ENVIRONMENTAL ASSESSMENT

East Central Georgia Reliability Projects

June 2025

Prepared for

Environmental and Historic Preservation Division
Rural Utilities Service
U.S. Department of Agriculture
1400 Independence Ave, SW
Washington, DC 20250

Project Proponent

2100 East Exchange Place
Tucker, GA 30084

Executive Summary

Georgia Transmission Corporation (GTC), an Electric Membership Corporation, proposes to construct several transmission lines and substation facilities associated with the East Central Georgia Reliability (ECGR) Project to address the area's electrical needs. These projects have been identified in the East Walton Study Report dated February 2023. Projects are identified as the 500 kV portion and the 230 kV portion of the study.

Project participants include GTC, Georgia Power Company (GPC), and the Municipal Electric Authority of Georgia (MEAG). Along with Dalton Utilities, these entities are the members of the Georgia Integrated Transmission System (ITS). Although individual transmission lines and substations are constructed, owned, and maintained by individual ITS members, the ITS is planned and operated as a single, integrated system.

Project components include:

- Construction of eight new transmission facility projects.
- Proposed modifications to existing GTC facilities.
- Proposed modifications to existing other ITS member facilities.

Construction of eight new transmission facilities

- New Substations
    - East Walton 500/230 kV Substation – located in Walton County near the city of Good Hope. A portion of an approximately 62-acre tract will be developed for the construction of a new substation. This tract was purchased in 2009. GTC will construct and own this facility.
    - Bostwick 230 kV Switching Station – located in Morgan County near the city of Bostwick. A portion of an approximately 39.25-acre tract will be developed for the construction of a new substation and modifications to the existing East Social Circle – East Watkinsville 230 kV Transmission Line. The tract was purchased in 2009, while the right-of-way (ROW) for the transmission line modification was purchased in 2010. GTC will construct and own this facility.
    - Rockville 500 kV Switching Station – located in Putnam County and to the east of the city of Eatonton. This new substation will be constructed on land owned by GPC. GPC will construct and own the facility.
    - Jacks Creek 230 kV Switching Station – located in Walton County and within the city of Monroe. This new switching station will be owned by MEAG. However, GTC will construct this facility on MEAG's behalf

- New Transmission Lines
    - East Walton – Rockville 500 kV Transmission Line – project is approximately 46.5-miles long and located in Walton, Morgan, and Putnam Counties. Approximately 15 miles of the transmission line route in Putnam County is located within a vacant but maintained 150-foot right-of-way purchased from GPC. All additional ROWs were purchased from individual landowners in 2011 with a 150-foot-wide ROW. GTC will construct and own this facility.

- Bostwick – East Walton 230 kV Transmission Line – project is approximately 5.2-miles long and located in Walton and Morgan Counties. All ROWs were purchased in 2011. Project will be constructed adjacent to a portion of the proposed East Walton – Rockville Transmission Line corridor; the combined corridor for this segment will be 225-feet wide. GTC will construct and own this facility.
- East Walton – Jack's Creek 230 kV Transmission Line – project is approximately 7.65-miles long and located in Walton County. All ROWs were purchased in 2010. This project is mostly located adjacent to existing roadsides with a variable ROW of approximately 30-feet; cross-country ROWs are 100-feet wide. GTC will construct and own this facility.
- Bethabara – East Walton 230 kV Transmission Line – project is approximately 10.2-miles long and located in Oconee and Walton Counties. The majority of the ROWs were purchased in 2013; however, some ROWs still need to be acquired. GTC will construct and own this facility.

Proposed modifications to existing GTC facilities

- Bethabara 230/115 kV Substation Modification – Terminate new Bethabara – East Walton 230 kV Transmission Line into existing substation. GTC will construct these modifications. No ground disturbing activities are anticipated outside the existing substation fence.
- East Social Circle – East Watkinsville 230 kV Transmission Line Loop – Loop existing transmission line into the proposed Bostwick 230 kV Switching Station. This existing transmission line is adjacent to the Bostwick Switching Station site. GTC will construct these modifications.
- East Social Circle 230 kV and East Watkinsville 230 kV Substation Modifications – Modify relaying at both substations. GTC will construct these modifications. No ground disturbing activities are anticipated outside the existing substation fence.
- Doyle 230 kV and LG&E 230 kV Substation Modifications – Modify relaying at both substations. GTC will construct these modifications. No ground disturbing activities are anticipated outside the existing substation fence.

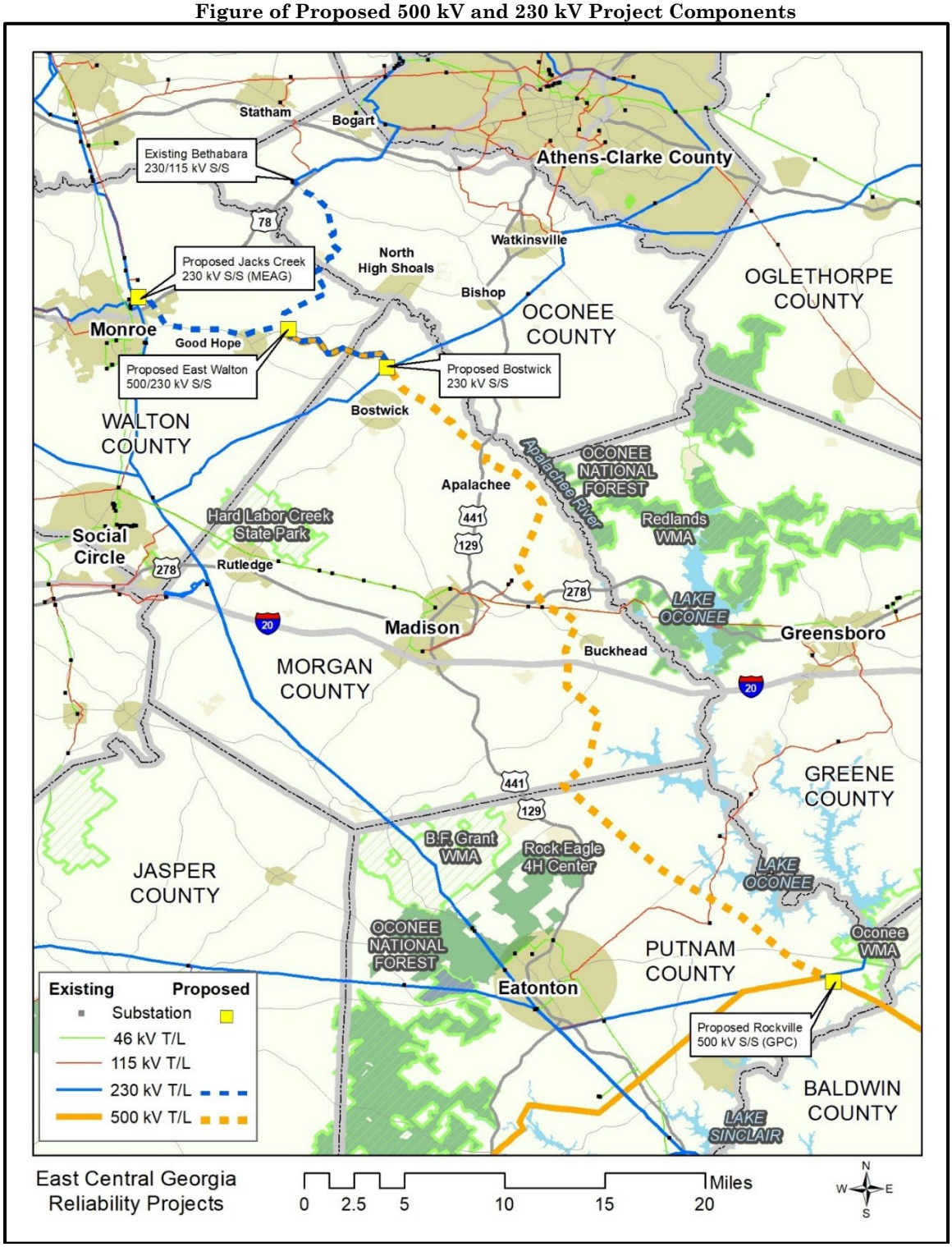
Proposed modifications to existing other ITS member facilities

- Doyle – Monroe 230 kV Transmission Line Loop – The existing GPC transmission line will be modified to terminate into the proposed Jacks Creek 230 kV Switching Station. The existing transmission line is adjacent to the Jacks Creek Switching Station site. GTC anticipates making the modifications on behalf of MEAG and GPC.
- Scherer – Warthen 500 kV Transmission Line Loop – The existing GPC transmission line will be modified to terminate into the proposed Rockville 500 kV Switching Station. This existing transmission line is adjacent to the Rockville Switching Station site. Modifications will be made by GPC.

GTC intends to request financing to construct the proposed Project from the United States Department of Agriculture Rural Utilities Service (RUS). In accordance with RUS's Environmental Policies and Procedures (7 CFR Part 1970), RUS considers a financing decision a major federal action subject to the National Environmental Policy Act of 1969

(NEPA). This Environmental Assessment (EA) has been prepared to fulfill the agency's NEPA requirements and to also document the agency's compliance with all other federal environmental and historic preservation laws and regulations.

Figure of Proposed 500 kV and 230 kV Project Components



In the early 2000's, GTC began studies to modify the electric grid due to significant projected load growth in Northeast Georgia over the subsequent decade. In addition to the load growth, a marked increase in new electric generation development was also projected for the region. GTC's studies revealed that transporting electricity produced by the increased generation to the large load areas in North Georgia would result in an overload to the existing transmission infrastructure. The East Walton 500/230 kV Plan (the prior name for the ECGR Project) was GTC's solution for the forecasted overloading issue in the area.

During the land acquisition process, the need for the proposed transmission projects dissipated. This was primarily due to the economic downturn in 2008, and the failure of new electric generation facilities to develop as anticipated. GTC placed the project 'on hold' but continued to complete the land acquisition process through 2013. GTC acquired the property for the East Walton Substation and the Bostwick Switching Station. GTC completed land acquisition for the ROWs needed on the 46.5-Mile East Walton – Rockville 500 kV Transmission Line project and the 7.65-Mile East Walton – Jacks Creek 230 kV Transmission Line project. The majority of right-of-way was acquired for the 10.2-Mile Bethabara – East Walton 230 kV Transmission Line project except for several gaps along the transmission line alignment when all land acquisition work ceased in 2013.

GTC and other members of the ITS have now determined that the construction of the ECGR Project is now necessary. The renewed need is primarily due to changes in generation and evolving interregional power flow patterns. Changes in generation include displacement and modified dispatch of traditional fossil-fueled generation, and an increase of inverter-based generation resources (primarily renewable generation in the form of solar facilities). These changes have placed constraints on the area transmission facilities with projected overloading of transmission lines under contingency situations as early as 2026. These overloads were identified by GTC in the original East Walton Plan Study.

The EA concludes that the construction of the ECGR Project would:

- not significantly affect prime farmland soils
- not affect any Wild and Scenic Rivers
- not affect any National Forest System lands
- not affect any state or federal park land
- not adversely affect threatened or endangered species
- not significantly impact floodplains
- not significantly impact vegetation or streams
- not impact any area protected by the Coastal Barrier Resource Act
- not significantly affect cultural resources
- not adversely affect the reception signals for radio, television, or any other electronic devices
- not produce any disproportionately high or adverse environmental or human health effects, and
- not significantly affect the natural, cultural, social, or economic environment.

Table of Contents

List of Figures

List of Tables

List of Appendices

List of Acronyms

ACSR - Aluminum Conductor Steel Reinforced
APE - Area of Potential Effect
APLIC - Avian Power Line Interaction Committee
BA - Biological Assessment
BMP - Best Management Practice
BO - Biological Opinion
CFR - Code of Federal Regulations
CO – Conference Opinion
CWA - Clean Water Act
DOI - Department of Interior
EA - Environmental Assessment
ECGR Project – East Central Georgia Reliability Project
EPA - United States Environmental Protection Agency
EPD - Environmental Protection Division of Georgia Department of Natural Resources
EMC - Electric Membership Corporation
EMF - Electromagnetic Field
EPRI - Electric Power Research Institute
ERC – Environmental Recognized Condition
E&SC - Erosion and Sedimentation Control
ESA - Endangered Species Act
FAA - Federal Aviation Administration
FEMA - Federal Emergency Management Agency
FIRM - Flood Insurance Rate Map
FONSI - Finding of No Significant Impact
FSA - Farm Service Agency
GA DNR - Georgia Department of Natural Resources
GDOT - Georgia Department of Transportation
GIS - Geographic Information Systems
GNAHRGIS - Georgia's Natural, Archaeological, and Historic Resources GIS
GNHP - Georgia Natural Heritage Program
GPC - Georgia Power Company
GTC - Georgia Transmission Corporation
HPD - Historic Preservation Division of Georgia Department of Community Affairs
IPaC - Information for Planning and Consultation
ITS - Georgia Integrated Transmission System
JDA - Joint Development Authority of Jasper, Morgan, Newton, and Walton Counties
kV – Kilovolt
LiDAR - Light Detection and Ranging (remote sensing method)
MEAG - Municipal Electric Authority of Georgia
MRLC - Multi-Resolution Land Cover Characteristic Consortium
NEPA - National Environmental Policy Act
NERC - North America Electric Reliability Corporation
NHPA - National Historic Preservation Act
NLCD - National Land Cover Database
NPDES - National Pollutant Discharge Elimination System
NPS - National Park Service
NRCS - Natural Resource Conservation Service
NRHP - National Register of Historic Places
NWI - National Wetland Inventory

NWP – Nationwide Permit
NWR - National Wildlife Refuge
O.C.G.A. - Official Code of Georgia
OPGW – Optical Ground Wire
PCM - Protection, Control, and Monitoring System
RUS - Rural Utilities Service
ROW - Right-of-way
SOI – Secretary of the Interior
SR – State Route (Highway)
SHPO - State Historic Preservation Office(r) (aka Historic Preservation Division)
SPCC - Spill Prevention, Control, and Countermeasure
S/S – Substation or Switching Station
THPO – Tribal Historic Preservation Officer
T/L – Transmission Line
USACE - United States Army Corps of Engineers
USC - United States Code
USDA - United States Department of Agriculture
USFS - United States Forest Service
USFWS - United States Fish and Wildlife Service
USGS - United States Geological Survey
WMA – Wildlife Management Area
WRD - Wildlife Resources Division of Georgia Department of Natural Resources

1.0 INTRODUCTION

Georgia Transmission Corporation (GTC) proposes to construct several transmission lines and substation facilities associated with the East Central Georgia Reliability (ECGR) project to address the area's electrical needs. These projects have been identified in the East Walton Study Report dated February 2023. Projects are identified as either the 500 kV portion or the 230 kV portion of the study. See Figure 1.0 Location Map.

Projects that GTC proposes to construct, operate and maintain are the:

- East Walton 500/230 kV Substation
- Bostwick 230 kV Switching Station
- East Walton – Rockville 500 kV Transmission Line
- Bostwick – East Walton 230 kV Transmission Line
- East Walton – Jacks Creek 230 kV Transmission Line
- Bethabara – East Walton 230 kV Transmission Line
- East Watkinsville-East Social Circle 230 kV Transmission Line Loop

GTC is requesting financing assistance from the U.S. Department of Agriculture (USDA), Rural Utilities Service (RUS) for construction of the ECGR Project (proposed action). Because GTC plans to apply for project financing assistance from RUS, the proposal constitutes a federal action subject to review in accordance with Rural Development's (RD) *Environmental Policy and Procedures* for implementing the National Environmental Policy Act (7 CFR Part 1970). RUS has determined that the proposed action requires the preparation of an Environmental Assessment (EA) due to the action not qualifying as a Categorical Exclusion, as listed in 7 CFR 1970 Subpart B.This EA identifies and evaluates the significance of environmental impacts associated with the proposed construction, maintenance, and operation of the proposed transmission projects associated with the ECGR Project. The EA will demonstrate the Agency's compliance with the requirements of the National Environmental Policy Act (NEPA) ((42 United States Code [USC] 4321 – 4347) and USDA Rural Development regulations (7 CFR 1970) RUS is the lead federal agency for the Project as defined by 40 CFR 1501.7(2024). As the lead federal agency, RUS must evaluate the Project's effect on historic properties under Section 106 of the National Historic Preservation Act (54 USC 306108) and its implementing regulation "Protection of Historic Properties" (36 CFR 800). Pursuant to 36 CFR 800.2(d)(3), RUS is using its procedures for public involvement under NEPA, in part, to meet its responsibilities to solicit and consider the views of the public during Section 106 review.

This EA will address laws, regulations, executive orders, and guidelines promulgated to protect and enhance environmental quality, including the Endangered Species Act, the National Historic Preservation Act, the Farmland Protection Policy Act, the Clean Water Act, and executive orders governing floodplain management and wetland protection.

1.2 PURPOSE AND NEED

USDA Rural Development is a mission area that includes three federal agencies – Rural Business Cooperative Service, Rural Housing Service, and the RUS. The agencies have more than 50 programs that provide financial assistance and a variety of technical and educational

assistance to eligible rural and tribal populations, eligible communities, individuals, cooperatives, and other entities with a goal of improving the quality of life, sustainability, infrastructure, economic opportunity, development, and security in rural America. Financial assistance can include direct loans, guaranteed loans, and grants to accomplish program objectives.

The Rural Electrification Act of 1936, as amended (7 U.S. Code [USC] § 901), authorizes and empowers the Secretary of Agriculture to make loans to nonprofit cooperatives and others for rural electrification for the purpose of financing the construction and operation of generating plants, electric transmission and distribution lines, or systems for the furnishing and improving of electric service to persons in rural areas (7 USC § 904). A primary function or mission of RUS is to carry out the electric loan program (7 USC § 6942).

RUS does not regulate the siting of generation and transmission infrastructure. The federal action related to the proposed project will be RUS's granting of financial assistance for construction of the Eastern Central Georgia Reliability project. RUS's decision of whether to grant the requested financing assistance will be made based on the environmental analysis outlined in the EA and subsequent engineering and financial reviews. Issuance of this EA is not a decision on a loan application and, therefore, not an approval of the expenditure of federal funds.

Issuance of the EA and any subsequent environmental findings is required in accordance with NEPA and RD's Environmental Policies and Procedures (7 CFR Part 1970). Legal challenges to the EA and any subsequent environmental findings may be filed in federal district court under the Administrative Procedure Act.

Georgia Transmission is an electric transmission cooperative established under the laws of the State of Georgia in 1996. The not-for-profit cooperative, headquartered in Tucker, Georgia, is engaged in the business of building, maintaining, and owning electric power transmission facilities (transmission lines, substations, and switching stations) to serve 38 of the 41 Georgia electric membership corporations (EMCs), one of which is Walton EMC. The EMCs, also known as Member Systems, are local, consumer-owned electric distribution cooperatives that provide retail electric service on a not-for-profit basis. The membership of the distribution cooperatives consists of residential, commercial, and industrial consumers, generally within specific geographic areas. This membership represents approximately 4.4 million people in a service area covering 40,000 square miles, or nearly 73 percent of the land area of Georgia.

In the early 2000's, GTC began studies to modify the electric grid due to significant projected load growth in Northeast Georgia over the subsequent decade. In addition to the load growth, a marked increase in new electric generation development was also projected for the region. GTC's studies revealed that transporting electricity produced by the increased generation to the large load areas in North Georgia would result in an overload to the existing transmission infrastructure. The East Walton 500/230 kV Plan (the prior name for the ECGR Project) was GTC's solution for the forecasted overloading issue in the area. During the land acquisition process, the need for the proposed transmission projects dissipated. This was primarily due to the economic downturn in 2008, and the failure of new electric generation facilities to

develop as anticipated. GTC placed the project 'on hold' but continued to complete the land acquisition process through 2013. GTC acquired the property for the East Walton Substation and the Bostwick Switching Station. GTC completed land acquisition for the ROWs needed on the 46.5-Mile East Walton – Rockville 500 kV Transmission Line project and the 7.65-Mile East Walton – Jacks Creek 230 kV Transmission Line project. The majority of right-of-way was acquired for the 10.2-Mile Bethabara – East Walton 230 kV Transmission Line project except for several gaps along the transmission line alignment when all land acquisition work ceased in 2013. GTC and other members of the ITS have now determined that the construction of the ECGR Project is now necessary. The renewed need is primarily due to changes in generation and evolving interregional power flow patterns. Changes in generation include displacement and modified dispatch of traditional fossil-fueled generation, and an increase of inverter-based generation resources (primarily renewable generation in the form of solar facilities). These changes have placed constraints on the area transmission facilities with projected overloading of transmission lines under contingency situations as early as 2026. These overloads were identified by GTC in the original East Walton Plan Study.

GTC intends to request financing to construct the proposed Project from the United States Department of Agriculture Rural Utilities Service (RUS). In accordance with RUS's Environmental Policies and Procedures (7 CFR Part 1970), RUS considers a financing decision a major federal action subject to the National Environmental Policy Act of 1969 Environmental Assessment East Central Georgia Reliability Project March 2025 iv (NEPA). This Environmental Assessment (EA) has been prepared to fulfill the agency's NEPA requirements and to also document the agency's compliance with all other federal environmental and historic preservation laws and regulations.

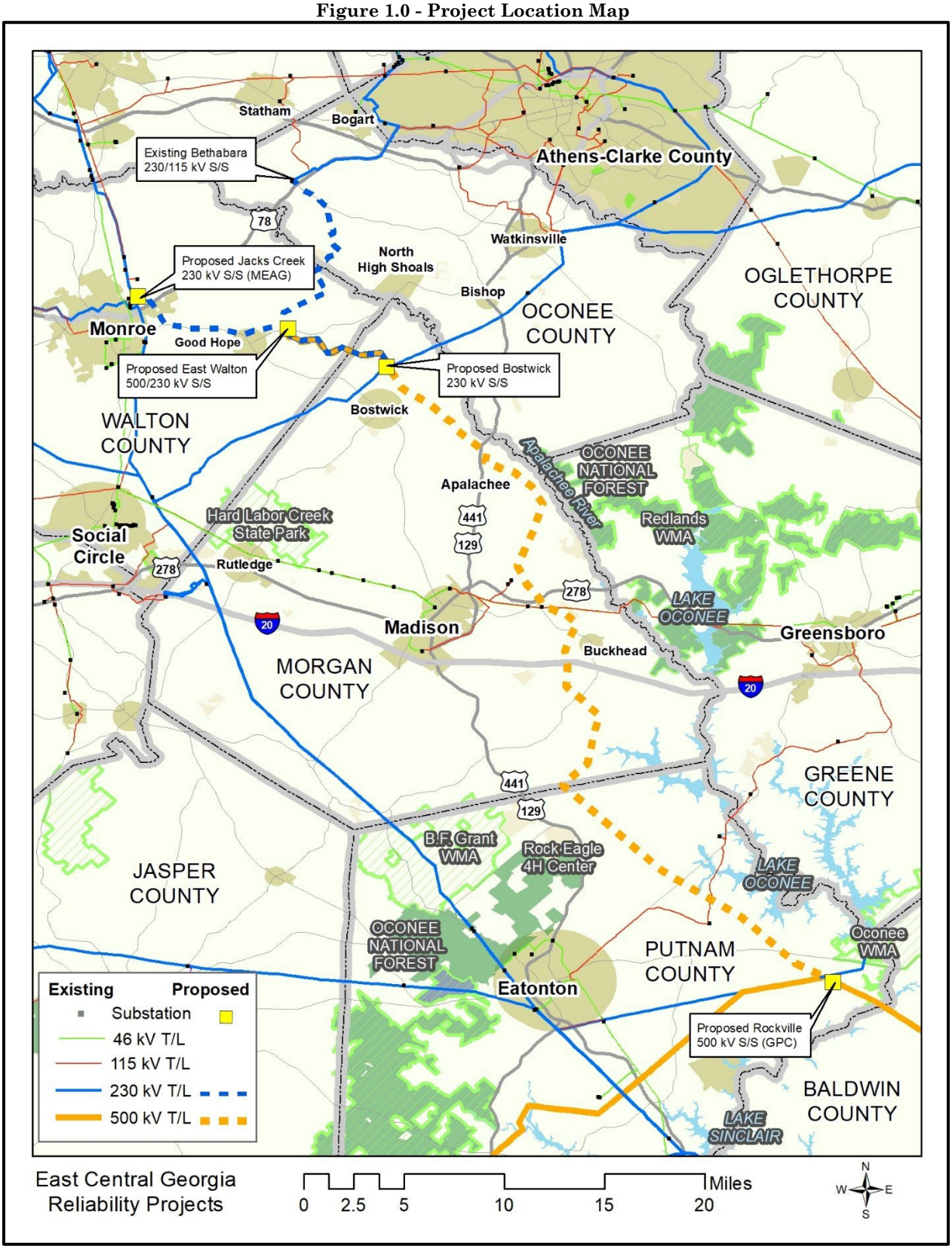
2.0 PROJECT PARTICIPANTS

GTC owns and maintains 5,400-miles of transmission lines and 787 transmission and/or distribution substations of various voltages. Georgia Transmission provides transmission capacity to the member system co-operatives through participation in Georgia's Integrated Transmission System (ITS), which consists of transmission facilities operated by Georgia Transmission, Georgia Power Company (GPC), MEAG Power (MEAG), and the City of Dalton Utilities. Parity in ownership of the ITS depends on the load served by each of the owners and varies slightly from year to year, requiring that periodic financial adjustments be made. Although individual transmission lines and substations are constructed, owned, and maintained by individual ITS members, the ITS is planned and operated as a single, integrated system.

The 41 EMCs members are local, consumer-owned electric distribution cooperatives that provide retail electric service on a not-for-profit basis. The memberships of the EMCs consist of residential, commercial, and industrial power consumers, generally within specific geographic areas. Georgia's EMCs serve more than 4.4 million members. Although not direct project participants, the proposed ECGR Project is located within service territories of four EMCs including Central Georgia EMC, Rayle EMC, Tri-County EMC, and Walton EMC.

Due to the transmission system improvement nature of this project, project participants also include other members of the ITS. In addition to GTC, other project participants include GPC and MEAG. GPC is an investor-owned electric utility, the largest electric subsidiary of Southern Company. MEAG is a not-for-profit utility that provides wholesale electric power to 49 municipalities in Georgia.

Figure 1.0 - Project Location Map



3.0 PROJECT DESCRIPTION

3.1 East Central Georgia Reliability Project – GTC Projects

GTC will construct, operate, and maintain 6 new transmission facilities that are proposed for the ECGR Project, including 2 new substation facilities and 4 new transmission line facilities. See Figure 1.0 Location Map.

- East Walton 500/230 kV Substation
- Bostwick 230 kV Switching Station
- East Walton – Rockville 500 kV Transmission Line
- Bostwick – East Walton 230 kV Transmission Line
- East Walton – Jack's Creek 230 kV Transmission Line
- Bethabara – East Walton 230 kV Transmission Line

GTC will modify four existing transmission facilities that are proposed for the ECGR Project.

- Bethabara 230/115/25 kV Substation Modification
- East Social Circle – East Watkinsville 230 kV Loop
- East Social Circle 230/115/26 kV Substation Modification
- East Watkinsville 230/115 kV Substation Modification
- Doyle 230 kV Substation Modification
- LG&E 230 kV Substation Modification

New Substations

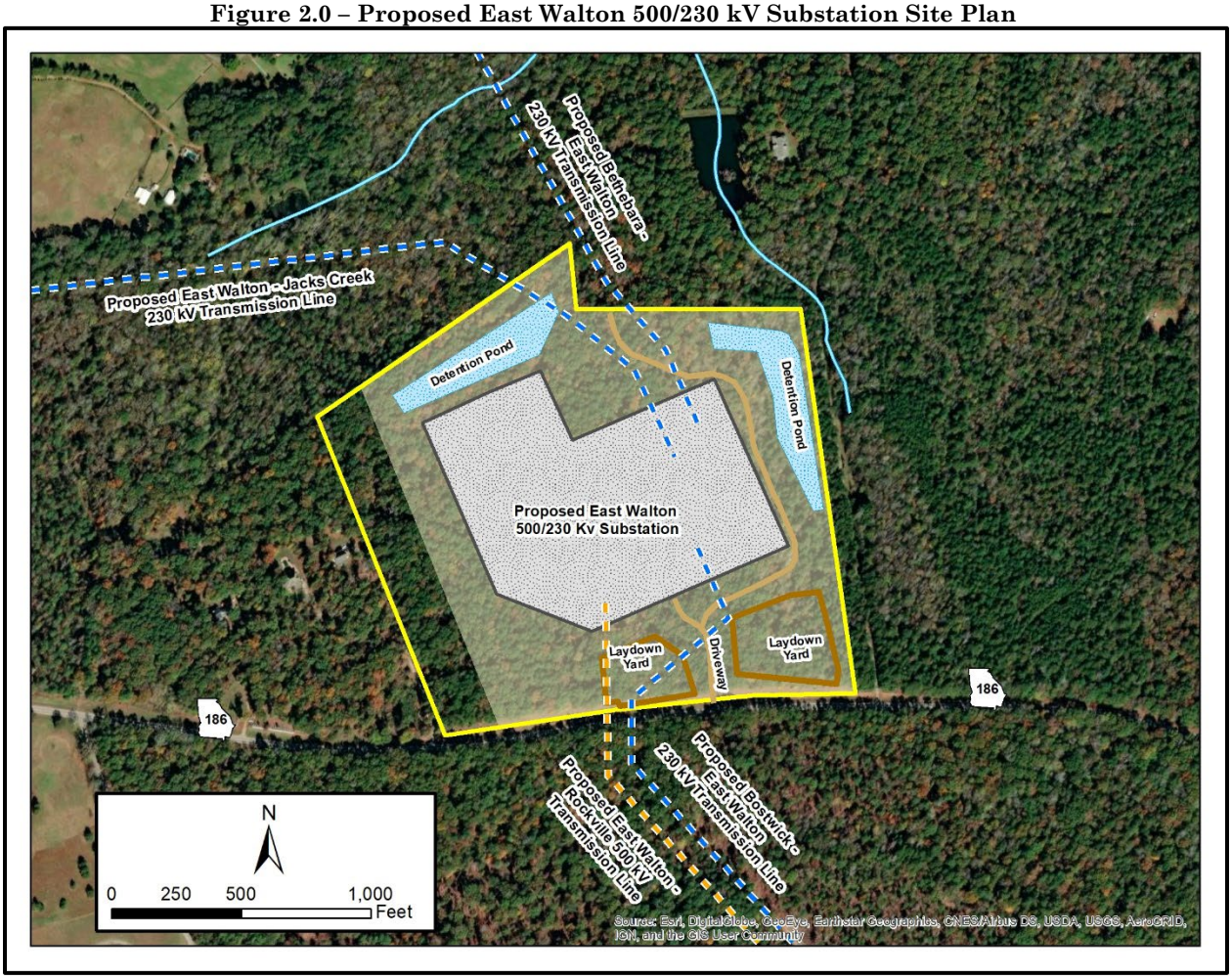
East Walton 500/230 kV Substation

The proposed substation is on the north side of State Route 186 in Walton County. The site is 0.75-miles east of the city of Good Hope and 3.5-miles west of the city of North High Shoals.

The site is located on a 62-acre tract owned by GTC; purchased by GTC in 2009. The proposed layout of the substation utilizes most of the property, with a 200-foot vegetative buffer preserved along the western property line. The planned graveled, fenced area of the proposed switching station is 750-feet by 950-feet. The area of disturbance including a driveway, detention pond, egress/ingress on the property for terminating transmission lines, and construction laydown areas is 57.25-acres. There will also be space available for possible 25 kV low-side equipment to serve future area electrical load. See Figure 2.0 for the proposed East Walton 500/230 kV Substation site plan.

The East Walton Substation serves as the northern terminus for the proposed East Walton – Rockville 500 kV Transmission Line, and the central terminus of the three new 230 kV transmission line projects. GTC will construct, own, and maintain this proposed substation project.

Figure 2.0 – Proposed East Walton 500/230 kV Substation Site Plan



Bostwick 230 kV Switching Station

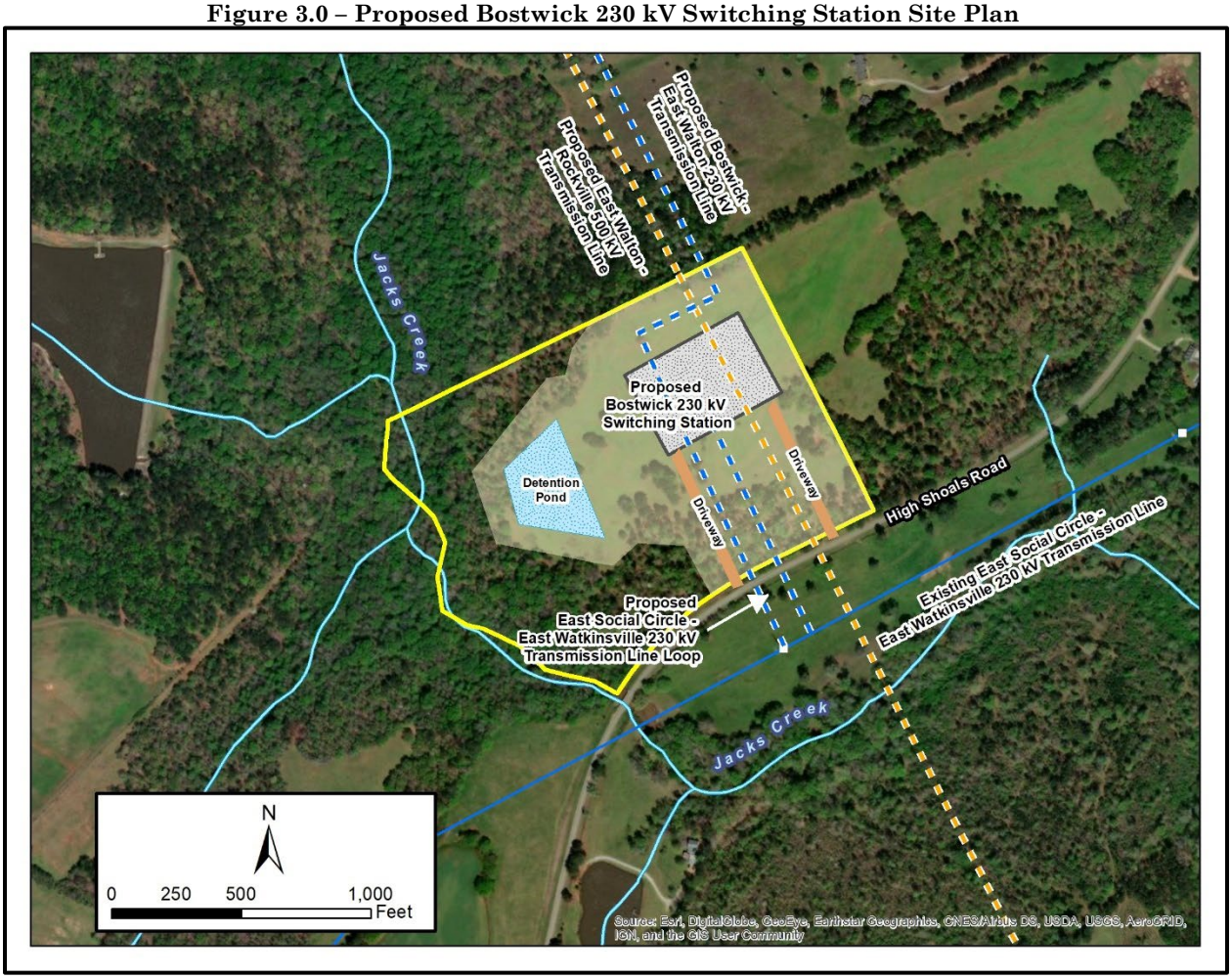
A switching station facility is a type of substation facility but operates at a single voltage level and does not contain transformers to step down to lower voltages.

This proposed switching station is on the north side of High Shoals Road in Morgan County. This site is 1-mile north of the city of Bostwick and 3-miles south of the city of North High Shoals. It is located along the proposed route of the East Walton – Rockville 500 kV Transmission Line and adjacent to the existing East Social Circle – East Watkinsville 230 kV Transmission Line. The planned graveled, fenced area of the proposed switching station is 350-feet by 500-feet. The area of disturbance, including driveways, a detention pond, and egress/ingress on the property for terminating transmission lines, is 27.54-acres. There will also be space available for possible 25 kV low-side equipment to serve future area electrical load. See Figure 3.0 for the proposed Bostwick 230 kV Switching Station site plan.

The Bostwick Substation serves as the eastern terminus of the proposed Bostwick – East Walton 230 kV Transmission Line. The existing East Social Circle – East

Watkinsville 230 kV Transmission Line will be looped into the switching station. GTC will construct, own, and maintain this proposed switching station project.

Figure 3.0 – Proposed Bostwick 230 kV Switching Station Site Plan



New Transmission Lines

See Figures 4.1, 4.2, 4.3, and 4.4, as well as Appendix A for maps of the proposed new transmission line projects:

- Proposed East Walton – Rockville 500 kV Transmission Line
- Proposed Bostwick - East Walton 230 kV Transmission Line
- Proposed Jacks Creek – East Walton 230 kV Transmission Line
- Proposed Bethabara – East Walton 230 kV Transmission Line

Figure 4.1 – Aerial Map of proposed East Walton – Rockville 500 kV Transmission Line located within existing vacant ROW through Putnam County, GA

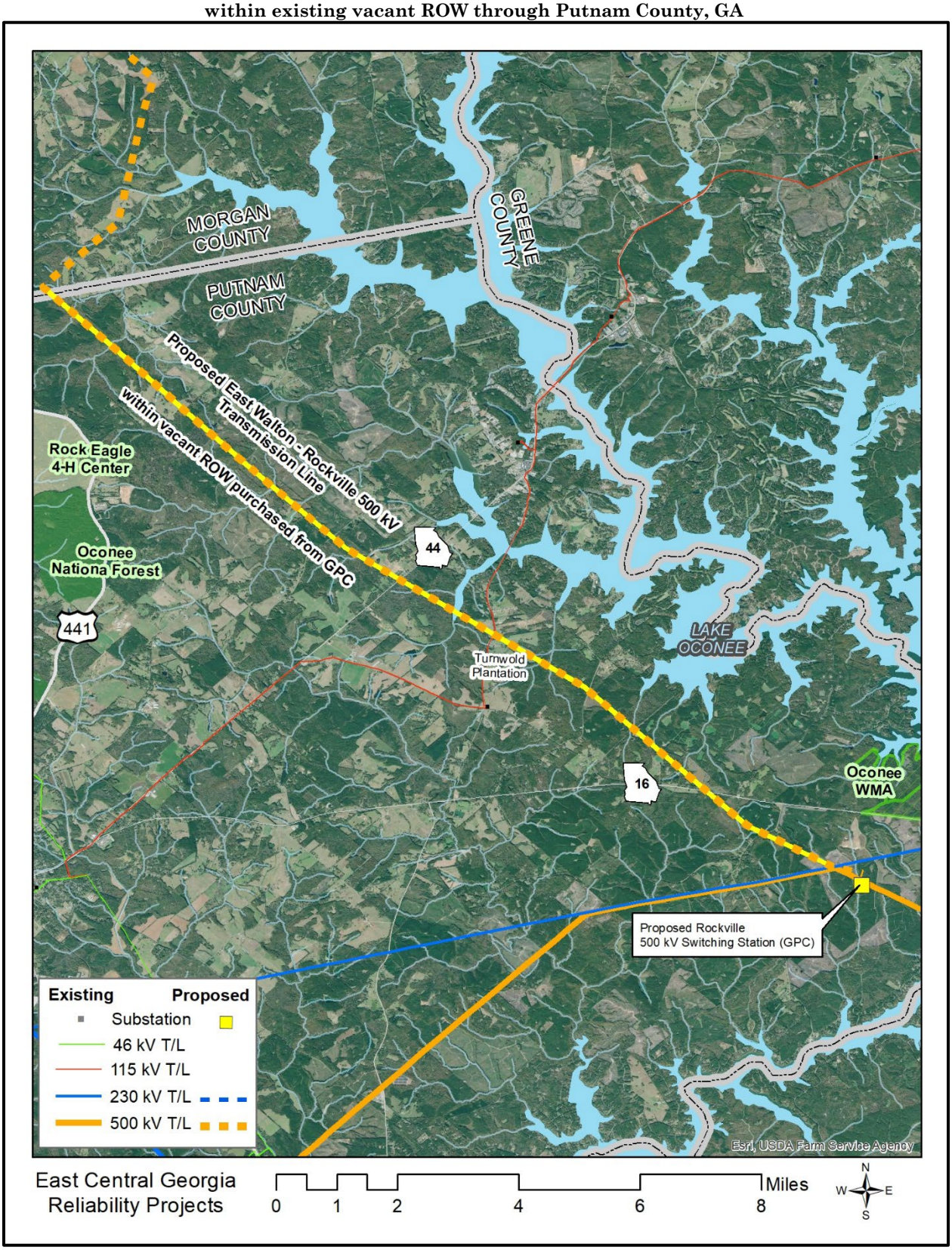


Figure 4.2 – Aerial Map of proposed East Walton – Rockville 500 kV Transmission Line from the Morgan/Putnam County line to the community of Apalachee

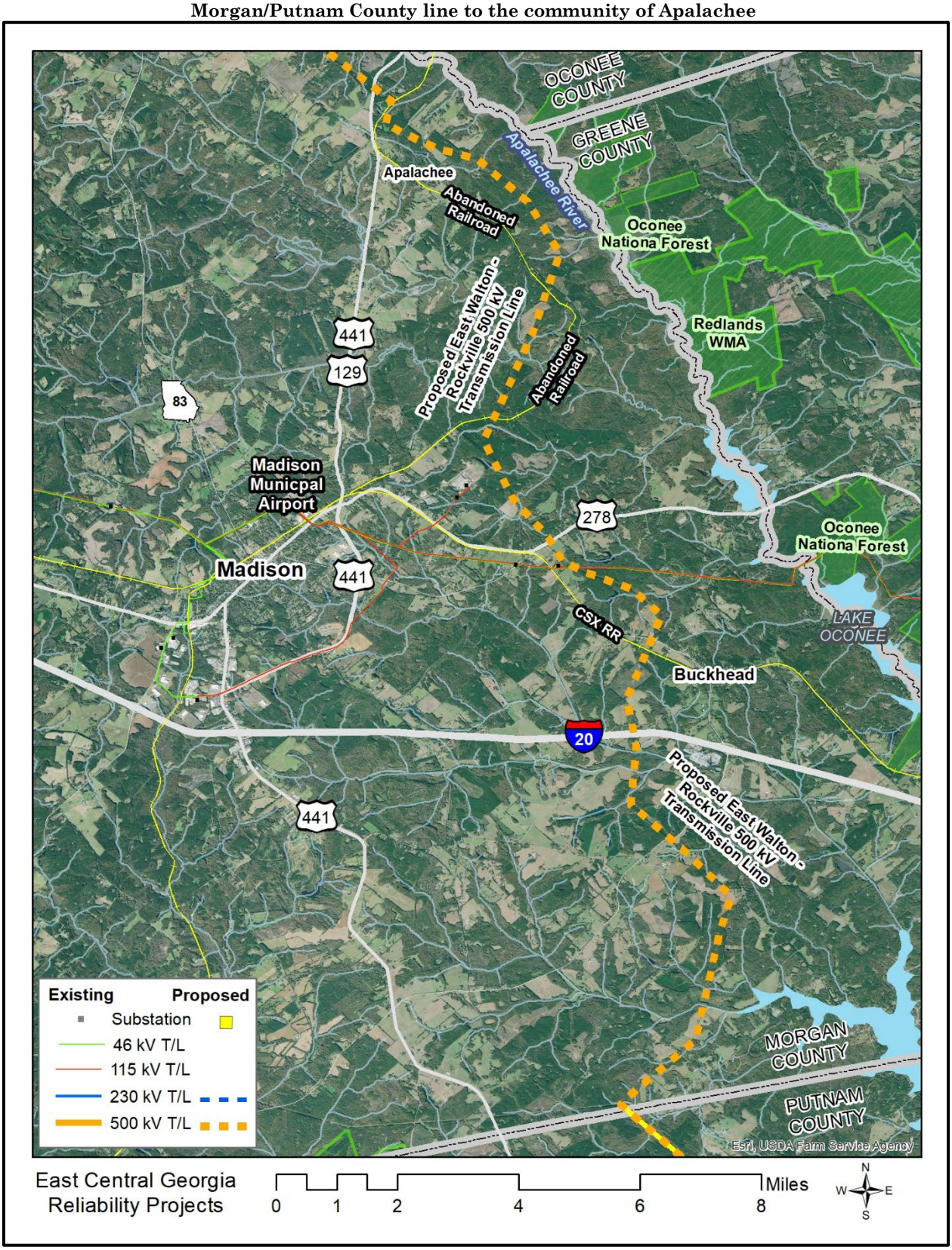


Figure 4.3 – Aerial Map of proposed transmission lines from the community of Apalachee to the East Walton Substation site and the Bethabara – East Walton 230 kV Transmission Line

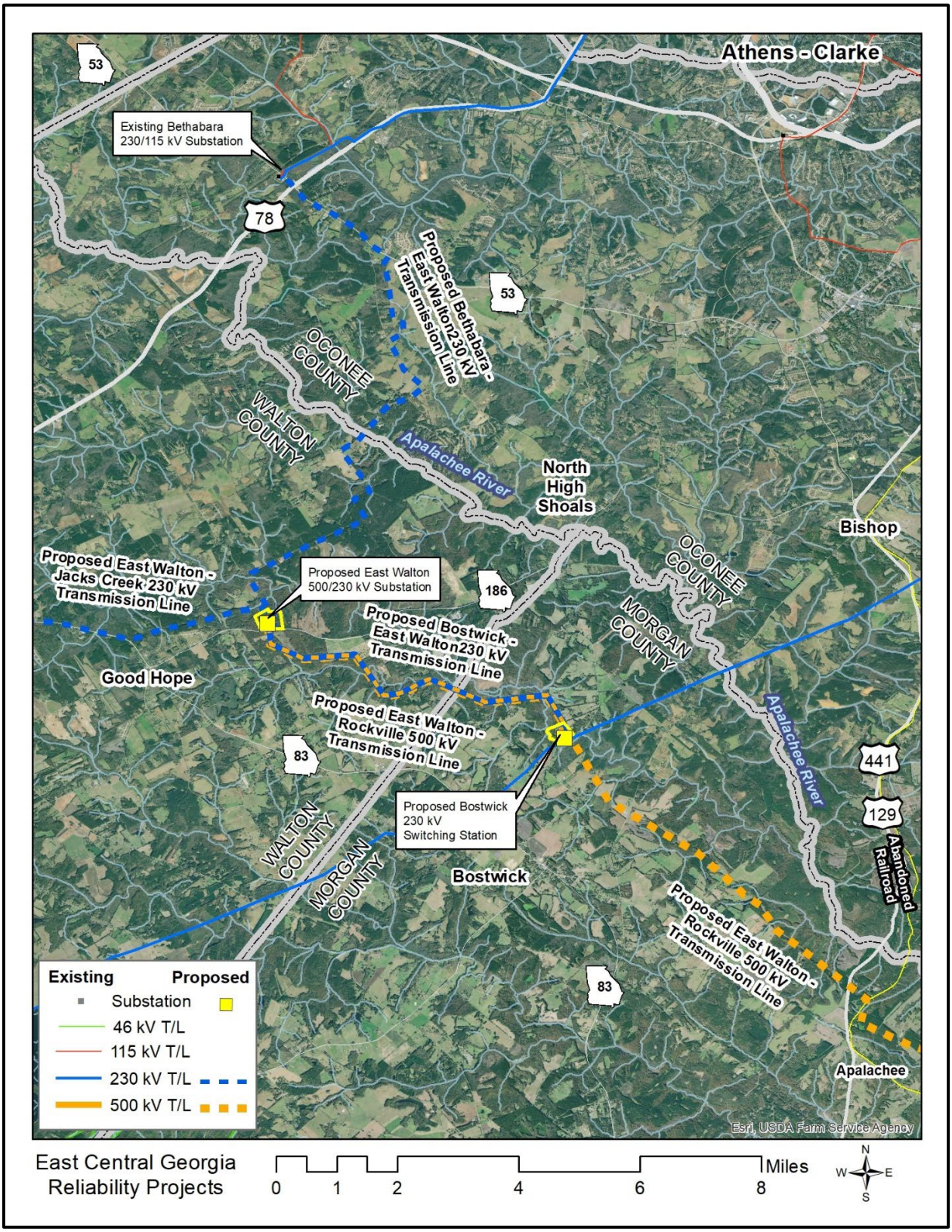
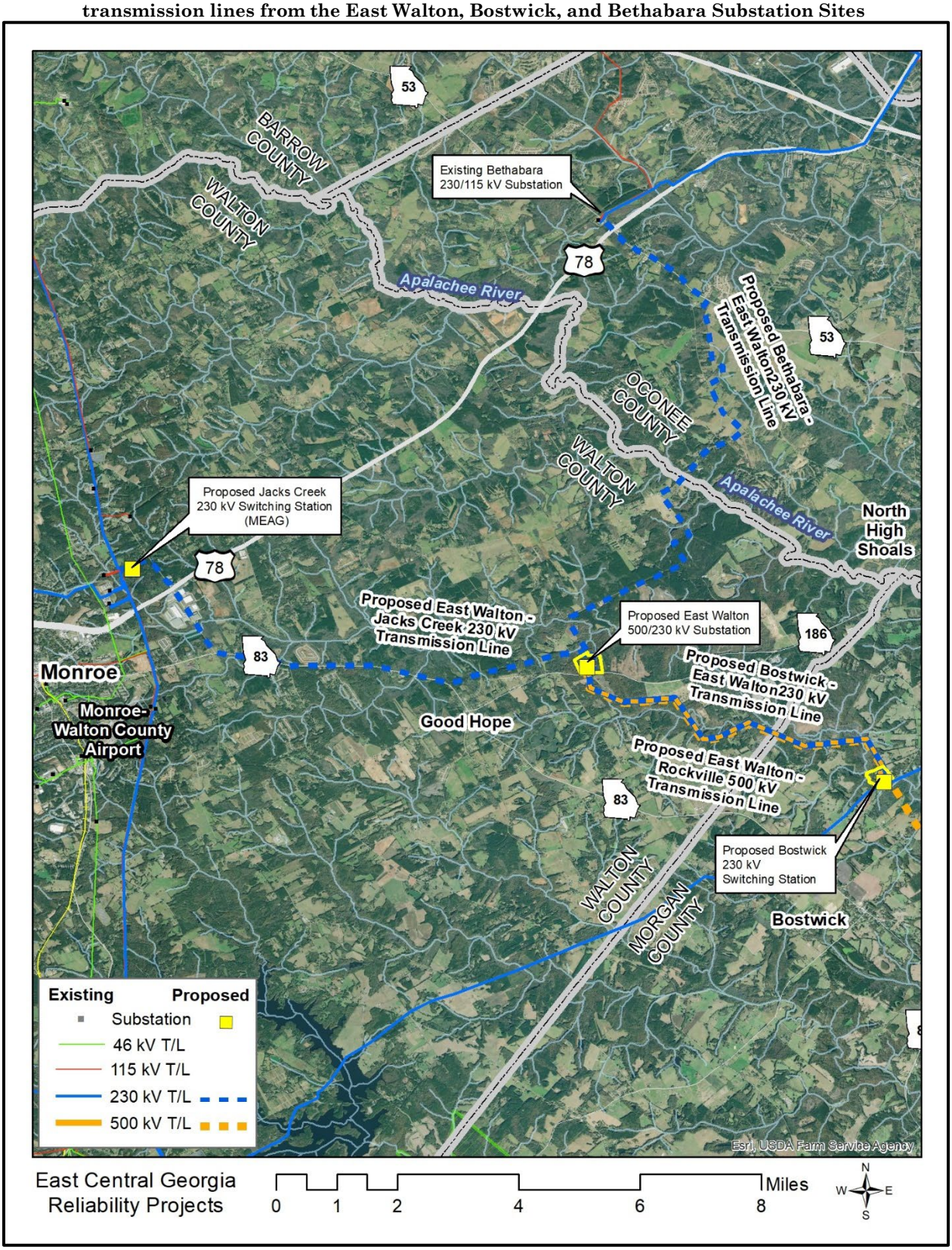


Figure 4.4 – Aerial Map of proposed Jacks Creek – East Walton 230 kV Transmission Line, other new transmission lines from the East Walton, Bostwick, and Bethabara Substation Sites

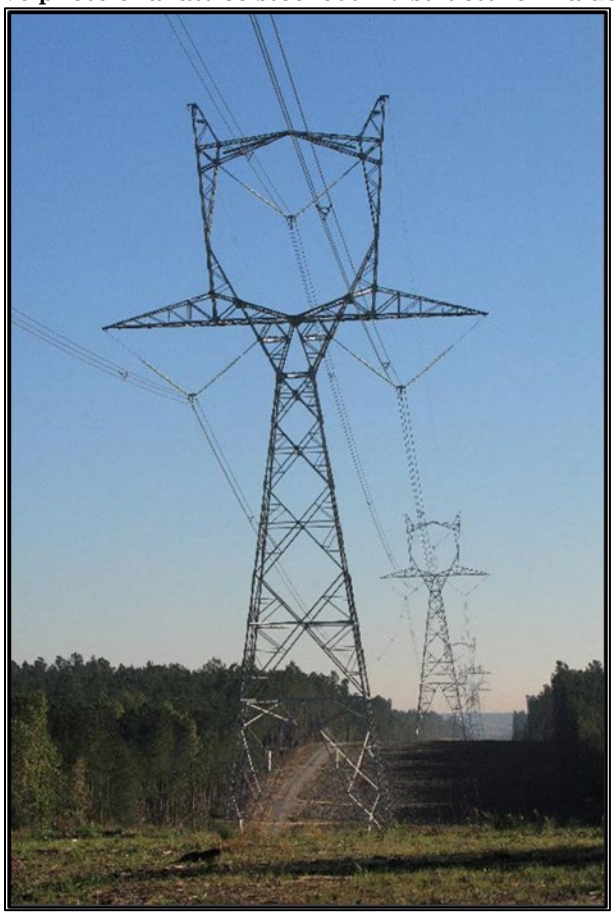


East Walton – Rockville 500 kV Transmission Line

The proposed East Walton – Rockville 500 kV Transmission Line route is 46.5-miles long. It traverses through Putnam, Morgan, and Walton Counties. The proposed Transmission Line requires steel lattice structures and requires a right-of-way (ROW) width of 150-Feet. All ROWs were purchased by GTC in 2011.

The structures will be constructed of lattice steel in a delta configuration. Structures will vary in height from approximately 100-150-feet above ground. The average distance between structures will be approximately 1,200-feet. The proposed transmission line will be constructed with 3-1113 Aluminum Conductor -Steel Reinforced (ACSR) and designed for 100ºC operation. There will be 203 lattice steel structures along the 46.5-mile transmission line. GTC will have fiber optics in the shield wire known as optical ground wire (OPGW) along the length of the transmission line. See Figure 5.0 for a representative photo of a lattice steel 500 kV structure in a delta configuration.

Figure 5.0 – Representative photo of a lattice steel 500 kV structure in a delta configuration



The proposed route for the East Walton – Rockville 500 kV Transmission Line leaves the proposed Rockville 500 kV Switching Station towards the northwest, crossing the GPC owned property, and then utilizing a vacant, 150-foot in width ROW. This section

of the route traverses through Putnam County for approximately 15-miles, between Lake Oconee to the east and the Oconee National Forest Service tracts in Putnam County, the Rock Eagle 4-H Center, and the City of Eatonton to the west. The route crosses several major roads and highways including Sparta Highway / State Route 16, Old Phoenix Road, Greensboro Road / State Route 44, and Harmony Road. The approximate amount of ROW acquired from Georgia Power Company in 2011 was 264-acres. An additional 8-acres of ROW was acquired to connect the vacant ROW to the proposed location of the Rockville 500 kV Switching Station.

After crossing the Putnam County / Morgan County line, the route leaves the vacant ROW and shifts from a northwest direction to a more north-northwest direction. This section of the route passes between Oconee National Forest Service tracts in Green County to the east and to the west of the City of Madison. The route follows property lines and crosses stream systems perpendicularly where practicable. The route passes on the west side of the City of Buckhead, to the east side of the community of Apalachee, and then to the east of the City of Bostwick. The route crosses several major roads and highways including Seven Islands Road, Interstate 20, U.S. Highway 278, U.S. Highway 441, Price Mill Road, and High Shoals Road. This section of the route is approximately 26.3-miles and will require 468-acres of transmission line ROW.

At High Shoals Road, the route passes through the proposed Bostwick 230 kV Switching Station site. The route shifts to a more west-northwest trajectory in the area of Indian Creek and Jacks Creek, crossing State Route 186, and then onto the proposed East Walton 500/230 kV Substation Site. This section of the Route is approximately 5.2-miles. In the section between the proposed Bostwick Switching Station and the proposed East Walton Substation, the corridor is shared with the proposed Bostwick – East Walton 230 kV Transmission Line. North of the proposed Bostwick 230 kV Switching Station site, the route for the proposed Bostwick – East Walton 230 kV Transmission Line project as routed with the proposed route for the East Walton – Rockville 500 kV Transmission Line project. The width of this section is 225'-feet and will require 138-acres of transmission line ROW to accommodate both transmission lines.

In addition to the new 500 kV transmission line ROW, additional construction activities will be needed for the development of this 500 kV transmission line corridor. Approximately 22.94-miles of existing access paths will be utilized for construction and future maintenance activities. These paths will require trees to be side trimmed and some improvements including adding gravel and minor blading and grading. Four miles of newly constructed access paths are needed for construction and future maintenance activities. Temporary construction areas are required for equipment to pull conductor along the 500 kV transmission line project. These temporary construction areas have a sum of 11.19-acres. A 21.75-acre laydown yard has been identified to stage equipment and store equipment during construction along U.S Highway 278.

GTC will construct, own, and maintain this proposed transmission line project.

Bostwick – East Walton 230 kV Transmission Line

The proposed Bostwick - East Walton 230 kV Transmission Line route is 5.2-miles long and traverses through Morgan and Walton Counties. The proposed transmission line will be constructed as concrete or steel mono-pole structures, which requires a ROW width of 100-feet. Since this route parallels the proposed East Walton – Rockville 500 kV Transmission Line route, the two parallel corridors share 25-feet. Therefore, for this section of transmission line corridor, a 225-foot wide ROW is needed for both transmission line routes. These ROWs were purchased by GTC together with the East Walton – Rockville 500 kV Transmission Line project in 2011. Acreage calculations were included with the East Walton – Rockville 500 kV Transmission Line project.

The mono-pole structures vary in height from approximately 80-100-feet above ground. The average distance between structures will be approximately 500-feet. The proposed transmission line will be constructed with 1351 Aluminum Conductor-Steel Supported (ACSS) and designed for 170ºC operation. There will be 48 mono-pole structures along the 5.2-mile transmission line. GTC will have fiber optics in the shield wire known as OPGW along the length of the transmission line. See Figure 6.0 for a representative photo of a mono-pole concrete structure.

Figure 6.0 – Representative photo of a mono-pole concrete structure

The route begins at the proposed Bostwick Switching Station site. The route was jointly routed with the East Walton - Rockville 500 kV Transmission Line project. The route takes a west-northwest trajectory in the area of Indian Creek and Jacks Creek, crossing State Route 186, and then onto the proposed East Walton 500/230 kV Substation Site along with the East Walton – Rockville 500 kV Transmission line route.

GTC will construct, own, and maintain this proposed transmission line project.

East Walton – Jacks Creek 230 kV Transmission Line

The proposed East Walton – Jacks Creek 230 kV Transmission Line route is 7.65-miles long and located within Walton County. The proposed transmission line will be constructed as concrete or steel mono-pole structures. The route is located mostly along existing roadsides with a variable ROW width of approximately 30-feet; cross country ROWs are 100-foot in width. The acreage of transmission line ROW required is 41-acres. These ROWs were purchased by GTC in 2010.

The mono-pole structures vary in height from approximately 80-120-feet above ground. The average distance between structures will be approximately 500-feet. The proposed transmission line will be constructed with 1351 Aluminum Conductor-Steel Supported (ACSS) and designed for 170ºC operation. There will be 64 mono-pole structures along the 7.65-mile transmission line. GTC will have fiber optics in the shield wire known as OPGW along the length of the transmission line.

The route begins at the proposed East Walton 500/230 kV Substation and travels west for 2.15-miles through the northern section of the city of Good Hope. The route then parallels State Route 83 for 3.3-miles, continuing in a westerly direction. The route makes a northerly turn along Unisa Drive/State Route 83 and parallels Unisa Drive for 1.2-miles. The route crosses U.S. Highway 78 and continues to parallel Unisa Drive (now named James Huff Rd) for 0.6-miles. The route takes a turn towards the west along Old Athens Highway for 0.4-miles. Once reaching the Jacks Creek Switching Station site, the route turns north to terminate into the proposed switching station.

GTC will construct, own, and maintain this proposed transmission line project.

Bethabara – East Walton 230 kV Transmission Line

The proposed Bethabara – East Walton 230 kV Transmission Line route is 10.21-miles long and located in Oconee and Walton Counties. The proposed transmission line will be constructed as concrete or steel mono-pole structures. The route takes a combination of roadside and cross-country paths. The route along existing roadsides has a variable ROW width of approximately 30-feet; cross country ROWs are 100-foot in width. The acreage of transmission line ROW required is 73-acres. Most ROWs were purchased in 2013. However, some ROWs still need to be acquired. GTC is currently working on those acquisitions.

The mono-pole structures vary in height from approximately 80-120-feet above ground. The average distance between structures will be approximately 500-feet. The proposed transmission line will be constructed with 1351 Aluminum Conductor -Steel Supported (ACSS) and designed for 170ºC operation. There will be 93 mono-pole structures along the 10.21-mile transmission line. GTC will have fiber optics in the shield wire known as OPGW along the length of the transmission line.

The route for the proposed Bethabara – East Walton 230 kV Transmission Line is oriented in a north south direction. From the existing Bethabara 230/115/25 kV Substation, the route exits the substation and parallels State Route 53 / Hog Mountain Road and crosses U.S. Highway 78. The route parallels State Route 53 for 2-miles. The route then takes a more southerly direction, cross-country to the east of Lane Creek Road for 1.63-miles, at which point the route parallels Lane Creek Road for 0.91-miles. The route turns towards the west and parallels Rogers Road for 0.58-miles until reaching Snows Mill Road. The route parallels Snows Mill Road for 1.03-miles, crossing the Apalachee River, before turning south and taking a cross-country path for 1.72-miles until reaching Jones Wood Road, at which point the route the route parallels George Laboon Road for 1.53-miles. The route then takes a southerly turn for 0.81-miles, taking a cross-country path, crossing Jacks Creek, and terminating into the proposed East Walton 500/230 kV Substation.

GTC will construct, own, and maintain this proposed transmission line project

Modifications to Existing GTC Facilities

Bethabara 230/115/25 kV Substation Modification

GTC will terminate the proposed Bethabara – East Walton 230 kV Transmission Line into the existing substation, which will require GTC to make some modifications to the existing substation. A fence expansion is not required. Some ground disturbing activities will occur on the substation site, which will include some tree removal and the construction of transmission line mono-pole structures to terminate the proposed transmission line into this existing substation. Any environmental consequence descriptions on the existing substation site will be described with the transmission line project.

East Social Circle – East Watkinsville 230 kV Transmission Line Loop

GTC will loop the existing East Social Circle – East Watkinsville Transmission Line into the proposed Bostwick 230 kV Switching Station. This existing transmission line is adjacent to the Bostwick Switching Station site on the south side of High Shoals Road. The existing 230 kV line will be modified near existing Structure #52 by replacing Structure #52 with two new mono-pole steel structures within the existing 230 kV ROW. The length of the two 230 kV circuits terminating into Bostwick Switching will be approximately 0.1-miles each. GTC will loop this existing 230 kV transmission line into Bostwick Switching Station creating the Bostwick – East Social Circle 230 kV Transmission Line and the Bostwick – East Watkinsville 230 kV Transmission Line. See Figure 3.0 for the proposed Bostwick 230 kV Switching Station site plan.

Due to the minimal amount of tree clearing and ground disturbing activities needed for this transmission line modification project, any environmental consequence descriptions will be described with the East Walton – Rockville 500 kV Transmission Line project.

East Social Circle 230 kV and East Watkinsville 230 kV Substation Modifications
Due to looping the existing East Social Circle – East Watkinsville 230 kV Transmission Line into the proposed Bostwick Switching Station, GTC will need to modify relaying at both the existing East Social Circle 230/115/26 kV Substation and the existing East Watkinsville 230/115 kV Substation to accommodate the proposed Bostwick Switching Station. GTC will construct these modifications. No ground disturbing activities are required outside the existing substation fences for these facility modifications.

Doyle 230 kV and LG&E 230 kV Substation Modifications
GTC would also need to complete remote end work at the existing GTC Doyle and LG&E 230 kV Substations to accommodate looping the existing Doyle – Monroe 230 kV Transmission Line into the proposed Jacks Creek 230 kV Switching Station. No ground disturbing activities are anticipated for the remote end work.

3.2 Connected Actions

Other ITS members will construct, operate, and maintain two new substation facilities that are proposed for the ECGR Project.

- Jacks Creek 230 kV Switching Station
- Rockville 500 kV Switching Station

Other ITS members will also modify four existing transmission facilities that are proposed for the ECGR Project.

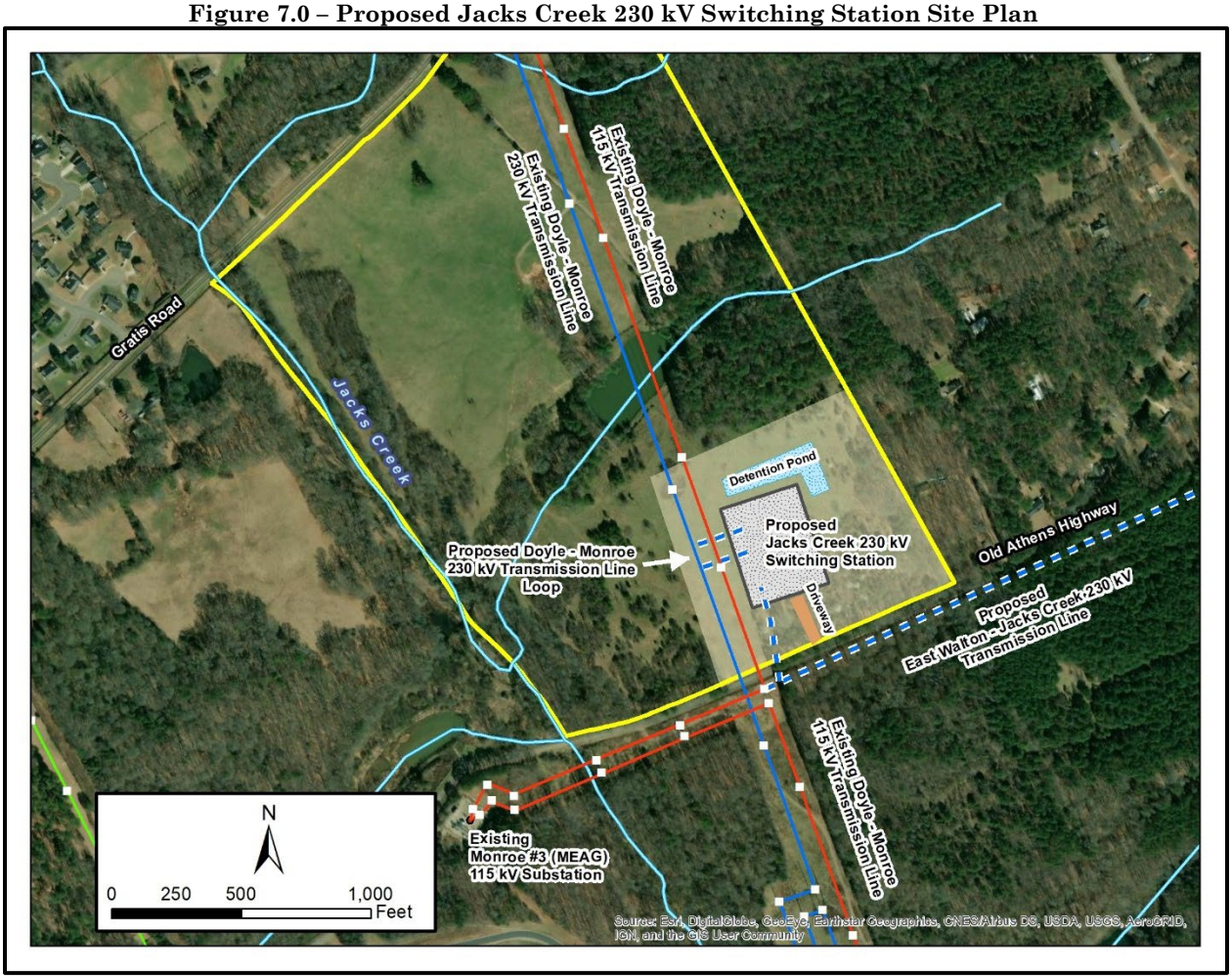
- Doyle – Monroe 230 kV Transmission Line
- Scherer – Warthen 500 kV Transmission Line

New Substations

Jacks Creek 230 kV Switching Station
This proposed switching station is on a large approximately 100-acre tract of land owned by MEAG in Walton County. The tract is bordered by Gratis Road to the north, Jacks Creek to the west, and Old Athens Highway to the south. The site is bisected by the existing Doyle – LG&E Monroe 230 kV Transmission Line and the existing Doyle – Monroe 115 kV Transmission Line. The planned graveled, fenced area of the proposed switching station is 300-feet by 400-feet. The area of disturbance including a driveway, detention pond, and egress/ingress on the property for terminating transmission lines is 17.8-acres. See Figure 7.0 for the proposed Jacks Creek 230 kV Switching Station site plan.

The Jacks Creek Switching Station serves as the western terminus for the proposed East Walton – Jacks Creek 230 kV Transmission Line. GTC will construct this project on behalf of MEAG. MEAG will own and maintain this proposed switching station.

Figure 7.0 – Proposed Jacks Creek 230 kV Switching Station Site Plan



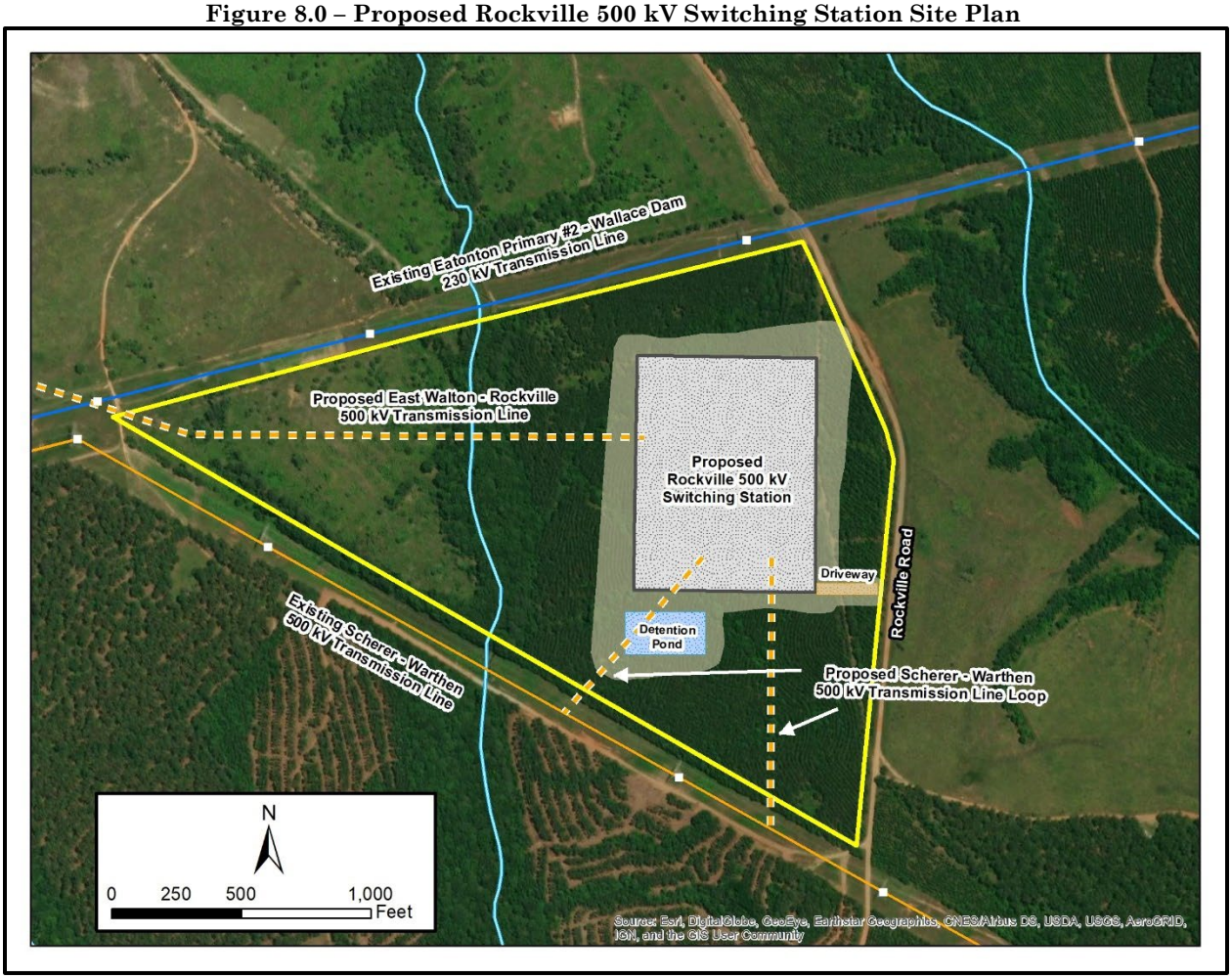
Rockville 500 kV Switching Station

The southern terminus of the East Walton – Rockville 500 kV Transmission Line project is the proposed Rockville 500 kV Switching Station. The Rockville site is located within Putnam County along Rockville Road and near the intersection of Rockville Road and Rockville Springs Landing. The site is approximately 1-mile south of Sparta Hwy / State Route 16, 1.5-miles east of the community of Rockville, and approximately 10 miles east of the city of Eatonton.

The site is located on an 80-acre, triangular property owned by GPC. The property is bordered to the east by Rockville Road, to the north by the existing GPC Eatonton Primary #2 – Wallace Dam 230 kV Transmission Line, and to the south by the existing GPC Sherer – Warthen 500 kV Transmission Line. The proposed layout of the switching station is located on the eastern side of the property. The graveled, fenced area of the proposed switching station is 750-feet by 950-feet. The area of disturbance including a driveway and detention pond is 26.23-acres. See figure 8.0 for the proposed Rockville 500 kV Switching Station site plan.

GPC will construct and own this proposed switching station project.

Figure 8.0 – Proposed Rockville 500 kV Switching Station Site Plan



Modified Facilities

Doyle – Monroe 230 kV Transmission Line Loop

The existing GPC transmission line will be modified to terminate into the proposed Jacks Creek 230 kV Switching Station. The existing transmission line is adjacent to the Jacks Creek Switching Station site. Due to the existing transmission line ROW on the MEAG property, any ground disturbing activities will be accounted for within the site plan for Jacks Creek Switching Station. See Figure 7.0 for the proposed Jacks Creek 230 kV Switching Station site plan.

GTC anticipates making the modifications on behalf of MEAG and GPC as part of the Jacks Creek Switching Station project. GPC will continue to own, operate, and maintain this existing transmission line facility. There will be two new mono-pole structures in the existing transmission line ROW to accommodate this project.

Scherer – Warthen 500 kV Transmission Line Loop

The existing GPC transmission line will be modified to terminate into the proposed Rockville 500 kV Switching Station. This existing transmission line is adjacent to the Rockville 500 kV Switching Station site and is contained on GPC owned property. Modifications will be made by GPC, and GPC will continue to own, operate, and maintain this existing transmission line facility. There will be four new lattice steel towers on GPC property to accommodate this project. See Figure 8.0 for the proposed Rockville 500 kV Switching Station site plan.

GPC will likely need to complete remote end work at the existing GPC Warthen, and GPC may need to complete remote end work at the existing Scherer 500 kV Substations to accommodate looping the existing Scherer – Warthen 500 kV Transmission Line into the proposed Rockville 500 kV Switching Station. No ground disturbing activities are anticipated for the remote end work.

3.3 Future Projects

The site design for the Bostwick 230 kV Switching Station and East Walton 500/230 kV Substation will allow GTC to add 25 kV equipment within these proposed facilities if needed in the future to serve electrical load in those areas.

3.4 Justification for Proposal

As described above in Section 2.1., Purpose and Need, GTC began studies to modify the electric grid due to significant projected load growth in Northeast Georgia over the subsequent decade. The East Walton 500/230 kV Plan was GTC's solution for the forecasted overloading issue in the area. The Plan described the need, the electrical alternatives, and the preferred solution, which resulted in GTC's proposal to construct the following projects:

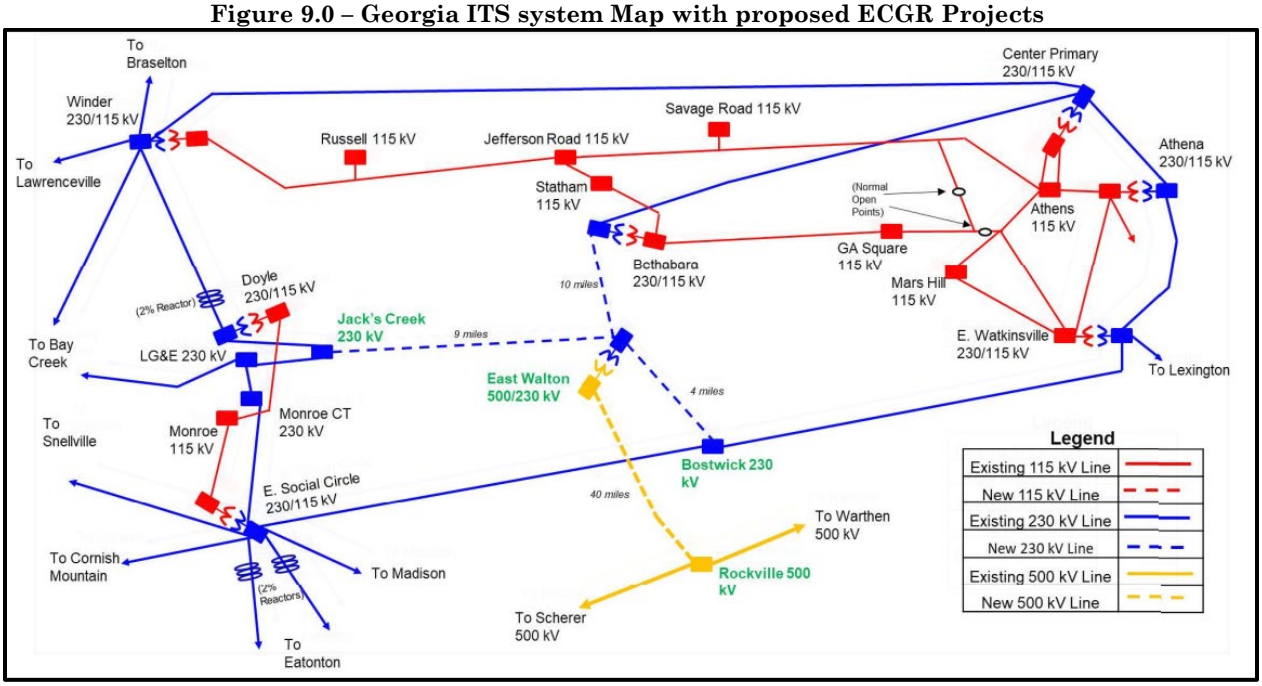
- East Walton – Rockville 500 kV Transmission Line
- East Walton – Bostwick 230 kV Transmission Line
- East Walton – Jack's Creek 230 kV Transmission Line
- East Walton – Bethabara 230 kV Transmission Line
- East Walton 500/230 kV Substation
- Bostwick 230 kV Switching Station
- East Watkinsville-East Social Circle 230 kV Loop

During the land acquisition process, the need for the proposed transmission project dissipated. This was primarily due to the economic downturn in 2008, and the failure of new electric generation facilities to develop as anticipated. GTC placed the project 'on hold' but continued to complete the land acquisition process through 2013. Several gaps along the Bethabara – East Walton 230 kV Transmission Line project remained in 2013 when all land acquisition work ceased.

As of 2023, GTC determined that the construction of the East Walton 500/230 KV Plan (aka the East Central Georgia Reliability Project) is now necessary (See Figure 9.0). The renewed need is primarily due to changes in generation and evolving interregional power flow patterns. Changes in generation include displacement and modified dispatch of traditional

fossil-fueled generation, and an increase of inverter-based generation resources (primarily renewable generation in the form of solar facilities). These changes have placed constraints on the area transmission facilities with projected overloading of transmission lines under contingency situations as early as 2026. Some of these overloads were identified by GTC in the original East Walton Plan Study, however additional facility overloads have been identified under the new and changing conditions. (See Appendix B)

Figure 9.0 – Georgia ITS system Map with proposed ECGR Projects



Beginning in 2026, existing transmission line facilities that will experience thermal constraints in the event of the loss of an existing area transmission line facility are:

- Branch – Eatonton Primary 2 230 kV Transmission Line
- Eatonton Primary – Oasis 230 kV Transmission Line
- Branch – Oasis 230 kV Transmission Line

Beginning in 2028, existing transmission line facilities that will experience thermal constraints in the event of the loss of one existing area transmission line facility are:

- Branch – Tiger Creek (Black) 230 kV Transmission Line
- Branch – Tiger Creek (White) 230 kV Transmission Line

With thermal constraints beginning in 2026, it will be necessary to utilize operating guides for these facilities until the ECGR Project can be completed, which could include curtailment of generation at the Wallace Dam and Tiger Creek generation facilities.

3.5 Alternatives to the Proposal

3.5.1 Electrical Alternatives

As described above, under contingency operations, area transmission line facilities will have thermal overloads. The Transmission Planning Working Group, consisting of representatives from GTC, GPC, and MEAG Power, evaluated several possible ways to alleviate the pending thermal constraints. The two primary alternatives considered under the updated plan were the No Action Alternative and the Brute Force Alternative.

3.5.1.1 No Action Alternative

A No Action alternative means that GTC and other ITS members will not undertake the ECGR Project as proposed. Not pursuing mitigation for the thermal overloads on the system would lead to significant service limitations under single contingency events. This would also lead to potential loss of load in the area resulting in blackouts.

This alternative was rejected because it would reduce reliable service in northeast Georgia, increase the potential for wide-area blackouts in Georgia under contingency situations, and result in numerous violations of the transmission planning guidelines of Georgia Transmission Corporation, the Integrated Transmission System, the Southeastern Electric Reliability Council, and the North American Electric Reliability Council.

3.5.1.2 Brute Force Alternative

The Brute Force Alternative would require upgrading key overloaded transmission lines by June 2027. The existing 230 kV system upgrades would include the following:

- Rebuild the Branch – Eatonton Primary 2 230 kV Transmission Line with 9.8-miles of 100 deg C 2-1033 ACSR
- Replace 1590 AAC Jumpers at Branch with 2000 AAC Jumpers
- Rebuild the Branch – Oasis 230 kV Transmission Line with 9.7-miles of 100 deg C 2-1033 ACSR
- Replace 1590 AAC Jumpers and Bus at Eatonton Primary with 2000 AAC Jumpers and Bus
- Rebuild the Eatonton Primary – Oasis 230 kV Transmission Line with 50-miles of 100 deg C 2-1033 ACSR
- Rebuild the Branch – Tiger Creek (Black) 230 kV Transmission Line with 20.7-miles of 100 deg C 2-1033 ACSR
- Rebuild the Branch – Tiger Creek (White) 230 kV Transmission Line with 20.7-miles of 100 deg C 2-1033 ACSR

Rebuilding these lines requires outages that would create additional overloads on the system. Long duration outages of the existing 230 kV lines to accommodate the rebuilds would significantly reduce the reliability of the northeast Georgia transmission system regardless of the load level and would likely result in additional electric generation curtailments and potential loss of load. This plan also provides limited capacity. Therefore, an upgrade of key overloaded transmission lines is not considered to be a viable solution.

3.5.1.5 Additional Alternative Evaluations

Underground construction of the transmission lines using buried cable in conduit encased in concrete was considered. This approach was considered and rejected because of the high voltage, greater environmental impact due to significantly more soil disturbance than overhead construction, decreased reliability due to excessive restoration time and the lifetime cost of underground construction being significantly greater than the lifetime cost of overhead construction.

3.5.1.6 Preferred Electrical Alternative

The preferred solution is the East Central Georgia Reliability (ECGR) Project. Unlike the No Action Alternative, the ECGR Project mitigates the thermal overload under a single contingency of existing lines in the area. Unlike the Brute Force Alternative, The ECGR Project creates an additional transmission source to support added operational flexibility and maintain system integrity and resiliency. It adds more capacity and minimizes the number of construction-related outages to the existing system.

In addition, the ECGR Project will improve the voltage profile in the area. Improvement of the voltage profile adds system strength with greater reliability and resiliency. Therefore, the East Central Georgia Reliability Project (aka The East Walton Project) is the preferred alternative.

3.5.2 Route and Site Alternatives

In 2004, GTC began identifying and evaluating alternatives for the following projects:

- East Walton 500/230 kV Substation
- Bostwick 230 kV Switching Station
- East Walton – Rockville 500 kV Transmission Line
- East Walton – Bostwick 230 kV Transmission Line
- East Walton – Jacks Creek 230 kV Transmission Line
- East Walton – Bethabara 230 kV Transmission Line

The GTC project team identified and evaluated alternative sites and selected preferred sites for the proposed East Walton 500/230 kV Substation and the proposed Bostwick 230 kV Switching Station. At which point, GTC developed Macro Corridors between East Walton 500/230 kV Substation, Bostwick 230 kV Switching Station, and the sites identified by GPC for Rockville 500 kV Switching Station and by MEAG for Jacks Creek 230 kV Switching Station. GTC developed a draft electrical alternative evaluation and macro-corridor study report that was published by the Rural Utilities Service (RUS) in April of 2006.

RUS held three public scoping meetings in the project area in April of 2006. The meetings allowed interested parties to review and comment on the macro-corridors. RUS advertised these meetings in the Federal Register and local newspapers. Copies of the macro-corridor report were available at the scoping meetings, posted in local libraries, and available on RUS' website. GTC developed a draft scoping report for the project, which was also available on the RUS website. After the scoping process concluded, GTC completed an alternatives analysis of the various transmission

projects by considering feedback from the scoping process, developing alternate corridors and routes, and selecting preferred sites and routes.

GTC developed alternate corridors using steps identified in the *EPRI/GTC Overhead Electric Transmission Line Siting Methodology*. GTC generated alternate corridors utilizing GIS datasets and techniques that create maps of suitability values (in a continuum from most preferred to least preferred areas) for locating a new transmission line. The geographic database includes layers such as existing linear infrastructure, hydrography, land use, land cover, slope, cultural resources, and other features within the study area.

Appendix C documents the alternatives analysis conducted between 2006 – 2008 including language and graphics. The selection of preferred sites and routes reflects the properties and ROWs acquired by GTC between 2008 - 2013. Some minor adjustments may have occurred due to negotiations with landowners and engineering designs since that time. The Project Description and Affected Environment sections of this document reflect the final designs that are proposed for construction.

See Appendix C for more details regarding route and site alternatives.

3.5.3 Public Input Process and Route Adjustments

RUS held three public scoping meetings in the project area in April of 2006. The meetings allowed interested parties to review and comment on the macro-corridors for the transmission lines. RUS advertised these meetings in the Federal Register and local newspapers. After the scoping process concluded, GTC completed an alternatives analysis of the various transmission projects which included reviewing feedback from the scoping process, developing alternate corridors and routes, and selecting preferred sites and transmission line routes.

Once preferred routes were selected, GTC began the public input process by providing information to local elected officials about the proposed project, including the location of the preferred substation site and preferred transmission line route. After the local elected officials were briefed, GTC contacted the property owners from whom transmission line ROW was required. Property owners were informed about the project and survey permission was requested. Public meetings were held in compliance with Chapter 3 of Title 22 of the Official Code of Georgia. GTC held these public information meetings from mid-June to late-August of 2007 to inform the public about the project and the siting process.

GTC worked with landowners to gain survey permission along the preferred routes and subsequently began survey activities including:

- engineering field surveys for transmission and substation design
- ROW plat development for transmission line ROW acquisition
- ecology surveys for streams, wetlands, and protected species habitat
- cultural resource surveys for archaeological and historical resources.

Route adjustments were made after GTC reviewed information from the public meetings, correspondence with landowners, and survey information. Once the transmission line routes

were finalized and off-ROW access plans were analyzed, GTC began the process of acquiring ROWs needed for the safe operation and maintenance of the proposed transmission line facilities.

- GTC acquired the 150-foot wide vacant ROW from GPC in Putnam County.
- GTC acquired the property for the East Walton Substation and the Bostwick Switching Station.
- GTC acquired all transmission line ROW needed for the East Walton – Rockville 500 kV Transmission Line project, the Bostwick – East Walton 230 kV Transmission Line project, and the East Walton – Jacks Creek 230 kV Transmission Line project.

The majority of ROW for the Bethabara – East Walton 230 kV Transmission Line project was acquired except for several gaps along the transmission line alignment when all land acquisition work ceased in 2013. Land acquisition included off-ROW access roads identified at that time for construction and future maintenance. GTC did not acquire several areas of 150-foot by 300-foot temporary construction ROWs (totaling less than 10-acres) needed in select areas to pull conductor along the 500 kV transmission line corridor during construction.

The GTC project team began reinitiating public outreach for the project in 2023 by:

- rebranding the project as the East Central Georgia Reliability Project
- notifying local EMCs and elected officials
- reengaging property owners by sending letters and holding new public information meetings
- sending Section 106 initiation letters to potential consulting parties and tribes

GTC held in-person public information meetings in the four counties where the ECGR Project is located:

- Oconee County Meeting
  - October 12, 2023 – 2pm to 4pm and 6pm to 8pm
  - 3500 Hog Mountain Road, Watkinsville, GA 30677
- Putman County Meeting
  - October 19, 2023– 2pm to 4pm and 6pm to 8pm
  - 305 N. Madison Avenue, Eatonton, GA 31024
- Morgan County Meeting
  - October 24, 2023 – 2pm to 4pm and 6pm to 8pm
  - 513 Foster Street, Madison, GA 30650
- Walton County meeting
  - November 30, 2023 – 2pm to 4pm and 6pm to 8pm
  - 212 Bryant Road, Monroe, GA 30655

After the public information meetings, GTC considered route adjustments and transmission structure location adjustments based on feedback. GTC continued to consider project adjustments and thoroughly reviewed access plans for construction and future maintenance based on updated ecology and cultural resource surveys.

At a landowner's request, route adjustments were primarily contained to the property south of the proposed East Walton Substation and sections along the Bethabara – East Walton 230 kV Transmission Line route. Additional minor route adjustments may occur as the ROW acquisition process proceeds.

4.0 AFFECTED ENVIRONMENT

As the name infers, the ECGR Project is in the East Central Georgia region. This region of Georgia borders South Carolina to the east. The Georgia Department of Economic Development defines this region as Barrow, Clarke, Elbert, Greene, Jackson, Jasper, Madison, Morgan, Newton, Oconee, Oglethorpe, and Walton. This region also corresponds with the Northeast Georgia Development Commission under the Georgia Department of Community Affairs (DCA). The East Central Georgia region forms a portion of the Atlanta–Athens–Clarke–Sandy Springs combined statistical area. The largest city in this region is Athens, GA, home to the University of Georgia. The ECGR Project is located within three of the region's counties: Morgan, Oconee and Walton. Putnam County is associated with the Middle Georgia region with Macon, GA being this region's largest city.

The area extends through the following United States Geological Survey (USGS) 7.5-minute topographic maps (See Appendix A – Additional Figures for the ECGR Project overlaid on USGS 7.5-minute topographic maps):

- Statham, GA
- Monroe, GA
- High Shoals, GA
- Watkinsville, GA
- Apalachee, GA
- Madison, GA
- Buckhead, GA
- Harmony, GA
- Rock Eagle Lake, GA
- Meda, GA
- Rockville, GA

The area falls within the Washington Slope District of the Piedmont Physiographic Province and is described in the 'Physiographic Map of Georgia' (Clark, et al, 1976) as:

> "… is characterized by a gently undulating surface which descends gradually from about 700-foot elevation at its northern margins to about the 500-foot elevation at its southern edge. Streams occupy broad, shallow valleys with long gentle side slopes separated by broad, rounded divides. Relief throughout this district is 50 to 100-feet except in the vicinity of the Ocmulgee River, which flows in a steep-walled valley 150 to 200-feet below the adjacent area. The western boundary corresponds to the drainage divide between the Atlantic Ocean and the Gulf of Mexico. The southern boundary, known as the Fall Line, follows the contact between the metamorphic rocks of the Piedmont and the sediments of the Coastal Plain."

The area also lies within the Piedmont Level III and the Southern Outer Piedmont Level IV Ecoregions described on the 'Ecoregions of Alabama and Georgia' Map. The Ecoregions were developed by U.S. EPA (Griffith, et al., 2001). EPA describes these regions as:

"Piedmont 45) - Considered the non-mountainous portion of the old Appalachians Highland by physiographers, the northeast-southwest trending Piedmont ecoregion comprises a transitional area between the mostly mountainous ecoregions of the Appalachians to the northwest and the relatively flat coastal plain to the southeast. It is a complex mosaic of Precambrian and Paleozoic metamorphic and igneous rocks with moderately dissected irregular plains and some hills. The soils tend to be finer textured than in coastal plain regions. Once largely cultivated, much of this region has reverted to pine and hardwood woodlands, and, more recently, spreading urban- and suburbanization."

"The Southern Outer Piedmont (45b) ecoregion has lower elevations, less relief, and less precipitation than the Southern Inner Piedmont (45a). Loblolly-shortleaf pine is the major forest type, with less oak-hickory and oak-pine than in 45a. Gneiss, schist and granite are the dominant rock types, covered with deep saprolite and mostly red, clayey subsoils. The majority of soils are Kanhapludults. The southern boundary of the ecoregion occurs at the Fall Line, where unconsolidated coastal plain sediments are deposited over the Piedmont metamorphic and igneous rocks."

The southern end of the project area (Rockville 500 kV Switching Station) is approximately 5-miles north of the northern reach of the Fall Line, defining the transition from the Piedmont to the Sand Hills region of the Coastal Plain. The elevation at the southern end of the project is approximately 420-feet above sea level. The elevation range of East Walton – Rockville 500 kV corridor is between 420 - 800-feet above sea level with the highest elevation at the East Walton Substation site. The East Walton – Jacks Creek 230 kV corridor has a range of elevation of approximately 750 - 850-feet above sea level. The Bethabara – East Walton 230 kV corridor has a range of elevation of approximately 700 - 820-feet above sea level.
Once the initial public outreach and public meetings concluded, GTC:

- completed new ecology and historic resource surveys and reports,
- contracted with the original project archaeologist to conduct a thorough review and analysis to assess the project's regulatory compliance and develop a survey plan,
- implemented the archeological review plan, including additional archeological survey efforts, resulting in an updated archeological report,
- initiated the Section 106 process including tribal notification letters on behalf of RUS,
- revisited construction and access plans,
- consulted with U.S. Fish and Wildlife Service (USFWS) and Georgia Department of Natural Resources (GA DNR) regarding protected species.

4.1 General Land Use

4.1.1 Affected Environment

The predominant land use in the project area is forests followed by pasture with various types of transportation corridors including Interstate 20, U.S. Highway 278, U.S. Highway 441, U.S. Highway 78 and various state routes and county roads. Through Putnam County the

project utilizes a vacant 150-foot ROW previously maintained by Georgia Power Company. The project area includes rural residential development throughout with some industrial development near the Jacks Creek Switching Station portion of the project on the east side of the city of Monroe. The East Walton – Jacks Creek and Bethabara – East Walton 230 kV corridors parallel state routes and county roads where practicable.

4.1.2 Environmental Consequences

Overhead transmission line projects have more effects on some land cover types than others. Generally, agriculture and pastureland can remain unchanged and continue to function as those land use types within a transmission line ROW. In many cases, developed land use functions can remain the same. However, structures, signage, or vegetation types that have the potential to grow higher than 15-feet in height cannot exist within a transmission line ROW. Forested land cover is affected to a much greater degree. Trees must be removed from the transmission line ROW for the safe and reliable operation of the transmission line facility. Removing the forested land cover converts the land to utility ROW. It may be used for other land use activities, but forested land cover cannot continue in the utility ROW. Although the land cover is converted, the utility ROW can still support non-forested areas valued by wildlife species.

To analyze land use conversion for the proposed transmission line corridors, GTC utilized the 2021 National Land Cover Database (NLCD) to analyze land cover patterns for Morgan, Oconee, Putnam, and Walton Counties. The NLCD is a product developed by the Multi-Resolution Land Cover Characteristics (MRLC) Consortium. MRLC is described by the consortium's website as:

> "…a group of federal agencies who coordinate and generate consistent and relevant land cover information at the national scale for a wide variety of environmental, land management, and modeling applications. The creation of this consortium has resulted in the mapping of the lower 48 United States, Hawaii, Alaska and Puerto Rico into a comprehensive land cover product termed, the National Land Cover Database (NLCD), from decadal Landsat satellite imagery and other supplementary datasets. - https://www.mrlc.gov/"

A map of the 2021 NLCD overlaid with the ECGR Project is shown in Figure 10.0 below. Also, Figure 11.0 shows the classifications contain in the NLCD and the symbology of each land over classification as shown in Figure 10.0. Additional NLCD mapping is shown in the 5.0 Cumulative Effects section of this report.

Figure 10.0 – 2021 National Land Cover Database with 1-mile buffer around ECGR Project overlaid

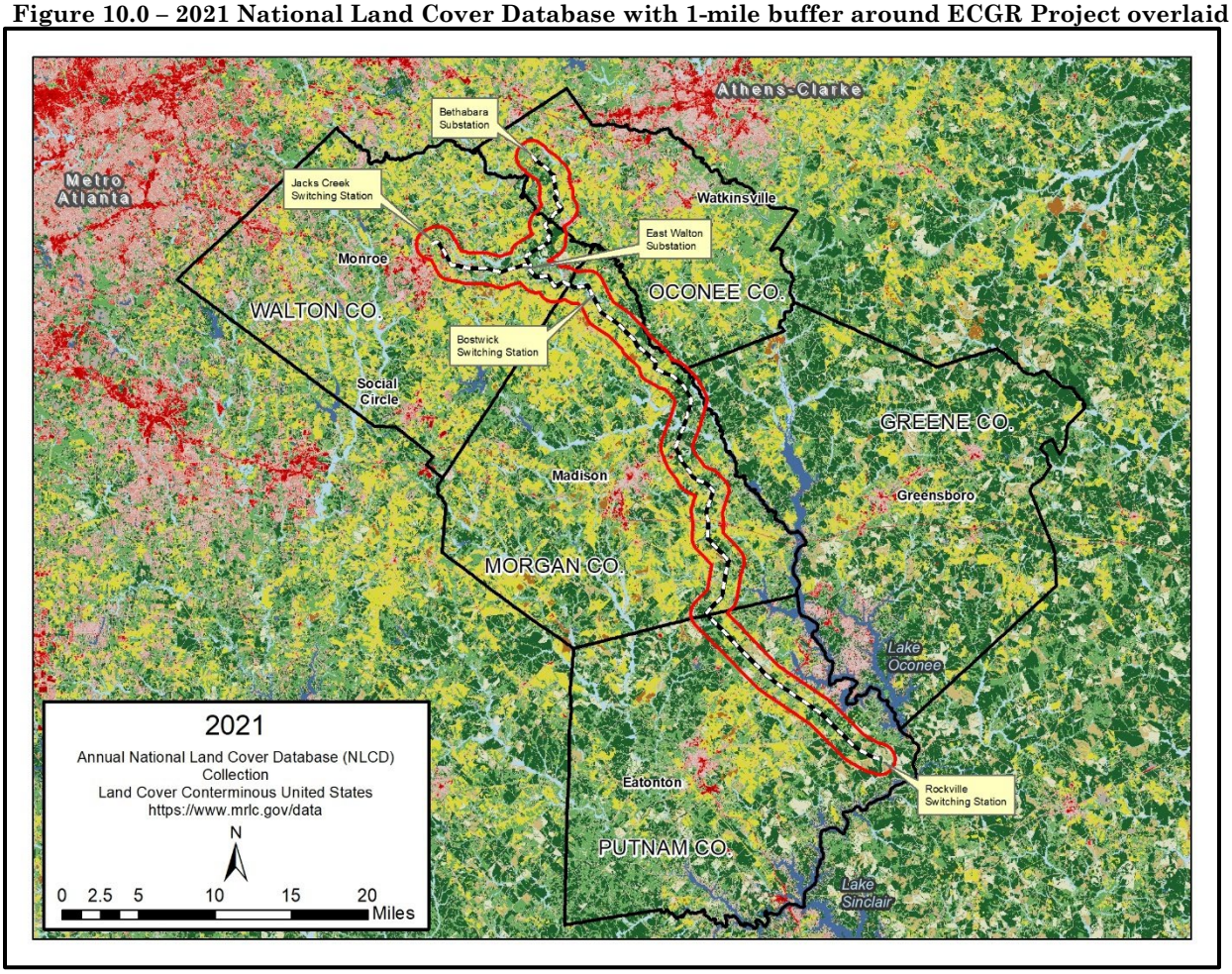
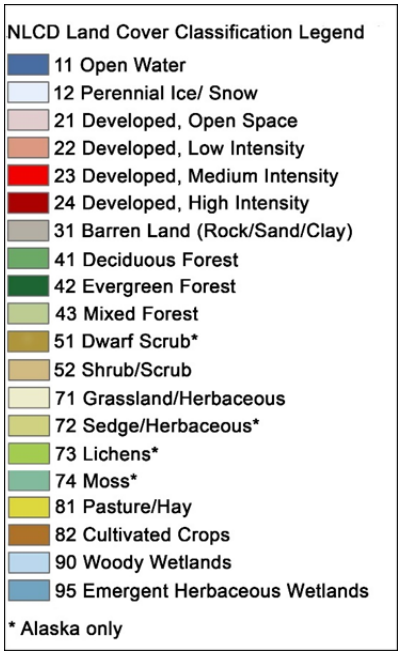


Figure 11.0 –National Land Cover Database Classification Legend



In addition to the types identified in the NLCD, GTC incorporated public transportation ROWs and existing transmission ROW crossed by the proposed transmission line corridors. These areas were identified by previous land survey efforts. GTC evaluated the proposed unencumbered transmission line ROW, new access roads, and contemporary construction ROWs. Based on this evaluation the following acreages were calculated as land use types within the proposed ROWs for the proposed transmission line projects and shown in Table 1.0 below.

Table 1.0 – Acreages of land use types for proposed ECGR Project

Type	**Acreage**
Barren Land (Rock/Sand/Clay)	2.13
Cultivated Crops	2.14
Deciduous Forest	183.02
Developed - high Intensity	0.09
Developed - Low Intensity	6.31
Developed - Medium Intensity	1.03
Developed - Open Space	29.71
Emergent Herbaceous Wetlands	0.83
Evergreen Forest	175
Existing Utility	1.72
Grassland/Herbaceous	54.02
Mixed Forest	79.54
Open Water	2.16
Pasture/Hay	141.71
Shrub/Scrub	29.32
Transportation Corridor	15.21
Woody Wetlands	33.55
Total Project Acres	**757.49**

For substations and laydown areas, land cover / land use is completely converted from the previous type and function to a utility facility within the developed site. For this project, GTC is sponsoring two substation facilities: East Walton Substation, requiring 57.25-acres of ground disturbance and Bostwick Switching Station, requiring 27.54-acres of ground disturbance. A proposed laydown yard has been identified for the proposed East Walton – Rockville 500 kV Transmission Line, requiring 21.27-acres of ground disturbance. Two additional substation facilities are proposed but sponsored by other transmission entities. Georgia Power Company will fund, construct, and own the Rockville Switching Station, requiring 26.20-acres of ground disturbance. MEAG will fund and own the proposed Jacks Creek Switching Station, requiring approximately 18-acres of ground disturbance. MEAG has requested that GTC construct Jacks Creek Switching Station on their behalf.

Based on the analysis above, the acreage of land use convergence for each project is calculated in Table 2.0 below.

Table 2.0 – Acreages of land use conversion for each ECGR Project component

Project	Land Use Conversion Acreage
Bostwick 230 kV Switching Station	27.54
East Walton 230/500 kV Substation	57.25
Laydown area	21.27
Rockville 500 kV Switching Station	26.20
Jacks Creek 230 kV Switching Station	18.00
East Walton - Rockville 500 kV Transmission Line	380.90
Bostwick – Rockville 230 kV Transmission Line	31.96
East Walton – Jacks Creek 230 kV Transmission Line	25.65
Bethabara – East Walton 230 kV Transmission Line	32.60
Total	**621.37**

The total land use conversion for all components of the ECGR Project is projected to be 621.37-acres.

4.1.3 Mitigation

No mitigation is required.

4.2 Important Farmland

Through the passage of the Farmland Protection Policy Act (FPPA) of 1981 and the Final Rule for its implementation, 7 CFR Part 658, the U.S. Department of Agriculture (USDA) mandated that any federal agency contemplating a land-disturbing activity should review its actions with respect to prime, unique, statewide, or locally important farmland soils. The USDA also has policies requiring the Department to consider the impact of its actions on prime farmland soils.

4.2.1 Affected Environment

Per the USDA 2022 Census of Agriculture, the State of Georgia has 4,523,728-acres of cropland and 1,177,580-acres of pastureland.

- Madison County has 26,720-acres of cropland and 23,301-acres of pastureland.
- Oconee County has 7,809-acres of cropland and 17,648-acres of pastureland.
- Putnam County has 15,270-acres of cropland and 13,803-acres of pastureland.
- Walton County has 18,158-acres of cropland and 14,804-acres of pastureland.

GTC consulted the NRCS Web Soil Survey website, as well as the following USDA Natural Resources Conservation Service (NRCS) Soil Surveys to determine the presence of prime farmland soils and soils of statewide importance along the proposed transmission line corridors and facility sites:

- Morgan County, GA (1965)
- Clarke and Oconee Counties, GA (1968)
- Baldwin, Jones, and Putnam Counties, GA (1976)
- Walton County, GA (1964)

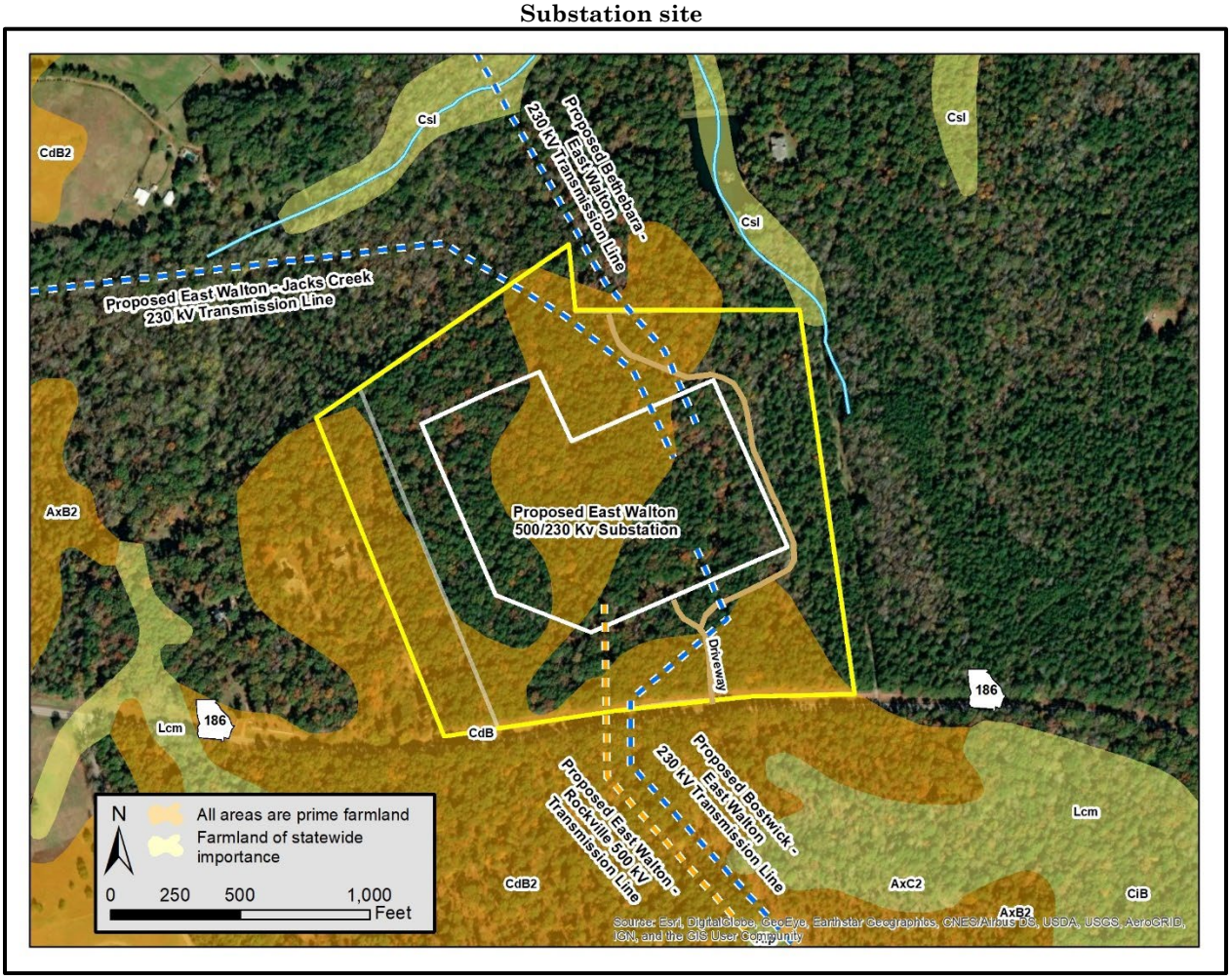
East Walton-Rockville 500 kV and East Walton-Bostwick 230 kV Transmission Lines
In total, there are thirty-one (31) soil series that are considered prime farmland or soils of statewide importance within these proposed transmission line corridors. Prime farmland soil occurs within 216.2-acres (23.5%) of the proposed corridor. Soils of statewide importance occur within 124.2-acres (13.5%) of the proposed corridor.

East Walton – Jacks Creek 230 kV Transmission Line
In total, there are nine (9) soil series that are considered prime farmland or soils of statewide importance within the proposed transmission line corridor. Prime farmland soils occur within 14.1-acres (27.2%) of the proposed corridor. Soils of statewide importance occur within 5.5-acres (10.6%) of the proposed corridor.

Bethabara – East Walton 230 kV Transmission Line
In total, there are thirteen (13) soil series that are considered prime farmland or soils of statewide importance within the proposed transmission line corridor. Prime farmland soils occur within 34.4-acres (41.5%) of the proposed corridor. Soils of statewide importance are located within 11.4-acres (13.8%) of the proposed corridor.

East Walton 500/230 kV Substation
In total, there are three (3) soil series that are considered prime farmland or soils of statewide importance within the substation site boundary. Because prime farmland or soils of statewide importance are present on this site, GTC initiated correspondence with NRCS on behalf of RUS through the completion of the AD-1006 form in keeping with the requirements of the Farmland Protection Policy Act (Code of Federal Regulations, 7 CFR 658). NRCS completed the AD-1006 form, which is found in Appendix D. Per NRCS calculations, prime farmland soils occur within 29.7-acres of the project site boundary, and there is a nominal amount soils of statewide importance occurring within the project site boundary, 0.1-acres. Cecil coarse sandy loam, 2 to 6 percent slope (CdB) is classified as a prime farmland soil and occurs within the proposed area of disturbance. This is a conversion of approximately 0.03% of farmland in Walton County. (See Figure 12.0)

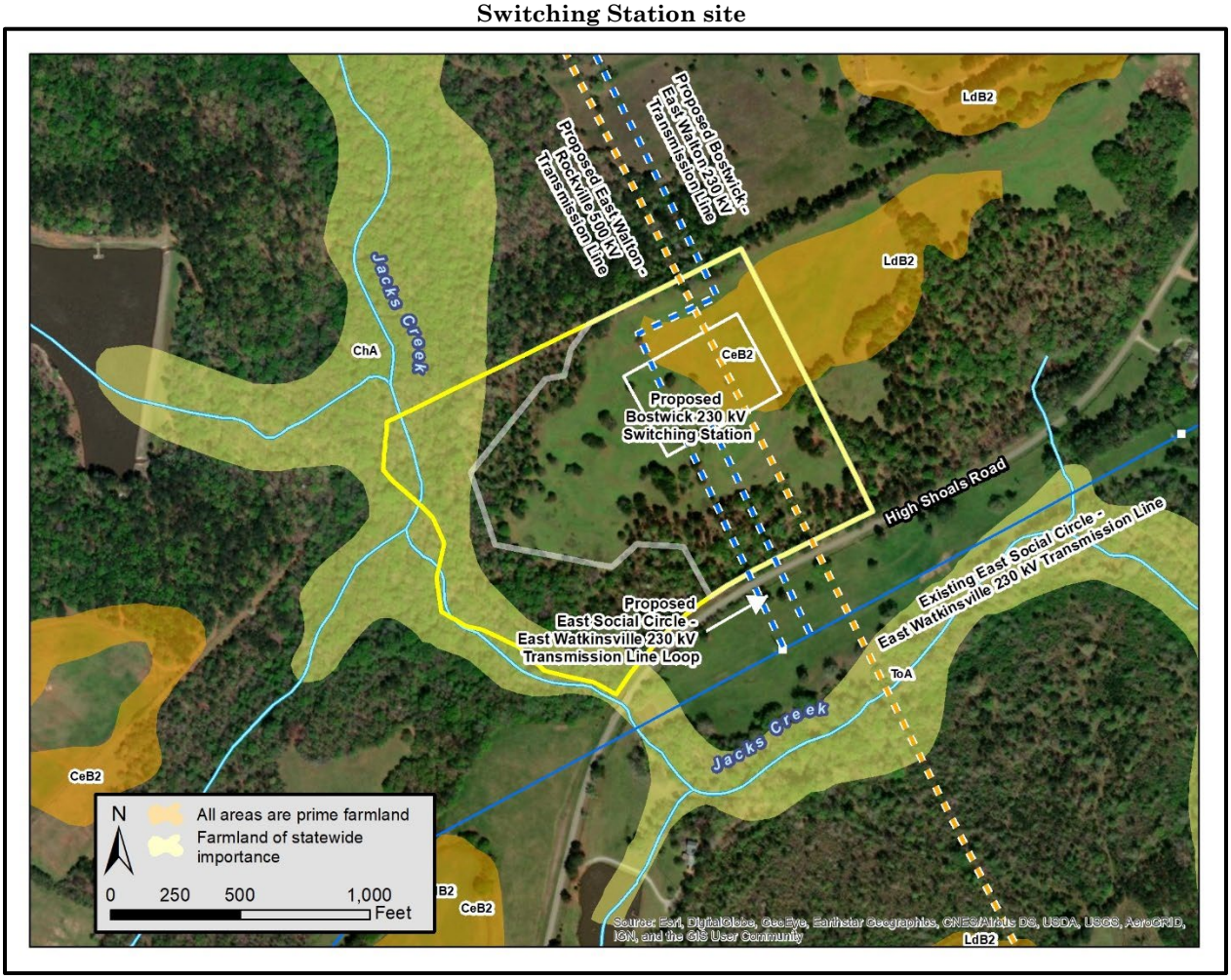
Figure 12.0 –Farmland soils present within the proposed area of disturbance on the East Walton Substation site



Bostwick 230 kV Switching Station

In total, there are three (3) soil series that are considered prime farmland or soils of statewide importance within the substation site boundary. Because prime farmland or soils of statewide importance are present on this site, GTC initiated correspondence with NRCS on behalf of RUS through the completion of the AD-1006 form in keeping with the requirements of the Farmland Protection Policy Act (Code of Federal Regulations, 7 CFR 658). NRCS completed the AD-1006 form, which is found in Appendix D. Per NRCS, prime farmland soils occur within 3.2-acres of the project site boundary, and soils of statewide importance occur within 6.9-acres of the project site boundary. Cecil sandy clay loam, 2 to 6 percent slopes, moderately eroded (CeB2) and Lloyd sandy loam, 2 to 6 percent slopes, moderately eroded (LdB2) are classified as a prime farmland soils and occur within the proposed area of disturbance. This is a conversion of approximately 0.01% of farmland in Morgan County. (See Figure 13.0)

Figure 13.0 –Farmland soils present within the proposed area of disturbance on the Bostwick Switching Station site



Proposed Laydown Yard

There are no soil series that are considered prime farmland or soils of statewide importance within this site boundary. Therefore, construction of this project will not significantly impact agricultural lands or activities in Morgan County. Due to the absence of prime farmland soils or soils of state importance, an AD-1006 form was not submitted to NRCS.

Jacks Creek 230 kV Switching Station

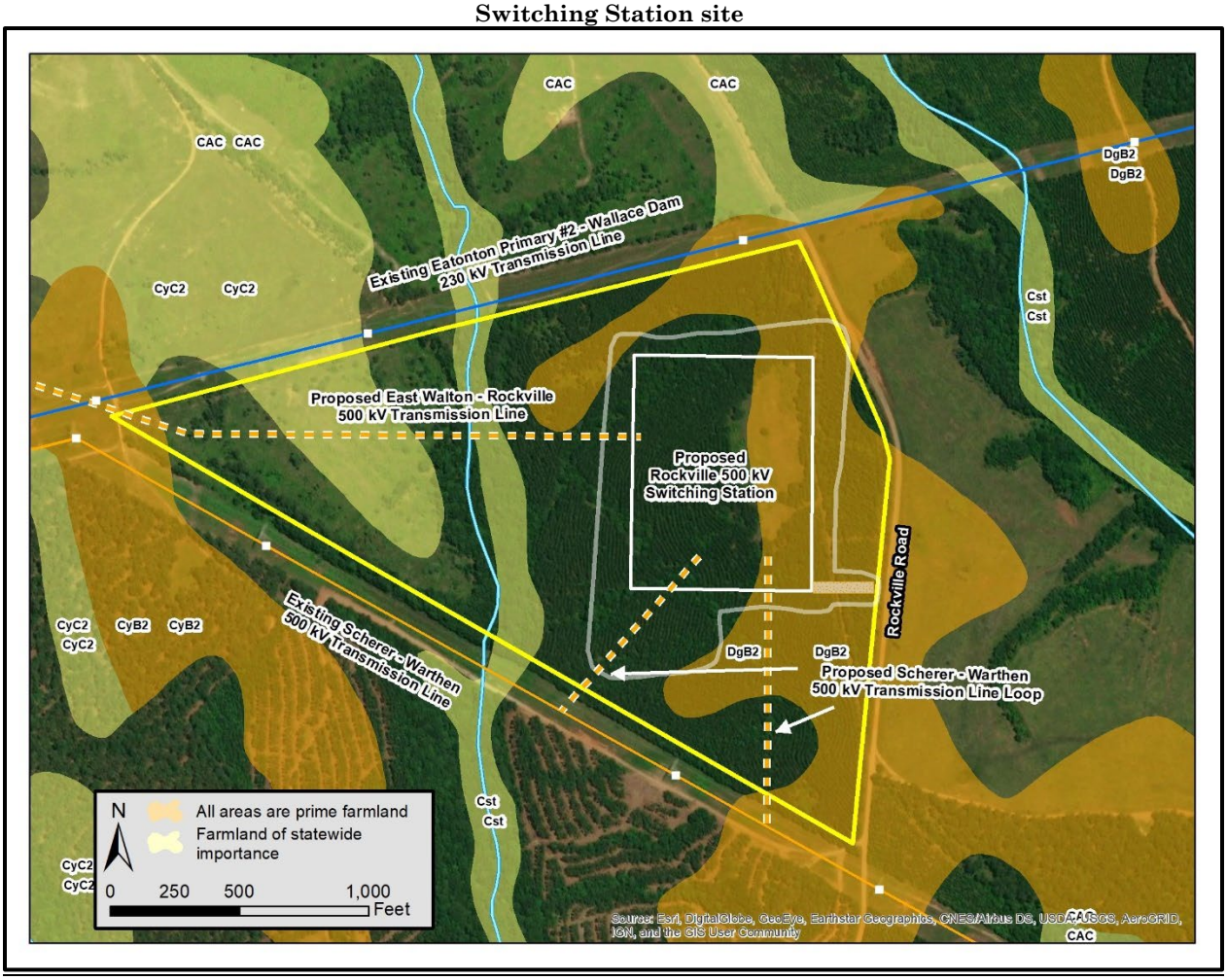
There are no soil series that are considered prime farmland or soils of statewide importance within the substation site boundary. Therefore, construction of this project will not significantly impact agricultural lands or activities in Walton County. Due to the absence of prime farmland soils or soils of state importance, an AD-1006 form was not submitted to NRCS.

Rockville 500 kV Switching Station

In total, there are five (5) soil series that are considered prime farmland or soils of statewide importance within the substation site boundary. Because prime farmland or soils of statewide importance are present on this site, GTC initiated correspondence with NRCS on behalf of

RUS through the completion of the AD-1006 form in keeping with the requirements of the Farmland Protection Policy Act (Code of Federal Regulations, 7 CFR 658). NRCS completed the AD-1006 form, which is found in Appendix D. Per NRCS, prime farmland soils occur within 22.7-acres of the project site boundary, and soils of statewide importance occur within 9.6-acres of the project site boundary. Davidson loam, 2 to 6 percent slopes, moderately eroded is classified as a prime farmland soil and occurs within the proposed area of disturbance of the site. This is a conversion of approximately 0.3% of farmland in Putnam County. (See Figure 14.0)

Figure 14.0 –Farmland soils present within the proposed area of disturbance on the Rockville Switching Station site



4.2.2 Environmental Consequences

The NRCS has determined that the utilization of prime farmland soils for transmission line ROWs do not necessarily result in their conversion to nonagricultural use and do not require a AD-1006 form. Land in transmission line ROWs can remain in cultivation. Due to the overhead construction and linear nature of this project, agricultural activities can continue within the proposed ROW and adjacent soils left undisturbed. Therefore, impacts to prime

farmland will be minimal, and construction of the proposed transmission line projects will not have a significant effect on farmland in Morgan, Oconee, Putnam and Walton Counties.

The cropland and pastureland acreage for the Morgan, Oconee, Putnam and Walton four-county area totals 137,513-acres. Total conversion of farmland soils for the substation sites is 72.2-acres. This calculates as 0.05 percent of important farmland soil conversion of the project which is a de minimis alternation. These components of the ECGR Project will not have a significant effect on farmland in Morgan, Oconee, Putnam and Walton Counties.

4.2.3 Mitigation

No mitigation is required.

4.3 Formally Classified Lands

4.3.1 Wild and Scenic Rivers

4.3.1.1 Affected Environment

In Georgia, the only river designated as a Wild and Scenic River (16 USC 1276) is the Chattooga River located in the northeastern corner of the state and is the closest Wild and Scenic River to the ECGR Project. The Chattooga River is approximately 80 miles NNW of the project area.

4.3.1.2 Environmental Consequences

The ECGR project does not cross or is near any designated Wild or Scenic Rivers. The project will have no impact on any designated Wild and Scenic River.

4.3.1.3 Mitigation

No mitigation is required.

4.3.2 National Forests

4.3.2.1 Affected Environment

There are two National Forests located within the state of Georgia, the Chattahoochee National Forest in the north Georgia mountains region and the Oconee National Forest in the Piedmont region north of Macon. The ECGR Project is in closest proximity to portions of the Oconee National Forest. The proposed East Walton – Rockville 500 kV Transmission Line is the facility that will be in closer proximity to U.S. Forest Service (USFS) lands than the other project components. This proposed transmission line is located approximately 0.5-miles to the west of USFS units in Green County and approximately 2.0-miles to the east of USFS units in Putnam County.

4.3.2.2 Environmental Consequences

The routing and siting of the proposed ECGR Project avoided impacts to any National Forest, and the ECGR project does not cross any USFS land. (See Figure 1.0 – Location Map for locations of Oconee National Forest tracts in relation to the ECGR Project)

4.3.2.3 Mitigation

No mitigation is required.

4.3.3 State and Federal Parks

4.3.3.1 Affected Environment

The State Parks & Historic Sites Division of the GA DNR operates state parks and historic sites. The Division manages 66 state parks, 16 of which are historic sites. The nearest state park to the project area is Hard Labor Creek State Park, about 7-miles east of the ECGR Project.

The Wildlife Resource Division (WRD) of GA DNR operates Wildlife Management Areas (WMA) in Georgia. The USFS tracts in Green County are also managed as the State's Redlands WMA, which are 0.5-miles from the proposed East Walton – Rockville 500 kV Transmission line. The B.F. Grant WMA is in the northwest corner of Putnam County. This WMA is approximately 3.0-miles from the proposed East Walton – Rockville 500 kV Transmission Line. The Oconee WMA is associated with GPC owned project surrounding the GPC Wallace Dam hydro-generation facility. This WMA is approximately 1-mile from the proposed GPC Rockville 500 kV Switching Station.

The State of Georgia owns and operates the Rock Eagle 4-H Center in Putnam County. This facility's primary function is providing an environmental education program for K-12 students. It also contains the Rock Eagle Effigy Mound dating to pre-historic times, most likely the Middle Woodland period. The proposed East Walton – Rockville 500 kV Transmission Line project is approximately 1.25-miles to the east of this state facility.

The National Park Service (NPS) of the U.S. Department of the Interior operates National Battlefield Parks, National Recreation Areas, National Historic Sites, and/or National Monuments in the State of Georgia. The nearest NPS managed units to the ECGR Project are the Ocmulgee National Historic Park and the Martin Luther King Jr. National Historic Site. Ocmulgee National Historic Park is located approximately 40-miles southwest of the proposed Rockville 500 kV Switching Station. Martin Luther King Jr. National Historic Site is located approximately 40-miles to the west of the proposed Jacks Creek 230 kV Switching Station.

4.3.3.2 Environmental Consequences

The routing and siting of the proposed ECGR Project avoided impacts to any State and Federal Parks, and the ECGR Project does not cross any State or Federal Parks. (See Figure 1.0 – Location Map for the locations of Hard Labor Creek State Park, various WMAs, and the Rock Eagle 4-H Center in relation to the ECGR Project)

4.3.3.3 Mitigation

No mitigation is required.

4.4 Floodplains

Executive Order 11988 directs Federal agencies to avoid to the greatest extent practicable any modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. The location of floodplains and other flood hazard areas is normally identified using Flood Insurance Rate Maps (FIRMs) produced by the Federal Emergency Management Agency (FEMA).

4.4.1 Affected Environment

Morgan, Newton, Oconee, and Walton Counties are participating communities in the National Flood Insurance Program. Appendix A (Additional Figures) shows the location of the FEMA 100-year floodplain overlaid with the ECGR Project on USGS 7.5-minute topographic maps with the ECGR Project. FEMA floodplain was evaluated in a digital version of the Flood Insurance Rate Maps (FIRM) for Morgan, Newton, Oconee, and Walton Counties. GTC referred to the follow FIRMs:

Putnam County

- 13237C0200D
- 13237C0175D
- 13237C0075D
- 13237C0050D

Morgan County

- 13211C0325B
- 13211C0350B
- 13211C0250B
- 13211C0225B
- 13211C0230B
- 13211C0120B
- 13211C0110B
- 13211C0105B
- 13211C0040B
- 13211C0020B

Walton County

- 13297C0170E
- 13297C0165E
- 13297C0145E
- 13297C0135E
- 13297C0130F
- 13297C0155E
- 13297C0160E

Oconee County

- 13219C0105E
- 13219C0110E
- 13219C0045E
- 13219C0040E

According to FEMA, there are no 500-yr FEMA floodplains within the ECGR Project area. GTC identified the following streams and river systems associated with FEMA 100-year floodplains in the ECGR Project area: (See Appendix A for Additional Figures with floodplain mapping.)

Putnam County

- Jenkins Branch
- Rush Creek
- Lake Oconee
- Denham Branch
- Lick Creek
- Highlog Branch
- Weaver Branch

Morgan County

- Little Sugar Creek
- South Sugar Creek
- North Sugar Creek
- Briar Creek
- Hard Labor Creek
- Apalachee River
- Bucks Creek
- Jacks Creek

Walton County

- Indian Creek
- Jacks Creek
- Grubby Creek

Oconee County

- Jacks Creek
- Rocky Branch
- Apalachee River
- Lane Creek

The properties that GTC acquired for the proposed East Walton 500/230 kV Substation and Bostwick 230 kV Switching Station do contain designated 100-year floodplains associated with Jacks Creek. However, the site plans for the proposed East Walton 500/230 kV Substation and Bostwick 230 kV Switching Station avoid any impacts to the floodplain. Likewise, the property owned by MEAG contains designated floodplains associated with Jacks Creek. However, the Jacks Creek 230 kV Switching Station site avoids any impacts to floodplains. Designated floodplains are not located on the proposed laydown yard or Rockville 500 kV Switching Station property.

In Putnam County, the proposed East Walton – Rockville 500 kV Transmisison Line crosses several areas of designated floodplain. However, the proposed route through Putnam County utilizes a previously maintained, vacant ROW. The acreage of 100-year floodplains within the existing, vacant ROW is 14.79-acres. There are no 500-year floodplains in this area. No additional impacts are expected to occur due to the construction of the East Walton – Rockville 500 kV Transmission Line project, other than a tower placement within the designated floodplain associated with Highlog Branch.

Beginning in 2008, new ROW was purchased for the remaining ECGR transmission line projects listed below:

- proposed East Walton – Rockville 500 kV Transmission Line north of Putnam County
- Bostwick – East Walton 230 kV Transmission Line (parallel to a portion of East Walton – Rockville 500 kV Transmission Line)
- East Walton – Jacks Creek 230 kV Transmission Line
- Bethabara – East Walton 230 kV Transmission Line

The acreages of land use / land cover within the designated floodplains for these transmission line corridors are shown in the tables below:

Table 3.0 – Acreages of land use within FEMA Floodplain crossed by the proposed East Walton – Rockville 500 kV Transmission Line Project

Land Use Type	East Walton - Rockville Acreages
Barren Land (Rock/Sand/Clay)	0.42
Deciduous Forest	11.79
Developed - Open Space	0.17
Emergent Herbaceous Wetlands	0.35
Evergreen Forest	0.48
Existing Utility	0.3
Grassland/Herbaceous	0.12
Mixed Forest	1.94
Pasture/Hay	4.35
Shrub/Scrub	0.08
Transportation Corridor	0.03
Woody Wetlands	16.39
Total Project Floodplain Acres	**36.42**

Table 4.0 – Acreages of land use within FEMA Floodplain crossed by the proposed Bostwick - East Walton Transmission Line Project

Land Use Type	Bostwick - East Walton Acreages
Deciduous Forest	2.75
Developed - Open Space	0.07
Mixed Forest	0.11
Pasture/Hay	0.27
Transportation Corridor	0.01
Woody Wetlands	4.08
Total Project Floodplain Acres	**7.29**

Table 5.0 – Acreages of land use within FEMA Floodplain crossed by the proposed East Walton - Jacks Creek Transmission Line Project

Land Use Type	East Walton - Jacks Creek Acreages
Deciduous Forest	0.48
Developed - Low Intensity	0.05
Developed - Open Space	0.56
Evergreen Forest	0.02
Grassland/Herbaceous	0.02
Mixed Forest	0.1
Transportation Corridor	0.02
Woody Wetlands	0.04
Total Project Floodplain Acres	**1.29**

Table 6.0 – Acreages of land use within FEMA Floodplain crossed by the proposed Bethabara - East Walton Transmission Line Project

Land Use Type	Bethabara - East Walton Acreages
Deciduous Forest	1.13
Developed - Low Intensity	0.02
Emergent Herbaceous Wetlands	0.41
Evergreen Forest	0.13
Grassland/Herbaceous	0.04
Mixed Forest	0.01
Pasture/Hay	0.5
Shrub/Scrub	0.1
Woody Wetlands	0.17
Total Project Floodplain Acres	**2.51**

4.4.2 Environmental Consequences

No tree clearing or ground disturbing activities will occur in designated floodplains associated with the site development of the proposed East Walton, Bostwick, Jacks Creek, and Rockville sites. Additionally, site development of the proposed laydown yard along US Highway 278 in Morgan County will not require tree clearing or ground disturbing activities in designated floodplains.

Except for the No Action Alternative, all potential alternatives, including the ECGR Project would cross FEMA designated floodplains. The proposed transmission lines were routed to minimize impacts to floodplains, cross floodplains perpendicularly, or to parallel existing linear infrastructure where practicable. There are 47.51-acres of proposed transmission line ROW located within FEMA 100-yr floodplains. Based on land use calculations with FEMA floodplains, 39.62-acres will be converted from forested land to transmission line ROW. Compared to the 621.37-acres of anticipated land use conversion for the entire project, 6.4% of land use conversion is within designated floodplains.

Also, during the design of the proposed transmission line projects, a few transmission line structures were sited within a designated FEMA floodplain. No significant grade changes are expected in these areas.

- For the 46.5-mile proposed East Walton – Rockville 500 kV Transmission Line, 4 out of the 203 lattice steel towers will be within FEMA 100-yr floodplains. In Putnam County, one tower will be within a floodplain associated with Highlog Branch, a tributary of Lick Creek. In Morgan County, one tower will be located within a floodplain associated with South Sugar Creek, and one tower will be located within a floodplain associated with Hard Labor Creek. In Walton County, one tower will be within a floodplain associated with Indian Creek near the confluence with Jacks Creek.

- For the 5.2-mile proposed Bostwick – East Walton 230 kV Transmission Line, 3 out of the 48 mono-pole structures will be within FEMA 100-yr Floodplain. These

locations are in Walton County, and within a floodplain associated with Indian Creek.

- For the 7.65-mile proposed Jacks Creek – East Walton 230 kV Transmission Line, two out of the 64 mono-poles will be within FEMA 100-yr Floodplain. These locations are in Walton County and within floodplain associated with Jacks Creek and an unnamed tributary of Jacks Creek. These are locations parallel SR 83.

- There are no proposed structure locations for the Bethabara – East Walton 230 kV Transmission Line project within floodplains.

4.4.3 Mitigation

No mitigation is required.

4.5 Jurisdictional Waters and Wetlands

GTC contracted with Ecological Solutions, Inc. (Ecological Solutions) to delineate wetlands and waters within the project footprint, including the proposed transmission line ROW, substation and switching station sites, temporary construction ROWs, possible laydown yards, and off-ROW access roads.

Ecological Solutions conducted ecological field studies within the proposed project survey areas from July through October 2023. Studies were conducted utilizing the methodology outlined in the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual: Eastern Mountains and Piedmont Regional Supplement V 2.0. State waters were determined in accordance with guidelines provided in the Georgia Environmental Protection Division (EPD) document: *Field Guide for Determining the Presence of State Waters that Require a Buffer*.

Waters of the United States (WOTUS) are defined in 33 CFR Part 328 and protected by Section 404 of the Clean Water Act, which charges the USACE with the regulation of discharges of "dredged or fill" material into waters of the United States, including wetlands and special aquatic sites. During the transmission line siting process, GTC considered the location of mapped wetlands shown on the US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps as well as hydric soils identified by NRCS soil surveys for Morgan, Oconee, Putnam, and Walton Counties. GTC also considers the location of streams and drainage patterns shown on the USGS 7.5-minute Quadrangle Maps when siting new transmission facilities. Furthermore, GTC acquired orthophotography and LiDAR information to assist in the identification of drainage patterns and the potential for streams. Additionally, the Ecological Solutions field delineated these features in order to assist GTC with the avoidance and minimization of direct impacts to waters of the United States, Section 404 permitting, the creation of erosion and sedimentation control plans, and spill prevention control and countermeasures (SPCC) plans.

4.5.1 Affected Environment

Wetlands

Field studies to identify wetlands were conducted within the transmission line ROW, substation sites, and within the project area (See Appendix E – Ecology Report). Ecological Solutions delineated numerous waters and wetlands along the proposed transmission line routes, proposed sites, and other areas of the ECGR Project. (See Appendix A – Additional Figures). (See Table 7.0 for list of wetlands delineated).

- Forty-five (45) wetlands were delineated along the East Walton – Rockville 500 kV Transmission Line route from Rockville Switching Station site to Bostwick Switching Station site.
- Twenty-two (22) wetlands were delineated along the shared ROW with the Bostwick – East Walton 230 kV Transmission Line Route.
- Three (3) wetlands were delineated along the East Walton – Jacks Creek 230 kV Transmission Line route.
- Eight (8) wetlands were delineated along the Bethabara – East Walton 230 kV Transmission Line route.
- No wetlands were present on the East Walton 500/230 kV Substation site.
- One (1) wetland was delineated on the Bostwick 230 kV Switching Station Site.
- Five (5) wetlands were delineated on the Jacks Creek 230 kV Switching Station.
- Eight (8) wetlands were delineated on the Rockville 500 kV Switching Station Site.
- One (1) wetland was delineated on the existing Bethabara 230/115 kV Substation Site.

Table 7.0 – Wetlands delineated during the ecology field surveys

Feature Name	Cowardin Classification	Acreage in survey area	Drainage Association in survey area	Potential Jurisdictional Status
East Walton – Rockville 500 kV Transmission Line & Bostwick - East Walton 230 kV Transmission Line shared ROW				
BEW WET 02	PFO	0.12	none	JD
BEW WET 03	PFO	1.6	BEW WAT 02 – 04	JD
BEW WET 04	PFO	0.8	none	JD
BEW WET 05	PFO	1.76	BEW WAT 05	JD
BEW WET 06	PFO	0.04	none	JD
BEW WET 07	PEM	0.22	none	JD
BEW WET 08	PFO	2.4	none	JD
BEW WET 09	PFO	0.02	BEW WAT 08	JD
BEW WET 10	PFO	0.01	BEW WAT 08	JD
BEW WET 11	PFO	0.66	BEW WAT 08 and 09	JD
BEW WET 12	PFO	0.66	BEW WAT 12 and 13	JD
BEW WET 13	PSS	0.01	none	JD
BEW WET 14	PSS	0	none	JD
BEW WET 15	PFO	0.27	BEW WAT 15	JD
BEW WET 16	PFO	0.25	none	JD

Feature Name	Cowardin Classification	Acreage in survey area	Drainage Association in survey area	Potential Jurisdictional Status
BEW WET 17	PFO	0.12	none	JD
BEW WET 18	PFO	0.16	none	JD
BEW WET 19	PFO	0.26	BEW G/EF 07	Non-JD
BEW WET 20	PFO	0.19	none	JD
BEW WET 21	PFO	0.09	BEW WAT 18	JD
BEW WET 22	PFO	0.09	BEW WAT 20	JD
East Walton – Rockville 500 kV Transmission Line				
EWR WET 01	PFO	0.09	EWR WAT 05	JD
EWR WET 02	PFO	0.88	EWR G/EF 04	JD
EWR WET 03	PFO	0.14	none	JD
EWR WET 04	PFO	0.96	none	JD
EWR WET 05	PFO	0.25	EWR WAT 43	JD
EWR WET 06	PFO	0.03	EWR WAT 43	JD
EWR WET 07	PFO	0.5	EWR WAT 45	JD
EWR WET 08	PFO	0.1	EWR WAT 46 (EPH)	Non-JD
EWR WET 09	PFO	0.07	EWR WAT 53	JD
EWR WET 10	PFO	0.07	EWR WAT 51	JD
EWR WET 11	PFO	0.09	EWR WAT 51 and 54	JD
EWR WET 12	PFO	0.14	WAT 55	JD
EWR WET 13	PFO	0.11	none	Non-JD
EWR WET 14	PFO	0.18	none	Non-JD
EWR WET 15	PFO	0.49	none	JD
EWR WET 16	PFO	3.87	EWR WAT 62	JD
EWR WET 17	PFO	0.02	EWR WAT 62	JD
EWR WET 18	PFO	0.63	none	JD
EWR WET 19	PFO	1.55	EWR WAT 66	JD
EWR WET 20	PFO	0.02	none	Non-JD
EWR WET 21	PFO	0.06	none	Non-JD
EWR WET 22	PFO	0.79	EWR WAT 68 and EWR 69	JD
EWR WET 23	PFO	0.08	EWR WAT 70	JD
East Walton – Rockville 500 kV Transmission Line (withing vacant ROW)				
EWR WET 24	PFO	0.28	none	JD
EWR WET 25	PFO	0.12	EWR WAT 76	JD
EWR WET 26	PFO	0.03	EWR WAT 80	JD
EWR WET 27	PFO	0.18	none	JD
EWR WET 28	PFO	0.58	none	JD
EWR WET 29	PFO	0.35	EWR WAT 88	JD
EWR WET 30	PFO	0.73	EWR WAT 89 and EWR 90	JD
EWR WET 31	PFO	0.37	none	JD
EWR WET 32	PFO	0.25	EWR WAT 94 and 95	JD
EWR WET 33	PFO	0.27	EWR WAT 98	JD
EWR WET 34	PFO	0.06	EWR WAT 99	JD

Feature Name	Cowardin Classification	Acreage in survey area	Drainage Association in survey area	Potential Jurisdictional Status
EWR WET 35	PFO	0.06	EWR WAT 99	JD
EWR WET 36	PFO	2.73	EWR WAT 105 and EWR 106	JD
EWR WET 37	PFO	0.09	EWR WAT 110	JD
EWR WET 38	PFO	0.01	none	JD
EWR WET 39	PFO	0.16	EWR WAT 115 (EPH)	Non-JD
EWR WET 40	PFO	0.43	EWR WAT 116	JD
EWR WET 41	PFO	0.62	EWR WAT 117	JD
EWR WET 42	PFO	0.27	EWR WAT 118 (EPH)	Non-JD
EWR WET 43	PFO	0.06	none	JD
EWR WET 44	PFO	0.18	none	JD
EWR WET 45	PFO	0.05	none	JD
East Walton – Jacks Creek kV Transmission Line				
EWJC WET 01	PFO	0.02	EWJC WAT 01	JD
EWJC WET 02	PFO	0.06	EWJC WAT 11	JD
EWJC WET 03	PFO	0.41	EWJC WAT 13	JD
Bethabara - East Walton 230 kV Transmission Line				
BBEW WET 01	PFO	0.01	BBEW WAT 01 and 02	Non-JD
BBEW WET 04	PFO	0.002	BBEW WAT 09 (EPH)	Non-JD
BBEW WET 05	PFO	0.08	none	Non-JD
BBEW WET 06	PFO	0.11	none	JD
BBEW WET 07	PEM	0.03	none	JD
BBEW WET 08	PFO	0.69	BBEW WAT 15	JD
BBEW WET 09	PFO/PEM	1.18	BBEW WAT 16	JD
BBEW WET 10	PEM	0.04	BBEW WAT 16	JD
East Walton 500/230 kV Substation Property				
No wetlands identified within the survey area.				
Bostwick 230 kV Switching Station Property				
BSS WET 01	PFO	1.7	BSS WAT 01 – 03	JD
Rockville 500/230 kV Switching Station Property				
RSS WET 01	PEM	0.06	RSS WAT 01	JD
RSS WET 02	PEM	0.02	RSS WAT 02	JD
RSS WET 03	PEM	0.01	RSS WAT 03	JD
RSS WET 04	PFO	0.03	RSS WAT 03	JD
RSS WET 05	PFO/PEM	1.46	RSS WAT 04, 05, 07	JD
RSS WET 06	PEM	0.02	RSS WAT 05	JD
RSS WET 07	PEM	0.03	RSS WAT 05	JD
RSS WET 08	PEM	0.04	RSS WAT 05	JD
Jacks Creek 230 kV Switching Station Property				
JCSS WET 01	PFO	2.68	JCSS WAT 05	JD
JCSS WET 02	PFO	0.29	JCSS WAT 04	JD
JCSS WET 03	PFO	0.18	JCSS WAT 06 and 07 (EPH)	Non-JD

Feature Name	Cowardin Classification	Acreage in survey area	Drainage Association in survey area	Potential Jurisdictional Status
JCSS WET 04	PFO	0.26	JCSS WAT 07 (EPH)	Non-JD
JCSS WET 05	PFO	0.58	JCSS WAT 08 (EPH)	Non-JD
Existing Bethabara 230/115 kV Substation Property				
BBSS WET 01	PFO	0.05	BBSS WAT 01	JD
BBSS WET 02	PFO	0.005	BBSS G/EF 04	Non-JD

Most of these wetlands are characterized as palustrine forested wetland communities (PFO), 11 as palustrine emergent wetland communities (PEM), and 2 as palustrine scrub-shrub wetland communities (PSS).

Forested wetlands are dominated by hardwood tree species including red maple (Acer rubrum), green ash (Fraxinus pennsylvanica), river birch (Betula nigra), various oaks (Quercus spp.), and black willow (Salix nigra). Emergent wetlands are dominated by soft rush (Juncus effusus), false-nettle (Boehmeria cylindrica), climbing hempweed (Mikania scandens), shallow sedge (Carex lurida), and other various sedges. Vegetation in the scrub-shrub wetlands is composed primarily of tag alder (Alnus serrulata), soft rush, marsh dewflower (Murdannia keisak), fowl manna grass (Glyceria striata), and shallow sedge

Jurisdictional Waters

Field studies to identify streams (perennial, intermittent, and ephemeral), open waters, and non-jurisdictional gully/erosional features were conducted within the proposed transmission line route, substation sites, and proposed access roads and laydown areas (See Appendix E – Ecology Report).

USGS delineates and defines watersheds as hierarchical Hydrologic Unit Code (HUC) systems. The watersheds range from large 2-digit regions to small 12-digit sub-watersheds. All components of the ECGR Project are within the Upper Oconee River Watershed (HUC-10 – 03070101). The proposed ECGR Project crosses through the following HUC-12 sub-watersheds:

- Log Dam Creek – Lake Sinclair – 030701011804
- Crooked Creek – 030701011801
- Lake Oconee – Lake Sinclair – 030701011306
- Lick Creek – 030701011305
- Little Sugar Creek – 030701011302
- Upper Sugar Creek – 030701011301
- Lower Apalachee River – 030701011007
- Lower Hard Labor Creek – 030701010907
- Mile Branch – Hard Labor Creek – 030701010903
- Wolf Creek – Apalachee River – 030701011006
- Lower Jacks Creek – 030701011004
- Upper Jacks Creek – 030701011003

- Turkey Creek – Apalachee River – 030701011001
- Upper Barber Creek – 030701010304

Below are the number of waters delineated by Ecological Solutions for each project. These waters include potentially non-jurisdictional, ephemeral streams. (See Appendix A - Additional Figures). (See Table 8.0 for list of waters delineated)

- One hundred twenty (120) waters were delineated along the East Walton – Rockville 500 kV Transmission Line route; twenty (20) of these waters are shared with the Bostwick – East Walton 230 kV Transmission Line route.
- Sixteen (16) waters were delineated along the East Walton – Jacks Creek 230 kV Transmission Line route.
- Fourteen (14) waters were delineated along the Bethabara – East Walton 230 kV Transmission Line route.
- No waters were present on the East Walton 500/230 kV Substation site.
- Three (3) waters were delineated on the Bostwick 230 kV Switching Station site.
- Eight (8) waters were delineated on the Jacks Creek 230 kV Switching Station site.
- Seven (7) waters were delineated on the Rockville 500 kV Switching Station site.
- One (1) water was delineated on the existing Bethabara 230/115 kV Substation site.

Table 8.0 – Waters delineated during the ecology field surveys

Feature Name	Drainage Association in survey area	Flow Regime	Avg. Width Top of Bank (ft)
East - Walton - Rockvlle 500 kV Transmission Line & Bostwick – East Walton 230 kV Transmission Line shared ROW			
BEW WAT 01	UT (unnamed tributary)	perennial	5
BEW WAT 02	UT; BEW WET 03	perennial	3
BEW WAT 03	UT; BEW WET 03	perennial	3
BEW WAT 04	Jacks Creek; BEW WET 03	perennial	30
BEW WAT 05	UT; BEW WET 05	perennial	3
BEW WAT 06	UT	perennial	4
BEW WAT 07	Indian Creek	perennial	20
BEW WAT 08	Indian Creek; BEW WET 09 and 10, BEW WAT 09	perennial	15
BEW WAT 09	UT of BEW WAT 08	intermittent	3
BEW WAT 10	UT; BEW WET 11	ephemeral	3
BEW WAT 11	UT	perennial	4
BEW WAT 12	UT; BEW WET 12	perennial	3
BEW WAT 13	BEW WET 12	open water	50
BEW WAT 14	UT	perennial	4
BEW WAT 15	UT; BEW WET 15	perennial	5
BEW WAT 16	UT	intermittent	3
BEW WAT 17	UT	intermittent	3
BEW WAT 18	UT of BEW WAT 19	ephemeral	3
BEW WAT 19	UT; BEW WET 21	intermittent	2

Feature Name	Drainage Association in survey area	Flow Regime	Avg. Width Top of Bank (ft)
BEW WAT 20	UT of BEW WAT 19; BEW WET 22	intermittent	2
East Walton – Rockville 500 kV Transmission Line			
EWR WAT 01	UT	perennial	30
EWR WAT 02	UT	perennial	30
EWR WAT 03	UT; EWR WAT 04	perennial	5
EWR WAT 04	UT; EWR WAT 03	ephemeral	5
EWR WAT 05	Bucks Creek; WET 01	perennial	15
EWR WAT 06	UT; EWR WAT 07	perennial	12
EWR WAT 07	UT; EWR WAT 06	perennial	3
EWR WAT 08	none	open water	432
EWR WAT 09	none	open water	150
EWR WAT 10	UT	perennial	5
EWR WAT 11	UT	perennial	4
EWR WAT 12	UT	perennial	3
EWR WAT 13	UT; EWR WAT 14	perennial	7
EWR WAT 14	UT; EWR WAT 13	perennial	2
EWR WAT 15	UT	ephemeral	3
EWR WAT 16	UT	perennial	5
EWR WAT 17	UT	perennial	5
EWR WAT 18	none	open water	231
EWR WAT 19	Long Branch	perennial	10
EWR WAT 20	UT	intermittent	4
EWR WAT 21	UT	perennial	5
EWR WAT 22	UT	perennial	3
EWR WAT 23	UT; EWR WAT 24, 25, and 26	perennial	1.5
EWR WAT 24	UT; EWR WAT 23	intermittent	2
EWR WAT 25	UT; EWR WAT 23	intermittent	1.5
EWR WAT 26	UT; EWR WAT 23	intermittent	3
EWR WAT 27	UT	intermittent	3
EWR WAT 28	UT; EWR WAT 29	perennial	3
EWR WAT 29	UT; EWR WAT 28	intermittent	3
EWR WAT 30	UT; EWR WAT 31	intermittent	2.5
EWR WAT 31	UT; EWR WAT 30	perennial	3
EWR WAT 32	UT; EWR WAT 31	perennial	2.5
EWR WAT 33	Hard Labor Creek	perennial	55
EWR WAT 34	UT	ephemeral	4
EWR WAT 35	UT	perennial	4
EWR WAT 36	UT of EWR WAT 37	intermittent	3
EWR WAT 37	UT; EWR WAT 36	perennial	3
EWR WAT 38	UT	perennial	3
EWR WAT 39	Briar Creek	perennial	25
EWR WAT 40	UT	intermittent	3

Feature Name	Drainage Association in survey area	Flow Regime	Avg. Width Top of Bank (ft)
EWR WAT 41	UT of EWR WAT 42	intermittent	5
EWR WAT 42	UT; EWR WAT 41, 43 – 45, EWR WET 06 and 07	perennial	5
EWR WAT 43	UT of EWR WAT 42; WET 05	intermittent	3
EWR WAT 44	UT of WAT 42	intermittent	5
EWR WAT 45	UT of EWR WAT 42; WET 07	intermittent	3
EWR WAT 46	UT; WET 08	ephemeral	3
EWR WAT 47	UT	ephemeral	2
EWR WAT 48	UT	ephemeral	4
EWR WAT 49	UT	perennial	4
EWR WAT 50	UT	perennial	4
EWR WAT 51	UT; EWR WAT 54, WET 10 and 11	intermittent	4
EWR WAT 52	UT; EWR WAT 51 and 53	ephemeral	2
EWR WAT 53	UT; EWR WAT 52, WET 09	intermittent	1
EWR WAT 54	UT; EWR WAT 51	intermittent	2
EWR WAT 55	UT; EWR WET 12	intermittent	4
EWR WAT 56	UT	perennial	4
EWR WAT 57	UT of EWR WAT 58	intermittent	4
EWR WAT 58	North Sugar Creek; EWR WAT 57	perennial	50
EWR WAT 59	South Sugar Creek; EWR WAT 60	perennial	25
EWR WAT 60	UT of EWR WAT 59	intermittent	5
EWR WAT 61	South Sugar Creek	perennial	25
EWR WAT 62	UT; WET 16 and 17	intermittent	3
EWR WAT 63	UT of EWR WAT 64	intermittent	4
EWR WAT 64	UT; EWR WAT 63	perennial	6
EWR WAT 65	UT	perennial	4
EWR WAT 66	UT; EWR WET 19	perennial	15
EWR WAT 67	Little Sugar Creek	perennial	40
EWR WAT 68	UT; EWR WET 22	perennial	4
EWR WAT 69	UT; EWR WET 22	intermittent	3
EWR WAT 70	UT; EWR WET 23	perennial	4
EWR WAT 71	UT; EWR WET 23	perennial	1
EWR WAT 72	UT	perennial	10
EWR WAT 73	UT	intermittent	4
EWR WAT 74	UT	intermittent	4
East Walton – Rockville 500 kV Transmission Line (within vacant ROW)			
EWR WAT 75	UT (Clarks Fork)	perennial	70
EWR WAT 76	UT; EWR WET 25	perennial	1
EWR WAT 77	UT	intermittent	2
EWR WAT 78	UT	perennial	2
EWR WAT 79	UT; EWR WAT 80	perennial	3

Feature Name	Drainage Association in survey area	Flow Regime	Avg. Width Top of Bank (ft)
EWR WAT 80	UT; EWR WAT 79 and WET 26	intermittent	3
EWR WAT 81	none	open water	75
EWR WAT 82	UT	perennial	4
EWR WAT 83	UT	perennial	4
EWR WAT 84	UT	ephemeral	3
EWR WAT 85	UT	intermittent	3
EWR WAT 86	Weaver Branch (Highlog Branch); EWR WAT 87	perennial	8
EWR WAT 87	UT of EWR WAT 86	intermittent	2
EWR WAT 88	Denham Branch	perennial	6
EWR WAT 89	UT; EWR WET 30	ephemeral	2
EWR WAT 90	UT; EWR WET 30	perennial	6
EWR WAT 91	UT	intermittent	2
EWR WAT 92	UT; EWR WAT 93	perennial	10
EWR WAT 93	UT; WAT 92 and 94	perennial	5
EWR WAT 94	UT; EWR WAT 95	perennial	3
EWR WAT 95	UT; WAT 94 and WET 32	intermittent	3
EWR WAT 96	UT; EWR WAT 97	intermittent	5
EWR WAT 97	UT; EWR WAT 96	intermittent	2
EWR WAT 98	UT; EWR WET 33 and WAT 99	intermittent	2
EWR WAT 99	UT; EWR WAT 98, WET 34 and 35	perennial	5
EWR WAT 100	UT of EWR WAT 99	perennial	4
EWR WAT 101	UT of EWR WAT 102	perennial	4
EWR WAT 102	UT; EWR WAT 101	perennial	5
EWR WAT 103	none	open water	55
EWR WAT 104	UT	ephemeral	2
EWR WAT 105	UT; EWR WET 36	perennial	18
EWR WAT 106	UT; EWR WET 36	perennial	5
EWR WAT 107	UT	perennial	4
EWR WAT 108	UT	ephemeral	4
EWR WAT 109	UT	perennial	6
EWR WAT 110	UT; EWR WET 37	intermittent	3
EWR WAT 111	UT; EWR WAT 113, 114, and 115	perennial	5
EWR WAT 112	UT; EWR WAT 111	ephemeral	1
EWR WAT 113	UT; EWR WAT 111	intermittent	5
EWR WAT 114	UT; EWR WAT 111	ephemeral	1
EWR WAT 115	UT; EWR WET 39 and 40, WAT 116	ephemeral	1
EWR WAT 116	UT; EWR WET 40 and WAT 115	intermittent	1
EWR WAT 117	UT; EWR WET 41	perennial	5
EWR WAT 118	UT; EWR WET 42	ephemeral	3
EWR WAT 119	UT	ephemeral	3

Feature Name	Drainage Association in survey area	Flow Regime	Avg. Width Top of Bank (ft)
EWR WAT 120	UT	perennial	5
East Walton – Jacks Creek 230 kV Transmission Line			
EWJC WAT 01	UT; EWJC WET 01	intermittent	3
EWJC WAT 02	UT; EWJC WAT 03 and 04	perennial	3
EWJC WAT 03	EWJC WAT 02	open water	118
EWJC WAT 04	UT; EWJC WAT 02	ephemeral	1
EWJC WAT 05	UT	perennial	3
EWJC WAT 06	UT	ephemeral	3
EWJC WAT 07	UT; EWJC WAT 08	perennial	8
EWJC WAT 08	UT; EWJC WAT 07 and 09	perennial	4
EWJC WAT 09	UT; EWJC WAT 08 and 10	intermittent	4
EWJC WAT 10	UT; EWJC WAT 09	ephemeral	2
EWJC WAT 11	UT; EWJC WET 02	perennial	3
EWJC WAT 12	UT	perennial	9
EWJC WAT 13	UT; EWJC WET 03	perennial	20
EWJC WAT 14	Grubby Creek	perennial	20
EWJC WAT 15	Jacks Creek	perennial	20
EWJC WAT 16	Jacks Creek	perennial	10
Bethabara – East Walton 230 kV Transmission Line			
BBEW WAT 01	unnamed pond; BBEW WET 01	open water	82
BBEW WAT 02	UT; BBEW WET 01	ephemeral	3
BBEW WAT 06	Apalachee River	perennial	50
BBEW WAT 07	UT of BBEW WAT 08	perennial	8
BBEW WAT 08	UT; BBEW WAT 07, 09, and 10	perennial	3
BBEW WAT 09	UT of BBEW WAT 08; BBEW WET 04	ephemeral	3
BBEW WAT 10	UT of BBEW WAT 08	ephemeral	3
BBEW WAT 11	Rocky Branch	perennial	10
BBEW WAT 12	Jacks Creek	perennial	25
BBEW WAT 13	UT	perennial	3
BBEW WAT 14	unnamed pond (impoundment of Lane Creek)	open water	86
BBEW WAT 15	UT (Lane Creek); BBEW WET 08	perennial	4
BBEW WAT 16	unnamed pond (impoundment of Land Creek) ; BBEW WET 09 and 10	open water	100

Feature Name	Drainage Association in survey area	Flow Regime	Avg. Width Top of Bank (ft)
BBEW WAT 17	UT	ephemeral	1
East Walton 500/230 kV Substation Property			
No streams were identified within the survey area			
Bostwick 230 kV Switching Station Property			
BSS WAT 01	Jacks Creek; BSS WET 01	perennial	15
BSS WAT 02	UT to BSS WAT 01; BSS WET 01	perennial	2
BSS WAT 03	UT to BSS WAT 01; BSS WET 01	perennial	1
Rockville 500 kV Switching Station Property			
RSS WAT 01	UT of RSS WAT 03; RSS WET 01	intermittent	1
RSS WAT 02	UT of RSS WAT 03; RSS WET 02	intermittent	1
RSS WAT 03	UT; RSS WAT 01, 02, and 04; RSS WET 03 and 04	intermittent	2
RSS WAT 04	UT; RSS WET 05	perennial	3
RSS WAT 05	UT; RSS WAT 06 and 07, RSS WET 05	perennial	8
RSS WAT 06	UT of RSS WAT 05	intermittent	3
RSS WAT 07	UT of RSS WAT 05; RSS WET 05	intermittent	2
Jacks Creek 230 kV Switching Station Property			
JCSS WAT 01	Jacks Creek; JCSS WAT 02	perennial	10
JCSS WAT 02	UT of JCSS WAT 01	intermittent	5
JCSS WAT 03	UT	intermittent	3
JCSS WAT 04	JCSS WET 02	open water	204
JCSS WAT 05	UT of JCSS WAT 01	intermittent	2
JCSS WAT 06	UT; JCSS WET 03	ephemeral	4
JCSS WAT 07	UT; JCSS WET 03 and 04	ephemeral	5
JCSS WAT 08	UT; JCSS WET 05	ephemeral	4
Existing Bethabara 230/115 kV Substation Property			
BBSS WAT 01	UT; BBSS WET 01	perennial	3

Ninety-nine (99) waters are classified as perennial streams, 51 as intermittent streams, 28 as ephemeral streams, and 11 as open water (man-made ponds). Some of the waters are named on USGS 7.5-minute Quadrangle Maps, while some are unnamed tributaries. The named streams crossed are:

Putnam County

- Rush Creek
- Denham Branch
- Highlog Branch (Weaver Branch)
- Clarks Fork

Morgan County

- Little Sugar Creek
- South Sugar Creek
- North Sugar Creek
- Briar Creek
- Hard Labor Creek
- Long Branch
- Big Branch
- Bucks Creek
- Jacks Creek

Walton County

- Indian Creek
- Grubby Creek
- Jacks Creek
- Rocky Branch
- Apalachee River (county line)

Oconee County

- Apalachee River
- Lane Creek

Perennial streams range from 1 to 70 feet in width with varying substrate combinations of gravel, boulders, sand and/or silt. Intermittent streams range from w to 5 feet in width with substrates primarily composed of silt, sand and/or gravel. Ephemeral streams range from 2 to 5 feet in width with a substrate of clay or sand. Open waters range from 50 to 432 feet in width and consist mainly of small, man-made impoundments. Gully and erosional features did not exhibit hydric soil or groundwater connections and consisted primarily of hillside or roadside swales, areas of erosion, or relict agricultural ditches. Ecological Solutions identified 88 gully and erosional features during ecology field studies.

4.5.2 Environmental Consequences

GTC evaluated NWI, USGS, LiDAR data and field survey data, considering locations of waters of the United States in the project design. The proposed substation and switching station sites avoid dredge and fill impacts to wetland and water features. Although GTC will clear vegetation within forested wetland areas that are within the proposed transmission line ROW and thus converting them to non-forested wetlands; they will still remain wetland resources. GTC also proposes to clear vegetation along the banks and within the State of Georgia's 25-foot stream buffers that fall within the proposed transmission line ROWs. GTC construction contractors will use clearing methods that will leave root systems intact and minimize land disturbance within these areas. A variety of methods and equipment can be utilized by the contractor to achieve this requirement. These can include hand clearing equipment, normal clearing machinery if conditions are dry at the time of clearing, load distributing mats, and/or equipment with low-ground pressure tracks and/or high-flotation tires with less than 10 PSI distributed load under full operating load.

GTC has developed construction plans, which designate where vehicular wetland crossings will be needed for construction and future maintenance. GTC has identified numerous off-ROW access paths to minimize impacts to waters and wetlands along the proposed

transmission line routes. These access crossings will utilize the USACE's Nationwide Permit 57 for Electric Utility Line and Telecommunications Activities. Under Nationwide Permit 57, Note 2 states "For electric utility line or telecommunications activities crossing a single waterbody more than one time as separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization". GTC construction plans identified separate and complete crossings of waters of the United States that have less than a 0.5-acre of impact thresholds under the Section 404 Nationwide Permit Program (See Tables 9.0 and 10.0). GTC is committed to developing plans and designs that minimize impacts to waters of the United States, therefore qualifying for use of the USACE's Nationwide Permit Program and avoiding a Section 404 Individual Permit.

The tables below (Tables 9.0 and 10.0) describe proposed 'single and complete' wetland and stream crossings along the transmission line corridors for construction and future maintenance of the ECGR Project.

Table 9.0 – Proposed vehicular crossings in wetlands delineated during the ecology field surveys

Feature Name	Cowardin Classification	Drainage Association in survey area	Proposed Crossing Type	Total Impacts (Acres)
East Walton – Rockville 500 kV Transmission Line & Bostwick - East Walton 230 kV Transmission Line shared ROW				
BEW WET 04	PFO	none	Replace existing at-grade crossing and add additional at-grade road	<0.10-acres
BEW WET 19	PFO	BEW G/EF 07	Replace existing at-grade crossing in existing crossing footprint	0-acres
East Walton – Rockville 500 kV Transmission Line				
EWR WET 15	PFO	none	New at-grade crossing	<0.10-acres
East Walton – Rockville 500 kV Transmission Line (withing vacant ROW)				
EWR WET 31	PFO	none	Replace existing at-grade crossing in existing crossing footprint	0-acres
EWR WET 41 / EWR WAT 117	PFO	EWR WAT 117	New at-grade crossing	<0.10-acres
RSS WET 02 / RSS WAT 05	PEM	RSS WAT 02	Replace existing at-grade crossing in existing crossing footprint	0-acres
RSS WET 08	PEM	RSS WAT 05	Replace existing at-grade crossing in existing crossing footprint	0-acres
East Walton – Jacks Creek kV Transmission Line				
EWJC WET 03	PFO	EWJC WAT 13	Place a mono-pole 230 kV structure in wetland	<0.10-acres
Bethabara - East Walton 230 kV Transmission Line				
BBEW WET 05	PFO	none	New at-grade crossing	<0.10-acres

Table 10.0 – Proposed vehicular crossings in waters delineated during the ecology field surveys

Feature Name	Flow Regime	Drainage Association in survey area	Impact Acreage	Proposed Crossing Type
East - Walton - Rockvlle 500 kV Transmission Line & Bostwick – East Walton 230 kV Transmission Line shared ROW				
BEW WAT 01	perennial	UT	Replace existing at-grade crossing	<0.01-acres
BEW WAT 10	ephemeral	UT; BEW WET 11	Replace existing at-grade pipe in existing crossing footprint	0-acres
BEW WAT 11	perennial	UT	New pipe crossing	<0.01-acres
BEW WAT 16	intermittent	UT	New at-grade crossing	<0.01-acres
East Walton – Rockville 500 kV Transmission Line				
EWR WAT 10	perennial	UT	New pipe crossing	<0.01-acres
EWR WAT 12	perennial	UT	New pipe crossing	<0.01-acres
EWR WAT 13	perennial	UT; EWR WAT 14	New at-grade crossing	<0.01-acres
EWR WAT 16	perennial	UT	New pipe crossing	<0.01-acres
EWR WAT 34	ephemeral	UT	New at-grade crossing	<0.01-acres
EWR WAT 36	intermittent	UT of EWR WAT 37	New pipe crossing	<0.01-acres
EWR WAT 38	perennial	UT	New at-grade crossing	<0.01-acres
EWR WAT 40	intermittent	UT	New pipe crossing	<0.01-acres
EWR WAT 55	intermittent	UT; EWR WET 12	New at-grade crossing	<0.01-acres
EWR WAT 56	perennial	UT	Replace existing at-grade crossing in existing crossing footprint	0-acres
EWR WAT 57	intermittent	UT of EWR WAT 58	New pipe crossing	<0.01-acres
EWR WAT 58	perennial	North Sugar Creek; EWR WAT 57	Install new bridge to avoid stream impacts	0-acres
EWR WAT 61	perennial	South Sugar Creek	Install new bridge to avoid stream impacts	0-acres
EWR WAT 64	perennial	UT; EWR WAT 63	New pipe crossing	<0.01-acres
EWR WAT 67	perennial	Little Sugar Creek	Install new bridge to avoid stream impacts 0-Acres	0-acres
EWR WAT 72	perennial	UT	New at-grade crossing	<0.01-acres

Feature Name	Flow Regime	Drainage Association in survey area	Impact Acreage	Proposed Crossing Type
East Walton – Rockville 500 kV Transmission Line (within vacant ROW)				
EWR WAT 78	perennial	UT	New at-grade crossing	<0.01-acres
EWR WAT 79	perennial	UT; EWR WAT 80	New pipe crossing	<0.01-acres
EWR WAT 84	ephemeral	UT	Replace existing at-grade pipe in existing crossing footprint	0-acres
EWR WAT 85	intermittent	UT	New pipe crossing	<0.01-acres
EWR WAT 91	intermittent	UT	Replace existing at-grade crossing in existing crossing footprint	0-acres
EWR WAT 109	perennial	UT	New pipe crossing	<0.01-acres
EWR WAT 117	perennial	UT; EWR WET 41	See EWR WET 41 in previous table	<0.01-acres, See EWR WET 41 in previous table for wetland impacts
RSS WAT 05	perennial	UT; RSS WAT 06 and 07, RSS WET 05	See RSS WET 05 in previous table	<0.01-acres, See RSS WET 05 in previous table for wetland impacts

No 500 kV transmission line towers or site grading for substations will occur in any streams or wetlands. One 230 kV mono-pole transmission structure is proposed to be placed in a wetland (EWJC WET 03) on the East Walton – Jacks Creek 230 kV Transmission Line. Nationwide Permit 57 allows for the placement of "Foundations for overhead electric utility line or telecommunication line towers, poles, and anchors". GTC will incorporate stringent Best Management Practices (BMPs) in the Erosion and Sedimentation Control (E&SC) plans and implement those to protect wetland resources.

All 'single and complete project' impacts are aggregated in the following list:

- East Walton – Rockville –
  - Wetlands – <0.3-acres
  - Waters (Streams) – 0.2-acres
- East Walton – Jacks Creek
  - Wetlands – <0.1-acres
  - Waters (Streams) – 0-acres
- Bethabara – East Walton
  - Wetlands – <0.1-acres
  - Waters (Streams) – 0-acres

4.5.3 Mitigation

Currently, compensatory mitigation is not required since each single and complete crossing of waters of the United States falls below the USACE Nationwide Permit mitigation threshold of 0.10-acre for wetlands and 0.01-acre for streams. If unforeseen design changes occur that make compensatory mitigation a requirement, GTC will purchase mitigation bank credits in a USACE-approved mitigation bank within the appropriate watershed or provide USACE-approved in lieu fee mitigation, if necessary (i.e., if mitigation bank credits are not available).

4.6 Coastal Resources

The proposed project is not located within areas protected by the Coastal Barrier Resources Act of 1972 (16 USC Part 3501 et. seq.).

The National Oceanic and Atmospheric Administration (NOAA) approved the Georgia Coastal Management Program (GCMP) on January 26, 1998, pursuant to the provisions of Section 306 of the Federal Coastal Zone Management Act of 1972, as amended, 16 USC 1455 (CZMA). The GCMP is prescribed in the Georgia Coastal Management Program and Final Environmental Impact Statement (P/FEIS) published on December 5, 1997. Notice of approval of the GCMP was published in the Federal Register on February 6, 1998.

4.6.1 Affected Environment

The proposed ECGR Project is not located in any of the eleven counties which constitute Georgia's Coastal Zone. Section III of the GCMP Program Document identifies a list of Federal Actions Subject to Federal Consistency. Section B is a list of Federal Licenses or Permits Subject to Consistency with the Georgia Coastal Management Program. Under the Department of Defense, Army Corps of Engineers, is a category for "Other provisions of Section 404 of the Clean Water Act, including permits."

4.6.2 Environmental Consequences

The project will have no impact to Coastal Resources.

4.6.3 Mitigation

No mitigation is required.

4.7 Biological Resources

4.7.1 Endangered Species Act

Section 7 of the Endangered Species Act requires every Federal agency, including RUS, to consult with the USFWS to ensure that any action it authorizes is not likely to jeopardize the continued existence of any "listed species" (plants or animals listed as threatened or endangered) or result in the destruction or adverse modification of designated critical habitat. The USFWS Interagency Cooperation regulations (50 CFR Part 402) require that the agency (RUS), or the applicant (GTC) on the Agency's behalf, requests the list of threatened and endangered species that may occur within the project's action area. GTC's consulting biologist makes this request on behalf of the applicant and the Agency.

For the purposes of better understanding the distribution of flora and fauna of the State, the Georgia legislature passed the Wildflower Preservation Act (Georgia Code Title 12 Chapter 6 Article 3) and the Endangered Wildlife Act of 1973. The GA DNR administers these two Acts. This program and the enabling acts have two purposes: to inventory the diverse flora and fauna of the state, and to protect "state endangered, threatened, rare, or unusual" species of plants and wildlife. Plants listed by the state are protected on public lands such as state or federal property, and on any other land that is not held by a private individual, firm, corporation, partnership, proprietorship, or other legal entity. For animals protected by the state, any activity that intends to harass, capture, kill, sell/purchase any part thereof, and/or destroys their habitats on public lands are is prohibited

The USFWS Information for Planning and Consultation (IPaC) website was queried to determine whether any federally listed species may be affected by the ECGR Project. The GA DNR *Georgia Rare Species and Natural Community Data Portal* website (georgiabiodiversity.org) was also queried for potential state-protected species occurrences within Morgan, Oconee, Putnam, and Walton Counties.

Ecological Solutions traversed the ECGR Project study area and conducted threatened and endangered species field surveys from July through October of 2023 (See Appendix E – Ecology Survey). Ecological Solutions surveyed for five (5) federally listed or proposed to be listed species and five (5) additional state-protected species. (See Table 11.0)

Table 11.0 – List of species surveyed

Scientific Name	Common Name	Federal Status	State Status	Preferred Habitat
Faunal Species				
Danaus plexippus	monarch butterfly	C	--	open fields and meadows with milkweed
Cyprinella xaenura	Altamaha shiner	--	T	runs or pools over sand to gravel substrate in medium to large streams
Haliaeetus leucocephalus	bald eagle	--	T	nests and forages along coasts and near large rivers and lakes
Perimyotis subflavus	tricolored bat	PE	--	open forests with large trees and woodland edges; roost in tree foliage; hibernate in caves or mines with high humidity
Floral and Floral-like Species				
Amphianthus pusillus	little amphianthus	T	T	vernal pools on granite outcrops
Isoetes tegetiformans	mat-forming quillwort	E	E	vernal pools on granite outcrops
Ptilimnium nodosum	Harperella	E	E	cypress ponds in the Coastal Plain and seeps at the edge of granite outcrops in the Piedmont
Quercus oglethorpensis	Oglethorpe oak	--	T	Broad River bottomlands; upland seepage swamps over Iredell and Enon soils with seasonally wet clay beds
Cypripedium acaule	pink lady slipper	--	U	upland oak-hickory-pine forests; piney woods
Draba aprica	sun-loving draba	--	E	granite and amphibolite outcrops, usually in redcedar litter
E = Endangered; T = Threatened; C = Candidate; PE = Proposed Endangered; U = Unusual				

4.7.1.1 Affected Environment

Federal Species

Ecological Solutions surveyed for these five (5) federally listed or proposed to be listed species. No occurrences of federally listed or proposed to be listed species were identified during the field surveys. Table 12.0 indicates the presence of habitat for each component of the ECGR Project.

Table 12.0 – Federally listed species occurrences and habitats observed during ecology field surveys

Proposed Project	Species	Species Observed	Habitat Observed	Known Within 3-Mile Radius*
Proposed Transmission Line Projects				
Bostwick – East Walton 230 kV Transmission Line	monarch butterfly, tricolored bat	No	Yes, both species	
East Walton – Rockville 500 kV Transmission Line	monarch butterfly, little amphianthus, mat-forming quillwort, Harperella, tricolored bat	No	Yes, monarch butterfly and tricolored bat	Yes, all except monarch butterfly
East Walton – Jacks Creek 230 kV Transmission Line	monarch butterfly, tricolored bat	No	Yes, both species	
Bethabara – East Walton 230 kV Transmission Line	monarch butterfly, tricolored bat	No	Yes, both species	
Substation / Switching Station Sites				
East Walton 500/230 kV Substation Site	monarch butterfly, tricolored bat	No	Yes, both species	
Bostwick 230 kV Switching Station Site	monarch butterfly, tricolored bat	No	Yes, both species	
Rockville 500 kV Switching Station Site	monarch butterfly, Harperella, tricolored bat	No	Yes, monarch butterfly and tricolored bat	
Jacks Creek 230 kV Switching Station Site	monarch butterfly, tricolored bat	No	Yes, both species	
Existing Bethabara 230/115 kV Substation Site	monarch butterfly, tricolored bat	No	Yes, both species	
*Includes IPaC, GNAHRGIS 3-mile radius, and USFWS coordination				

Granite Outcrop Plant Species

Three (3) of these federally listed species were plants: Harperella, Little Amphianthus, and Mat-forming Quillwort. These species share similar habitat requirements of vernal pools or seepages on granite outcrops. Habitat for these species was not observed during the pedestrian field surveys.

Monarch Butterfly

Foraging habitat was observed throughout the project area for the Monarch Butterly. Although foraging habitat is present for the Monarch Butterly, milkweed was not observed within surveyed areas of the ECGR Project. Milkweed is essential to the lifecycle of the Monarch Butterfly. Surveys were conducted during times when milkweed was observable.

Tricolored Bat

Due to the statewide range of the tricolored bat, as well as a known occurrence in close proximity to the ECGR Project area, mist netting or acoustic surveys were deemed unnecessary. As in most areas of the state, ample summer habitat exists throughout the ECGR Project area. Although winter hibernacula such as caves and mines are not present, culverts and bridges that may be used in place of caves/mines occur in the area. The ECGR Project is in the portion of the tricolored bat's range, referred to as "Zone 1- Year-round Active" by USFWS, where the species does not fully hibernate but instead, enters a torpor state during the winter months. Torpor is a type of temporary hibernation over the winter season where a species becomes lethargic during colder periods and may become active during warmer periods.

State-protected Species

Ecological Solutions surveyed five (5) state-protected species. Aquatic surveys were not conducted for the one state-protected aquatic species, the Altamaha shiner. However, Ecological Solutions did assess streams for suitable habitat. Table 13.0 indicates the presence of habitat for each component of the ECGR Project.

Table 13.0 – State-protected species occurrences and habitats observed during ecology field surveys

Proposed Project	Species	Species Observed	Habitat Observed	Known Within 3-Mile Radius*
Proposed Transmission Lines				
Bostwick – East Walton 230 kV Transmission Line	Altamaha shiner	No	Yes	Yes
East Walton – Rockville 500 kV Transmission Line	Altamaha shiner, pink lady slipper, sun-loving draba, bald eagle, Oglethorpe oak	No	pink lady slipper Altamaha shiner	Yes
East Walton – Jacks Creek 230 kV Transmission Line	Altamaha shiner	No	Yes	
Bethabara – East Walton 230 kV Transmission Line	Altamaha shiner	No	Yes	Yes
Substation / Switching Station Sites				
East Walton 500/230 kV Substation	Altamaha shiner	No	No	
Bostwick 230 kV Switching Station	Altamaha shiner	N/A	Yes	Yes
Rockville 500 kV Substation	sun-loving draba, bald eagle	No	No	Yes, both
Jacks Creek 230 kV Substation	Altamaha shiner	No	Yes	
Existing Bethabara 230/115 kV Substation	Altamaha shiner	No	No	Yes
*Includes IPaC, GNAHRGIS 3-mile radius, and USFWS coordination				

Sun-loving Draba

State-protected sun-loving draba is associated with granite outcrop habitats similar to that of the federally listed plants previously mentioned. Neither granite outcrops nor sun-loving draba were observed during field surveys of the ECGR Project area.

Oglethorpe Oak

There was one occurrence of the Oglethorpe oak recorded in Georgia's Natural, Archaeological, and Historic Resources Geographic Information System (GNAHRGIS) database. However, in the database, the record is noted as expiated. No occurrences or suitable habitat was observed for the Oglethorpe oak during ecology surveys.

Pink Lady Slipper

The Pink lady slipper is a wildflower in the orchid family. It is state listed as unusual. Potential habitat was observed for the Pink lady slipper, which includes a mixed pine-hardwood forest. No occurrences of this species were observed during the ecology surveys.

Bald Eagle

In addition to the Migratory Treaty Bird Act (MTBA) and the Bald and Golden Eagle Protection Act (BGEPA), the bald eagle is also protected as state listed, threatened. No occurrences, nests, or suitable foraging habitat was observed during the ecology surveys. However, Lake Oconee provides foraging habitat for the Bald eagle. At its closet point, Lake Oconee is approximately 0.5-miles from the ECGR Project. See subsequent sections for MTBA and BGEPA discussion.

Altamaha Shiner

Larger streams surveyed for the ECGR Project are suitable habitats for the Altamaha shiner. Aquatic surveys were not conducted by Ecological Solutions. However, both Jacks Creek and Apalachee River have known populations within 3-miles of the ECGR Project area. Streams identified as suitable habitat during ecology surveys for Altamaha shiner habitat are listed below.

East Walton - Rockville 500 kV Transmission Line

- Unnamed Tributaries JWAT01, JWAT02, JWAT05, and JWAT06
- Long Branch - JWAT19
- Hard Labor Creek – JWAT33
- Briar Creek – JWAT39
- North Sugar Creek – JWAT58
- South Sugar Creek – JWAT59, JWAT61
- Little Sugar Creek – JWAT 67

East Walton – Rockville 500 kV and Boswtick - East Walton 230 kV Transmission Line

- Jacks Creek – JWAT04
- Indian Creek – JWAT07, JWAT08

East Walton – Jacks Creek 230 kV Transmission Line

- Unnamed perennial stream – JWAT13
- Grubby Creek – JWAT14
- Jacks Creek – JWAT15, JWAT16

Bethabara – East Walton 230 kV Transmission Line
- Apalachee River – JWAT06
- Jacks Creek – JWAT 12

East Walton 500/230 kV Substation site
- Altamaha shiner habitat not present

Bostwick 230 kV Switching Station site
- Jacks Creek – JWAT01
- Unnamed perennial stream – JWAT02

Jacks Creek 230 kV Switching Station site
- Jacks Creek – JWAT01

Rockville 500 kV Switching Station site
- Altamaha shiner habitat not present

4.7.1.2 Environmental Consequences

During the ecology survey, no observations were made of the five (5) federally listed species or the five (5) state-protected species, habitat was observed for the Monarch butterfly, tricolored bat, and the pink lady slipper.

Monarch Butterfly – Federal Candidate, Proposed Federally Threatened
Milkweed was not observed during the ecology surveys. The development of the ECGR Project will not cause loss of foraging habitat. Conversely, it is more likely that the ECGR Project will create additional foraging habitat in the long-term due to the cyclical nature maintenance of the proposed transmission in ROWs. The three- (3) and seven- (7) year cyclical nature of transmission line ROW maintenance prevents growth of woody vegetation and provides an herbaceous environment suitable for local wildlife including pollinators. Therefore, the ECGR Project is "not likely to jeopardized" the Monarch butterfly. The Monarch butterfly is addressed in the Biological Assessment (BA) (see Appendix F-1 - Biological Assessment; primarily developed to address the Tricolored bat).

Tricolored Bat – Proposed Federally Endangered
GTC discussed this project with the USFWS Athen Field Office on several occasions. USFWS requested a Biological Assessment (BA) to be developed based on the location of the ECGR Project, length of the proposed transmission line, and amount of tree clearing required to construct and maintain the transmission facilities; as well as the documentation of Tricolored bats using culvert roots along with I-20 corridor in proximity of the ECGR Project area. GTC contracted with Ecological Solutions to develop the BA which outlines the amount of proposed forested clearing anticipated for the ECGR Project as well as the proposed timelines for when that clearing will occur (see Appendix F-1 -Biological Assessment). The determination of the BA and concurrence by RUS is that the ECGR Project is "not likely to jeopardize" the Tricolored Bat.

GTC has committed to observing recommended restricted tree clearing windows; with some possible clearing being required should unforeseen circumstances occur. GTC will make

concerted efforts to conduct tree clearing outside of the current Tricolored bat tree removal restrictive periods except for the vacant transmission line ROW in Putnam County.
Avoidance and minimization measures would be implemented by GTC to minimize harm or take for this species during construction. The section of existing, vacant transmission line ROW in Putnam County can be cleared any time of year due to the early successional nature of the forest and low probability of use by the tricolored bat. USFWS issued an Emergency Consultation Letter in response to the BA concurring with the "not likely to jeopardize" determination for both he Tricolored bat and Monarch butterfly. (see Appendix F-2 – USFWS Emergency Consultation Letter).

Pink Lady Slipper – State Unusual
No occurrences of this species were observed during the ecology field surveys. Surveys were conducted during the appropriate survey time of year to observe the plant species if it were present. Therefore, adverse effects to pink lady slippers are not anticipated.

Altamaha Shiner – State Threatened
Although aquatic surveys were not conducted, surveys for suitable habitat for the Altamaha Shiner were undertaken. Several large perennial streams were identified as suitable habitat during the ecological field surveys and two (2) of these streams have known occurrences per GA DNR's Biodiversity Portal. GTC will avoid dredge or fill impacts within these streams where practicable. If a culvert is needed for a vehicular crossing, GTC will follow guidelines provided in the *Georgia Stream Crossing Handbook* (Georgia Aquatic Connectivity Team, 2021) and with correspondence provided by Ga DNR (See Appendix F-3). GTC will incorporate stringent BMPs in the E&SC plans and implement those plans to protect water resources. Therefore, adverse effects to Altamaha Shiners are not anticipated.

4.7.1.3 Mitigation

For the tricolored bat, GTC has agreed to adhere to the restricted summer tree clearing season (May 1 – July 15) and the restricted tree clearing season for winter (December 15 to February 15) except for early successional vegetation growth within the vacant ROW in Putnam County; with some possible clearing being required should unforeseen circumstances occur. GTC has also committed to surveying culverts for tricolored bats if 1) the culvert needs replacing, and 2) the culvert meets suitable winter hibernacula guidelines provided by USFWS, which include culvert size and composition.

4.7.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 703 - 712) implements the conventions between the U.S., Great Britain (on behalf of Canada), Mexico, Japan, and Russia for the protection of migratory birds. MBTA prohibits take, which includes pursuing, hunting, taking, capturing, killing, or attempting to do the same to migratory bird species and their eggs and nests).

Design of the proposed transmission lines will meet or exceed standards outlined within the Avian and Power Line Interactions Committee's 'Suggested Practices for Protection on Powerlines: The State-of-the-Art 2006' and Rural Utilities Service 'Avian-Safe Design Standards', minimizing effects to migratory bird species.

GTC currently has an active Migratory Bird Special Purpose Utility (SPUT) Permit through the USFWS. A condition of this permit requires the submittal of an annual report to the USFWS Region 4 Migratory Bird Office. This report summarizes and documents all known avian interactions on GTC facilities.

4.7.2.1 Affected Environment

Migratory birds would most likely utilize the forested areas and pastures along the proposed transmission line routes and substation sites for nesting and foraging. Suitable habitat for migratory birds exists throughout the project area.

Raptor nests were not observed along the majority of the project corridors. However, one inactive osprey nest was observed on the GPC existing Eatonton Primary #2 – Wallace Dam 230 kV transmission line within GPC's property near the location of the Rockville 500 kV Switching Station. This nest falls outside the ECGR Project's construction area, approximately 1000-feet north of the Rockville 500 kV Switching Station site plan. (See Appendix E – Ecology Survey)

4.7.2.2 Environmental Consequences

Logging activities can disrupt migratory birds. However, land use patterns along the project corridors are a patchwork of forested, agricultural, and rural residential. These areas are also crossed by multiple transportation corridors. Larger acres of intact forest exist outside of the project area associated with the Oconee National Forest and state WMAs. Also, the majority of tree clearing activities will occur within proposed linear corridors varying in widths of 30-feet to 225-feet. Therefore, the ECGR Project is expected to have a de minimis effect on migratory birds and migratory bird habitats.

Construction activities connected to the ECGR Project are not expected to affect the osprey nest observed during the ecology surveys. Due to the proximity to Lake Oconee and Lake Sinclair, osprey may choose to nest on the proposed 500 kV structures once constructed. If nests are built on the proposed structures, GTC will manage those nests in compliance with the MBTA.

In the event an interaction with migratory bird species occurs after the proposed ECGR Project is in operation, the interaction will be included in an annual report required as a condition under the SPUT permit.

4.7.2.3 Mitigation

No mitigation is required.

4.7.3 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940, as amended, prohibits anyone without a permit issued by the USFWS from incidental or purposeful "taking" of bald or golden eagles, including their parts, nests, or eggs.

4.7.3.1 Affected Environment

The project is within the range of the bald eagle, but neither eagles nor their nests were observed during the ecology surveys. (See Appendix E – Ecology Survey)

4.7.3.2 Environmental Consequences

No impacts to bald eagles or golden eagles are anticipated.

4.7.3.3 Mitigation

No mitigation is required.

4.7.4 General Fish, Wildlife, and Vegetation Issues

The Ecology Report (Appendix E) developed by Ecological Solutions characterizes the majority of the vegetation within the ECGR Project as agricultural lands, maintained roadside/transmission line ROW, planted pine, mixed pine-hardwood forests, floodplains, early successional vegetation growth in previously disturbed areas, and aquatic resources. These areas are bisected by transportation corridors, including I-20 and various other highways and county roads. Bottomland forests exist along streams and wetland systems that the proposed transmission line project crosses perpendicularly. These habitats are common across Morgan, Oconee, Putnam, and Walton Counties, GA. No trout streams exist within the project area.

4.7.4.1 Affected Environment

Vegetation will be removed within the limits of disturbance for each substation and switching station site. Woody vegetation within the proposed transmission line ROW will need to be cleared. The transmission line ROW along county roads will be approximately 30-feet in width. Cross-country sections of the transmission line projects will be 100-feet to 225-feet in width. Individual trees just outside the transmission line ROW deemed to be a danger tree (dead, diseased, or leaning trees) will be removed for the safe and reliable operation of the transmission line facilities.

4.7.4.2 Environmental Consequences

Disturbance to wildlife is expected to be minimal and temporary during the clearing and construction of the proposed ECGR Project. Forested areas occurring within wetlands and close proximity to streams will be cleared by minimizing ground disturbance and leaving root systems in place. Stringent BMPs will be incorporated into the E&SC plans to prevent sedimentation. Transmission line ROW maintenance occurs on a three- (3) and seven- (7) year cyclical nature to prevent the growth of woody vegetation. The cyclical maintenance events assists in providing habitat for turkey, deer, and other wildlife species. The ECGR Project is not expected to have a significant impact on local wildlife.

4.7.4.3 Mitigation

No mitigation is required.

4.8 Cultural Resources and Historic Properties

Section 106 of the National Historic Preservation Act (NHPA) requires that Federal agencies review the impact of their undertakings (construction loan guarantees, contract approvals, etc.) on historic properties. For the purposes of Section 106 review, historic properties include archaeological sites and districts, historic structures and districts, traditional cultural properties, and other resources listed in or eligible for listing in the National Register of Historic Places (NRHP).

GTC is a third-party participant in a Programmatic Agreement (PA) with the RUS and Georgia State Historic Preservation Office (SHPO) (Appendix G). This PA facilitates compliance under Section 106 and 110 of the National Historic Preservation Act [16 U.S.C. §470(f)], as authorized by the Advisory Council of Historic Preservation's (ACHP) regulations in 36 CFR §800.14 for construction, modification, and relocation of transmission facilities by GTC. Under the terms of the PA, if a proposed project is determined to have an adverse effect on a National Historic Landmark, a NRHP -listed historic property, a traditional cultural property, a listed or eligible archaeological site or district, or an eligible historic district, Georgia Transmission initiates consultation with the SHPO as appropriate. GTC, SHPO, and RUS then agree on a plan of resolution.

Letters were mailed to potential consulting parties inviting them to participate in the Section 106 process for the proposed ECGR Projects on June 20, 2023. (See Appendix K-2 – provided under a separate cover). Parties invited to become participants in the Section 106 consultation process for the ECGR Project are the:

- City of Good Hope
- City of Buckhead
- City of Monroe
- Morgan County Commission
- Oconee County Commission
- Putnam County Commission
- Walton County Commission
- Northeast Georgia Regional Commission
- Middle Georgia Regional Commission
- Morgan Co. African American Museum
- Morgan County Historical Society
- Morgan County Landmarks Society
- Eatonton-Putnam Co. Historical Society
- Uncle Remus Museum Association
- Oconee County Historical Society
- Historical Society of Walton County
- Madison Morgan Conservancy
- Historic Preservation Society of Social Circle
- Madison Historic Preservation Commission
- Monroe Historic Preservation Commission
- Georgia Trust for Historic Preservation

The following Native American tribes were also invited to participate in the Section 106 process (See Appendix K-1 – provided under a separate cover):

- Alabama – Quassarte Tribal Town
- Cherokee Nation
- Coushatta Tribe of Louisiana
- Eastern Band of Cherokee Indians
- Muscogee (Creek) Nation.

Responses were received from the Middle Georgia Regional Commission and the Morgan County Board of Commissioners. (See Appendix K-3 – provided under a separate cover)

4.8.1 Archaeological Resources

The proposed project was previously surveyed for archaeological resources between 2007 and 2010, and a series of reports were prepared at that time. A formal reevaluation of these reports was completed to address these reports' age, methodologies, and modifications to the project footprint. GTC contracted with NV5 to conduct a thorough review and analysis to assess the overall status of the project's regulatory compliance regarding the previous archaeological work performed as well as provide recommendations for additional survey or resurvey efforts. The original archaeologist was involved with the original surveys conducted between 2007 and 2010, as well as the current archaeology survey effort. The analysis, findings, and recommendations are summarized in a memo dated June 12, 2023. (Appendix H-1 – provided under a separate cover)

GTC proposed to follow these recommendations to supplement the previous archaeology survey efforts. GTC contracted with NV5 to conduct a Phase I Archaeological Survey to ensure current survey methodologies were used and surveys cover the current ECGR Project area. NV5 implemented this plan which involved resurveying some sites and surveying potential survey gaps from the previous version of the project. To determine whether there are archaeological sites listed on or recommended eligible for listing on the NRHP, surveys included both archival research and field investigations, consisting of walkover observation and shovel testing at 30-60-meter intervals and on high probability landforms.

4.8.1.1 Affected Environment

For the purposes of the archaeological survey, the area of potential effects (APE) was defined as the transmission line ROWs, substation and switching station sites, a laydown yard, temporary construction ROWs and the off-ROW access roads. The APE does or does not include any federal and/or tribal lands as defined pursuant to 36 CFR § 800.16(x).

The report titled, "Archaeological Resources Survey of The East Central Georgia Reliability Project Morgan, Walton, Oconee, and Putnam Counties, Georgia" dated March 2024 (Appendix H-2 – provided under a separate cover) describes the updated results of the archaeological survey of the APE. The survey identified 16 previously unrecorded archaeological sites (9MG742 through 9MG748, 9WN224 through 9WN228, and 9OC458), and three Isolated Finds in the ECGR Project survey area.

9MG746, is recommended eligible for inclusion on the NRHP. Site 9MG746 is a multicomponent scatter of precontact lithic and ceramic artifacts mixed with twentieth century artifacts in Morgan County. GTC originally identified this area as a laydown yard along the proposed East Walton – Rockville 500 kV Transmission Line. However, after the discovery of the site, GTC will not develop a laydown yard on this property.

Site 9WN227 is not recommended as NRHP eligible. However, it is a historic cemetery including human interments in Walton County. The cemetery would be preserved and avoided by implementation of the ECGR Project. This site falls outside the proposed East Walton – Jacks Creek 230 kV Transmission Line ROW.

In addition, 22 previously recorded sites whose boundaries intersect the APE were surveyed again to assess their current condition and accurately delineate their current boundaries within the APE. Of these, only seven of the previously recorded sites were rediscovered within the APE. Of the previously recorded archaeological sites which were successfully rediscovered during the current survey, only one (9MG663) is recommended eligible for the NRHP. This site is within the proposed East Walton – Rockville 500 kV Transmission Line ROW in Morgan County. This site includes a single human grave and multicomponent scatter of precontact lithic and twentieth century artifacts. NV5 used ground penetrated radar (GPR) to ensure no additional graves were in the APE.

4.8.1.2 Environmental Consequences

Although Sites 9MG746, 9MG663 and 9WN227 are within or in proximity to the development of the ECGR Project transmission line ROWs, these sites will be protected during project implementation. GTC will also place these sites in GTC's archeological site monitoring program to ensure these sites are not inadvertently disturbed during future maintenance activities. Therefore, the ECGR Project is not expected to adversely affect archaeological resources in the project area.

In the event of inadvertent archaeological discoveries anywhere along the ECGR Project during construction activities, GTC will follow steps addressed in the aforementioned PA.

4.8.1.3 Mitigation

For areas of these sites that fall within the ECGR Project ROWs, GTC clearing contractors will remove vegetation around these sites with hand clearing techniques that will involve no ground disturbance. Geotextile fabric may be incorporated, as necessary. Orange barrier protective fencing will be placed surrounding the sites to prevent inadvertent damage during the ECGR Project construction activities.

4.8.2 Historic Resources

Due to the age of the previous 2007 historic resource surveys, a new survey was conducted to identify any properties 50 years of age or older within the APE of the proposed project. For planning purposes, the survey date was extended to include any properties constructed in 1977 or earlier. GTC contracted with NV5 to reconduct a Historic Resource Survey (a Phase I Survey) to identify structures and make a recommendation of NRHP eligibility within the ECGR Project APE. NV5 assessed effected historic resources identified in the Historic Resource Survey (a Phase II Survey). NV5 combined their Phase I and Phase II Surveys into one report titled 'Historic Resources Survey Report and Assessment Report of Affects Recommendations - East Central Georgia Reliability Projects - June 2024'. (Appendix I – provided under a separate cover)

4.8.2.1 Affected Environment

NV5 identified 302 properties. Of these, 38 were recommended eligible for inclusion on the NRHP. Three (3) additional properties within the APE are listed on the NRHP. These include:

- Turnwold Plantation
- Gatewood House
- Apalachee School.

Apalachee School is located within the Apalachee Historic District, which was recommended eligible for the NRHP. Three previously identified resources were also located within the APE of the project. The Georgia Mainline Railroad and the Macon & Northern Railway were both determined eligible for the NRHP in Georgia's Railroads, 1833-2015: Historic Context and Statewide Survey, while the Bostwick Railroad/Greene County Railroad was determined to be not eligible for the NRHP.

4.8.2.2 Environmental Consequences

In accordance with the "Programmatic Agreement Among the RUS, SHPO, and GTC", which was implemented in 2024 (See Appendix G), RUS will initiate consultation with the Georgia SHPO if a proposed project will affect a National Historic Landmark, a NRHP listed historic property, a traditional cultural property, or an eligible historic district. Therefore, on December 7, 2023, GTC and RUS cultural resources staff met with the Georgia SHPO (Georgia HPD) to discuss impacts to the following properties:

- Resource 23 - Turnwold Plantation (NRHP Listed)
- Resource 25 - Wards Chapel Road Historic District (NRHP Recommended Eligible)
- Resource 29 - Gatewood House (NRHP Listed)
- Resource 148 - Apalachee Historic District (NRHP Recommended Eligible)

It was discussed that the proposed project may result in an Adverse Effect to the NRHP listed Turnwold Plantation due to the location on the plantation property and within the NRHP listed boundary. It should be noted that the vacant transmission line ROW was previously developed through this boundary, and the proposed East Walton – Rockville 500 kV Transmission Line is located within the vacant ROW. The ROW through this area is straight. Any alternatives around this historic resource would result in more 500 kV structures and potentially larger structures due to angles. One (1) lattice steel tower will be located within the plantation NR boundary (See Figure 15.0). The location of these towers will minimize visual effects to the plantation home and surrounding outbuildings. GTC contracted with Merrick & Co. (Merrick) to demonstrate visibility to the proposed transmission line towers from the buildings through a 3D model developed from LiDAR data, orthophotography, and lattice tower design drawings. From these models, Merrick developed conceptual photos of the lattice towers from the plantation home. (See Figures 16.0 and 17.0)

Figure 15.0 – Turnwold Plantation NR Boundary

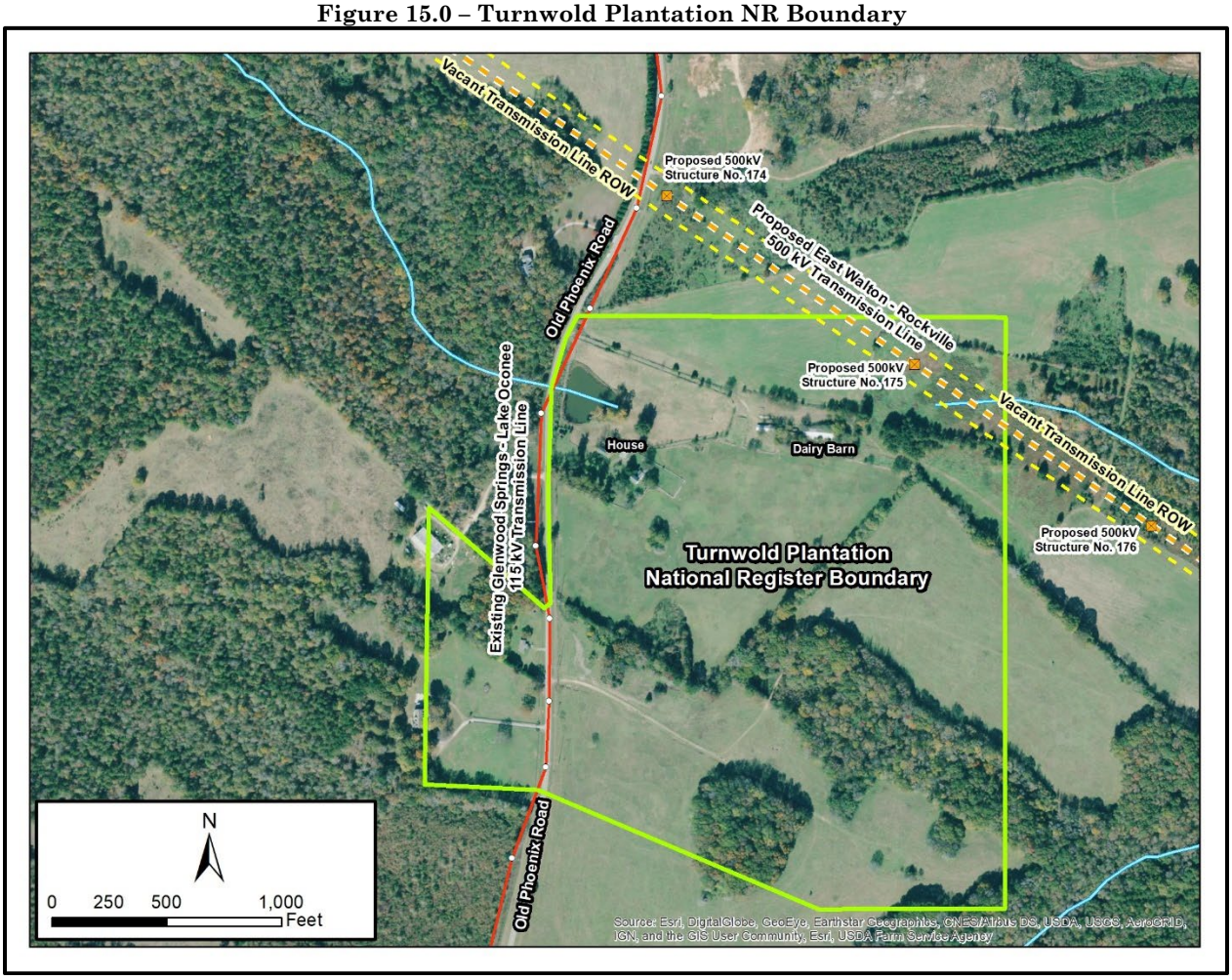
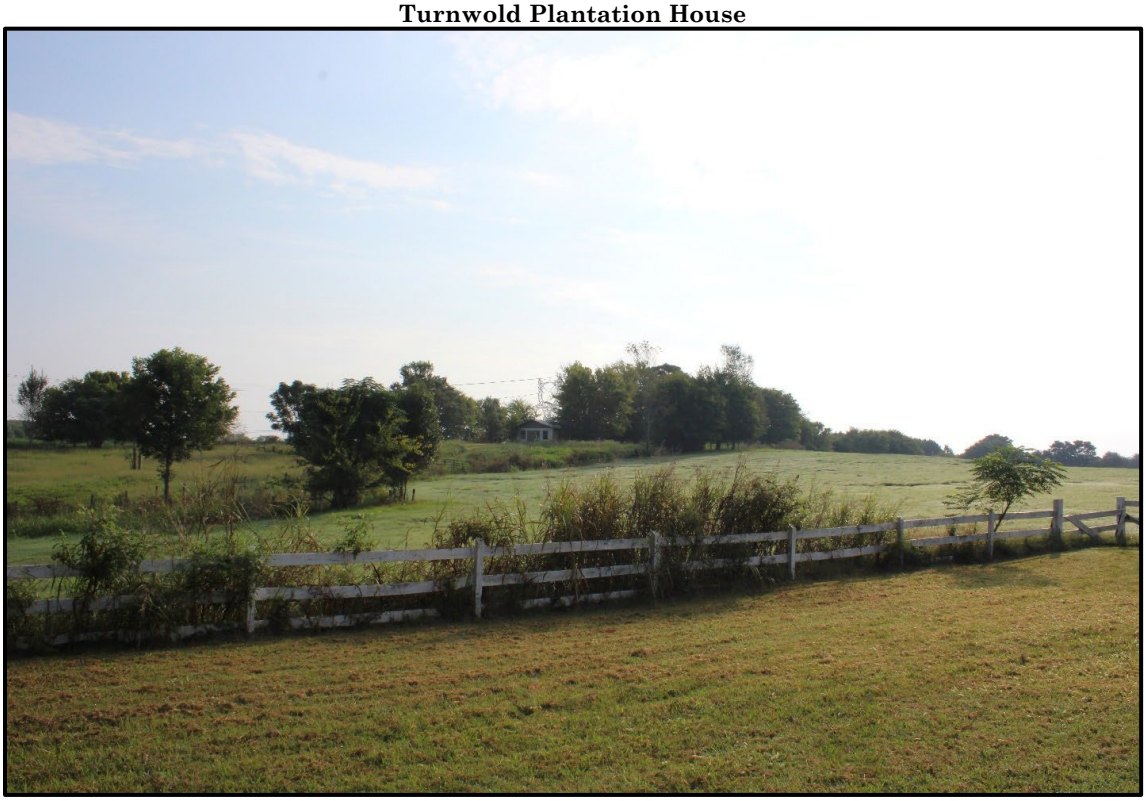


Figure 16.0 – Photo Rendering of view towards Proposed 500 kV Structure No. 174 form Turnwold Plantation House

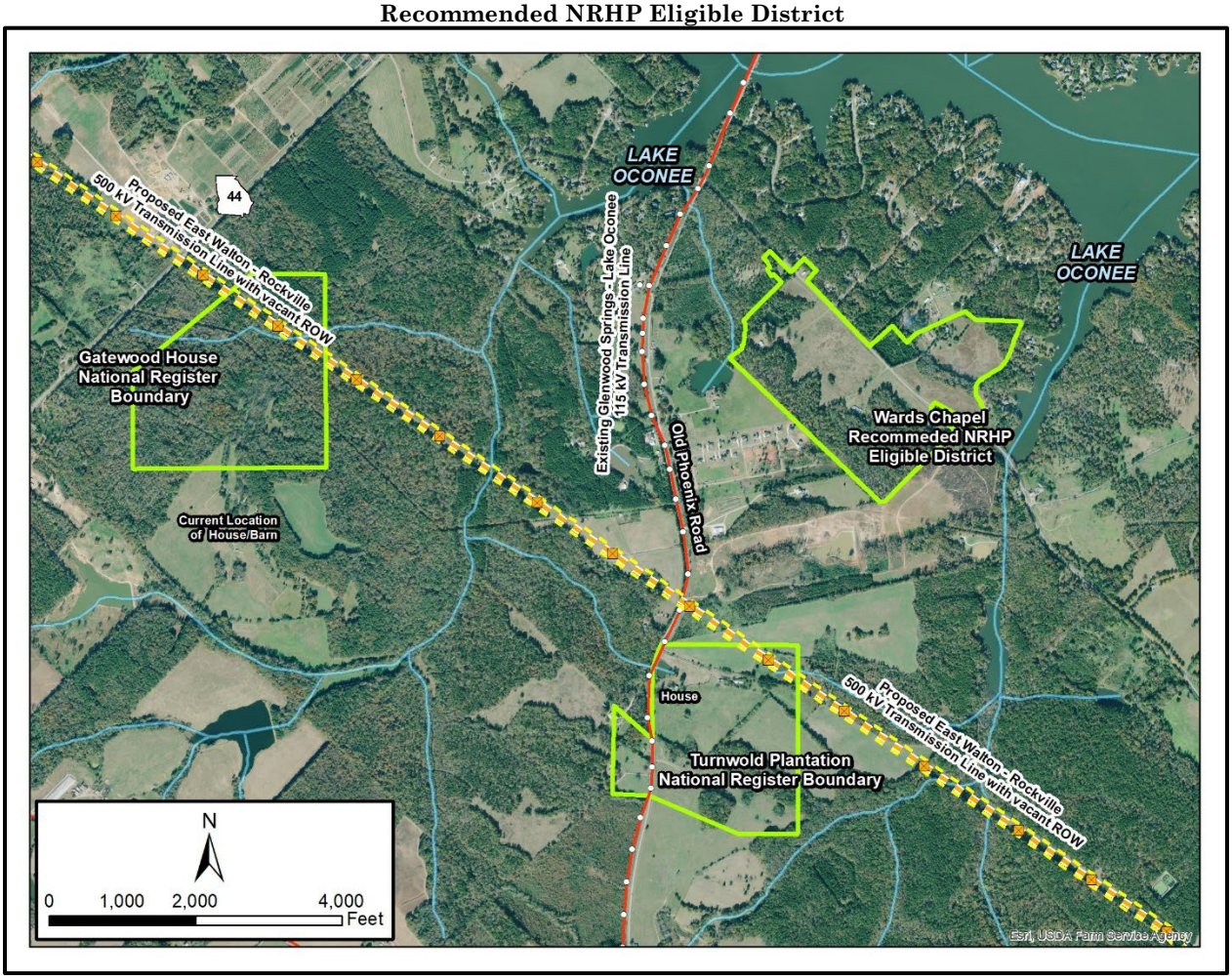
Figure 17.0 – Photo Rendering of view towards Barn and Proposed 500 kV Structure No. 175 form Turnwold Plantation House



The Wards Chapel Road Historic District is recommended to be eligible to the NRHP. The ECGR Project would result in a finding of No Effect to Wards Chapel Road Historic District as this property is located at the edge of the study area and would not be physically or visually impacted by the proposed East Walton – Rockville 500 kV Transmission Line. (See Figure 18.0)

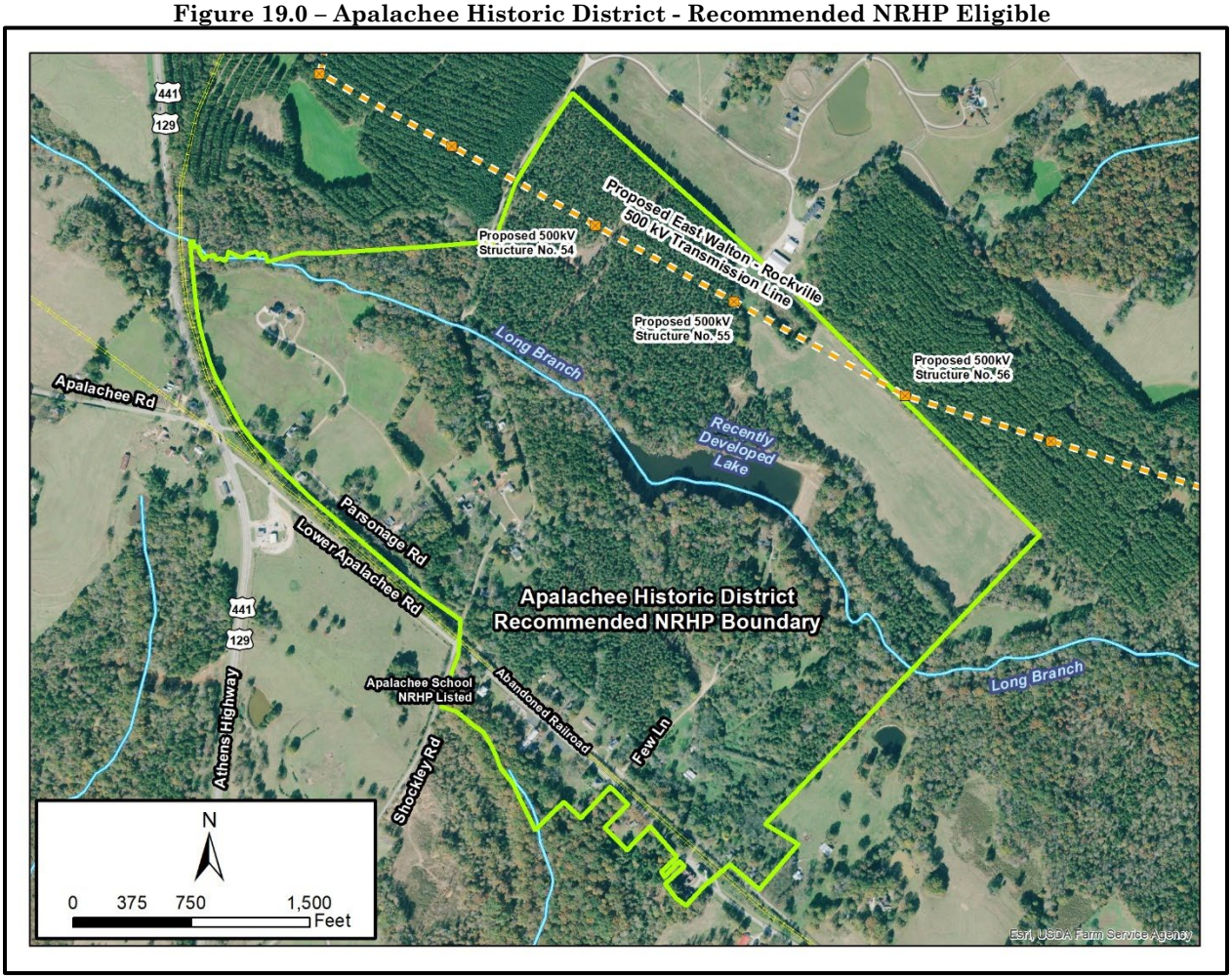
The Gatewood House is listed on the NRHP, it has twice been relocated and is currently on a site located far outside the APE of the project. It was determined that the ECGR Project would result in a finding of No Adverse Effect to the remaining structures formerly associated with the Gatewood House. (See Figure 18.0)

Figure 18.0 – Turnwold Plantation NR Boundary, Gatewood House NR Boundary, Wards Chapel Recommended NRHP Eligible District



The NRHP Listed Apalachee School is located within the larger Apalachee Historic District; however, the school itself is located at the edge of the study area, and it was determined that the project would result in a finding of No Effect to the school. However, due to the location within the NRHP recommended eligible Apalachee Historic District, the East Walton – Rockville Transmission Line may have an Adverse Effect to this resource. The proposed transmission line route primarily crosses through planted pine through this historic district with no visibility to historic buildings within the district. (See Figure 19.0)

Figure 19.0 – Apalachee Historic District - Recommended NRHP Eligible



The consultants recommended adverse effects to six (6) additional properties. These include:

- Resource 13 - a circa 1900 Gabled Ell house
- Resource 70 - a circa 1920 Georgian Cottage
- Resource 165- an 1881 cemetery
- Resource 170- a 1962 Ranch House
- Resource 276- a 1930 Bungalow
- Resource 277- a 1910 Bungalow

Based on the findings of the reevaluation dated 2023 and reports dated 2024, a finding of no adverse effect in accordance with 36 CFR § 800.5(b) is appropriate for the referenced project.

4.8.2.3 Mitigation

For physical and visual adverse effects to the Turnwold Plantation and the Apalachee Historic District resources, GTC will procure and submit to HPD (Georgia SHPO) an historic resources survey of the ECGR Project. The survey will encompass properties in Oconee, Morgan, Walton, and Putnam Counties, Georgia to include agricultural structures/buildings/resources/property types forty (40) years of age or older. All project work shall conform to the Secretary of the Interior (SOI) Standards for Archaeology and Historic Preservation, which include the Standards for Evaluation, Identification, and Registration. GTC will ensure that all survey data and digital photographs are entered in the GNAHRGIS online database. GTC will provide an electronic draft deliverable to HPD for review and comment (see Appendix J-1 – provided under a separate cover).

The six (6) historic properties that are recommended as adverse effects in NV5's report are mitigated programmatically through the terms outlined in the previously discussed PA. The PA requires GTC to engage in programmatic mitigation measures. One of those measures is funding the FindIt Program. The FindIt Program is described on the University of Georgia (UGA) College of Environment and Design website as:

> "… a state-wide cultural resource survey program sponsored by GTC in partnership with the Department of Community Affairs - Historic Preservation Division, (DCA-HPD). FindIt is housed at the Center for Community Design and Preservation (CCDP) at the College of Environment and Design (CED) at the University of Georgia and was created to help document historic resources throughout Georgia, facilitating their preservation.
>
> FindIt began as a program in 2002 to provide data to the DCA-HPD by teaching students to identify and document cultural resources. Students are trained to locate historic structures and perform fieldwork including architectural identification, mapping, and data analysis. The program serves as one component of GTC's environmental review requirements and provides support to the university through the funding of staff positions and graduate assistantships. This partnership creates a student learning experience that is unavailable elsewhere on campus. Students can experience fieldwork first-hand, having surveyed over 60 Georgia counties and cities thus far." - https://ced.uga.edu/pso/findit/

As another mitigation measure, GTC sponsored the development of The Ranch House in Georgia: Guidelines for Evaluation, published in May 2010.

GTC is currently involved in a research project to develop an historic context for Georgia's electric grid.

4.8.3 Tribal Coordination

Consideration of impacts to traditional cultural properties of importance to Native American tribes is an important aspect of Section 106 consultation. The Tribal Directory Assessment Tool (TDAT), developed by the Office of Environment and Energy (OEE) to provide tribal contact information, was used to identify Tribal Historic Preservation Officers (THPOs) and tribal leaders for the proposed ECGR Project.

The following Native American tribes were invited to participate in the Section 106 process:

- Alabama – Quassarte Tribal Town
- Cherokee Nation
- Coushatta Tribe of Louisiana
- Eastern Band of Cherokee Indians
- Muscogee (Creek) Nation

No responses to the letters of initiation were received from the tribes. Notifications of Emergency Undertaking pursuant to 36 CFR § 800.12(b) were sent on May 20, 2025, and no objections to the Project were received. Tribal coordination letters are contained in Appendix K-1 (provided under a separate cover).

4.9 Aesthetics

The proposed ECGR Project does not visually affect designated wilderness areas, parks, recreation areas, or wild/scenic rivers. Based on the location of the proposed East Walton – Rockville 500 kV Transmission Line, visual effects to historic resources will be minimal and are mitigated through the terms of the Programmatic Agreement.

4.10 Air Quality

Under the Clean Air Act, the Environmental Protection Agency (EPA) set National Ambient Air Quality Standards (NAAQS) for "criteria" pollutants (ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, and lead). Morgan and Oconee Counties, GA are not located in a designated nonattainment or maintenance area, and a conformity evaluation is therefore not required. Putnam and Walton Counties, GA were placed in maintenance status in 2016 and have achieved attainment, and a conformity evaluation is therefore not required.

Any potential air quality effects will be construction-related and therefore short-term. The usual fugitive dust and vehicular emissions from construction related activities will be localized and temporary. GTC projects comply with the State of Georgia Rules for Air Quality Control (Chapter 391-3-1) for construction activities. This proposal will not have a significant impact on short- or long-term air quality.

4.12 Miscellaneous Issues

4.12.1 Noise

The proposed construction of the ECGR Project requires the operation of land clearing, grading, and construction equipment which will create limited and temporary construction-related noise. Noise will be attenuated by existing vegetative buffers and distance to homes. Noise generated by the project is not expected to cause short or long-term adverse effects.

4.12.2 Transportation

The proposed ECGR Project crosses and parallels a series of county roads and highways through Morgan, Oconee, Putnam and Walton Counties. These roads will be utilized during the construction of the proposed projects. Clearing and construction activities and the traffic they generate will be small in scale and temporary on these roads. The proposed East Walton

- Rockville 500 kV Transmission Line crosses Interstate-20 (I-20) in Morgan County. I-20 will not be utilized for clearing, construction, or future maintenance activities for the proposed East Walton – Rockville Transmission Line. I-20 will be crossed aerially with conductors and shield wires associated with the proposed East Walton – Rockville 500 kV Transmission Line. Shield wires will contain fiber optics. A permit from Georgia Department of Transportation (GDOT) will be acquired for this project to cross I-20 at this location as well as other U.S. Highways and State Routes (SR). Permits for crossing county roads will be acquired from individual county transportation departments. Adverse effects are not anticipated to area roads and highways by the proposed ECGR Project.

Roads crossed include:
East Walton – Rockville 500 kV Transmission Line

Putnam County

- Oconee Springs Rd
- Texas Chapel Rd
- SR 16 / Sparta Hwy
- Spivey Rd
- Wards Chapel Rd
- Old Phoenix Rd
- SR 44 / Greensboro Rd
- Denham Rd
- Lower Harmony Rd
- Harmony Rd

Morgan County

- Clarks Ford Rd
- Cochran Rd
- Bethany Rd
- Seven Islands Rd
- I-20
- Baldwin Dairy Rd
- Ferrell Ln
- Buckhead Rd
- U.S. Hwy 278 / Greensboro Hwy
- Lower Apalachee Rd
- Lower Apalachee Rd (2nd crossing)
- Sidwell Rd
- U.S. Hwy 441/129 / Athens Hwy
- Beal Ln
- Wagnon Mill Rd
- Price Mill Rd
- High Shoals Rd

East Walton – Rockville 500 kV and Bostwick – East Walton 230 kV Transmission Lines

Walton County

- Indian Creek Rd (Morgan/Walton County Line)
- Preston Rd
- Moina Michael Rd
- SR 186

East Walton - Jacks Creek 230 kV Transmission Line

Walton County

- Thurston Snow Rd
- Jim Edmondson Rd
- Jacks Creek Rd NW
- Bearden Rd
- SR 83 (parallel)
- SR 83 / Unisa Dr (parallel to highway)
- U.S. Highway 78
- Old Athens Hwy (parallel to road)

Bethabara – East Walton 230 kV Transmission Line

Walton County

- George Laboon Rd (parallel to road)
- Jones Wood Rd
- Snows Mill Rd (parallel to road)

Oconee County

- Snows Mill Rd (parallel to road)
- Rogers Rd (parallel to road)
- Lane Creek Rd (parallel to road)
- Moores Ford Rd
- SR 53 / Hog Mountain Rd (parallel to hwy)
- U.S. Hwy 78 / Monroe Hwy

In addition to crossing a series of public roads and highways, the ECGR Project crosses two (2) rail lines and a pipeline in Morgan County. The proposed East Walton – Rockville 500 kV Transmission Line crosses a section of CSX Transportation rail line on the east side of the city of Buckhead. Also, the proposed East Walton – Rockville 500 kV Transmission Line crosses an abandoned Athens Line, LLC rail line in three locations. Rail lines will not be utilized for clearing, construction, or future maintenance activities. Permits for crossing the rail lines will be acquired from the individual railroad companies. Also, the proposed East Walton – Rockville 500 kV Transmission Line crosses a liquified petroleum gas line owned by Dixie Pipeline. GTC will acquire a permit from the pipeline company.

Adverse effects are not anticipated to area roads, highways, railroads, or pipelines by the proposed transmission line projects.

The proposed substation and switching station facilities will have driveway access from the following public roads:

- East Walton 500/230 kV Substation will have access driveways off SR 186.
- Bostwick 230 kV Substation will have access driveways off High Shoals Rd.
- Jacks Creek 230 kV Substation will have an access driveway off Old Athens Hwy and may also use existing access off Gratis Rd.
- Rockville 500 kV Switching Station will have access driveways off Rockville Rd.

GTC will acquire the necessary driveway permits for the proposed East Walton, Bostwick, and Jacks Creek facilities. GPC will acquire any necessary permits for the Rockville 500 kV Switching Station.

Adverse effects are not anticipated to area roads and highways by the proposed substation projects.

There are several regional and municipal airports in the area.

At its closest point, the proposed East Walton - Jacks Creek 230 kV Transmission Line is 1.25-miles from the Monroe County Airport. Given the distance to the airport, this project does meet the criteria requiring notification of the Federal Aviation Administration (FAA), as outlined in FAA Regulations, 14 CFR Part 77, Objects Affecting Navigable Airspace. GTC will file a notification with FAA regarding proposed structure locations, proposed structure

heights, ground heights, and heights of cranes needed to erect the structures. GTC will make design modifications necessary (i.e. marker balls) as directed by FAA to ensure the project has no adverse impacts to airport glidepaths.

At its closet point, the proposed East Walton – Rockville 500 kV Transmission Line is 2.5-miles from the Madison Municipal Airport. Two additional airports are both 13-miles from the proposed ECGR Project: Athens/Ben Epps Airport and the Greene County Regional Airport. Given the distance to these airports, the proposed East Walton – Rockville 500 kV Transmission Line, Bostwick – East Walton 230 kV Transmission Line, and Bethabara – East Walton 230 kV Transmission Line projects do not meet the criteria requiring notification of the Federal Aviation Administration (FAA), as outlined in FAA Regulations, 14 CFR Part 77, Objects Affecting Navigable Airspace.

No impacts to transportation resources are anticipated.

4.13 Human Health and Safety

4.13.1 Electromagnetic Fields and Interference

The proposal for the ECGR Project introduces new high-voltage, transmission level sources of electromagnetic fields (EMF). However, the EMF frequency diminishes greatly with distance from the transmission line conductors (wires) and substation equipment to nominal levels past the proposed transmission line ROWs and the substation / switching station fences.

With respect to radio and television interference, the new transmission facilities will be properly constructed and grounded, and the project is not expected to generate significant radio or television interference.

In consideration of public protection, the proposed ECGR Project will be designed to comply with the National Electrical Safety Code in effect at the time construction begins. GTC's experience in designing, building, and operating these types of facilities indicates that the facility will be durable, structurally sound, and pose no threat to public health and safety under normal operating conditions and anticipated emergency conditions.

4.13.2 Environmental Risk Management

During the summer of 2024, GTC contracted with Remtech Engineers (Remtech) to survey evidence of recognized environmental conditions (ERCs) on or adjacent to the proposed East Walton 500/230 kV Substation, Bostwick 230 kV Switching Station sites, or the proposed laydown yard. This type of survey is known as a Phase I Site Environmental Assessments (Appendix L – Phase I Environmental Site Assessments – provided under a separate cover). The only ERC noted was evidence of community dumping on the East Walton Substation site. Further investigation (a Phase II Environmental Site Assessment) demonstrated that no hazardous materials were present on the East Walton Substation site. Uncontrolled or unpermitted release of hazardous substances, pollutants, contaminants, or petroleum and natural gas products are not anticipated for proposed transmission line and substation projects. GTC will use qualified contractors to dispose of oil and other materials if needed.

Therefore, these projects will not have an adverse environmental effect in regard to waste disposal.

These projects will fall under the state's NPDES GAR100002 Construction Stormwater General Permit for infrastructure construction projects. Each individual transmission line, substation, and switching station project will require a National Pollutant Discharge Elimination System (NPDES) plan to be submitted for the Georgia Department of Natural Resources Environmental Protection Division (EPD) review. The plan must be submitted at least 14-days prior to the construction start date. The projects will be monitored for possible erosion and sedimentation issues as per the permit. GTC will incorporate stringent Best Management Practices (BMPs) in the E&SC plans and implement those plans to protect wetland and water resources. GTC will monitor the BMPs regulatory and will file a Notice of Intent (NOI) with EPD once the project construction sites have final stabilization.

4.13.3 Spill Prevention, Control, and Countermeasure (SPCC)

Under authority of the Clean Water Act (33 U.S.C. § 1251 et seq.), the U.S. Environmental Protection Agency (EPA) issued spill prevention control and countermeasure (SPCC) regulations (40 CFR Part 112). The regulations apply to non-transportation related facilities engaged in the consumption, usage, or above-ground storage of oil in quantities of 1,320 gallons or greater. Due to a facility's location and assuming an oil spill might occur, a SPCC plan would be required if it could reasonably be expected to discharge oil in harmful quantities into U.S. waterways or shorelines. The SPCC plan must provide for adequate secondary containment designed to prevent an oil release from reaching navigable waters.

Substation equipment (transformers, capacitor banks, circuit breakers, etc.) contains highly refined, contaminant-free oil needed to insulate and protect internal parts that are electrically energized. All substation facilities have a primary form of containment by nature of the substation pad which acts as an absorbent. The purpose of the SPCC plan is to provide a secondary containment method in the event that the primary containment fails or is otherwise overwhelmed.

The proposed East Walton 500/230 kV Substation and Bostwick 230 kV Switching Station will exceed the 1,320-gallon SPCC threshold. A detention pond will be developed on the site adjacent to the substation fence to meet the needs of Erosion and Sedimentation Control (E&SC) during the construction of the project and as secondary containment for SPCC during the operation and maintenance of the substation facility.

GTC will develop a detention pond on the Jacks Creek 230 kV Switching Station adjacent to the substation fence to meet the needs of Erosion and Sedimentation Control (E&SC) during the construction of the project and as secondary containment for SPCC during the operation and maintenance of the substation facility. MEAG will be responsible for incorporating this facility into their SPCC plan.

Georgia Power Company (GPC) will develop a detention pond on the Rockville 500 kV Switching Station adjacent to the substation fence to meet the needs of Erosion and Sedimentation Control (E&SC) during the construction of the project and as secondary containment for SPCC during the operation and maintenance of the substation facility. GPC will be responsible for incorporating this facility into their SPCC plan.

5.0 CUMULATIVE EFFECTS

Overhead transmission line projects have effects to some land cover types more than others. Generally, agriculture and pastureland cover can remain unchanged, and the land use of those land cover types can still function as agriculture and pasture within a transmission line easement. To some degree, developed land cover and land use types can be affected by transmission line ROW. Although certain types of developed land use function can remain, certain features within the transmission line ROW cannot. For example, structures, signage, or woody vegetation that has the potential to be higher than 15 feet cannot exist within a transmission line ROW; therefore, forested land cover is affected to a much greater degree. Trees must be removed from the transmission line ROW for the safe and reliable operation of the transmission line facility. This converts the forested land cover types to utility ROW. For substation facilities, land use is completely converted from the previous function to utility use within the graded area.

Although the land cover is converted by tree clearing activities, the utility ROW can still support many of the area wildlife species. However, tree clearing does remove summer and winter roosting habitat for the Tricolored bat, which is proposed to be federally listed as an endangered species.

The proposed ECGR Project will convert 621.37-acres of forested areas to utility use. GTC used the National Land Cover Database (NLCD) as discussed in the General Land Use section of this assessment. The NLCD is a product developed by the Multi-Resolution Land Cover Characteristics (MRLC) Consortium. MRLC has published NLCD products for the years 1985 through 2023. GTC utilized the NLCD to analyze land cover patterns for Greene, Morgan, Oconee, Putnam, and Walton Counties. A land use comparison was made to the geographical area of Greene, Morgan, Oconee, Putnam, and Walton Counties, and a 1.0-mile buffer surrounding the ECGR Project. Greene County was added to the multi-county analysis since the county is less than 1.0-mile from the ECGR Project. Forested land cover types were compared for the years 1985, 2005, 2021 and 2023 to demonstrate how forested land has changed in the general area since 1985 and the percentage of forest reduction caused by the ECGR Project. (See Figures 20.0, 21.0, 22.0, and 23.0)

Refer to Figure 11.0 under the 4.1 General Land Use section for the NLCD Classification legend.

Figure 20.0 – 1985 NLCD with 1-mile buffer of the ECGR Project overlaid

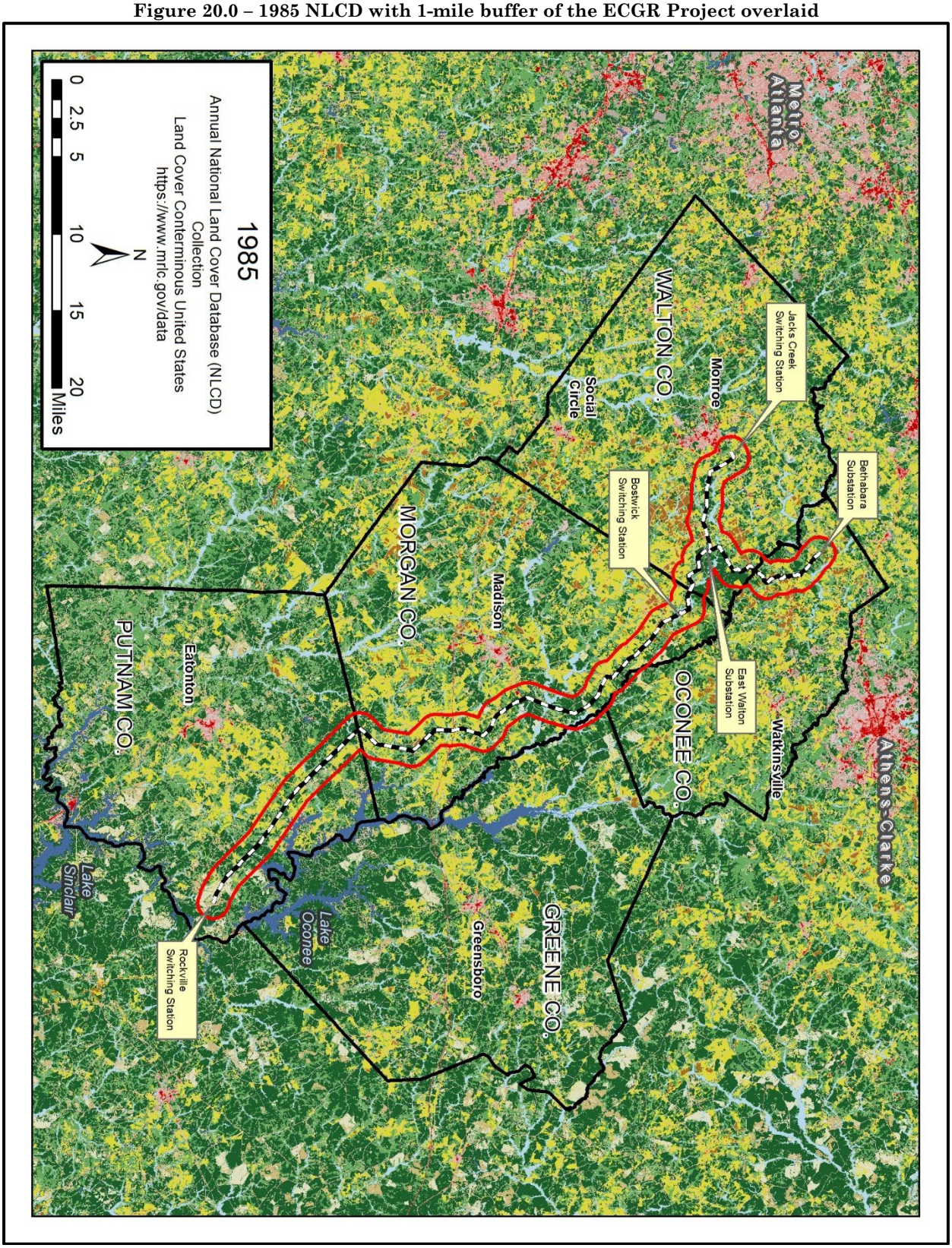


Figure 21.0 – 2005 NLCD with 1-mile buffer of the ECGR Project overlaid

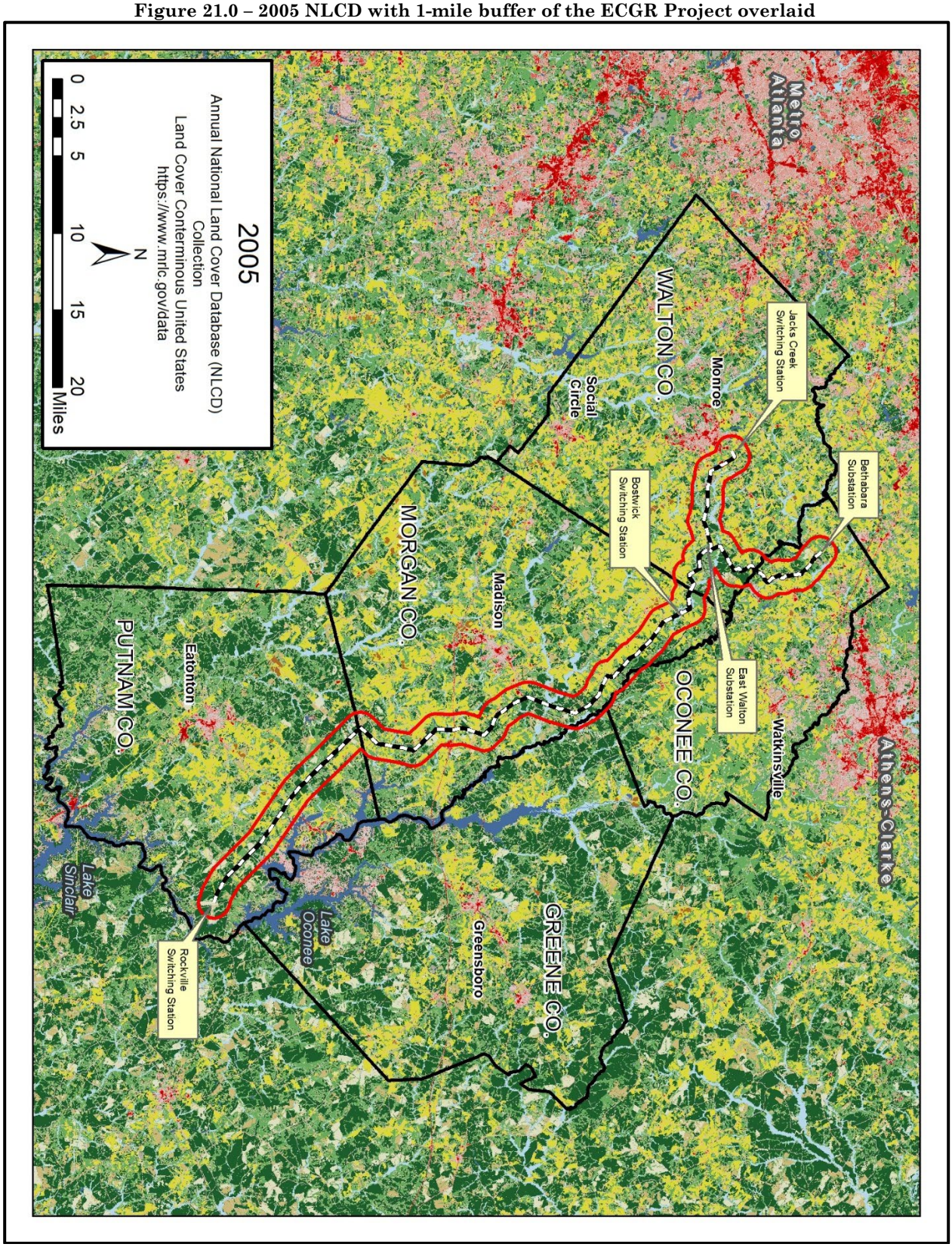


Figure 22.0 – 1921 NLCD with 1-mile buffer of the ECGR Project overlaid

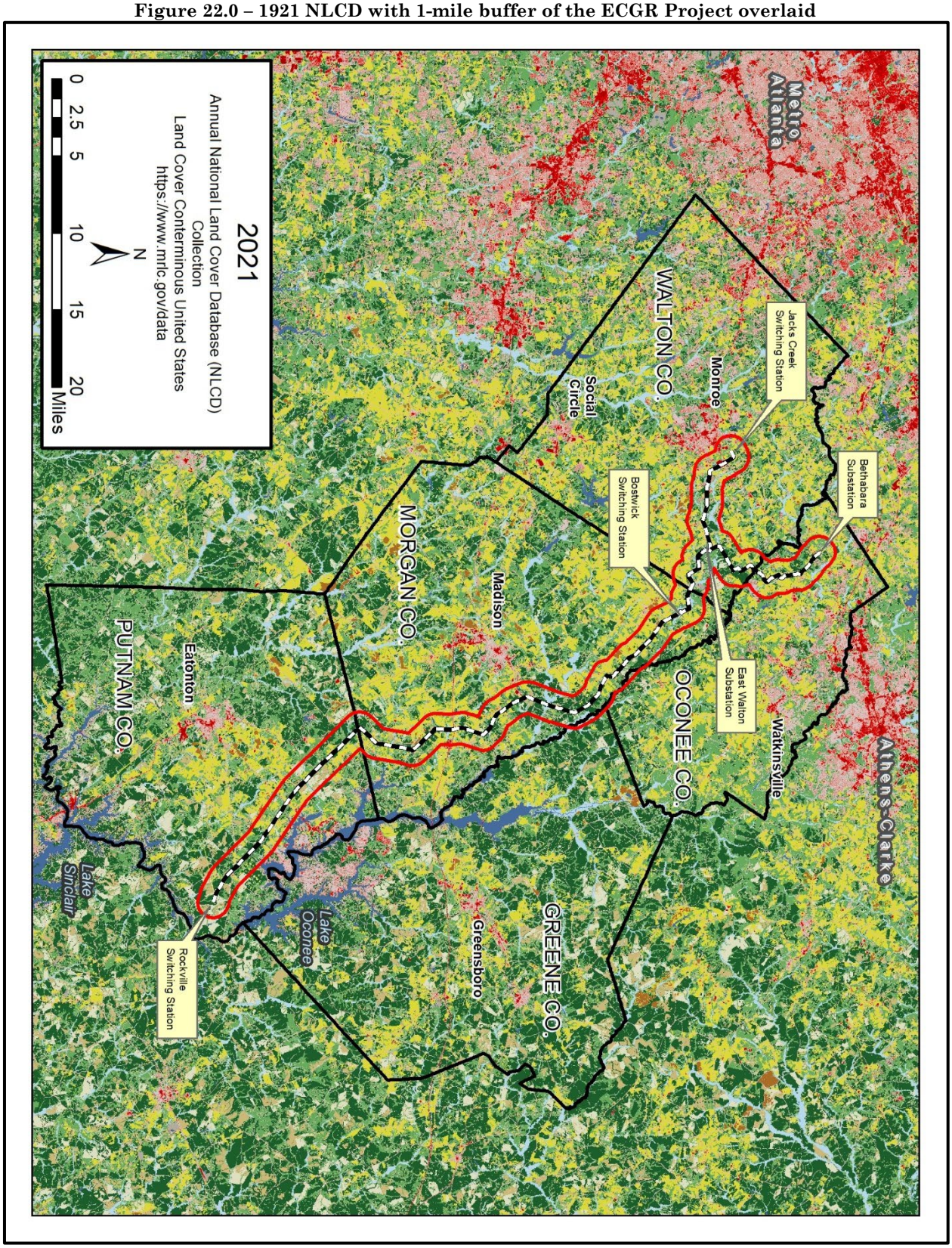


Figure 23.0 – 2023 NLCD with 1-mile buffer of the ECGR Project overlaid

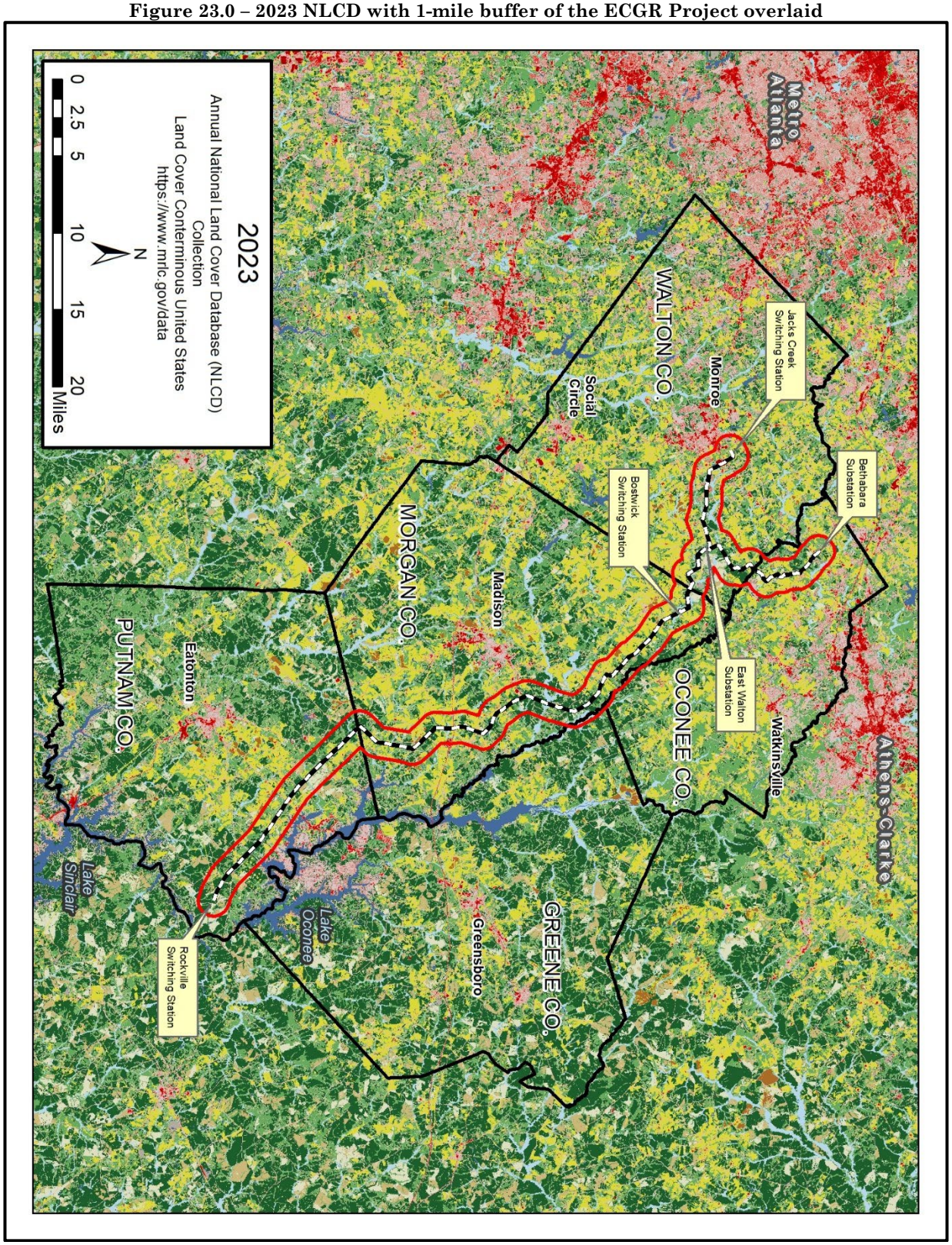


Table 14.0 – Land cover (NLCD) acreages and percentages for the 5 County Area – 1985 and 2005

		5 County Area - 1985		5 County Area - 2005	
		Acres	Percent	Acres	Percent
11	Open Water	27,319.56	2.61%	30,337.00	2.89%
21	Developed, Open Space	51,632.12	4.93%	69,884.43	6.67%
22	Developed, Low Intensity	16,394.10	1.56%	26,539.77	2.53%
23	Developed, Medium Intensity	2,367.95	0.23%	5,502.66	0.52%
24	Developed, High Intensity	579.88	0.06%	1,428.89	0.14%
31	Barren Land (Rock/Sand/Clay)	513.23	0.05%	711.31	0.07%
41	Deciduous Forest	202,635.32	19.33%	204,813.68	19.54%
42	Evergreen Forest	341,042.25	32.54%	262,006.36	25.00%
43	Mixed Forest	83,457.53	7.96%	117,343.99	11.20%
52	Shrub/Scrub	17,512.84	1.67%	24,424.92	2.33%
71	Grassland/Herbaceous	24,283.31	2.32%	28,055.49	2.68%
81	Pasture/Hay	215,819.14	20.59%	228,262.67	21.78%
82	Cultivated Crops	17,422.15	1.66%	3,996.88	0.38%
90	Woody Wetlands	46,916.53	4.48%	44,609.73	4.26%
95	Emergent Herbaceous Wetlands	231.94	0.02%	213.85	0.02%

Table 15.0 – Land cover (NLCD) acreages and percentages for the 5 County Area – 2021 and 2023

		5 County Area - 2021		5 County Area - 2023	
		Acres	Percent	Acres	Percent
11	Open Water	30,487.81	2.91%	30,834.05	2.94%
21	Developed, Open Space	78,761.10	7.51%	80,183.24	7.65%
22	Developed, Low Intensity	34,542.35	3.30%	35,370.65	3.37%
23	Developed, Medium Intensity	8,048.96	0.77%	8,374.63	0.80%
24	Developed, High Intensity	2,212.42	0.21%	2,244.05	0.21%
31	Barren Land (Rock/Sand/Clay)	1,149.15	0.11%	1,257.69	0.12%
41	Deciduous Forest	204,275.99	19.49%	203,702.35	19.43%
42	Evergreen Forest	250,679.90	23.92%	251,635.06	24.01%
43	Mixed Forest	104,726.19	9.99%	101,404.53	9.67%
52	Shrub/Scrub	26,385.08	2.52%	29,852.17	2.85%
71	Grassland/Herbaceous	38,739.46	3.70%	36,869.44	3.52%
81	Pasture/Hay	215,878.75	20.60%	215,399.05	20.55%
82	Cultivated Crops	7,751.00	0.74%	6,523.13	0.62%
90	Woody Wetlands	44,092.32	4.21%	44,044.08	4.20%
95	Emergent Herbaceous Wetlands	397.92	0.04%	433.05	0.04%

Table 16.0 – Land cover (NLCD) Acreages and percentages for ECGR Project 1-mile buffer – 1985 and 2005

		1.0-mile Buffer Area - 1985		1.0-mile Buffer Area - 2005	
		Acres	Percent	Acres	Percent
11	Open Water	364.92	0.44%	568.80	0.69%
21	Developed, Open Space	3,548.54	4.31%	4,377.26	5.32%
22	Developed, Low Intensity	722.45	0.88%	1,110.27	1.35%
23	Developed, Medium Intensity	86.39	0.11%	243.57	0.30%
24	Developed, High Intensity	22.79	0.03%	117.22	0.14%
31	Barren Land (Rock/Sand/Clay)	1.00	0.00%	37.79	0.05%
41	Deciduous Forest	15,820.48	19.23%	16,612.25	20.20%
42	Evergreen Forest	23,180.77	28.18%	17,966.28	21.84%
43	Mixed Forest	6,734.66	8.19%	9,641.55	11.72%
52	Shrub/Scrub	1,166.53	1.42%	1,850.78	2.25%
71	Grassland/Herbaceous	2,463.79	3.00%	2,540.87	3.09%
81	Pasture/Hay	21,811.08	26.52%	22,679.88	27.57%
82	Cultivated Crops	1,858.47	2.26%	186.44	0.23%
90	Woody Wetlands	4,469.02	5.43%	4,315.72	5.25%
95	Emergent Herbaceous Wetlands	3.47	0.00%	5.73	0.01%

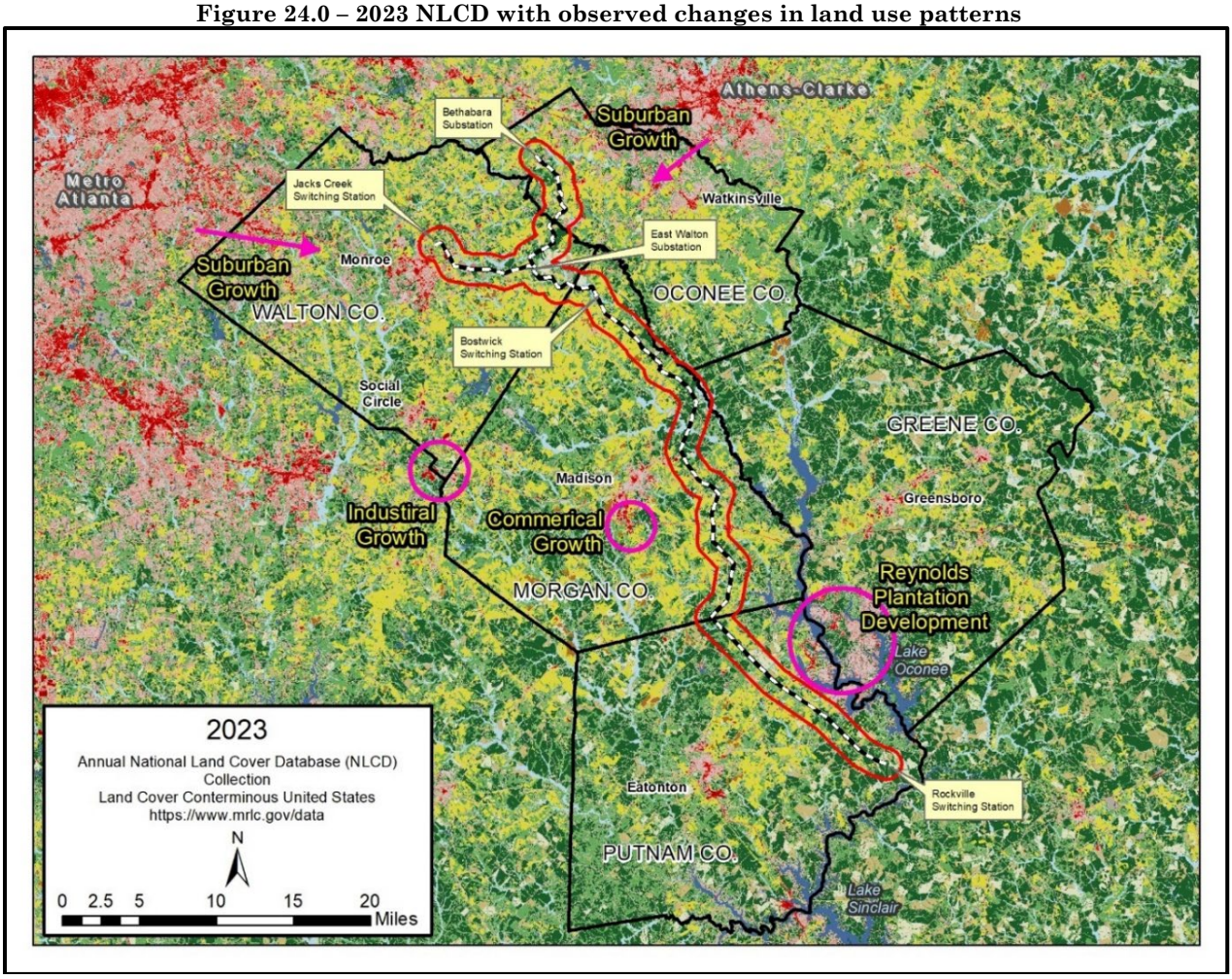
Table 17.0 – Land cover (NLCD) Acreages and percentages for ECGR Project 1-mile buffer – 2021 and 2023

		1.0-mile Buffer Area - 2021		1.0-mile Buffer Area - 2023	
		Acres	Percent	Acres	Percent
11	Open Water	605.71	0.74%	653.84	0.79%
21	Developed, Open Space	4,942.58	6.01%	5,011.03	6.09%
22	Developed, Low Intensity	1,537.52	1.87%	1,595.85	1.94%
23	Developed, Medium Intensity	362.67	0.44%	385.40	0.47%
24	Developed, High Intensity	169.46	0.21%	169.76	0.21%
31	Barren Land (Rock/Sand/Clay)	124.05	0.15%	127.53	0.16%
41	Deciduous Forest	16,369.69	19.90%	15,989.65	19.44%
42	Evergreen Forest	16,811.79	20.44%	17,322.79	21.06%
43	Mixed Forest	8,317.99	10.11%	8,043.97	9.78%
52	Shrub/Scrub	2,740.74	3.33%	2,008.18	2.44%
71	Grassland/Herbaceous	3,581.82	4.35%	4,375.44	5.32%
81	Pasture/Hay	21,860.16	26.57%	21,857.64	26.57%
82	Cultivated Crops	562.45	0.68%	435.42	0.53%
90	Woody Wetlands	4,249.30	5.17%	4,250.08	5.17%
95	Emergent Herbaceous Wetlands	25.28	0.03%	28.06	0.03%

By reviewing changes in land use patterns and the percentage of land use in the 5-county area and the 1.0-mile buffer area around the ECGR Project area the following observations can be made (See Tables 14.0, 15.0, 16.0, 17.0 and Figure 24.0):

- Cultivated areas decreased significantly between 1985 through 2005 with a small increase in recent years.
- Suburban areas are moving into western Walton County from the Atlanta Metro Areas and into northern Oconee County from the Athens-Clarke Area.
- The area in the southern part of Lake Oconee has experience low density development. The area of development is in proximity to the Reynolds Plantation development.
- The area south of the city of Madison along the I-20 has experienced medium to high density development.
- The area near the city of Social Circle and the Stanton Springs area along I-20 has experienced medium to high density development.
- The acreage of forested areas in both the 5-county area and the 1-mile buffer area around the ECGR Project area appear to be stable.

Figure 24.0 – 2023 NLCD with observed changes in land use patterns



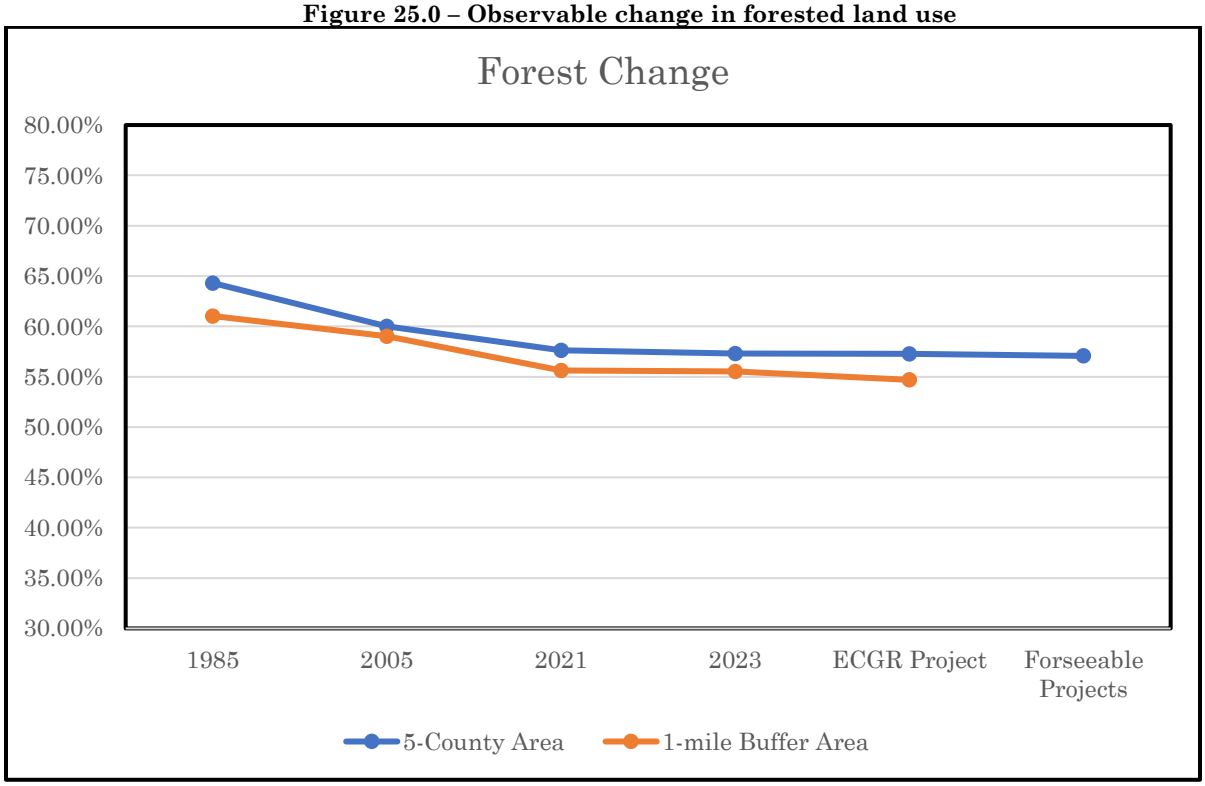
Several of the categories in the NLCD represent types of forest including Deciduous Forest, Evergreen Forest, Mixed Forest and Woody Wetlands. In this area:

- Deciduous forests contain hardwood species such as various types of oak, various types of hickory, sweetgum, tulip poplar, and red maples.
- Evergreen forest mainly contain loblolly pine, and in many cases are planted pine. Planted pine are planted in rows for timber production.
- Mixed forests are a mix of hardwoods and loblolly pine.
- Woody wetlands are forested wetlands that contain various oaks, red maple, green ash river birch, and black willow.

By adding the categories of forest percentages, a trend in forested land use from 1985 through 2023 can be observed as 64.31% in 1985 to 57.31% in 2023. Likewise for the 1.0-mile buffer area around the ECGR Project area a trend in forested land use from 1985 through 2023 can be observed as 61.03% in 1985 to 55.54% in 2023. An additional reduction of forested areas for the 5-county county area is observed by subtracting the ECGR Project 621.37-acres of land use conversion discussed in the General Land Use section of this report. The forested land use of the 5-county area will decrease by 0.05% to 57.26% of the 5-county area remaining forested. The forested land use of the 1.0-mile buffer of the ECGR Project area will decrease forested area by 0.85% to 54.69% of the 1.0-mile buffer area remaining forested.

Foreseeable development in the 5-county area is associated with industrial development in the southern part of Walton County and the western portion of Morgan County. This development is primarily associated with the Stanton Springs Industrial Park, which continues to expand and develop (https://www.i20jda.com/stanton-springs.html). This expansion includes the area formerly referred to as the East Atlanta MEGA Site. This area north of 1-20 is currently planned for a Rivian electric automobile manufacturing plant. The East Atlanta MEGA site expanded to approximately 2000-acres to accommodate the Rivian plant. The site was approximately 50% forested and 50% agricultural fields for livestock. With other associated developments in the area such as GDOT improvements and electric transmission expansion, 2000-acres of tree clearing was used to represent the changing land use for foreseeable projects in the chart below. By removing another 2000-acres of forest, the reduction of forested areas in the 5-county area decreases by another 0.19% to 57.07% of the 5-county area remaining forested. (See Figure 25.0)

Figure 25.0 – Observable change in forested land use



Although there is a trend of a decrease in forested land (See Figure 25.0), the forested acreage that will be converted due to the proposed ECGR Project, as well as foreseeable projects, is not significant when compared to the 5-county area and the 1.0-mile buffer area around the ECGR Project area. In addition, approximately 111,219-acres of the 5-county area are in conservation use, including the Oconee National Forest, Hard Labor Creek State Park, WMAs, mitigation banks, and land trust easements. Therefore, the construction of the ECGR Project, as well as the other area developments will not cumulatively create a significant impact on the existing forested areas in Greene, Morgan, Oconee, Putnam, and Walton Counties.

6.0 SUMMARY OF MITIGATION

Project specific mitigation measures include:

Tricolored Bats:
GTC has agreed to adhere to the restricted summer tree clearing season (May 1 – July 15) and the restricted tree clearing season for winter (December 15 to February 15) except for early successional vegetation growth within the vacant ROW in Putnam County; with some possible clearing being required should unforeseen circumstances occur. GTC has also committed to surveying culverts for tricolored bats if 1) the culvert needs replacing, and 2) the culvert meets suitable winter hibernacula guidelines provided by USFWS, which include culvert size and composition.

Archaeological Resources:

Sites 9MG746, 9MG663 and 9WN227 are within or in proximity to the development of the ECGR Project transmission line ROWs. GTC will protect these sites during project implementation. For areas of these sites that fall within the ECGR Project ROWs, GTC clearing contractors will remove vegetation around these sites with hand clearing techniques that will involve no ground disturbance. GTC will place orange barrier protective fencing surrounding the perimeter of these sites to prevent inadvertent damage during the ECGR Project construction activities. Geotextile fabric may be incorporated, as necessary. GTC will also place these sites in GTC's archeological site monitoring program to ensure these sites are not inadvertently disturbed during future maintenance activities.

Historical Resources:

For physical and visual adverse effects to the Turnwold Plantation and the Apalachee Historic District resources, GTC will procure and submit to HPD (Georgia SHPO) an historic resources survey of the ECGR Project. The survey will encompass properties in Oconee, Morgan, Walton, and Putnam Counties, Georgia to include agricultural structures/buildings/resources/property types forty (40) years of age or older. All project work shall conform to the SOI Standards for Archaeology and Historic Preservation, which include the Standards for Evaluation, Identification, and Registration. GTC will ensure that all survey data and digital photographs are entered in the GNAHRGIS online database. GTC will provide an electronic draft deliverable to HPD for review and comment (see Appendix J-1 – provided under a separate cover).

7.0 COORDINATION, CONSULTATION, AND CORRESPONDENCE

March 21, 2023 - GTC coordinated an ECGR Project introduction meeting at the USDA 1400 Independence Ave, Washington, D.C. office with RUS Enviromental and Historic Preservation Division staff.

April 18, 2023 – GTC coordinated an ECGR Project introduction meeting at the GTC's headquarters in Tucker, GA with HPD (Georgia SHPO) and RUS (online) to discussed developing Section 106 initiation letters and a strategy to update archaeological surveys.

June 21, 2023 – GTC mailed Section 106 initiation letters for the ECGR Project. Parties and tribes who received a letter are listed in section 4.8 - Cultural Resources and Historic Properties of this EA. GTC received a response from the Middle Georgia Regional Commission on June 27, 2023, and a response from the Morgan County, County Manager on July 11, 2023.

August 23, 2023 – GTC met with RUS Enviromental and Historic Preservation Division staff onsite at Turnwold Plantation in a joint meeting with UGA FindIt students to review the resource and discuss potential visual effects from the ECGR Project.

October – November 2023 – GTC began to notify elected officials of the ECGR project in the 3rd Quarter of 2023. As noted in section 3.5.3 Public Input Process and Route Adjustments, GTC held public information meetings in each county associated with the ECGR Project.

November 7 - 18, 2023 – On behalf of GTC, Ecological Solutions submitted requests to the USFWS IPaC website and to the WRD, Ga DNR for a list of protected species. A response with the species lists was also received on November 18, 2023.

December 7, 2023 – GTC coordinated an ECGR Project mitigation strategy meeting at the Georgia of Community Affairs office with HPD (Georgia SHPO) and RUS (online) to discuss potential mitigations strategies.

February 23, 2024 – GTC began to introduce the scope of the ECGR Project in meetings with the USFWS – Athens Field Office beginning in June 2023. Once ecology surveys were complete, GTC coordinated a meeting on February 23, 2024 with USFWS at the USFWS Athens Field Office to discuss the ECGR Project potential impacts to the Tricolored bat and specifically the need to develop a BA.

February 28, 2024 – GTC coordinated a virtual meeting with USFWS – Athens Field Office and RUS regarding the development of a BA for the Tricolored bat.

March 1, 2024 – On behalf of RUS, GTC initiated the completion of AD-1006 forms for the proposed East Walton 500/230 kV Substation and the proposed Bostwick 230 kV Switching Station with the USDA NRCS Georgia State Conservationist's Office.

June 14, 2024 – GTC requested additional information and guidance from WRD, Ga DNR on the state-listed Altamaha Shriner, a species of fish that has suitable habitat in a few perennial streams crossed by the ECGR Project.

August 29, 2024 – On behalf of RUS, GTC initiated the completion of AD-1006 form for the proposed Rockville 500 kV Switching Station with the USDA NRCS Georgia State Conservationist's Office.

September 10, 2024 – GTC submitted a draft BA for the Tricolored bat to RUS, developed by Ecological Solutions.

October 12, 2024 - GTC received a response regarding the June 14 inquiry regarding the Altamaha Shriner from WRD, Ga DNR with a list of species from the Georgia Natural Heritage Database and suggested practices.

January 8, 2025 – GTC submitted a draft BA for the Tricolored bat to RUS, developed and revised by Ecological Solutions to RUS

March 14, 2025 – HPD (Georgia SHPO) suggested additional cultural resource mitigation alternatives for the ECGR Project.

March 19, 2025 – HPD (Georgia SHPO) agreed to a cultural resource mitigation project for the ECGR Project.

March 20, 2025 – GTC submitted a final BA for the Tricolored bat to RUS and USFWS, developed and revised by Ecological Solutions to RUS. USFWS issued an Emergency Consultation letter on March 24, 2025, concurring with a "not likely to jeopardize" determination for the Tricolored bat and the Monarch butterfly.

March 24, 2025 – RUS concurred with the cultural resource mitigation project for the ECGR Project and provided a response letter dated April 3, 2025. (See Appendix J-2 – provided under a separate cover).

8.0 REFERENCES

Georgia Transmission Corporation. East Central Georgia Reliability Projects website. 2024. *https://www.gatransmission.com/ecrp/*

2024 Directory of Georgia's Electric Membership Cooperatives. Georgia EMC, Tucker, GA: 2024.

EPRI-GTC Overhead Electric Transmission Line Siting Methodology. EPRI, Palo Alto, CA and Georgia Transmission Corporation, Tucker, GA: 2006.

Merrick & Company, *ECGR Orthophotography and LiDAR*, Denver, Co. April 2021

U.S. Department of the Interior, U.S. Geologic Survey. *7.5-minute quadrangle (topographic) maps:*

- *Statham, GA, 1986*
- *Monroe, GA, 1986*
- *High Shoals, GA, 1986*
- *Watkinsville, GA, 1986*
- *Apalachee, GA, 1991*
- *Madison, GA, 1986*
- *Buckhead, GA, 1986*
- *Harmony, GA, 1985*
- *Rock Eagle Lake, GA, 1974*
- *Meda, GA, 1974*
- *Rockville, GA, 1986*

Clark, Jr., William Z. and Arnold C. Zisa. *Physiographic Map of Georgia*. Atlanta: Georgia Department of Natural Resources, 1976.

Payne, Harley H. Soil Survey of Morgan County, Georgia. USDA Soil Conservation Service, 1965.

Robertson, Stanley M. Soil Survey of Clarke and Oconee Counties, Georgia. USDA Soil Conservation Service, 1968.

Payne, Harley H. Soil Survey of Baldwin, Jones, and Putnam Counties, Georgia. USDA Soil Conservation Service, 1976.

Thomas, Grover J. Jr., and Tate, Ray J. Soil Survey of Walton County, Georgia. USDA Soil Conservation Service, 1964.

U.S. Department of Homeland Security, Federal Emergency Management Agency (FEMA). *Flood Insurance Rate Maps:*

- 13237C0200D - effective date, 1/26/2023
- 13237C0175D - effective date, 1/26/2023
- 13237C0075D - effective date, 1/26/2023
- 13237C0050D - effective date, 1/26/2023
- 13211C0325B - effective date, 1/26/2023
- 13211C0350B - effective date, 1/26/2023
- 13211C0020B - effective date, 1/26/2023
- 13297C0170E - effective date, 12/15/2022
- 13297C0165E - effective date, 12/15/2022
- 13297C0145E - effective date, 12/15/2022
- 13297C0135E - effective date, 12/15/2022
- 13297C0130F - effective date, 12/15/2022

- 13211C0250B - effective date, 1/26/2023
- 13211C0225B - effective date, 1/26/2023
- 13211C0230B - effective date, 1/26/2023
- 13211C0120B - effective date, 1/26/2023
- 13211C0110B - effective date, 1/26/2023
- 13211C0105B - effective date, 1/26/2023
- 13211C0040B - effective date, 1/26/2023
- 13297C0155E - effective date, 12/15/2022
- 13297C0160E - effective date, 12/15/2022
- 13219C0105E - effective date, 9/15/2022
- 13219C0110E - effective date, 9/15/2022
- 13219C0045E - effective date, 9/15/2022
- 13219C0040E - effective date, 9/15/2022

Georgia Wildlife Resources Division, Georgia Department of Natural Resources. 2024. Georgia Rare Species and Natural Communities Data, Quarter Quad Rare Elements, *http://georgiabiodiversity.org/natels/qq_rare_elements_map.html*

Avian Power Line Interaction Committee (APLIC). 2006. Suggested Practices for Avain Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission, Washington, D.C. and Sacramento, CA.

Georgia Stream Crossing Handbook (Georgia Aquatic Connectivity Team, 2021)

Georgia. Department of Natural Resources. Historic Preservation Division. "Tilling the Earth: Georgia's historic agricultural heritage, a context." University of Georgia. Map and Government Information Library. 2001-10, https://dlg.galileo.usg.edu/do:dlg_ggpd_s-ga-bn200-ph5-bm1-b2001-bt5-belec-p-btext.

9.0 LIST OF PREPARERS

Primary Preparer:

Smith, Christopher - Manger, Environmental Services, Georgia Transmission Corporation, 2100 East Exchange Place, Tucker, GA, 30084.

Additional Preparers:

Ahrens, Heather Todd - Environmental and Regulatory Coordinator, Georgia Transmission Corporation, 2100 East Exchange Place, Tucker, GA, 30084.

Ferral-Graff, Katheryn - Environmental and Regulatory Coordinator, Georgia Transmission Corporation, 2100 East Exchange Place, Tucker, GA, 30084.

Geographic Information System (GIS) Analyst:

McCullough, Kathleen - Senior GIS Analyst, Merrick & Company c/o Georgia Transmission Corporation, 2100 East Exchange Place, Tucker, GA, 30084.

10.0 LIST OF APPENDICES

Appendix A – Additional Report Figures

USGS 7.5-minute Quadrangles with FEMA Floodplain and ECGR Project Overlaid

Ecology Report Figures – Ecological Solutions, Inc.

Appendix B – Project Release

Project Release: East Walton Project – 230 kV Portion: Georgia Transmission Corporation. (GTC), Tucker, GA, February 6, 2023.

Project Release: East Walton Project – 500 kV Portion: Georgia Transmission Corporation. (GTC), Tucker, GA, April 5, 2018.

Appendix C – Summary of Routing and Siting Alternatives Analysis for the East Walton Plan

Coordinated by Gayle Houston, Georgia Transmission Corporation (2006-2008) and summarized by Christopher D. Smith, Georgia Transmission Corporation (2023)

Appendix D – AD-1006 Forms

U.S. Department of Agriculture, Farmland Conversion Impact Rating Form and Associated Project Maps, Completed by Dee Cabaniss Pederson, Natural Resource Conservation Service (NRCS), Athens, GA and Clayton Doherty, Linear Projects, on behalf of Georgia Transmission Corporation (GTC), Tucker, GA - 2024

Appendix E – Ecology Report

East Central Georgia Reliability Projects- Walton, Morgan, Oconee, and Putnam Counties, Georgia, Ecological Survey Report: Ecological Solutions, Inc., Roswell, GA, June 2024.

Appendix F-1 – Biological Assessment

Malloy, Ryan - East Central Georgia Reliability Projects- Walton, Morgan, Oconee, and Putnam Counties, Georgia, Biological Assessment for the tricolored bat (Perimyotis subflavus): Ecological Solutions, Inc., Roswell, GA, January 2025. Revised March 2025.

Appendix F-2 – USFWS Emergency Consultation Letter – (dated March 24, 2025)

Appendix F-3 –Additional Correspondence with Ga DNR – (dated October 12, 2024

Appendix G – Programmatic Agreement

Programmatic Agreement Among The Rural Utilities Service and The Georgia State Historic Preservation Officer Concerning the Construction and Modification of Transmission Facilities By Georgia Transmission Corporation: 2024.

Appendix H-1 –Memo for Archaeological Resources Survey Plan

(Provided under a separate cover)

Franz, David M. – AMemo for Archaeological Resources Survey Plan for the East Central Georgia Reliability Projects- Walton, Morgan, Oconee, and Putnam Counties, Georgia: NV5, Alpharetta, GA, June 6, 2023.

Appendix H-2 –Archaeological Resources Survey

(Provided under a separate cover)

Franz, David M. – Archaeological Resource Survey for the East Central Georgia Reliability Projects- Walton, Morgan, Oconee, and Putnam Counties, Georgia: NV5, Alpharetta, GA, March 2024.

Appendix I –Historic Resource Survey

(Provided under a separate cover)

Mroczka, Christopher - Historic Resources Survey Report and Assessments of Effects Recommendations– East Central Georgia Reliability Projects: NV5, Alpharetta, GA, June 2024.

Appendix J-1 – Cultural Resource Mitigation Project

(Provided under a separate cover)

Appendix J-2 – Georgia SHPO response letter (dated April 3, 2025)

(Provided under a separate cover)

Appendix K-1 – Tribal Letters – (dated 6/23/2023)

(Provided under a separate cover)

Appendix K-2 – Section 106 Initiation Letters – (dated 6/20/2023)

(Provided under a separate cover)

Appendix K-3 – Section 106 Initiation Letter Responses – (dated 6/27/2023 & 7/11/2023)

(Provided under a separate cover)

Appendix L – Phase I Environmental Site Assessment

(Provided under a separate cover)

Seabolt, Larry K. – Phase 1 Environmental Site Assessment – Various ECGR Project Sites: Remtech Engineers, Marietta, GA, March 2024.