



Three Oaks Engineering, Inc.
324 Blackwell Street, Suite 1200
Durham, NC 27701
(919) 732-1300

June 18, 2020

Tim Smith, PE, PLS
Senior Project Engineer
Summit Design and Engineering Services
320 Executive Court
Hillsborough, NC 27278
(919) 732-3883

SUBJECT: Potential Jurisdictional Resources Summary Report – Proposed Tupelo Junction Residential Cluster Development in Mebane, Orange County, North Carolina

Dear Mr. Smith:

Three Oaks Engineering, Inc. (Three Oaks) was contracted to perform wetland and stream delineations for the proposed Tupelo Junction Residential Cluster Development in Mebane, Orange County, North Carolina. Three Oaks is working as a sub-consultant to Summit Design and Engineering Services (Summit). The area of interest (on PIN 9826416095) is approximately 93 acres in size and is located to the north of Lebanon Road and to the west of Saddle Club Road. The site, which is predominantly wooded, is located in Orange County, within the City of Mebane's Extra-Territorial Jurisdiction (ETJ) boundary. This report is a summary of the potential features identified during our field visit. Please note that a Preliminary Jurisdictional Determination Package has not yet been developed for this project and a site visit has not been performed by either county, state, or federal regulatory agencies.

Field assessments of the project site were completed by Three Oaks staff on May 27 and May 29, 2020. During these site visits, led by Environmental Scientist Nathan Howell, thirteen potential jurisdictional features (four streams and nine wetlands) and one potential surface water (Pond PA) were identified within the study area (Appendix A, Figure 1). All features are located in the Cape Fear River Basin, Jordan Lake Watershed (U.S. Geological Survey Hydrologic Unit Code 03030002). Potential streams located within this watershed in Orange County are potentially subject to Jordan Lake Riparian Buffer Rules and/or Orange County riparian buffer protection.

Below are tables containing information associated with the potential streams, wetlands, and surface waters located within the project area of interest.



Table 1. Potential jurisdictional streams in the study area

Stream Name	Map ID	NCDWR Index Number	Best Usage Classification	Classification	On Topo or Soil Survey?	Length
Lake Michael	Lake Michael	16-18-3-1	WS-II;HQW,NSW	Perennial	Yes (Both)	3,288
Unnamed Tributary (UT) to Lake Michael	SA	16-18-3-1	WS-II;HQW,NSW	Perennial	Yes (Both)	43
UT to Lake Michael	SB	16-18-3-1	WS-II;HQW,NSW	Perennial	No	305
(UT) to Lake Michael	SC	16-18-3-1	WS-II;HQW,NSW	Intermittent	No	223
					Total	3,859

Note: Although not on either topographic or soils survey mapping, which would exclude them from the state-regulated Jordan Lake Riparian Buffer Rules, Streams SB and SC may still be buffered under Orange County riparian buffer protection if County staff confirm their jurisdictionality (Ordinance 6.13.2.A.3: "The stream buffer regulations and standards contained herein shall be applicable to all streams and water features, as follows: [A] Streams identified by any of the following means: 3. A water feature identified by a field determination of County staff trained in surface water identification through the North Carolina Division of Water Quality").

Table 2. Characteristics of potential jurisdictional wetlands in the study area

Map ID	NCWAM Classification	Hydrologic Classification	Area (ac.) in Study Area
WA	Bottomland Hardwood Forest	Riparian	0.17
WB	Bottomland Hardwood Forest	Riparian	0.22
WC	Floodplain Pool	Riparian	<0.01
WD	Floodplain Pool	Riparian	0.01
WE	Floodplain Pool	Riparian	0.03
WF	Floodplain Pool	Riparian	0.16
WG	Bottomland Hardwood Forest	Riparian	0.12
WH	Bottomland Hardwood Forest	Riparian	0.02
WI	Bottomland Hardwood Forest	Riparian	0.36
Total			1.09

Table 3. Potential surface waters in the study area

Surface Water	Map ID of Jurisdictional Connection	Area (ac.)
PA	N/A	0.45

Note: PA is an old farm pond that was built in upland. Based on mapping, it pre-dates the 1977 Soil Survey Map. There are no inlets or outlets to this farm pond, and it is not connected to a jurisdictional feature; therefore, it is non-jurisdictional.



If you have any questions or require additional information please contact me by email at james.mason@threeoaksengineering.com or by phone at (704) 604-8358. Additionally, please let us know if you would like Three Oaks to proceed with compiling the Preliminary Jurisdictional Determination package and performing the site visit with regulatory agencies.

Sincerely,

**James
Mason**

Digitally signed by James
Mason
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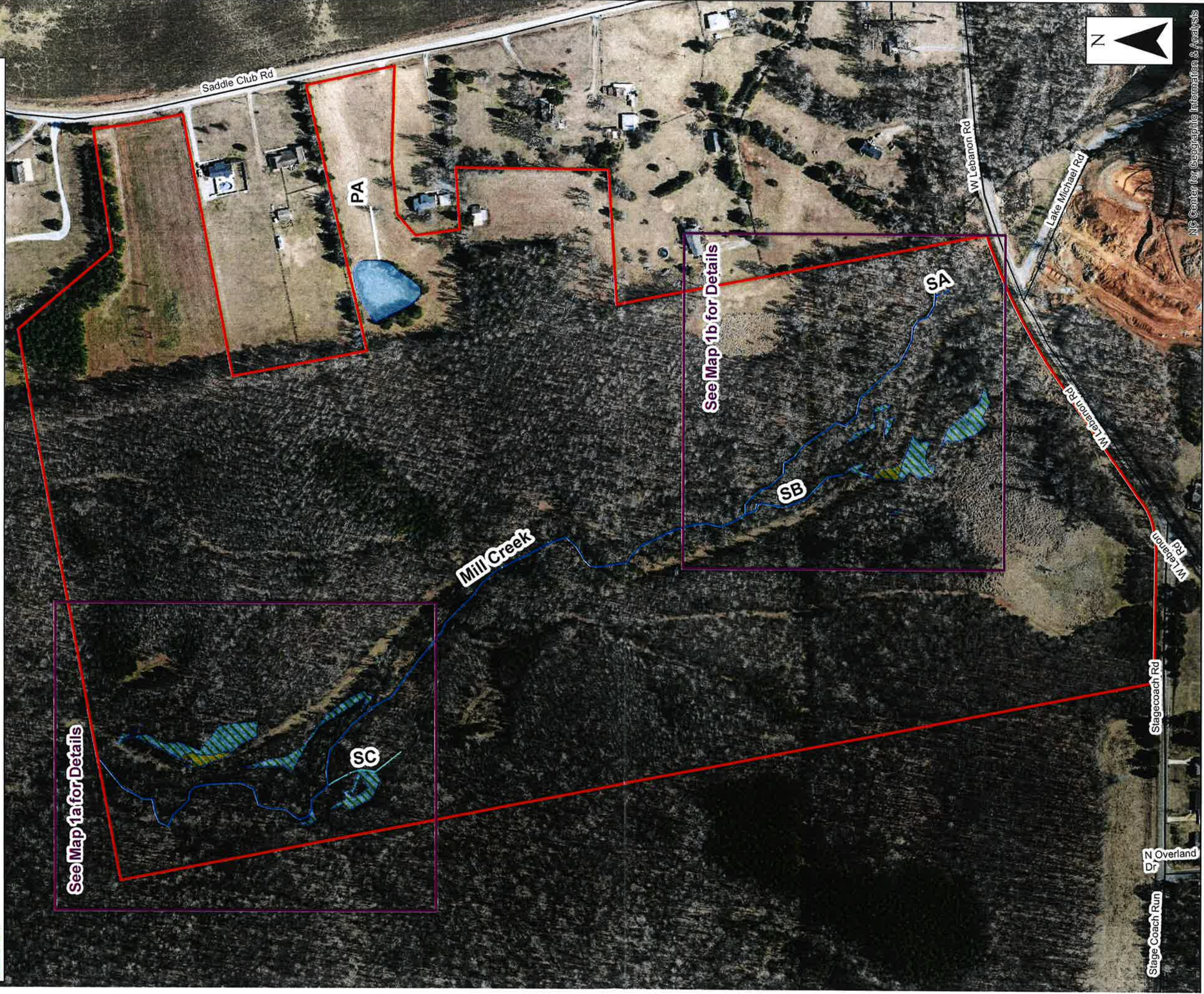
James Mason
Senior Environmental Scientist/Project Manager
Three Oaks Engineering, Inc.



Appendix A Figures

Legend

- Area of Interest
- Potential Non-wetland WOUS (Surface Water)
- Potential Non-wetland WOUS (Stream)
- Roads
- Intermittent
- Perennial
- Potential Wetland WOUS
- Disturbed
- Undisturbed



NC Center for Geographic Information & Analytics



Prepared For:



TUPELO JUNCTION SUBDIVISION
Jurisdictional Resources Map
 Orange County, North Carolina

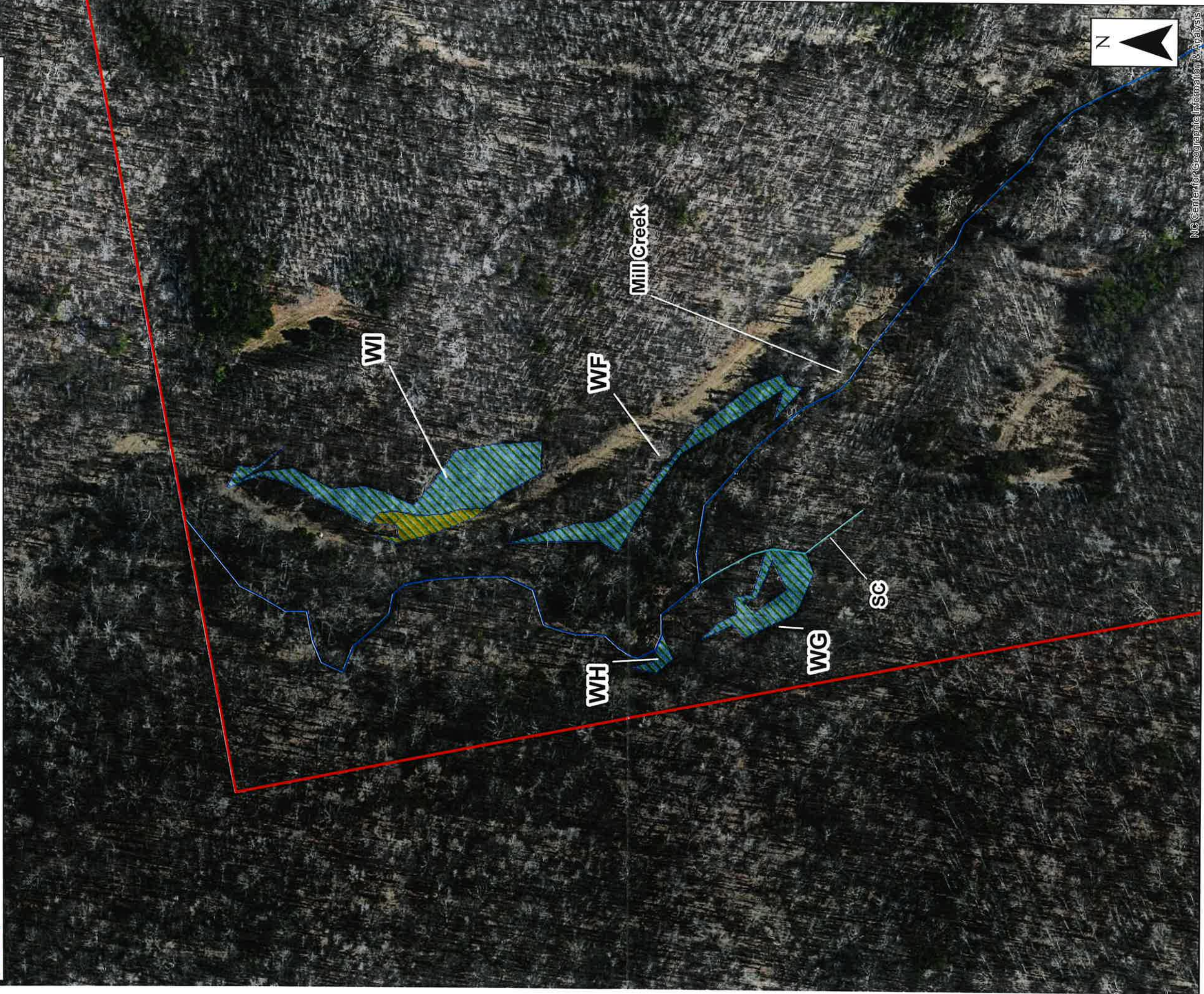
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Figure
1

Legend

- Area of Interest
- Potential Wetland WOUS
 - Disturbed
 - Undisturbed
- Potential Non-wetland WOUS (Surface Water)
 - Roads

- Potential Non-wetland WOUS (Stream)
 - Intermittent
 - Perennial



NC Center for Geographic Information & Analysis

Prepared For:



TUPELO JUNCTION SUBDIVISION
Jurisdictional Resources Map
Orange County, North Carolina

Date:	June 2020
Scale:	0 45 90 Ft
Job No.:	20-612
Drawn By:	JSM
Checked By:	NDH

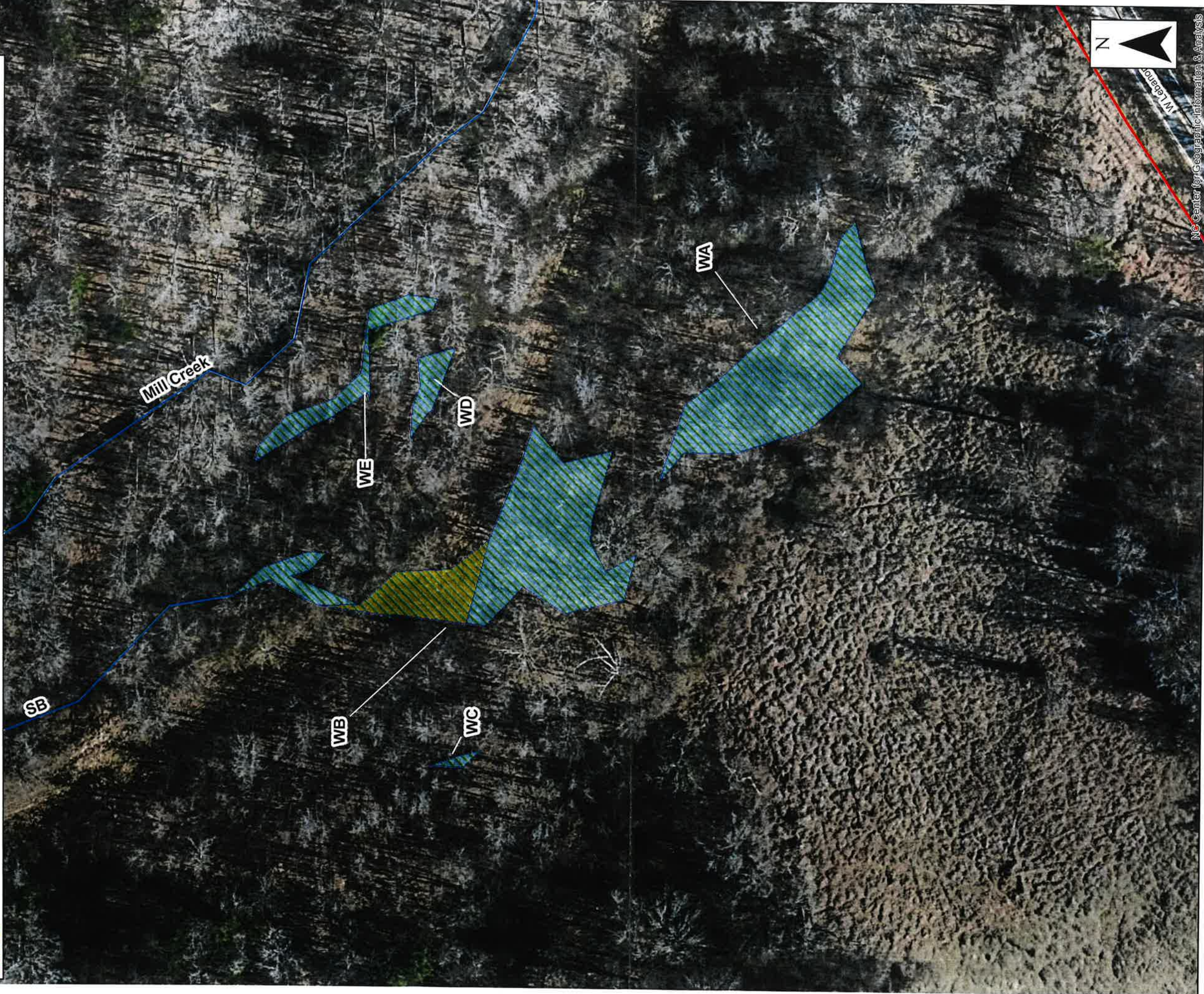
Figure
1a



Legend

- Area of Interest
- Potential Non-wetland WOUS (Surface Water)
- Roads
- Disturbed
- Undisturbed

- Intermittent
- Perennial



NO Center for Geographic Information & Analysis



Prepared For:



TUPELO JUNCTION SUBDIVISION
Jurisdictional Resources Map
 Orange County, North Carolina

Date:	June 2020
Scale:	0 20 40 Ft
Job No.:	20-612
Drawn By:	JSM
Checked By:	NDH

Figure
1b

