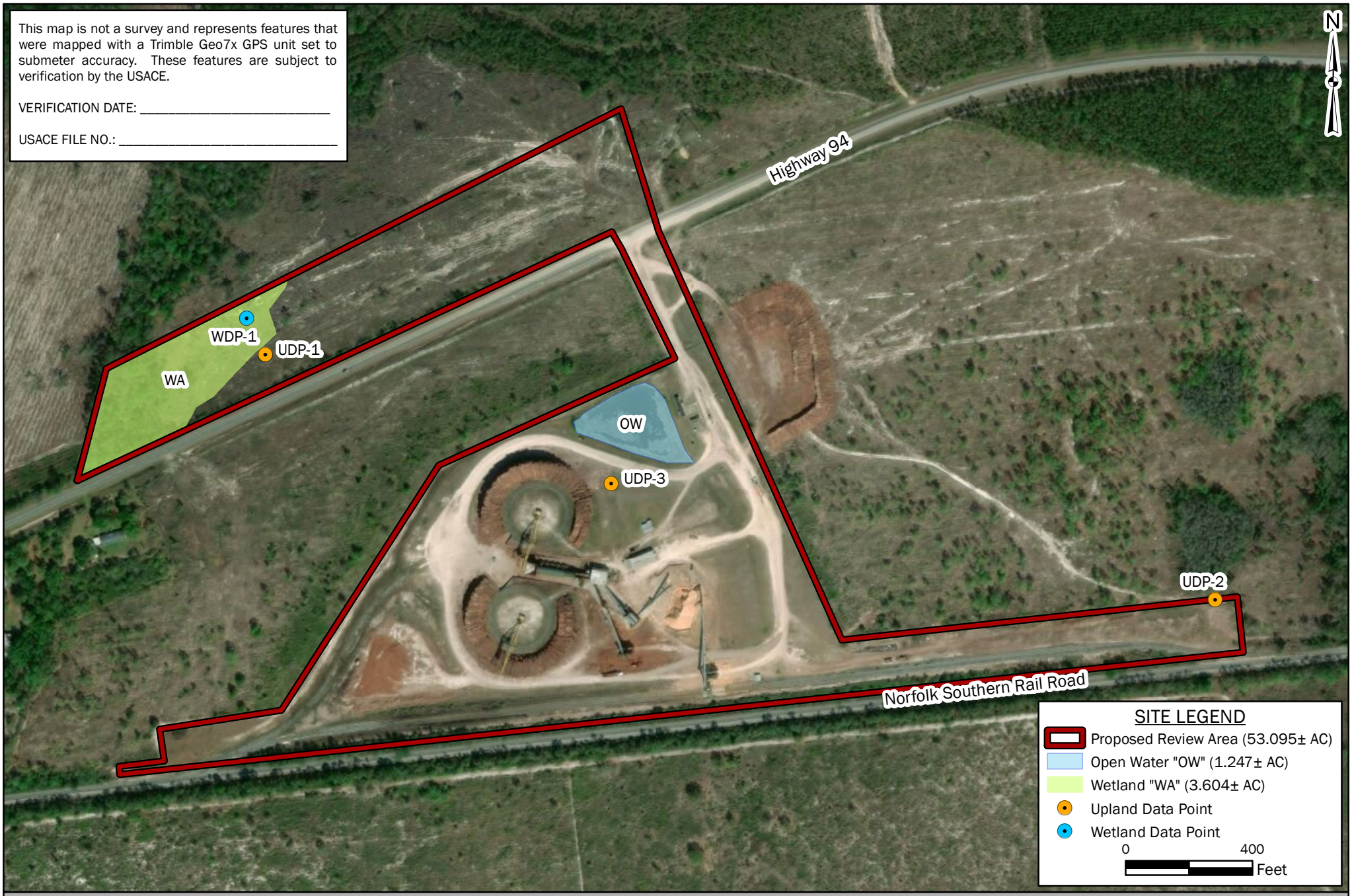


TTL

FIGURE 6: WATERS OF THE U.S. DELINEATION MAP

WATERS OF THE U.S. DELINEATION MAP

TWIN PINES MINERALS

ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: Maxar, Vivid Imagery, 3/24/2018 (0.46 m Resolution).

DRAWN BY:	DEK
CHECKED BY:	CMS
DRAWING DATE:	3/27/2020
REVISION DATE:	N/A
TTL JOB NO.:	000180200804.00
APPROX. SCALE:	1 in = 400 ft

APPENDIX A

Normal Weather Conditions Table
AgACIS Data
Palmer Drought Index
U.S. Drought Monitor – Georgia

Calculation of Normal Weather Conditions
General Project Location: Folkston, Georgia
Analysis for March 23-25, 2020 Site Visit

			Long-Term Rainfall Records							
	Month	Standard Deviation*	Minus One Standard Deviation (Dry)	Normal* (Mean Inches)	Plus One Standard Deviation (Wet)	Actual Rainfall**	Condition (wet, normal, dry)	Condition Value***	Month Weight Value	Weighted Value
1st prior month	2/23/2020 - 3/23/2020	2.69	1.33	4.02	6.71	1.80	Normal	2	3	6
2nd prior month	1/22/2020 - 2/22/2020	2.14	1.56	3.70	5.84	1.69	Normal	2	2	4
3rd prior month	12/21/2019 - 1/21/2020	2.18	1.24	3.42	5.60	1.73	Normal	2	1	2
									Sum:	12

Sum:	Conclusion:
6-9	prior period has been drier than normal
10-14	**prior period has been normal**
15-18	prior period has been wetter than normal

* Standard Deviation and Mean Values can be found through the National Oceanic and Atmospheric Associations Earth System Research Laboratory: http://www.esrl.noaa.gov/psd/data/usstation/

** Rainfall data can be found through AgACIS

*** Condition Values: 1 = dry, 2 = normal, 3 = wet

Climatological Data for FARGO 17 NE, GA - December 2019

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2019-12-01	78	46	62.0	22	12	0.00	M	M
2019-12-02	81	44	62.5	23	13	0.13	M	M
2019-12-03	M	M	M	M	M	M	M	M
2019-12-04	M	M	M	M	M	M	M	M
2019-12-05	63	38	50.5	11	1	0.00	M	M
2019-12-06	71	34	52.5	13	3	0.00	M	M
2019-12-07	71	37	54.0	14	4	0.00	M	M
2019-12-08	M	M	M	M	M	M	M	M
2019-12-09	68	54	61.0	21	11	0.01	M	M
2019-12-10	80	58	69.0	29	19	0.00	M	M
2019-12-11	83	51	67.0	27	17	0.12	M	M
2019-12-12	58	45	51.5	12	2	0.11	M	M
2019-12-13	59	45	52.0	12	2	0.80	M	M
2019-12-14	63	51	57.0	17	7	0.24	M	M
2019-12-15	62	38	50.0	10	0	0.00	M	M
2019-12-16	M	M	M	M	M	M	M	M
2019-12-17	M	M	M	M	M	M	M	M
2019-12-18	75	39	57.0	17	7	0.50	M	M
2019-12-19	54	30	42.0	2	0	0.00	M	M
2019-12-20	M	M	M	M	M	M	M	M
2019-12-21	M	M	M	M	M	M	M	M
2019-12-22	68	53	60.5	21	11	0.58	M	M
2019-12-23	M	M	M	M	M	M	M	M
2019-12-24	69	55	62.0	22	12	0.15	M	M
2019-12-25	M	M	M	M	M	M	M	M
2019-12-26	M	M	M	M	M	M	M	M
2019-12-27	70	53	61.5	22	12	0.00	M	M
2019-12-28	77	53	65.0	25	15	0.10	M	M
2019-12-29	77	53	65.0	25	15	0.07	M	M
2019-12-30	79	67	73.0	33	23	0.12	M	M
2019-12-31	M	M	M	M	M	M	M	M
Average|Sum	70.3	47.2	58.8	378	186	2.93	M	M

Climatological Data for FARGO 17 NE, GA - January 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-01-01	M	M	M	M	M	M	M	M
2020-01-02	62	41	51.5	12	2	0.00	M	M
2020-01-03	75	56	65.5	26	16	0.00	M	M
2020-01-04	81	61	71.0	31	21	0.71	M	M
2020-01-05	M	M	M	M	M	M	M	M
2020-01-06	M	M	M	M	M	M	M	M
2020-01-07	M	M	M	M	M	M	M	M
2020-01-08	M	M	M	M	M	M	M	M
2020-01-09	65	36	50.5	11	1	0.00	M	M
2020-01-10	74	41	57.5	18	8	0.00	M	M
2020-01-11	79	41	60.0	20	10	0.00	M	M
2020-01-12	M	M	M	M	M	M	M	M
2020-01-13	83	62	72.5	33	23	0.00	M	M
2020-01-14	83	59	71.0	31	21	0.00	M	M
2020-01-15	82	60	71.0	31	21	0.00	M	M
2020-01-16	M	M	M	M	M	M	M	M
2020-01-17	80	52	66.0	26	16	0.00	M	M
2020-01-18	80	45	62.5	23	13	0.00	M	M
2020-01-19	M	M	M	M	M	M	M	M
2020-01-20	M	M	M	M	M	M	M	M
2020-01-21	M	M	M	M	M	M	M	M
2020-01-22	M	M	M	M	M	M	M	M
2020-01-23	M	M	M	M	M	M	M	M
2020-01-24	62	37	49.5	10	0	T	M	M
2020-01-25	M	M	M	M	M	M	M	M
2020-01-26	M	M	M	M	M	M	M	M
2020-01-27	63	36	49.5	10	0	0.02	M	M
2020-01-28	M	M	M	M	M	M	M	M
2020-01-29	64	37	50.5	11	1	0.00	M	M
2020-01-30	M	M	M	M	M	M	M	M
2020-01-31	M	M	M	M	M	M	M	M
Average|Sum	73.8	47.4	60.6	293	153	0.73	M	M

Climatological Data for FARGO 17 NE, GA - February 2020

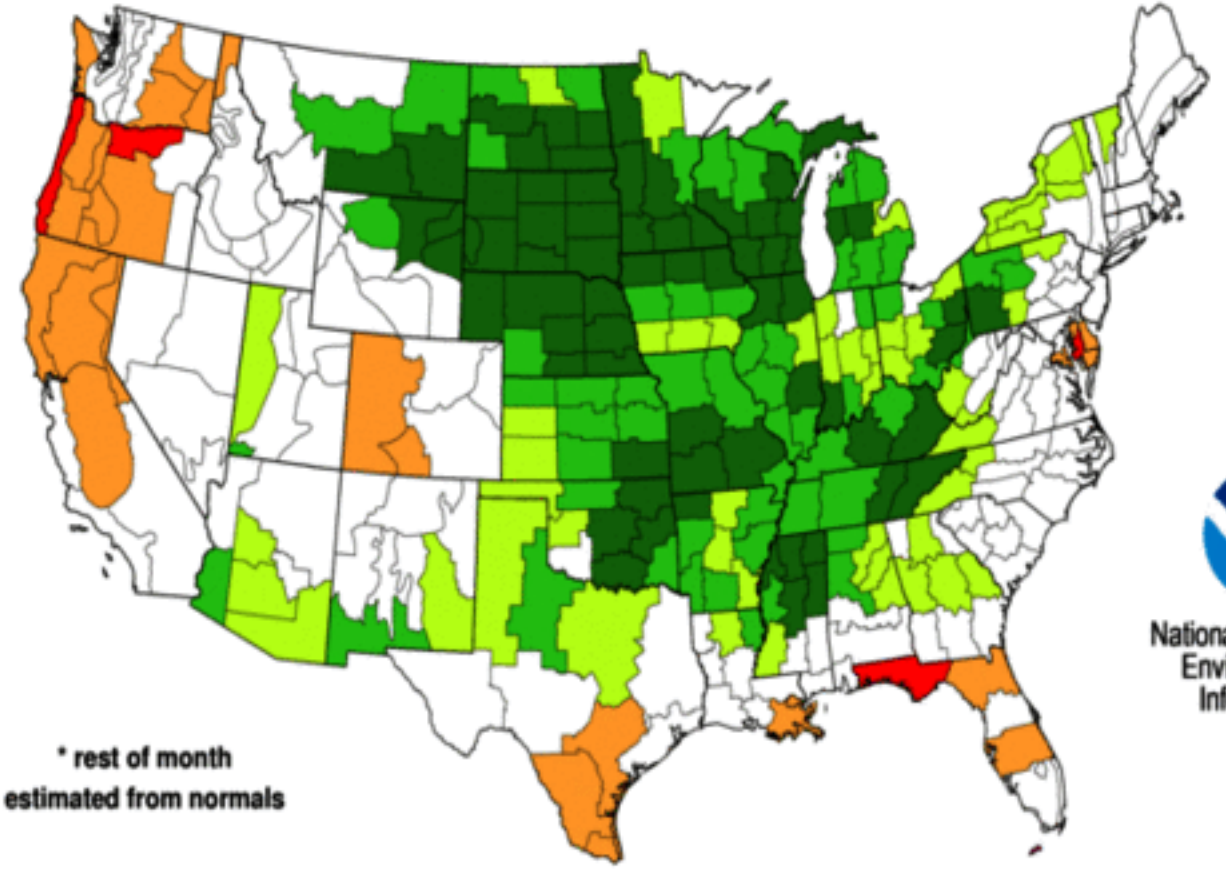
Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-02-01	62	44	53.0	13	3	0.02	M	M
2020-02-02	50	40	45.0	5	0	0.00	M	M
2020-02-03	M	M	M	M	M	M	M	M
2020-02-04	76	43	59.5	20	10	0.00	M	M
2020-02-05	76	43	59.5	20	10	0.00	M	M
2020-02-06	M	M	M	M	M	M	M	M
2020-02-07	79	50	64.5	25	15	1.65	M	M
2020-02-08	M	M	M	M	M	M	M	M
2020-02-09	66	36	51.0	11	1	0.00	M	M
2020-02-10	M	M	M	M	M	M	M	M
2020-02-11	80	60	70.0	30	20	0.00	M	M
2020-02-12	M	M	M	M	M	M	M	M
2020-02-13	82	66	74.0	34	24	0.00	M	M
2020-02-14	M	M	M	M	M	M	M	M
2020-02-15	62	38	50.0	10	0	0.00	M	M
2020-02-16	M	M	M	M	M	M	M	M
2020-02-17	M	M	M	M	M	M	M	M
2020-02-18	64	54	59.0	19	9	0.00	M	M
2020-02-19	M	M	M	M	M	M	M	M
2020-02-20	M	M	M	M	M	M	M	M
2020-02-21	M	M	M	M	M	M	M	M
2020-02-22	50	31	40.5	1	0	0.00	M	M
2020-02-23	M	M	M	M	M	M	M	M
2020-02-24	71	51	61.0	21	11	0.00	M	M
2020-02-25	M	M	M	M	M	M	M	M
2020-02-26	68	62	65.0	25	15	0.17	M	M
2020-02-27	M	M	M	M	M	M	M	M
2020-02-28	67	34	50.5	11	1	0.26	M	M
2020-02-29	60	37	48.5	9	0	0.00	M	M
Average|Sum	67.5	45.9	56.7	254	119	2.10	M	M

Climatological Data for FARGO 17 NE, GA - March 2020

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2020-03-01	63	36	49.5	10	0	0.00	M	M
2020-03-02	M	M	M	M	M	M	M	M
2020-03-03	M	M	M	M	M	M	M	M
2020-03-04	80	62	71.0	31	21	0.95	M	M
2020-03-05	75	M	M	M	M	0.09	M	M
2020-03-06	79	52	65.5	26	16	M	M	M
2020-03-07	M	40	M	M	M	M	M	M
2020-03-08	79	40	59.5	20	10	0.00	M	M
2020-03-09	M	M	M	M	M	M	M	M
2020-03-10	M	M	M	M	M	M	M	M
2020-03-11	M	M	M	M	M	M	M	M
2020-03-12	M	M	M	M	M	M	M	M
2020-03-13	84	53	68.5	29	19	M	M	M
2020-03-14	87	57	72.0	32	22	M	M	M
2020-03-15	87	59	73.0	33	23	M	M	M
2020-03-16	M	M	M	M	M	M	M	M
2020-03-17	M	M	M	M	M	M	M	M
2020-03-18	88	60	74.0	34	24	0.76	M	M
2020-03-19	87	62	74.5	35	25	0.00	M	M
2020-03-20	89	63	76.0	36	26	0.00	M	M
2020-03-21	89	62	75.5	36	26	0.00	M	M
2020-03-22	84	62	73.0	33	23	0.00	M	M
2020-03-23	M	M	M	M	M	M	M	M
2020-03-24	M	M	M	M	M	M	M	M
2020-03-25	86	61	73.5	34	24	0.00	M	M
2020-03-26	87	61	74.0	34	24	M	M	M
2020-03-27	85	64	74.5	35	25	0.00	M	M
2020-03-28	87	63	75.0	35	25	0.00	M	M
2020-03-29	92	63	77.5	38	28	0.00	M	M
2020-03-30	M	M	M	M	M	M	M	M
2020-03-31	M	M	M	M	M	M	M	M
Average|Sum	83.8	56.7	71.0	531	361	1.80	M	M

Palmer Hydrological Drought Index
Long–Term (Hydrological) Conditions

March 2020: through March 21 2020*



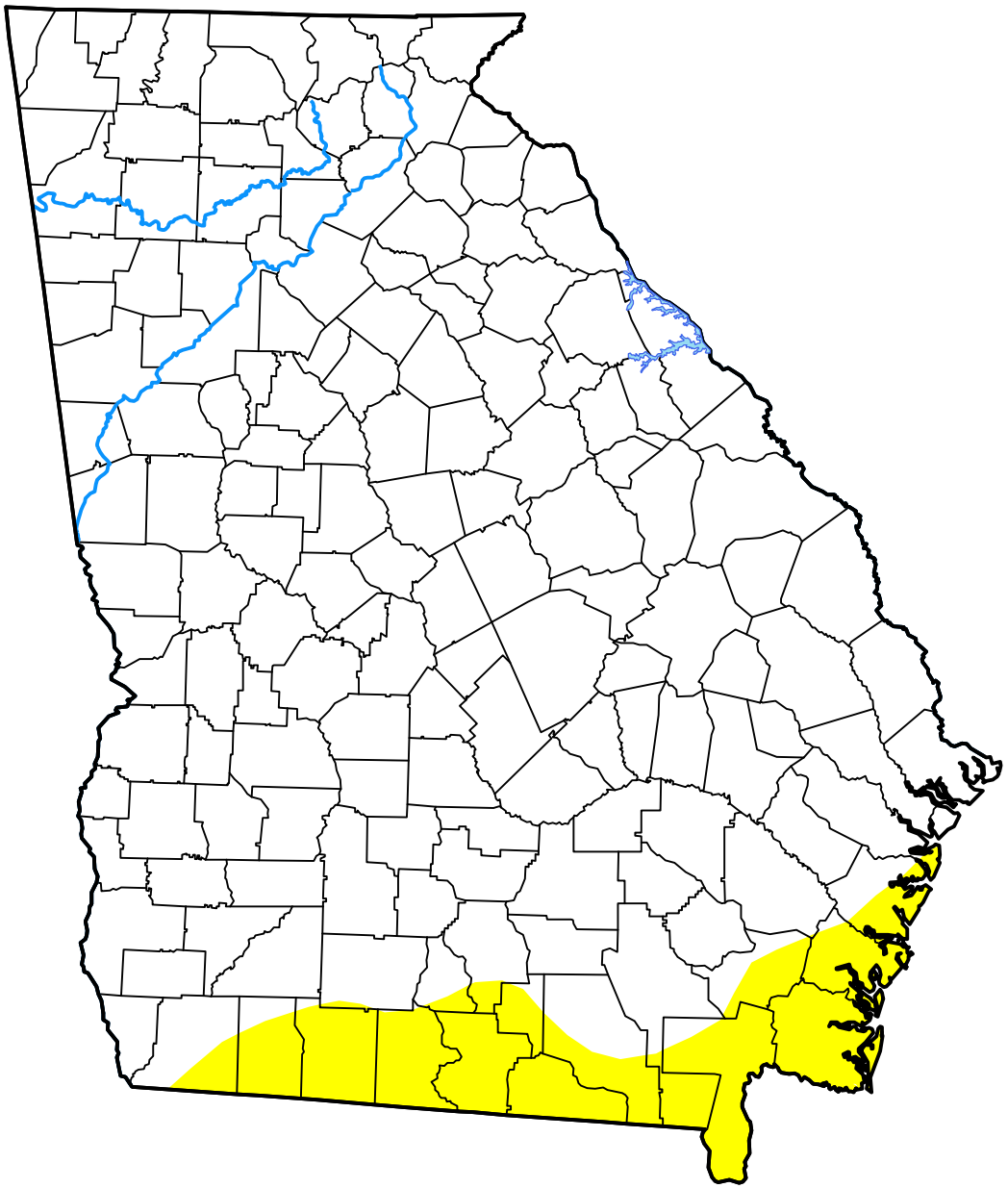
National Centers for Environmental Information

* rest of month estimated from normals

extreme drought	severe drought	moderate drought	mid–range	moderately moist	very moist	extremely moist
–4.00 and below	–3.00 to –3.99	–2.00 to –2.99	–1.99 to +1.99	+2.00 to +2.99	+3.00 to +3.99	+4.00 and above

U.S. Drought Monitor

Georgia



March 24, 2020

(Released Thursday, Mar. 26, 2020)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	90.39	9.61	0.00	0.00	0.00	0.00
Last Week *03-17-2020*	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago *12-24-2019*	96.00	4.00	0.00	0.00	0.00	0.00
Start of Calendar Year *12-31-2019*	96.00	4.00	0.00	0.00	0.00	0.00
Start of Water Year *10-01-2019*	0.00	100.00	61.58	28.35	4.49	0.00
One Year Ago *03-26-2019*	39.33	60.67	6.01	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

APPENDIX B

Site Photographs

Site Photographs

Waters of the U.S. Delineation: Chip Mill Property — TTL Project No. 000180200804.00
Twin Pines Minerals ● Charlton County, Georgia
Photos taken March 23, 2020 – March 25, 2020

Photograph 1: View of Wetland Data Point 1 (WDP-1) location.

Photograph 2: View of Upland Data Point 1 (UDP-1) location.

Photograph 3: View westward of the southeastern portion of the delineation area.

Photograph 4: View of Upland Data Point 2 (UDP-2) location.

Photograph 5: View of the constructed recirculation open water located on the central portion of the delineation area.

Photograph 6: View of Upland Data Point 3 (UDP-3) location.

APPENDIX C

U.S. Army Corps of Engineers Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Chip Mill Property City/County: Charlton County Sampling Date: 03/23/2020

Applicant/Owner: Twin Pines Minerals, LLC State: GA Sampling Point: UDP-1

Investigator(s): C. Terrell / C. Stanford (TTL) Section, Township, Range: Not Available

Landform (hillslope, terrace, etc.): Flatwoods Local relief (concave, convex, none): None Slope (%): 0-2%

Subregion (LRR or MLRA): LRR T / MLRA 153A Lat: 30.519768 Long: -82.090492 Datum: NAD83

Soil Map Unit Name: Leon fine sand, 0 to 2 percent slopes NWI classification: none

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

Are Vegetation Yes, Soil Yes, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation No, Soil No, or Hydrology No 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 ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:

- Vegetation historically impacted by silvicultural activities (planted pine).
- Soils/Hydrology historically impacted by silvicultural activities (bedding for planted pine).
- Abnormally dry, but not drought conditions.

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)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along 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)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) (LRR T,U)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ✓	No ____	Depth (inches): 24
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No ✓

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

Remarks: FAC-Neutral Test Results: Negative FACW and OBL: 1 to FACU and UPL: 3

VEGETATION – Use scientific names of plants.

Sampling Point: UDP-1

Tree Stratum (Plot sizes: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
50% of total cover: 35.00 20% of total cover: 14.00	0.0	= Total Cover	
Sapling Stratum (30 ft radius)			
1. *Acer rubrum*	15.0	yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
50% of total cover: 7.50 20% of total cover: 3.00	15.0	= Total Cover	
Shrub Stratum (30 ft radius)			
1. *Ilex glabra*	20.0	yes	FACW
2. *Serenoa repens*	15.0	yes	FACU
3.			
4.			
5.			
6.			
7.			
50% of total cover: 17.50 20% of total cover: 7.00	35.0	= Total Cover	
Herb Stratum (30 ft radius)			
1. *Andropogon virginicus*	50.0	yes	FAC
2. *Pteridium aquilinum*	10.0	no	FACU
3. *Rubus cuneifolius*	10.0	no	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
50% of total cover: 35.00 20% of total cover: 14.00	70.0	= Total Cover	
Woody Vine Stratum (30 ft radius)			
1. *Vitis rotundifolia*	10.0	yes	FAC
2.			
3.			
4.			
5.			
50% of total cover: 5.00 20% of total cover: 2.00	10.0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ✓ **No** ___

Remarks: (If observed, list morphological adaptations below). *Plants not idendified to species are not used in dominance calculations.

Indicators of hydrology and hydric soils were not observed although the the dominance test was greater than 50%.

SOIL

Sampling Point: UDP-1

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

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-18"	10YR 3/1	80					Sa	masked sand grains
	10YR 6/1	20					Sa	unmasked sand grains

[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)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✓

Remarks: *Soil abbreviations: Cl=Clay; Lo=Loam; Mu=Muck; Pe- Peat; Sa= Sand; Si=Silt

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Chip Mill Property City/County: Charlton County Sampling Date: 03/24/2020

Applicant/Owner: Twin Pines Minerals, LLC State: GA Sampling Point: UDP-2

Investigator(s): C. Terrell / C. Stanford (TTL) Section, Township, Range: Not Available

Landform (hillslope, terrace, etc.): Flatwoods Local relief (concave, convex, none): None Slope (%): 0-2%

Subregion (LRR or MLRA): LRR T / MLRA 153A Lat: 30.517638 Long: -82.080984 Datum: NAD83

Soil Map Unit Name: Leon fine sand, 0 to 2 percent slopes NWI classification: none

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

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

Are Vegetation No, Soil No, or Hydrology No 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

- Vegetation historically impacted by routine clearing activities (railroad rail spur right-of-way).
- Abnormally dry, but not drought conditions.

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)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along 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)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) (LRR T,U)

Field Observations:

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks: FAC-Neutral Test Results: Negative FACW and OBL: 0 to FACU and UPL: 7

VEGETATION – Use scientific names of plants.

Sampling Point: UDP-2

Tree Stratum (Plot sizes: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
50% of total cover: 35.00 20% of total cover: 14.00	0.0	= Total Cover	
Sapling Stratum (30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
50% of total cover: ____ 20% of total cover: ____	0.0	= Total Cover	
Shrub Stratum (30 ft radius)			
1. *Serenoa repens*	5.0	yes	FACU
2. *Yucca filamentosa*	5.0	yes	UPL
3.			
4.			
5.			
6.			
7.			
50% of total cover: 5.00 20% of total cover: 2.00	10.0	= Total Cover	
Herb Stratum (30 ft radius)			
1. *Digitaria ciliaris*	50.0	yes	FACU
2. *Rubus cuneifolius*	10.0	no	FACU
3. *Eupatorium capillifolium*	10.0	no	FACU
4. *Andropogon virginicus*	5.0	no	FAC
5. *Ambrosia artemisiifolia*	5.0	no	FACU
6. *Pteridium aquilinum*	5.0	no	FACU
7.			
8.			
9.			
10.			
11.			
12.			
50% of total cover: 42.50 20% of total cover: 17.00	85.0	= Total Cover	
Woody Vine Stratum (30 ft radius)			
1. *Vitis rotundifolia*	10.0	yes	FAC
2.			
3.			
4.			
5.			
50% of total cover: 5.00 20% of total cover: 2.00	10.0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	85	x 4 =	340
UPL species	5	x 5 =	25
Column Totals:	105 (A)		410 (B)

Prevalence Index = B/A = 3.90

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: (If observed, list morphological adaptations below). *Plants not idendified to species are not used in dominance calculations.

SOIL

Sampling Point: UDP-2

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 3/3	100					Sa	
6-18"	10YR 5/3	80					Sa	
	10YR 3/3	20					Sa	

[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)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✓

Remarks: *Soil abbreviations: Cl=Clay; Lo=Loam; Mu=Muck; Pe- Peat; Sa= Sand; Si=Silt

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Chip Mill Property City/County: Charlton County Sampling Date: 03/24/2020

Applicant/Owner: Twin Pines Minerals, LLC State: GA Sampling Point: UDP-3

Investigator(s): C. Terrell / C. Stanford (TTL) Section, Township, Range: Not Available

Landform (hillslope, terrace, etc.): Flatwoods Local relief (concave, convex, none): None Slope (%): 0-2%

Subregion (LRR or MLRA): LRR T / MLRA 153A Lat: 30.518645 Long: -82.087028 Datum: NAD83

Soil Map Unit Name: Mandarin fine sand, 0 to 2 percent slopes NWI classification: none

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

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

Are Vegetation No, Soil No, or Hydrology No 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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

- Vegetation historically impacted by routine mowing activities (green space within industrial chip mill facility).
- Abnormally dry, but not drought conditions.

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)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along 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)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) (LRR T,U)

Field Observations:

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks: FAC-Neutral Test Results: Negative FACW and OBL: 0 to FACU and UPL: 5

VEGETATION – Use scientific names of plants.

Sampling Point: UDP-3

Tree Stratum (Plot sizes: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
50% of total cover: 35.00 20% of total cover: 14.00	0.0	= Total Cover	
Sapling Stratum (30 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
50% of total cover: ____ 20% of total cover: ____	0.0	= Total Cover	
Shrub Stratum (30 ft radius)			
1. *Serenoa repens*	5.0	yes	FACU
2. *Yucca filamentosa*	5.0	yes	UPL
3.			
4.			
5.			
6.			
7.			
50% of total cover: 5.00 20% of total cover: 2.00	10.0	= Total Cover	
Herb Stratum (30 ft radius)			
1. *Digitaria ciliaris*	50.0	yes	FACU
2. *Paspalum notatum*	30.0	yes	FACU
3. *Erigeron quercifolius*	5.0	no	FAC
4. *Polygonella gracilis*	5.0	no	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
50% of total cover: 45.00 20% of total cover: 18.00	90.0	= Total Cover	
Woody Vine Stratum (30 ft radius)			
1.			
2.			
3.			
4.			
5.			
50% of total cover: ____ 20% of total cover: ____	0.0	= 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 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	5	x 3 =	15
FACU species	85	x 4 =	340
UPL species	10	x 5 =	50
Column Totals:	100 (A)		405 (B)

Prevalence Index = B/A = 4.05

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: (If observed, list morphological adaptations below). *Plants not idendified to species are not used in dominance calculations.

SOIL

Sampling Point: UDP-3

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
0-4"	10YR 4/3	100					Sa	
4-12"	10YR 6/1	80					Sa	
12-18	10YR 3/3	100					Sa	

[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)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✓

Remarks: *Soil abbreviations: Cl=Clay; Lo=Loam; Mu=Muck; Pe- Peat; Sa= Sand; Si=Silt

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Chip Mill Property City/County: Charlton County Sampling Date: 03/23/2020

Applicant/Owner: Twin Pines Minerals, LLC State: GA Sampling Point: WDP-1

Investigator(s): C. Terrell / C. Stanford (TTL) Section, Township, Range: Not Available

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): None Slope (%): 0-1%

Subregion (LRR or MLRA): LRR T / MLRA 153A Lat: 30.520082 Long: -82.090677 Datum: NAD83

Soil Map Unit Name: Leon fine sand, 0 to 2 percent slopes NWI classification: none

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

Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation No, Soil No, or Hydrology No 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 ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

- Vegetation historically impacted by silvicultural activities (planted pine) which are stunted due to hydric conditions.
- Abnormally dry, but no drought conditions.

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)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along 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)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ✓ Sphagnum moss (D8) (LRR T,U)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): ____

Water Table Present? Yes ✓ No ____ Depth (inches): 10"

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0"

Wetland Hydrology Present? Yes ✓ No ____

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

Remarks: FAC-Neutral Test Results: Positive FACW and OBL: 6 to FACU and UPL: 1

VEGETATION – Use scientific names of plants.

Sampling Point: WDP-1

Tree Stratum (Plot sizes: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
50% of total cover: ____ 20% of total cover: ____	0.0	= Total Cover	
Sapling Stratum (30 ft radius)			
1. *Magnolia virginiana*	5.0	yes	FACW
2. *Acer rubrum*	5.0	yes	FAC
3.			
4.			
5.			
6.			
7.			
50% of total cover: 5.00 20% of total cover: 2.00	10.0	= Total Cover	
Shrub Stratum (30 ft radius)			
1. *Hypericum fasciculatum*	50.0	yes	FACW
2. *Ilex glabra*	10.0	no	FACW
3. *Lyonia ferruginea*	5.0	no	FACU
4.			
5.			
6.			
7.			
50% of total cover: 37.50 20% of total cover: 13.00	65.0	= Total Cover	
Herb Stratum (30 ft radius)			
1. *Dichanthelium scoparium*	60.0	yes	FACW
2. *Fuirena scirpoidea*	10.0	no	OBL
3. *Juncus effusus*	10.0	no	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
50% of total cover: 40.00 20% of total cover: 16.00	80.0	= Total Cover	
Woody Vine Stratum (30 ft radius)			
1.			
2.			
3.			
4.			
5.			
50% of total cover: ____ 20% of total cover: ____	0.0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ✓ **No** ____

Remarks: (If observed, list morphological adaptations below). *Plants not idendified to species are not used in dominance calculations.

SOIL

Sampling Point: WDP-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18"	10YR 3/1	75					Sa	
	10YR 5/1	25					Sa	stripped areas

[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)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ✓ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks: *Soil abbreviations: Cl=Clay; Lo=Loam; Mu=Muck; Pe- Peat; Sa= Sand; Si=Silt

APPENDIX D

USACE Savannah District Request for Corps of Engineers Jurisdictional Determination (JD) and/or Delineation Review Form

US Army Corps of Engineers
Savannah District, Regulatory Division
Global Positioning Systems (GPS) Datasheet
Delineation of Wetlands, Streams and Other Waters
Within the State of Georgia

USACE File Number SAS-2018-00554 Date of Delineation 3/23-24/2020

Name of Delineator Present Chris Terrell & Chris Stanford

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

Trimble Geo7x GPS (model 88161)

Geographic Coordinate System Used US State Plane GA East - NAD 1983 (Conus)

Name of Continually Operated Reference Station Used for Post-processing

CORS, Jacksonville 1 (ZJX1), Florida

Date Post-processing Performed 3/27/2019

Percent Dilution of Position (PDOP) (6 or less is required) 0.90

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 as needed per field observations

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

US Army Corps
of Engineers
Savannah District

SAS APPENDIX 1: Request for Corps of Engineers Jurisdictional Determination (JD) and/or Delineation Review

I. Reason for request: (check as many as applicable)

☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.

☐ I intend to construct/develop a project or perform activities on this parcel 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 parcel which may require authorization from the Corps, and the JD 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 parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD 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 included on the district Section 1O list and/or is subject to the ebb and flow of the tide.

☐ A Corps JD is required in order to obtain my local/state authorization.

☐ I intend to contest jurisdiction over a particular aquatic resource and request the Corps 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:_____

II. I am requesting that the U.S. Army Corps of Engineers, Savannah District, provide me with the following:

☐ **Delineation Review of Aquatic Resources** - Concurrence with an aquatic resource delineation is a written notification from the Corps concurring, not concurring, or commenting on the aquatic resource boundaries, or limits, delineated on a property.

☑ **Preliminary Jurisdictional Determination** - (PJD). A PJD is defined in Corps regulations at 33 CFR 331.2, as "written indications that there may be waters of the United States on a parcel". When the Corps provides a PJD, the Corps is making no legally binding determination of any type regarding whether jurisdiction exists over the particular aquatic resource in question.

☐ **Approved Jurisdictional Determination** - (AJD) An AJD is defined in Corps regulations at 33 CFR 331.2. A definitive, official determination that there are, or that there are not, jurisdictional aquatic resources on a parcel.

☐ I am unclear as to what I would like to request and require additional information to inform my decision.

III. Property/Owner Information. Please complete ALL of the following information for the property under review:

SECTION 1

Parcel Number of Property: 0084 003

Lat. 30.518411 **Long.** - 82.087495 (in decimal degrees)

Parcel Address:

Parcel City : Saint George Parcel County: Charlton Zip:

Size of Review Area: 53.095 Acre(s) Variable Linear feet

SECTION 2

LANDOWNER NAME	AUTHORIZED AGENT'S NAME
First: Steven	First: Cindy
Last: Ingle	Last: House-Pearson
Company: Twin Pines Minerals, LLC	Company: TTL, Inc.
Email Address: single@greenfuelsenergy.com	Email Address: chpearson@ttlusa.com
Address: 2100 Southbridge Parkway, Ste. 540	Address: 3516 Greensboro Avenue
City: Birmingham	City: Tuscaloosa
State: AL Zip: 35209	State: AL Zip: 35401
Phone: 205-545-8759	Phone: 251-327-6153

PROPERTY ACCESS PERMISSION, AKNOWLEDGEMENT OF 18 U.S.C. SECTION 10001 AND STATEMENT OF AGENT AUTHORIZATION

Initial ONLY One:

SI By signing below, I certify that I am the owner of record of the property referenced in III, Section 1 above, and I hereby authorize representatives of the U.S. Army Corps of Engineers, Savannah District, to enter the property for purposes of conducting on-site inspections, and issuing an aquatic resource delineation concurrence and/or a jurisdictional determination. My signature shall also be an affirmation that I possess the requisite property rights to request a delineation review and/or a jurisdictional determination on the property referenced in III - Section 1. Further, I authorize the agent in III - Section 2, to act on my behalf in the processing of this request and to furnish supplemental information in support of this request.

N/A By signing below, I certify that I am acting as the duly authorized agent of the owner of record of the property referenced in III, Section 1 above, and have been given the authority to: 1) request a delineation review and/or a jurisdictional determination (JD) on the property referenced in III - Section 1, and 2) authorize representatives of the U.S. Army Corps of Engineers, Savannah District, to enter the property for purposes of conducting on-site inspections, and issuing an aquatic resource delineation concurrence and/or a jurisdictional determination. I understand that I may be required to provide documentary evidence of my authority to request a delineation review and/or JD, and/or to grant Corps of Engineers personnel access to the property.

Please Print Name Legibly: Steven R. Ingle

Signature _____ Date: 04/07/2020

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 approve 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 AJD cannot be evaluated nor can an AJD be issued