

Fact Sheet for Paulding County Reservoir

1. Population
 - a. 1988 Initial planning – Pop. 38,079
 - b. 2015 404 permit approval - Pop. 151,649
 - c. 2019 population – 168,667
2. Cost
 - a. 1988 Initial planning estimated cost - \$1.3-\$1.7 million
 - b. Current dam contract totals \$46 million (before claims arbitration)
3. Permitting Issues
 - a. Took 15 years to obtain a 404 permit
 - b. Wildlife mitigation
 - c. Land Acquisition
4. Mitigation
 - a. Faced stream and wetland mitigation costing \$10 million
 - b. Endangered species
 - i. Cherokee Darter
 - ii. Northern long-eared bat
5. Funding
 - a. Paulding County's dam and reservoir was part of an overall water supply program which included a water treatment plant and transmission mains and storage.
 - b. Funding was accomplished by a combination of revenue bonds, multiple GEFA loans and State Direct Investment from the Governor's Water Supply Program.

Fact Sheet for Carroll County Reservoir

1. Population
 - a. 2006 Initial planning – Pop. 108,894
 - b. 2019 population – 119,992
2. Cost
 - a. 2006 Initial planning
 - b. Final cost estimate expected to be - \$60 million
3. Permitting Issues
 - a. Certificate of Need – Took 6-8 years to obtain
 - b. Still have not received a 404 permit
 - c. Resiliency requirement – Must be able to withstand a 25% decrease in stream flows
4. Mitigation
 - a. Projected wetland mitigation cost to be \$5 - \$7 million
 - b. Carroll County advised that mitigation costs can vary considerably based on several factors including but not limited to project size, amount of impacts to streams and wetlands and varying cost of mitigation credits.
 - c. Carroll County had to purchase additional land to provide for an alternative mitigation site.
5. Funding
 - a. 2013- Selected for state direct investment funds under the governor's water supply program – Undisclosed amount
 - b. \$40 million in loans from the Governors Water Supply Program

DADE COUNTY WATER & SEWER AUTHORITY

AVERAGE DAILY FLOW OF LOOKOUT CREEK

YEAR	CREEK LEVEL	CFS	GALLONS PER SECOND	GALLONS PER MINUTE	GALLONS PER DAY
2015	3.10	24.80	185.50	11,130.24	16,027,545.60
2016	3.62	28.96	216.62	12,997.25	18,716,037.12
2017	4.57	36.56	273.47	16,408.13	23,627,704.32
2018	4.69	37.52	280.65	16,838.98	24,248,125.44
2019	4.86	38.88	290.82	17,449.34	25,127,055.36
2020	4.43	35.44	265.09	15,905.47	22,903,879.68
2021	4.16	33.28	248.93	14,936.06	21,507,932.16

DADE COUNTY WATER & SEWER AUTHORITY	
TREATMENT PLANT CAPACITY	3.8 MGD
PERMITTED WITHDRAWAL	3.8 MGD

AVERAGE DAILY WITHDRAWAL
2.0 MGD
2.3 MGD
2.1 MGD
1.9 MGD
2.1 MGD
1.8 MGD
2.16 MGD



July 22, 2021

Ms. Sherri Walker
General Manger
Dade County Water Authority
P.O. Box 104/250 Bond Street
Trenton, GA 30752

VIA EMAIL

**Subject: Revised Jurisdictional Waters Findings Report
Dade County Raw Water Holding Pond
Trenton, Georgia
Corblu Project No. 02-050721**

Dear Ms. Walker:

Corblu Ecology Group, LLC (Corblu) is pleased to present this report regarding the delineation of jurisdictional waters within the approximately 61-acre site proposed for Dade County's raw water holding pond, located between Sells Lane and Lookout Creek Road, adjacent to Lookout Creek in Trenton, Georgia (Figure 1). Corblu conducted the field survey on July 15, 2021.

Methods

Jurisdictional waters of the U.S., including streams and wetlands, are defined by 33 CFR Part 328.3, and are protected by Section 404 of the Clean Water Act (33 USC 1344), which is administered and enforced by the U.S. Army Corps of Engineers (USACE). Waters of the State of Georgia, including streams and ponds, are defined by Chapter 391-3-7-.01(aa) of the Georgia Department of Natural Resources (GDNR), Environmental Protection Division (EPD) Rules for Erosion and Sedimentation Control.

Jurisdictional waters were delineated in the field using the 1987 USACE Wetlands Delineation Manual¹ and the regional supplement for the Eastern Mountains and Piedmont². The referenced manuals use a multi-parameter wetland identification process, including positive evidence of three

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

² U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0*, ed. J. F. Berkowitz, J. S. Wakeley, R. W. Lichvar, C. V. Noble. ERDC/EL TR-12-9. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

criteria: 1) hydrophytic vegetation; 2) hydric soils; and 3) wetland hydrology. Any areas exhibiting all three criteria for wetland determination, as well as seasonal streams and ponds are considered jurisdictional waters regulated by the USACE.

Results

The project site is comprised of modified agricultural land and is located within the 100-year floodplain of Lookout Creek, a perennial stream that forms the eastern project boundary (Figure 2; Photograph No. 1). Soils on the project site are mapped by the U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS) as Cunningham silt loam, Etowah loam, Montevallo channery silt loam, Pettyjon silt loam, Steadman silt loam, and Townley-Montevallo complex; of these soils, Steadman silt loam (Se) is considered hydric (Figure 3).

During the field investigation, Corblu personnel observed five emergent wetlands, one open water feature, one impoundment, one jurisdictional wetland ditch, and Lookout Creek (Figure 4). Emergent wetland areas Wet 1 through Wet 5 formed within topographical depressions believed to be former man-made ditches used to drain the floodplain (Photograph No. 2). No direct surface connection was observed between Wet 2 and another jurisdictional water; therefore, Wet 2 may not be considered a jurisdictional water under the current regulatory USACE definition of Waters of the U.S.

In the western portion of the site, Wet 3 receives hydrologic input from a pond outside (west) of the project area and abuts an open water feature (OW 1) within the site (Photograph No. 3). Wet 3 and Wet 4 drain northeastward into a jurisdictional wetland ditch, which then flows into Wet 1 (Photograph No. 4-5). Wet 1 flows across the project site and drains into Lookout Creek. In the eastern portion of the project area, Wet 5 drains northeastward into an impoundment created by a beaver dam (Photograph No. 6). This impoundment forms within what we believe to be another former man-made ditch which drains into Lookout Creek.

Discussion

Based on USACE guidance, intermittent and perennial streams are considered relative permanent waters (RPW), which are expected to flow a minimum of three consecutive months per year. All RPWs are considered jurisdictional waters of the U.S. and are regulated by the USACE under Section 404 of the Clean Water Act. Wetlands and open waters directly abutting RPWs also are regulated by USACE. All jurisdictional waters identified on Figure 3 are expected to be regulated by USACE, with the exception of Wet 2, but are subject to verification by the USACE for final determination. Impacts to the delineated jurisdictional areas will require USACE approval prior to disturbance.

Based on historical NRCS conservation plan maps and conversations with NRCS personnel, the property appears to have had "V ditches" installed around the late 1960s. There is no record of the occurrence of drainage tiles within the property. Due to the nature of the project and proposed location, we recommend that geotechnical and floodplain studies be performed prior to final engineering design and the initiation of construction.

Federal Permitting Requirements

Stream and wetland impacts exceeding 0.5-acre of wetlands or 0.05-acre of streams will require an Individual Permit (IP) from the USACE. The process is considerably more complex than the Nationwide Permit (NWP) process and typically takes 6 or more months from application submittal to obtain approval from the USACE and will also require individual Clean Water Act Section 401 Water Quality Certification (WQC) from the EPD. Compensatory mitigation is normally required for activities that result in impacts greater than 0.1-acre of wetland or 0.01-acre of stream. Below is a summary table outlining the quantity of aquatic features within the project site:

Feature	Area/Length
Wet 1	0.62-acre
Wet 2*	0.08-acre
Wet 3	1.16-acre
Wet 4	0.08-acre
Wet 5	0.36-acre
OW 1	0.23-acre
Beaver Impoundment	0.83-acre
Jurisdictional Wetland Ditch	0.03-acre/685 linear feet
Lookout Creek	3,588 linear feet
TOTAL SITE WATERS	3.39-acres/4,273 linear feet

Table 1. Summary table quantifying aquatic features within the project site. Please note that Wet 2 is believed to be non-jurisdictional, and therefore should not be included in final impact numbers.

If stream and/or wetland impacts below the previously mentioned thresholds are proposed, Nationwide Permit No. 39 (NWP 39) – Commercial and Institutional Developments, authorize the construction of building foundations and pads as well as attendant features (i.e., roads, parking lots, garages, yards, utilities lines, storm water management facilities, etc.). A Pre-Construction Notification (PCN; i.e., permit application) must be submitted and approved by the USACE,

Savannah District if any impacts to jurisdictional waters will occur. A NWP 39 PCN requires one to two weeks to prepare upon receipt of engineering design plans, and typically requires a 45-day review period by the USACE and other regulatory agencies to obtain approval assuming no significant concerns with protected species or cultural resources.

State Permitting Requirements

Typically, intermittent and perennial streams require a 25-foot or 50-foot protected vegetative buffer for non-trout and trout streams, respectively as regulated by EPD. However, under Georgia Code public water supply reservoirs are exempt from stream buffer protection regulations [O.C.G.A. § 12-7-27 (11)]. Further, as mentioned above, if wetland and stream impacts exceed 0.5-acre an IP will be required by the USACE, which will trigger the need to obtain an individual Section 401 WQC from EPD.

Conclusion

Corblu appreciates the opportunity to assist you with this project. We can provide a proposal for an IP or NWP 39 if impacts to jurisdictional waters and are proposed. If you have any questions regarding this report, please contact me at (770) 591-9990.

Sincerely,

CORBLU ECOLOGY GROUP, LLC

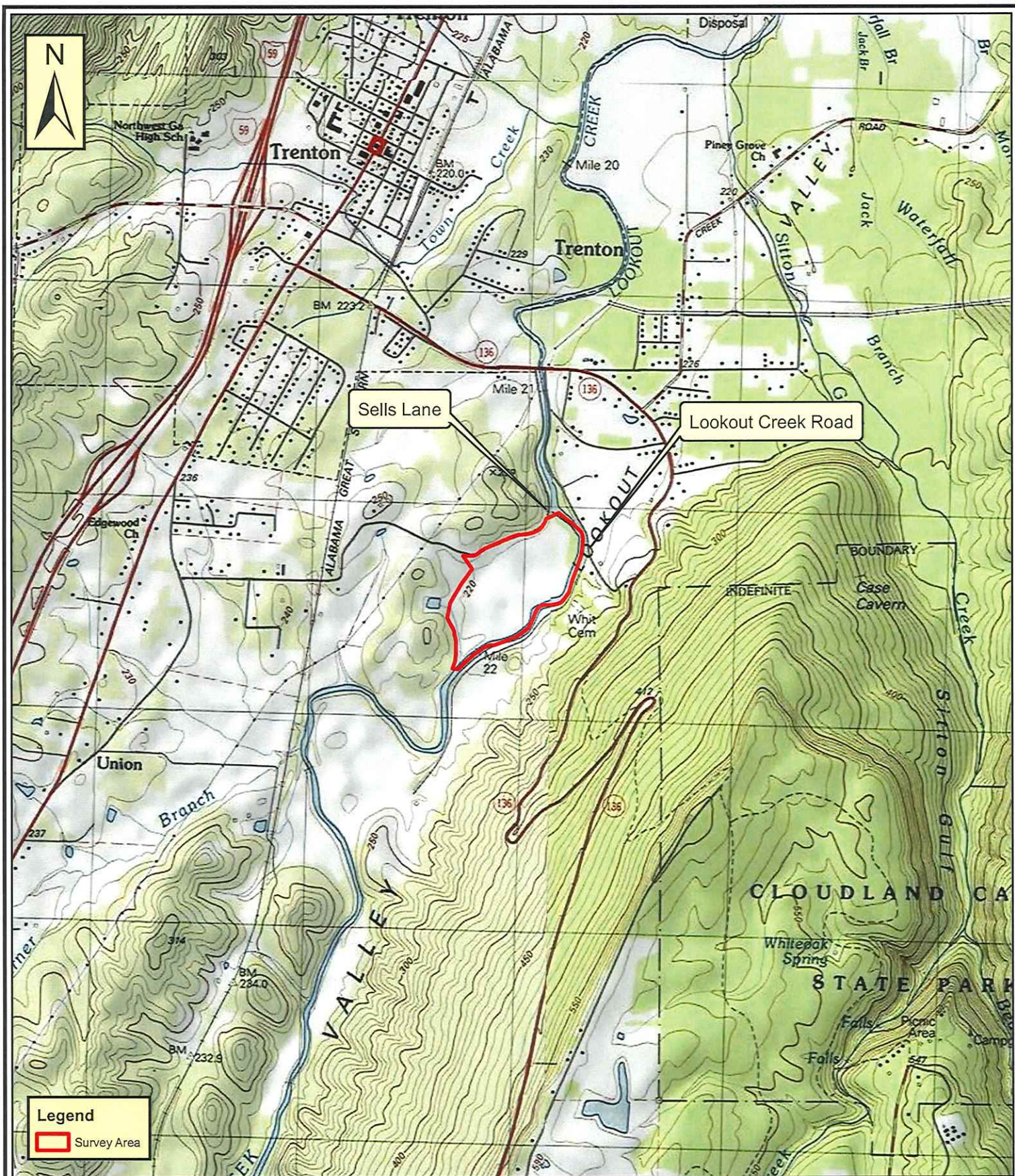


Mackenzie S. Wallace
Staff Ecologist



Richard W. Whiteside, PhD, CWB, CSE
President

Enclosures: Figure 1 – Site Location
 Figure 2 – FEMA National Flood Hazard Map
 Figure 3 – Site Soils
 Figure 4 – Aquatic Features
 Photograph Nos. 1-6



Base Map Source: USA Topo Map

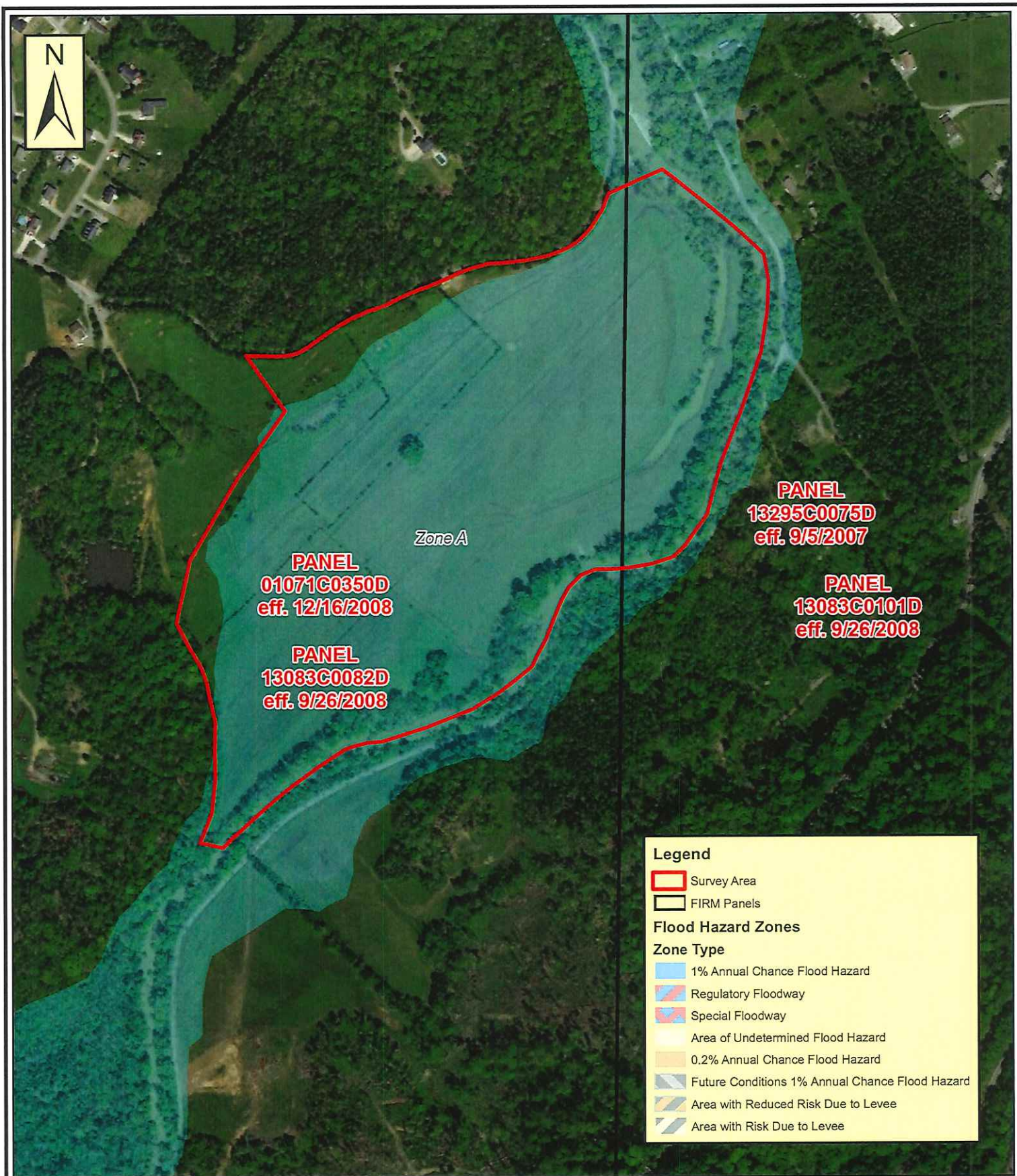
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2,600 1,300 0 2,600 Feet

Dade Co Water Authority
Findings Report
Dade County, Georgia



Figure 1
Site Location
Project No. 02-050721



Base Map Source: ESRI Aerial Imagery

1:5,500

640

320

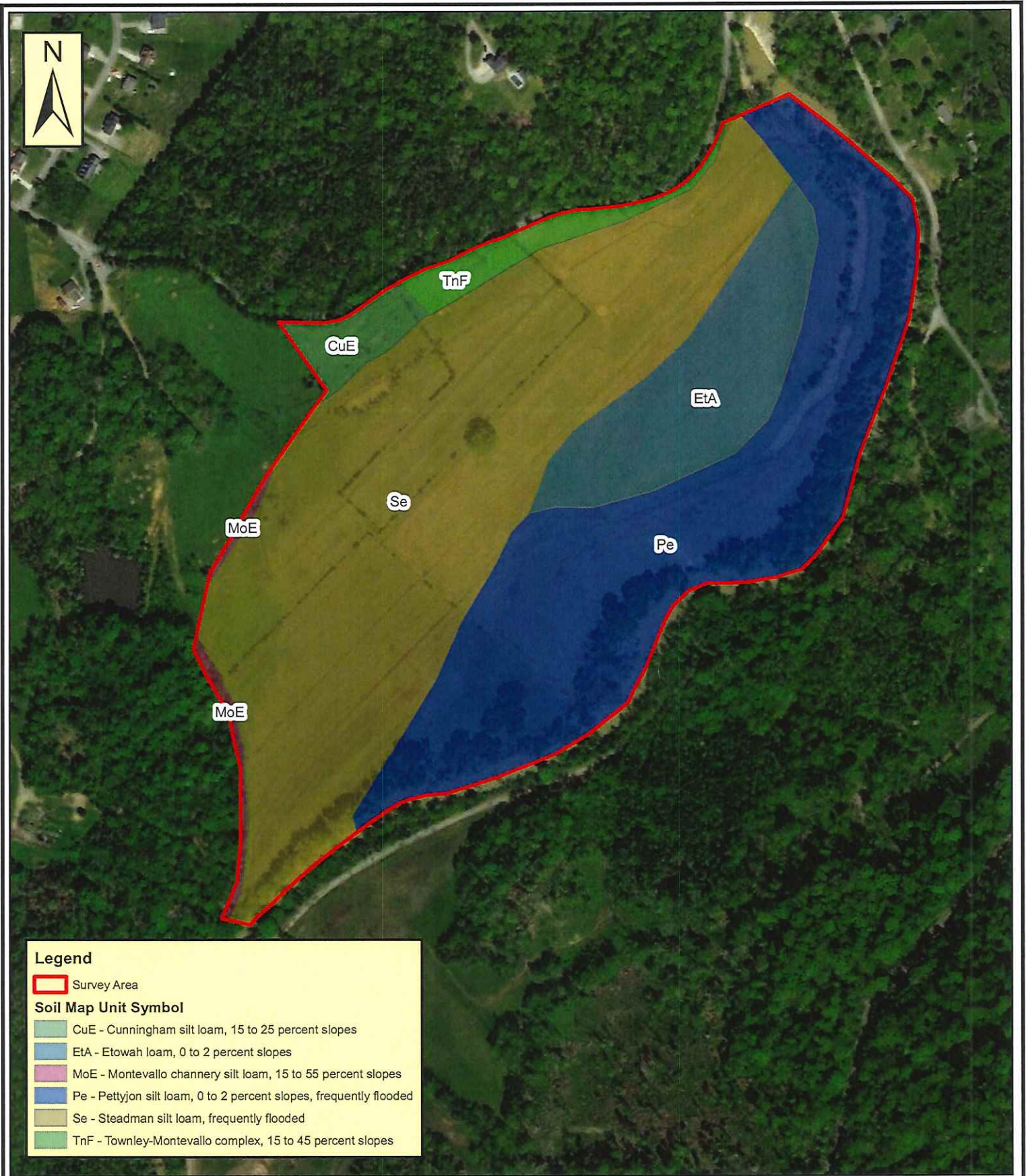
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640 Feet

Dade Co Water Authority
Findings Report
Dade County, Georgia



Figure 2
FEMA National Flood Hazard Map
Project No. 02-050721



Base Map Source: ESRI Aerial Imagery
Soil Data Source: USDA WebSoil Survey

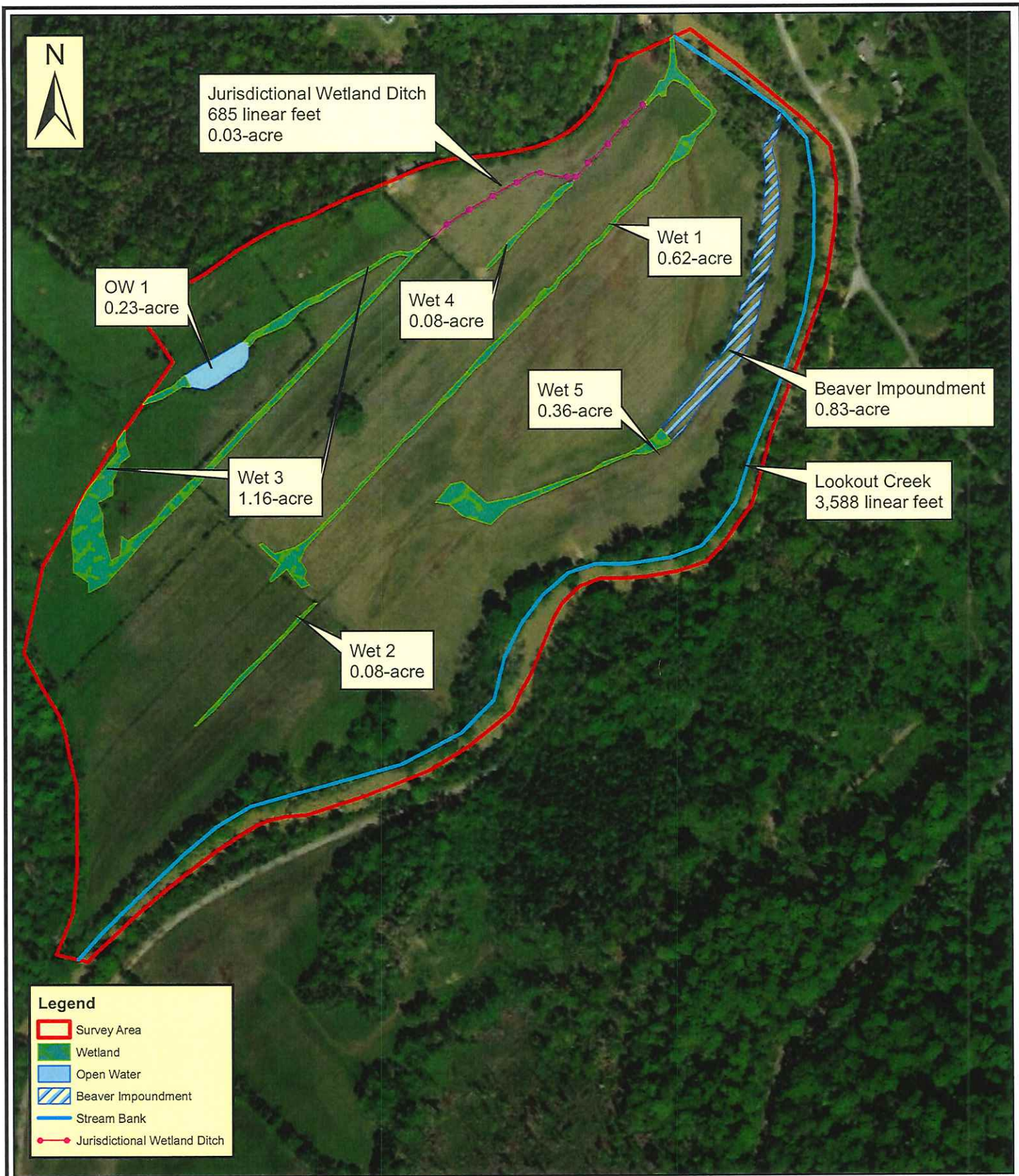
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520 260 0 520 Feet

Dade Co Water Authority
Findings Report
Dade County, Georgia



Figure 3
Site Soils
Project No. 02-050721



Base Map Source: ESRI Aerial Imagery

1:4,000

460 230 0 460 Feet



Photograph No. 1: Representative photograph of typical agricultural land within the project site.



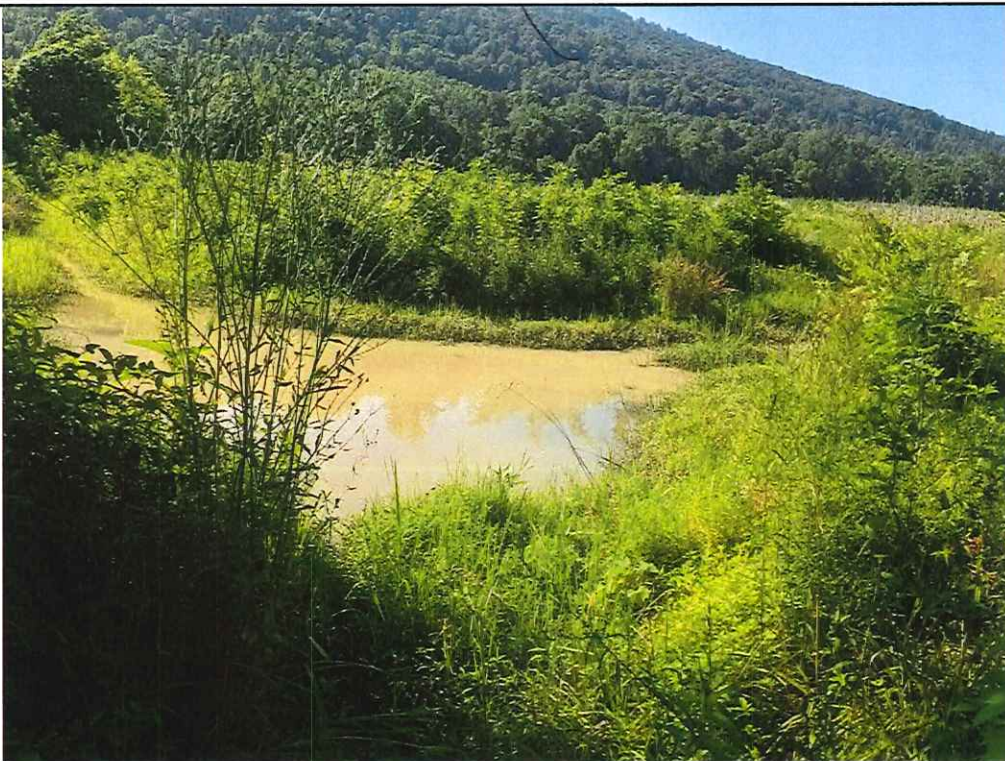
Photograph No. 2: Representative photograph of typical emergent wetlands within former ditches.



Photograph No. 3: Emergent wetland area Wet 3, facing northeast.



Photograph No. 4: Jurisdictional wetland ditch, facing southwest.



Photograph No. 5: Wetland area Wet 1, facing south.



Photograph No. 6: Impounded water with evidence of beaver activity, facing north.