Corridor Study

Thomson - Vogtle
500-kV Transmission Project

Georgia Power Company

January 2007

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PART I: INTRODUCTION

Georgia Power Company, on behalf of the co-owners of the Vogtle Electric Generating Plant, and Southern Nuclear Operating Company are pursuing an Early Site Permit from the federal Nuclear Regulatory Commission ("NRC") for that Plant's site located in Burke County, Georgia. Southern Nuclear filed an application in August 2006. The application included an Environmental Report that presented only general routing information for a new transmission line that would be added to handle the additional generation capacity to the electric grid in Georgia. Environmental Report 1.2.5 *Transmission System Information*, 2.2.2.2 *Proposed Transmission Corridor,* 3.7.2 *Power Transmission System*. At that time, the end points and counties through which the transmission line would traverse had been identified, but more detailed corridors for the line had not.

Georgia Power and Southern Nuclear commissioned this Corridor Routing Study to identify potential corridors for the proposed transmission line relative to existing land uses and habitats, including special land use classifications (e.g. National or State Parks, Military Reservations, floodplains, wetlands), and previously-confirmed cultural resources and threatened or endangered species. The Study also examined the corridor routing alternatives generally, based on the attributes of the identified corridors. For purposes of this Study, "corridors" are defined as transmission line routes of variable widths through the "study area". The study area represents a larger land area between the site, the end point of the transmission line and area through which corridors might be logically and practically identified (Figure 1). The term "right-of-way" refers to a precisely described routing of a transmission line, such as an easement of specific width measured in feet or meters, whereas a "corridor" is a more general route of sufficient width to contain the eventual right-of-way.

In performing this Study, we applied an established process and techniques for the identification of corridors facilitated by computerized, state-of-the-art data analysis and mapping. After further evaluations, specific rights of way within the corridors will be selected for potential acquisition; those evaluations will require several months and significant resources. This Study, however, delimits the corridors that should include a final, specific ROW, based on currently available information and provides a sound basis for that selection.

PART II: PROJECT DESCRIPTION

The existing VEGP site is interconnected with the regional power grid via two 500 kV transmission lines and four 230 kV transmission lines. SNC has assumed one new 500 kV transmission line will be added to handle the additional new generation capacity to the electric grid. This transmission line will extend from the VEGP site to the Thomson substation.

Therefore, SNC has prepared a Study of route alternatives. This Study was conducted to develop options for transmission line routing and to assess potential environmental, social and cultural impacts. The EPRI-GTC Transmission Line Siting Methodology was utilized to identify the Alternative Corridors presented in this report.

Subsequent to this Study additional, more detailed, analysis will be conducted by a GPC location team to identify alternative routes within these corridors. These alternative routes will be evaluated and a preferred route will be selected.

PART III: STUDY AREA DESCRIPTION

1. Study Area Location

The Thomson-Vogtle 500-kV transmission line project Study Area is located in East Central Georgia, to the west and south of the Augusta-Richmond County urban area. (See map of Study Area in Figure 1 on Page 4.) The Study Area includes 289,274 total acres. Notable features within or adjacent to the Study Area include the Savannah River, Interstate 20, the city of Augusta and the Fort Gordon Military Base. The Study Area includes parts of six Georgia counties: Burke, Glascock, Jefferson, McDuffie, Richmond and Warren. The majority of the study area is in Burke County.

TABLE 1: Analysis of Study Area Acres by County

County	Total Acres	Acres of Study Area	% of County in Study Area
Burke	534,264	158,930	54.92%
Glascock	92,438	182	0.06%
Jefferson	338,920	39,728	13.73%
McDuffie	170,418	39,693	13.72%
Richmond	210,181	43,250	14.94%
Warren	183,525	7,492	2.59%
TOTAL	**1,529,745**	**289,274**	

Source: Aerial, GIS information

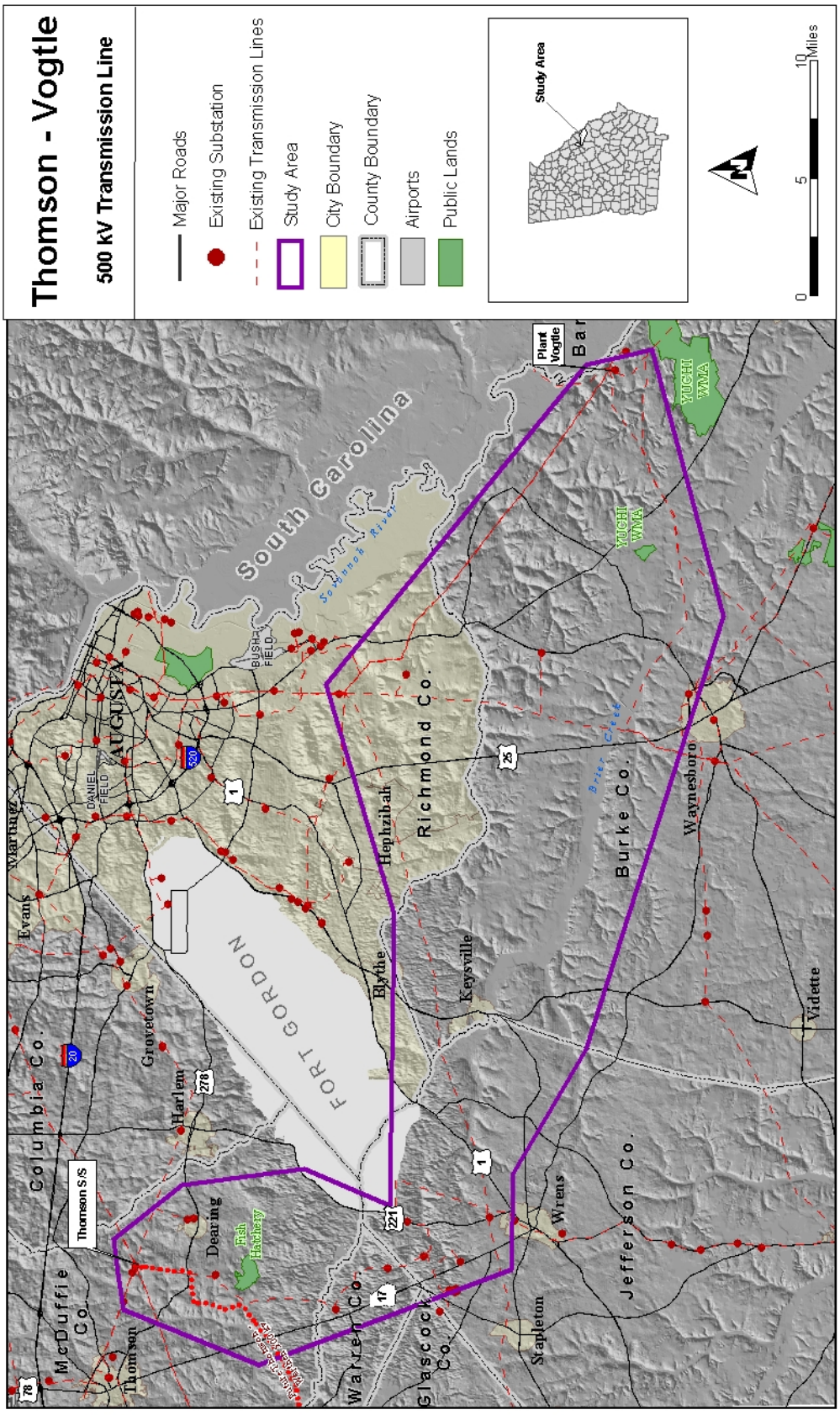


FIGURE 1: Thomson-Vogtle Study Area

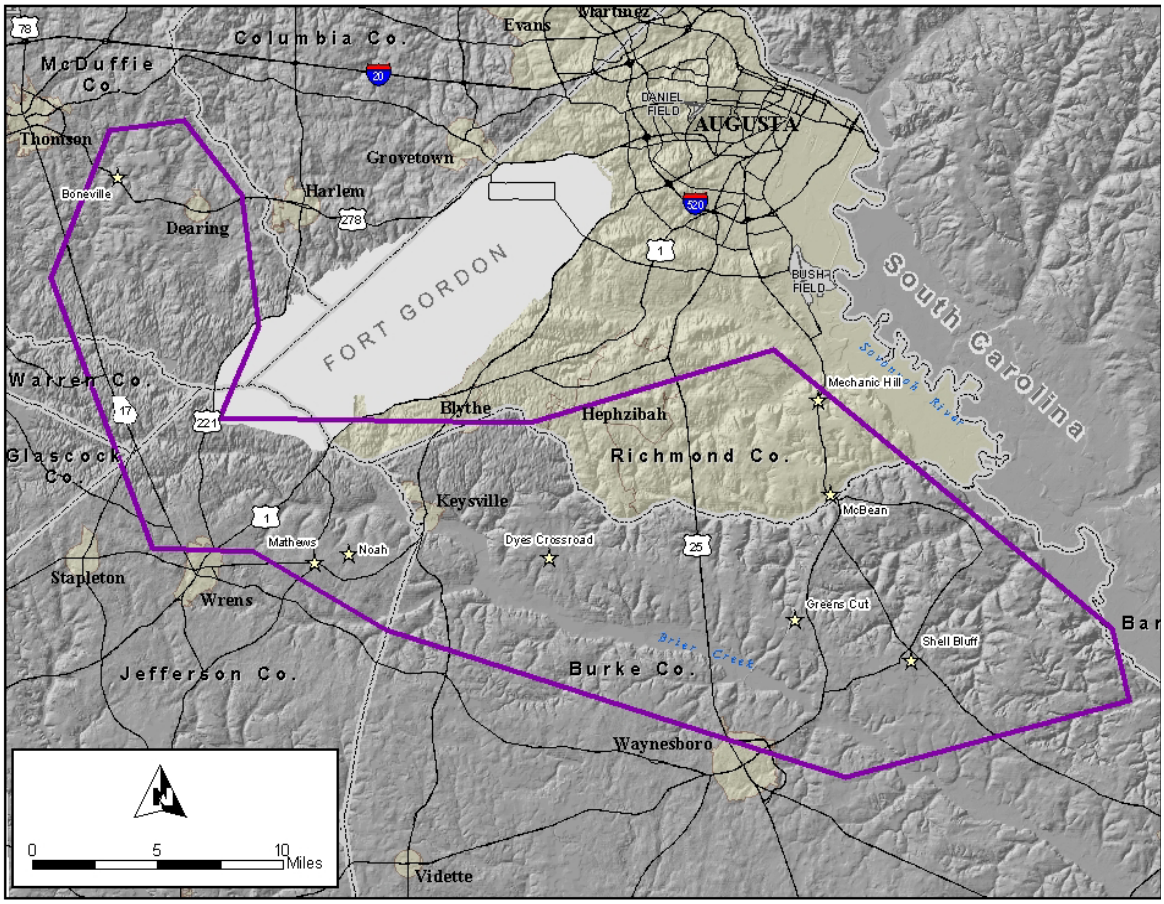
The Study Area encompasses a number of incorporated cities and towns, including:

- Augusta, Richmond County
- Blythe, Burke & Richmond Counties
- Dearing, McDuffie County
- Hephzibah, Richmond County
- Keysville, Burke County
- Waynesboro, Burke County
- Wrens, Jefferson County

In addition, the Study Area encompasses a number of unincorporated rural towns, including:

- Boneville, McDuffie County
- Dyes Crossroad, Burke County
- Greens Cut, Burke County
- Mathews, Jefferson County
- McBean, Richmond County
- Mechanic Hill, Richmond County
- Noah, Jefferson County
- Shell Bluff, Burke County

FIGURE 2: Rural Towns in Study Area



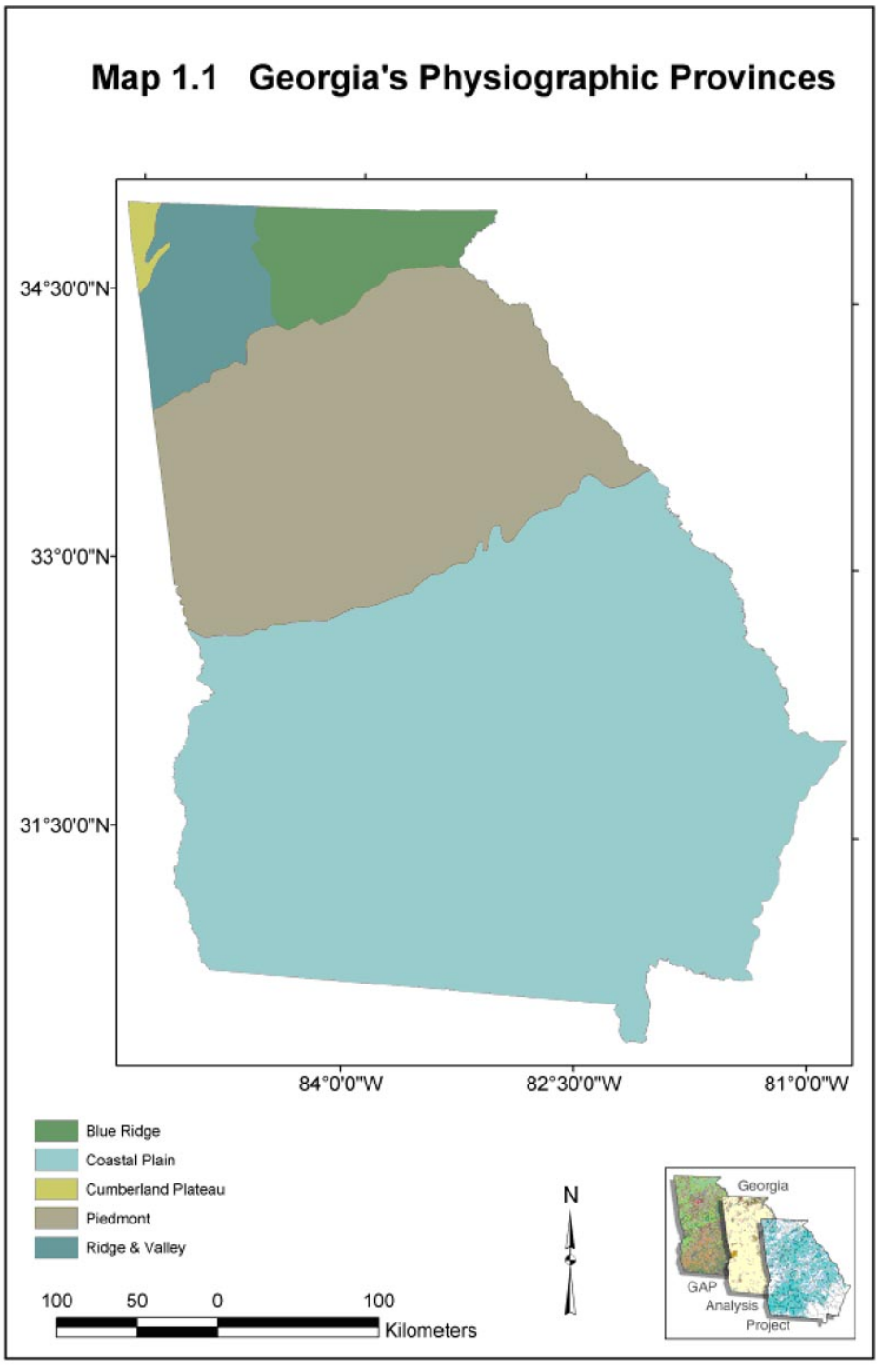
2. Study Area Characteristics

Physiography

The project area lies within the Piedmont and Coastal Plain Physiographic Regions of Georgia. (See Physiographic Diagram of Georgia in Figure 3 on Page 7.) The Piedmont is considered a transitional area between the coastal plain and the Appalachian Mountains. As such, it is characterized by a complex mosaic of irregular plains and rolling hills. The soils are often finely textured though highly erodable in many areas. An interesting feature that crosses the project area, forming the division between the Piedmont and the Coastal Plain, is the Fall Line. The Fall Line is an ancient shoreline from the Mesozoic Era, and provides an important hydrologic and geologic boundary between the crystalline rocks of the Piedmont and the sedimentary rocks of the Coastal Plain. This boundary is the reason for the shoals and waterfalls that occur on rivers traversing it. The Coastal Plain is characterized mostly by low, flat areas with some areas of gently rolling hills, and also comprises the coastal region of Georgia. The soils are primarily well drained and very suitable for cultivation (University of Georgia, Natural Resources Spatial Analysis Laboratory, http://narsal.ecology.uga.edu/gap/georgia.html)

The Savannah River and Brier Creek are the primary waterways that occur in the project area. The average annual rainfall for the area is around 45 inches. Winters tend to be moderate, damp, and cool while the summers tend to be warm with periods of 80 - 90° weather.

Figure 3: Physographic Diagram of Georgia



Source: University of Georgia, Natural Resources Spatial Analysis Laboratory (http://narsal.ecology.uga.edu/gap/images/Maps/1-1map.jpg)

Land Use/Land Cover

The Study Area for the proposed project consists primarily of forestlands at approximately 58% spread across the entire area. The majority of this forestland is planted pine stands that occur throughout the Study Area, often in large patches. The remaining 30% is split between natural forested land, which is concentrated in the western portion of the area north of Wrens and in the eastern portion along the Savannah River, and forested wetlands, which are predominately found along the stream corridors, particularly Brier Creek and the Savannah River. Another significant portion of the Study Area is row crop agriculture which is primarily found in clusters west of Brier Creek to Wrens in the west side and in the southeastern end of the Study Area near Vogtle.

The urban areas are concentrated around the cities of Hephzibah, Dearing, and the Augusta-Richmond County Area. There are scattered rural communities throughout the study area including Keysville, Wrens, and Waynesboro. See Figure 4 on Page 9 for a detailed land use/land cover map.

TABLE 2: Land Use/Land Cover of Study Area

Land Cover Type	Acres	% 0f Area
Commercial/Industrial	1,120	0.39
Forested	44,688	15.44
Forested Wetlands	41,898	14.48
Non-forested Wetlands	20	0.01
Open Land	42,656	14.74
Open Water	3,346	1.16
Pecan Orchard	1,810	0.63
Planted Pine	82,585	28.54
Quarry / Mines	1,054	0.36
Recreational	139	0.05
Residential	4,627	1.60
Row Crop	42,941	14.84
Transportation	18,566	6.42
Utility R/W	3,957	1.37
TOTAL	**289,413**	**100%**

Source: Photo Science Inc.

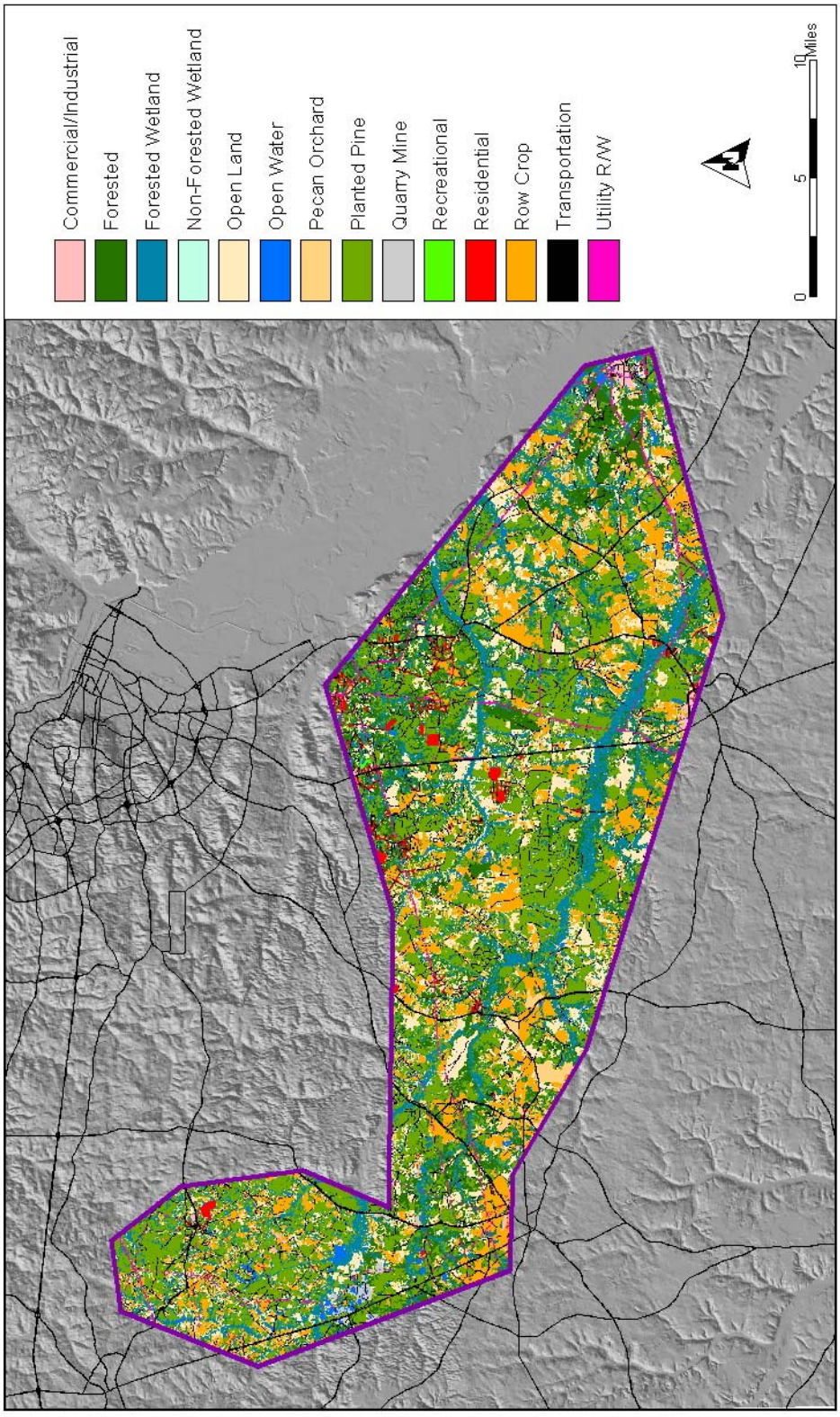


FIGURE 4: Study Area Land Use/Land Cover

TABLE 3: Socioeconomic Profiles of Study Area Counties

	Burke County	Glascock County	Jefferson County	McDuffie County	Richmond County	Warren County
POPULATION						
County population, 2000	22,243	2,556	17,266	21,231	199,775	6,336
Population within Study Area (a)	8,842	0	2,148	5,093	14,099	53
Percent of county's population within Study Area (a)	33.75%	0%	12.44%	23.99%	7.06%	0.84%
County population, percent change, 1990 to 2000	8.1%	8.4%	-0.8%	5.5%	5.3%	4.2%
HOUSEHOLDS						
Households, 2000	7,934	1,004	6,339	7,970	73,920	2,435
Households within Study Area (a)	3,122	0	793	1,847	4,811	25
Percent of county's households within Study Area (a)	39.35%	0%	12.51%	23.17%	6.51%	1.03%

Transportation

Significant transportation features in the Study Area consist of primarily north-south highway corridors. These include:

- A portion of U.S. 1, which runs southwest across the Study Area from Fort Gordon to Wrens.
- A portion of U.S. 78/278, which crosses the northwest portion of the Study Area at Dearing.
- A portion of U.S. 25, which bisects the eastern portion of the Study Area from Augusta to Waynesboro.
- A portion of U.S. 221, which parallels west of U.S. 1 from Fort Gordon to Wrens.
- A portion of Ga. 17, which follows the western end of the Study Area from Thomson to Wrens.

Water Resources

The Study Area encompasses nearly 290,000 acres, 1.16 percent of which is comprised of water. (See Table 4 below for a list of significant water resources.) The Savannah River is the largest body of water in the Study Area. The Savannah River system drains much of the eastern region of the state. Numerous perennial and intermittent streams associated with this watershed are found in the Study Area, including Brier Creek. Wetlands primarily are found along the stream corridors, particularly along Brier Creek and the Savannah River. There are many unconsolidated ponds and lakes identified as wetlands through the U.S. Fish and Wildlife Service's National Wetland Inventory maps.

TABLE 4: Water Resources Within Study Area
Major Rivers/Streams
Savannah River
Brier Creek
Reedy Creek
Brushy Creek
Sweetwater Creek
Boggy Gut Creek
Sandy Run Creek
McBean Creek
Newberry Creek
Little Spirit Creek
Daniels Branch
Beaverdam Creek

Source: USGS National Hydrography Dataset

Recreation Resources

Recreational resources in the Study Area include city parks, Applewood Golf Course along Brier Creek and Pointe South Golf Club in Hephzibah, and other scattered small parks associated with the rural communities within the Study Area.

Cultural Resources

Georgia Power Company contracted New South Associates to conduct a cultural resource literature review for the Thomson - Vogtle study area. The objective of this review was to identify all previously recorded architectural resources and archaeological sites within the study area. Data sources included National Register of Historic Places (NRHP), county architectural survey files, the Georgia Historic Preservation Division (HPD), and the Georgia Archaeological Site files located at the University of Georgia (UGA). NAHRGIS, a web-based GIS system developed by the HPD and the UGA, was also used to gather information for this review.

New South Associates identified 135 architectural resources, 206 archaeological sites, and 23 archaeological investigations within the study area. Several architectural resources are either listed on or eligible for listing on the NRHP. These resources include individual properties as well as historic districts in numerous small towns. Archaeological sites were identified from both the historic and prehistoric periods, although most were recommended ineligible for the NRHP. Several sites of significant prehistoric occupation were recommended potentially eligible for the NRHP, meaning that additional field study would be needed to make a full eligibility determination for these sites.

The literature report from New South Associates is attached as Appendix C, and provides more detailed descriptions of each resource identified during the review and its NRHP status.

Federal and State Lands

Federal lands in the Study Area include a portion of Fort Gordon Military Installation and a small portion of the Savannah River Plant in Barnwell County, South Carolina.

State lands in the Study Area include Yuchi Wildlife Management Area and McDuffie Public Fishing Area and Fish Hatchery.

Sensitive Wildlife Resources

Bald Eagle

Protected species federally listed under the Endangered Species Act were considered during the evaluation of constraints within the project area. Within the six counties (McDuffie, Warren, Richmond, Glascock, Jefferson, and Burke) partially contained in the study area, an aggregate total of six federally listed species potentially occur (USFWS 2006). These species are bald eagle (*Haliaeetus leucocephalus*), red-cockaded woodpecker (*Picoides borealis*), wood stork (*Mycteria americana*), flatwoods salamander (*Ambystoma cingulatum*), shortnose sturgeon (*Acipenser brevirostrum*), and Canby's dropwort (*Oxypolis canbyi*). One known location of a federally listed species occurs within the study area based on information from Georgia DNR's Element Occurrence Database. An active nest location of the federally listed threatened bald eagle occurs in the McDuffie County portion of the project area (GADNR 2006). In addition to the bald eagle, nine other species designated as Georgia protected species were also listed as occurring at specific locations within the study area. Seven of these species are designated as endangered, threatened, or rare on the Georgia protected species list, and three as species of interest (GADNR 2006).

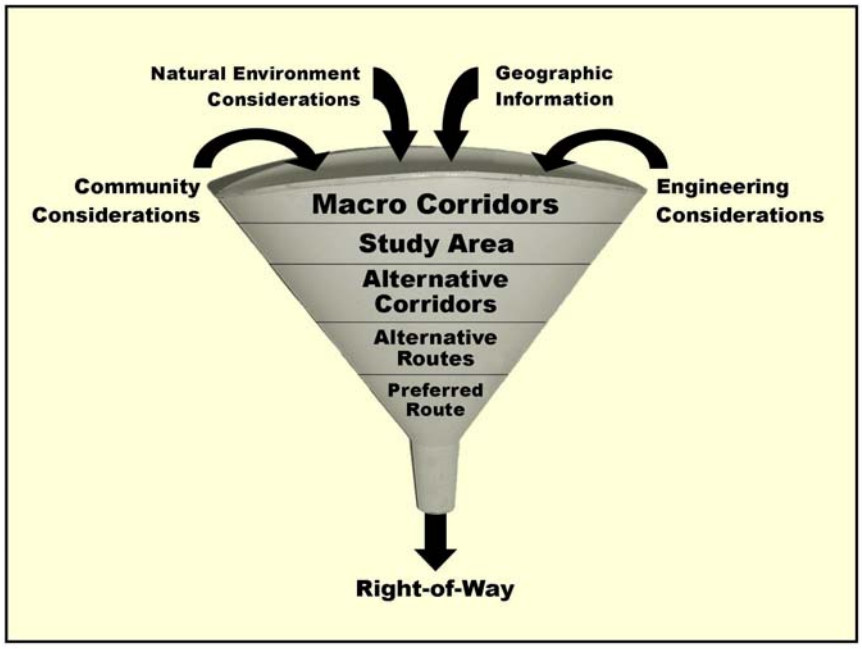
Part IV: Overview of Suitability Analysis

1. EPRI-GTC Methodology

For projects of this scope, Georgia Power Company (GPC) incorporates a computer-based methodology that was developed by the Electric Power Research Institute (EPRI) and Georgia Transmission Corporation (GTC). GPC uses the EPRI-GTC methodology as a tool to evaluate the suitability of individual land tracts, or "grid cells," for locating transmission facilities. Based on analysis of a large area between and in the vicinity of the endpoints for the line, a Macro-Corridor and Study Area are developed. Then, using more-detailed information about the grid cells within the Study Area, Alternate Corridors are developed for further evaluation.

Among its advantages, the EPRI-GTC methodology is objective, comprehensive and consistent. Employing increasingly detailed data, it allows the utility to take into consideration vast amounts of information and to quantitatively consider stakeholder input in developing Alternative Corridors by using the Georgia Siting Model discussed in the next section. Figure 5 below represents the EPRI-GTC methodology.

FIGURE 5: EPRI-GTC Siting Methodology



The EPRI-GTC methodology approaches corridor development by considering three broad perspectives or "environments":

- **Built Environment**, which is concerned with minimizing the impact on people places and cultural resources;
- **Natural Environment**, which is concerned with protecting water resources, plants and animals;
- **Engineering Environment**, which is concerned with maximizing co-location and considering physical restraints; and
- **Simple Average,** which is concerned with weighing each environment equally.

Features within each of these environments are identified and evaluated to map the suitability of grid cells in each environment and develop Alternative Corridors for each. Simple Average Alternative Corridors are developed to account for all three environments at once. These processes are discussed in detail in following sections.

2. About the Georgia Siting Model

A siting model was developed using data collected from a group of Georgia stakeholders during a workshop conducted in June 2003. The workshop was conducted and the model developed and tested by a project team of independent experts. Stakeholders at the workshop represented a range of interests from around the state, such as environmental concerns, historic preservation, homeowners associations, agricultural groups and government agencies, as well as GPC personnel and representatives of other utilities. The resulting model (see Figure 6 on Page 18) includes data layers, features, layer weights and suitability values that are specific to Georgia.

Based on the interest he or she represented, each stakeholder was assigned to a breakout group for each of the three environments—Built, Natural or Engineering. Guided by an independent expert from the project team, each of these groups developed a set of data layers (in green on Figure 6) with component features (in yellow), as well as avoidance areas (in red). For example, one of the data layers in the Built Environment is floodplains, which has two component features: background and 100-year floodplain.

For each feature, the stakeholders then used consensus-building techniques to develop a relative suitability value. Numbers between 1 and 9 were used to represent degrees of suitability, with 1 being most suitable for locating a transmission line and 9 being least suitable for locating a line. These values are described in the EPRI-GTC Project Report (2006) as follows:

Areas that have High Suitability for an Overhead Electric Transmission Line (1, 2, 3) - These are areas that do not contain known

sensitive resources or physical constraints, and therefore should be considered as suitable areas for the development of corridors.

Moderate Suitability for an Overhead Electric Transmission Line (4, 5, 6) - These are areas that contain resources or land uses that are moderately sensitive to disturbance or that present a moderate physical constraint to overhead electric transmission line construction and operation. Resource conflicts or physical constraints in these areas can generally be reduced or avoided using standard mitigation measures.

Low Suitability for an Overhead Electric Transmission Line (7, 8, 9) - These are areas that contain resources or land uses that present a potential for significant impacts that cannot be readily mitigated. Locating a transmission line in these areas would require careful siting or special design measures. Note that these areas can be crossed but it is not desirable to do so if other alternatives are available.

After assigning suitability values to features, stakeholders then weighted each data layer based on their view of its relative importance in the siting process. This was accomplished by conducting pair-wise comparisons. The result is a percentage weighting for each data layer within each environment, totaling 100 percent within each environment.

The EPRI-GTC methodology recognizes it is prohibitive to locate overhead transmission lines on or around some features, because, for example, of physical constraints or permitting delays. These areas are termed “avoidance areas” because the methodology seeks to avoid entering them, if possible. Features that constitute avoidance areas were determined by the stakeholder groups and are listed in red in Figure 6. One of the first steps in implementing the EPRI-GTC methodology is identifying avoidance areas on the Study Area surface to avoid locating transmission in those areas, if possible.

A final note—in each data layer where “background” appears, this feature represents areas that are not the location of any of the other features in that layer. For example, in the Floodplain data layer of the Natural Environment, all areas that are not within a 100-year floodplain are considered background.

FIGURE 6: Georgia Siting Model

Engineering	
Linear Infrastructure	**48.3%**
Rebuild Existing Transmission Lines	1
Parallel Existing Transmission Lines	1.4
Parallel Roads ROW	3.6
Parallel Gas Pipelines	4.5
Parallel Railway ROW	5
Background	5.5
Future GDOT Plans	7.5
Parallel Interstates ROW	8.1
Road ROW	8.4
Scenic Highways ROW	9
Slope	**9.1%**
Slope 0-15%	1
Slope 15-30%	5.5
Slope >30%	9
Intensive Agriculture	**42.6%**
Background	1
Fruit Orchards	5
Pecan Orchards	9
Center Pivot Agriculture	9
AVOIDANCE AREAS	
Non-Spannable Waterbodies	
Mines and Quarries	
Buildings + Buffer	
Airports	
Military Facilities	

Natural Environment	
Floodplain	**6.2%**
Background	1
100 Year Floodplain	9
Streams/Wetlands	**20.9%**
Background	1
Streams < 5cfs+ Regulatory Buffer	5.1
Non-forested Non-Coastal Wetlands a+ 30' Buffer	6.1
Rivers/Streams > 5cfs+ Regulatory Buffer	7.4
Non-forested Coastal Wetlands + 30' Buffer	8.4
Trout Streams (50' Buffer)	8.5
Forested Wetlands + 30' Buffer	9
Public Lands	**16.0%**
Background	1
WMA - Non-State Owned	4.8
Other Conservation Land	8.3
USFS	8
WMA - State Owned	9
Land Cover	**20.9%**
Open Land (Pastures, Scrub/Shrub, etc...)	1
Managed Pine Plantations	2.2
Row Crops and Horticulture	2.2
Developed Land	6.5
Hardwood/Mixed/Natural Coniferous Forests	9
Wildlife Habitat	**36.0%**
Background	1
Species of Concern Habitat	3
Natural Areas	9
AVOIDANCE AREAS	
EPA Superfund Sites	
State and National Parks	
USFS Wilderness Area	
Wild/Scenic Rivers	
Wildlife Refuge	

Built Environment	
Proximity to Buildings	**11.5%**
Background	1
900-1200	1.8
600-900	2.6
300-600	4.2
0-300	9
Eligible NRHP Historic Structures	**13.9%**
Background	1
0 - 1500	9
Building Density	**37.4%**
0 - 0.05 Buildings/Acre	1
0.05 - 0.2 Buildings/Acre	3
0.2 - 1 Buildings/Acre	5
1 - 4 Buildings/Acre	7
4 - 25 Buildings/Acre	9
Proposed Development	**6.3%**
Background	1
Proposed Development	9
Spannable Lakes and Ponds	**3.8%**
Background	1
Spannable Lakes and Ponds	9
Major Property Lines	**8.0%**
Edge of field	1
Landlots	7.9
Land Use	**19.1%**
Background	1
Undeveloped	1
Non-Residential	3
Residential	9
AVOIDANCE AREAS	
Listed Archaeology Sites	
Listed NRHP Districts and Buildings	
City and County Parks	
Day Care Parcels	
Cemetery Parcels	
School Parcels (K-12)	
Church Parcels	

- **Data layers (green cells):** Percentages represent relative importance, or weighting, of each layer in the siting process, as determined by stakeholders.
- **Features (yellow cells):** Numbers between 1 and 9 represent degrees of suitability, as determined by stakeholders, with 1 being most suitable for locating a transmission line and 9 being least suitable for locating a line.
- **Avoidance Areas (red cells):** Features to avoid siting transmission lines, if possible, as determined by stakeholders.

For more detailed information on datasets used in the Georgia model including data sources please see Appendix C of the EPRI-GTC Project Report (2006). This report was used as a guideline for this project.

3. Suitability Mapping

The methodology begins with two endpoints as the basis for creating transmission line corridors. For this project, the endpoints are Thomson Substation and Plant Vogtle. A large area in the vicinity of and between the endpoints is divided into grid cells.

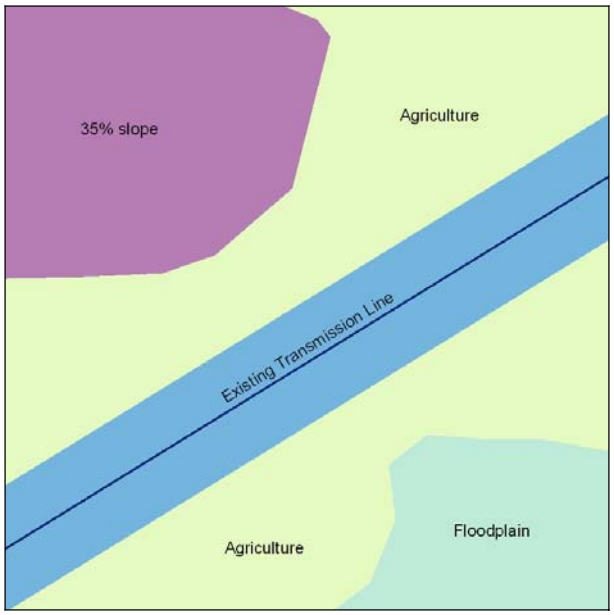
Data from aerial photography, geographic information systems, publicly available datasets and other sources are used to identify features within each grid cell. Based on these features and the values and data layer weights determined in the Georgia Siting Model, the methodology then assigns a suitability value to each cell. More-detailed data is employed by the methodology as corridor locations are narrowed down more precisely

Because cells deemed to have lower suitability for locating a transmission line are assigned higher values, the methodology employs an algorithm that seeks to minimize the sum of values as it works its way from one endpoint to the other. The resulting corridor is referred to the "least-cost path." In this sense, "least cost" refers not to economic costs, but to the fact that low values indicate greater suitability for locating transmission facilities.

Figures 7-9 on Pages 20 and 21 demonstrate the development of a sample "least-cost path" using information from a hypothetical situation.

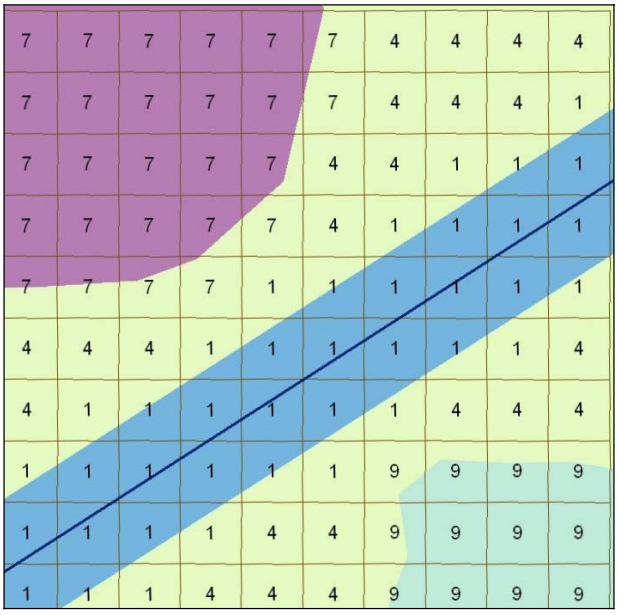
Figure 7 displays an example area that has four features: an existing transmission line through the center of the area, surrounded by agricultural land with an area of steep slopes to the northwest and a floodplain to the southeast.

FIGURE 7: Feature Map of Example Area



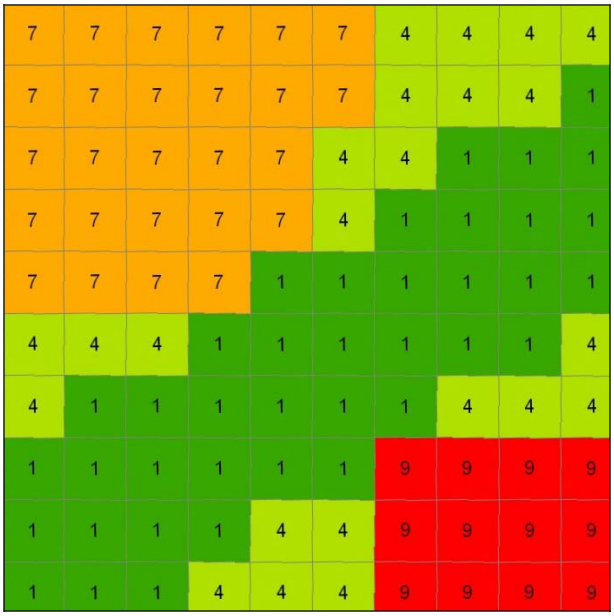
In Figure 8, grid cells are overlain and assigned suitability values based on the features. (The suitability values used in this example do not necessarily correspond to the Georgia Siting Model.) The area of the existing line is considered highly suitable. Agricultural land is moderately suitable. Steep slopes and floodplains have low suitability values.

FIGURE 8: Grid Cell Map of Example Area, With Suitability Values



Finally, Figure 9 shows in green the most suitable corridor through the area for locating a transmission line. Light green areas are moderately suitable. The orange area has a low suitability value and the red area is highly unsuitable. The most suitable corridor from east to west in this example is the one that follows the existing transmission line.

FIGURE 9: Suitability Map of Example Area



4. Developing Macro-Corridors and Alternative Corridors

Beginning with a large area around and between the endpoints, the EPRI-GTC methodology analyzes land tracts, or "grid cells," within that area to develop a Macro-Corridor. This initial analysis is based on satellite and GIS information that is readily available from public sources. Using a minimum ground resolution of 30 meters, this information, the resulting corridor is referred to as the Macro-Corridor, which represents the top 3 percent most suitable routes of all possible routes in the initial area. (See Figure 10 on Page 23 for a map of the Macro-Corridor for the Thomson - Vogtle project.)

The Macro-Corridor then is widened slightly to fully account for possible significant features on the fringes. The result is the Study Area. (See Figure 11 on Page 24 for a map of the Study Area for the Thomson - Vogtle project.) A second round of analysis, based on more-detailed data with a minimum ground resolution of 15 meters, is used to develop Alternative Corridors. These corridors represent the top 3 percent—that is, the most suitable 3 percent—of possible corridors within the Study Area.

- **Built Environment**, which is concerned with minimizing the impact on people places and cultural resources;
- **Natural Environment**, which is concerned with protecting water resources, plants and animals; and
- **Engineering Environment**, which is concerned with maximizing co-location and considering physical restraints.

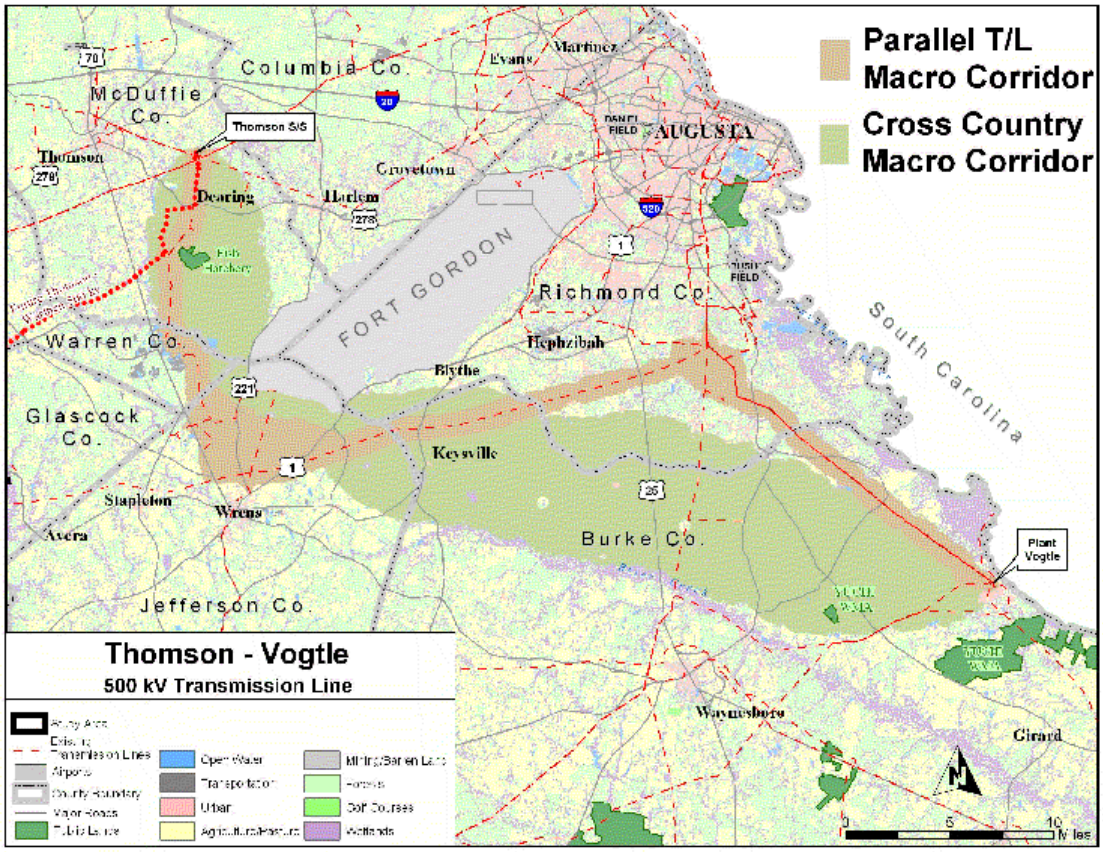
Alternative Corridors are generated for each of the three environments. It should be noted that, when generating Alternative Corridors for each environment, data layers from the other two environments are taken into account. While the target environment is weighted much more heavily, values and weights from the other environments can affect Alternative Corridors generated for that respective environment.

The final step in generating Alternative Corridors is to equally weigh the three environments and generate a Simple Average Alternative Corridor. Figure 12 on Page 25 shows all 4 corridors combined as the Composite Corridor. Appendix A (Alternative Corridors Maps) shows the Composite Corridor as well.

The Composite Corridor (Figure 12) depicts areas in which a transmission line should minimize adverse impacts on people, environmentally sensitive areas, and cultural resources. The Composite Corridor also provides a reasonable balance between co-location of the proposed line, minimization of the overall impacts, and construction and maintainance the line in a cost effective manner. As stated previously, the specific routing of a right-of-way within the Corridor will be implemented consistent with Georgia Power's procedures to mitigate impact by siting it to avoid sensitive land uses. Environmental Site Permit Application, Part 3 – Environmental Report, Section 4.1.2. Moreover, the alternates inherently examined in the Study by application of the proceduralized EPRI-GTC methodology provides assurance that the composite corridor avoids, minimizes and mitigates adverse environmental impacts during this phase of routing activities.

The following sections of this report provide information about features that were found within the Study Area based on available information, and about the Alternative Corridors that were generated.

Figure 10: Thomson – Vogtle Corridor



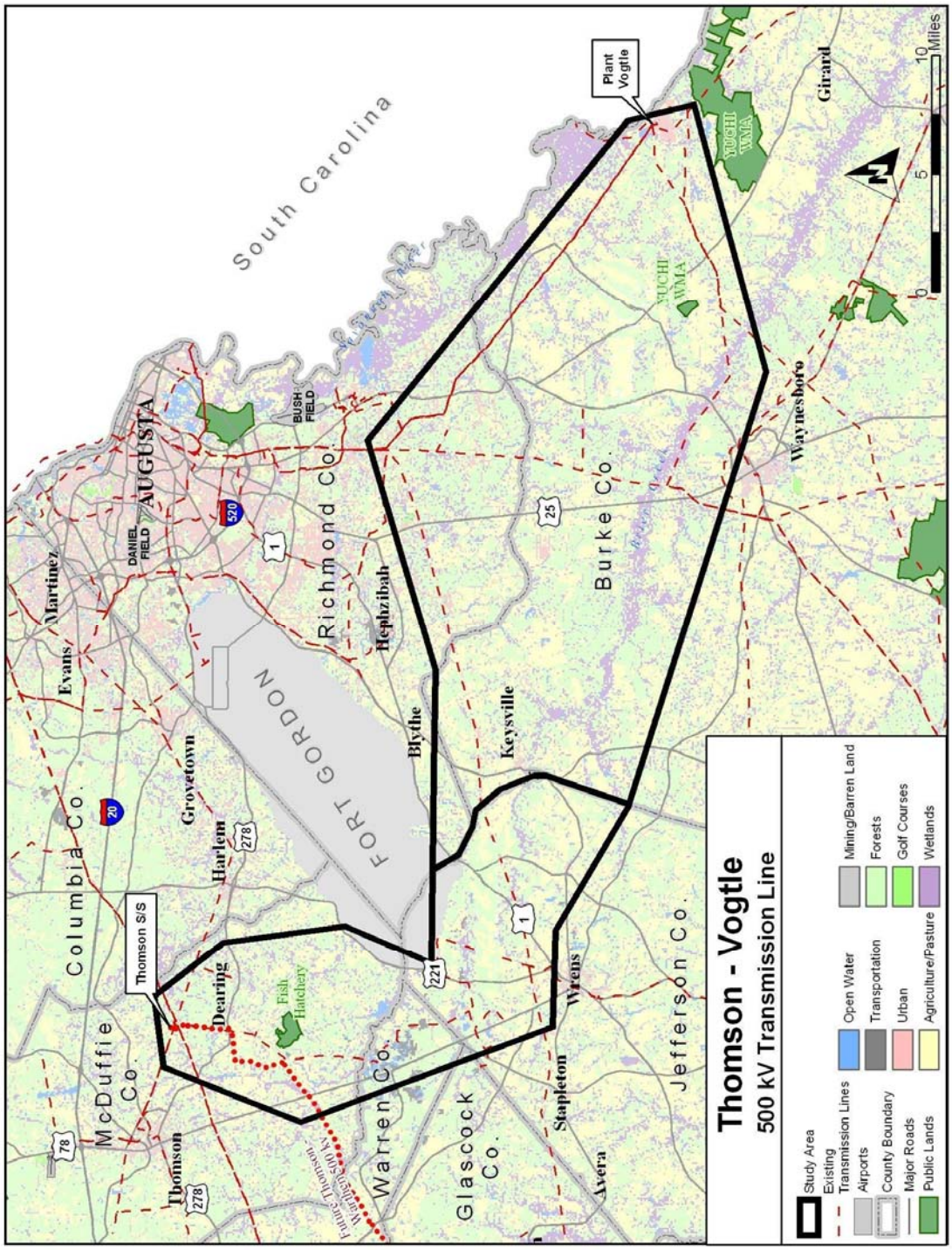


FIGURE 11: Thomas - Vogtle Study Area

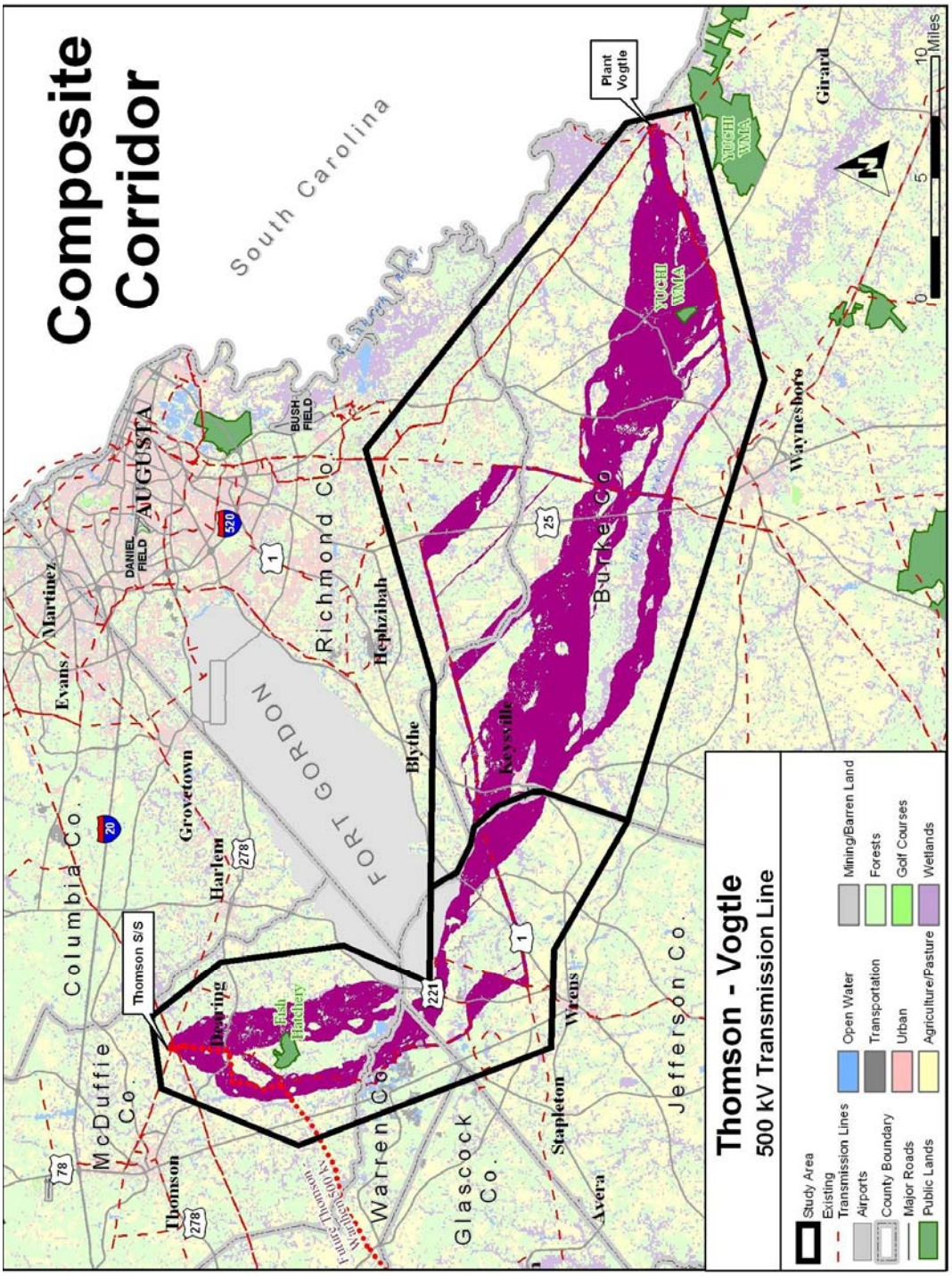


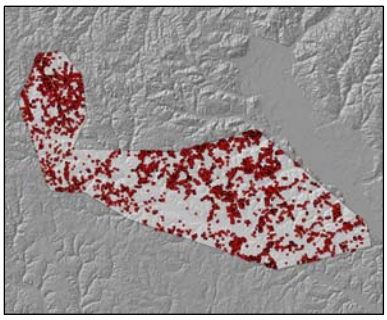
FIGURE 12: Built, Engineering, Natural and Simple Average Alternative Corridors, Thomas - Vogtle

PART V: ENGINEERING ENVIRONMENT

1. Avoidance Areas

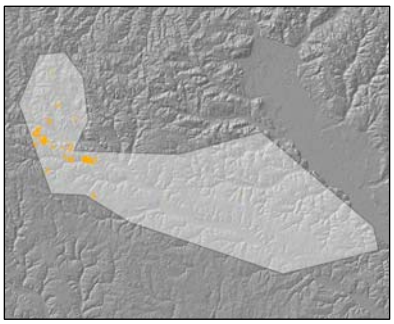
Avoidance Area: Buildings

Buildings are designated as Avoidance Areas within the Engineering Environment. In the Study Area, there are numerous existing structures, with notable concentrations around the suburbs of Augusta, around Waynesboro, Wrens, Dearing, and near the Thomson substation. This information was developed from 2005 NAIP aerial photography.



Avoidance Area: Mines & Quarries

Mines and quarries area designated as Avoidance Areas also. There are many kaolin mining operations occurring within the study area. The mining operations mainly occur along the "fall line," which is the geological transition from the Peidmont Province to the Coastal Plain Province. This transition area is rich in Kaolin clays.



Other Avoidance Areas

These other avoidance features also fell within the Study Area:

- Non-spannable water bodies;
- Airports; and
- Military facilities

2. Linear Infrastructure Features

High Suitability: Parallel Existing Transmission Lines

In the Engineering Environment, the model gives high suitability to paralleling existing transmission lines. Several existing transmission lines traverse the Study Area. (See Figure 13 on Page 28 for a map of existing lines). Below is a list of lines and voltages within the Study Area.

- SNG Tap, 46kv
- Clark Road Tap, 115kv
- Boykin Road - Goshen 230kv
- Mills Road Loop 115kv
- Vogtle - Goshen #2, 230kv
- Vogtle - Goshen #3, 230kv
- Vogtle - Goshen #1, 230kv
- Greens Cut Tap, 115kv
- SNG Underground Tap, 46kv
- Georgia Kaolin Tap, 46kv
- Vogtle - West McIntosh, 500kv
- Savannah River Plant - Vogtle, 230kv
- Dum Jon - Goshen, 230kv
- Branch - Goshen, 230kv
- Thomson Primary - Warrenton Primary, 115kv
- Thomson Primary - Temple Industries, 46kv
- Thomson Primary - Thiele Kaolin, 46kv
- Waynesboro Primary - Wilson, 230kv
- Vogtle - Wilson Primary, 230kv
- Waynesboro Primary - Mills Road, 115kv
- Thomson Primary - Harlem, 46kv
- Goshen - Waynesboro Primary, 115kv
- Augusta Newsprint - Voglte, 230kv
- Goshen - South Augusta (White), 230kv
- Goshen - South Augusta, 115kv
- Branch - Goshen, 230kv
- Wrens Primary - Hillman Road, 46kv
- Evans Primary - Thomson Primary, 230kv
- Thomson Primary - Warrenton Primary, 230kv
- Evans Primary - Thomson Primary, 115kv
- Fifty Six Loop - Goshen, 230kv
- Goshen - West Augusta, 115kv
- Goshin - Olin, 115kv
- Sylvania - Waynesboro Primary, 115kv
- Thomson Primary - Warrenton Primary (Black), 115kv
- Wrens Primary - Ga Tenn Mining, 46kv
- Vogtle - Warthen, 500kv
- Waynesboro Primary - Gough City, 46kv
- Thomson - Warthen, 500kv
- Vogtle - Goshen #1, #2, and # 3 230kv. Paralleling the Vogtle - Goshen corridor which currently has three 230kV lines. This routing option is NOT recommended due to the potential for severe transmission system impacts associated with the loss of multiple elements along this common right-of-way corridor. This corridor was assigned a low suitability.

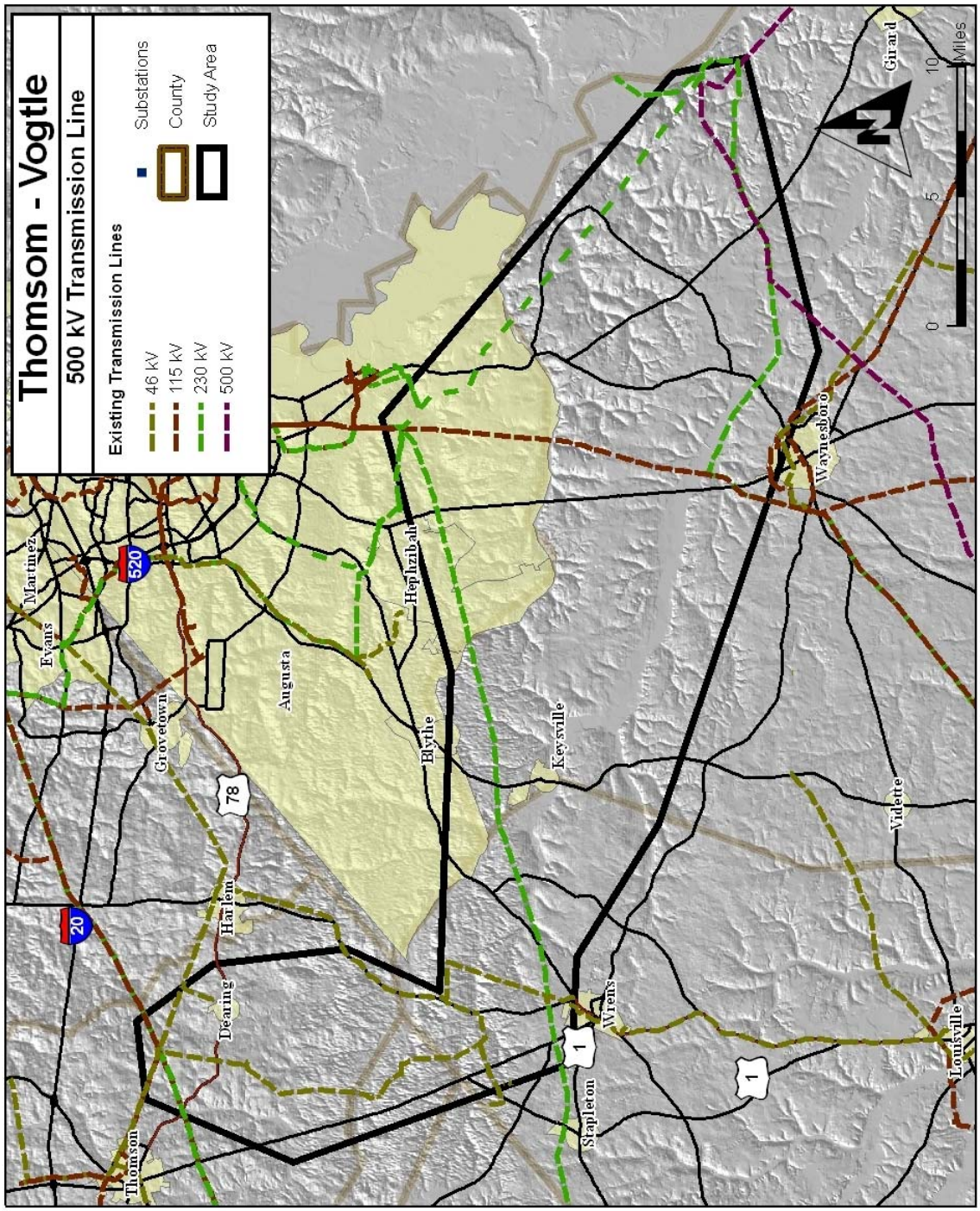
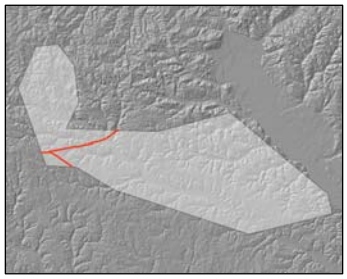


FIGURE 13: Existing Transmission Lines in Study Area

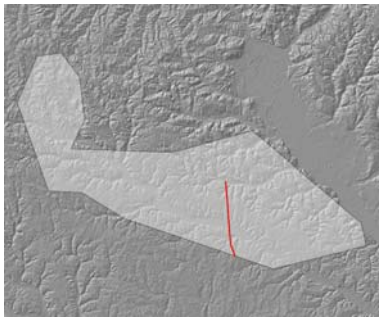
Moderate Suitability: Parallel Pipelines

Locating parallel to existing pipelines is given a moderate suitability in the Engineering Environment. There are a several natural gas pipelines in the Study Area. These include lines owned by Southern Natural Gas. Data was obtained from the U.S. Geological Survey.



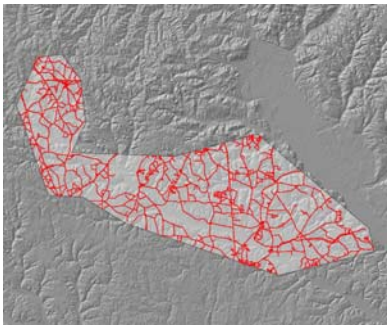
Low Suitability: Future Department Of Transportation Plans

The Engineering Environment model assigns a low suitability to locating on the site of future planned road projects. According to information acquired by research, one road project is underway in the Study Area, which is a widening project of US Hwy 25. Data was obtained from the Georgia Department of Transportation.



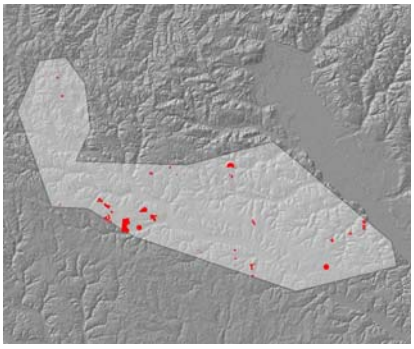
Low Suitability: Road Rights of Way, Railroad Rights of Way

The Engineering Environment of the model gives low suitability to locating a transmission line on road or railroad right of ways. Data was obtained from datasets on file at the Central Savannah River Regional Development Center.



3. Intensive Agriculture Features

The Engineering Environment of the Georgia Siting Model categorizes intensive agriculture as fruit and pecan orchards, and center pivot irrigation and assigns a low suitability to these areas. There are several center pivot irrigation systems scattered throughout the study area. There are also several pecan orchards located in the southern portion of the study area. These features were located thru aerial photography interpretation. No fruit orchards were found to be present in the study area.



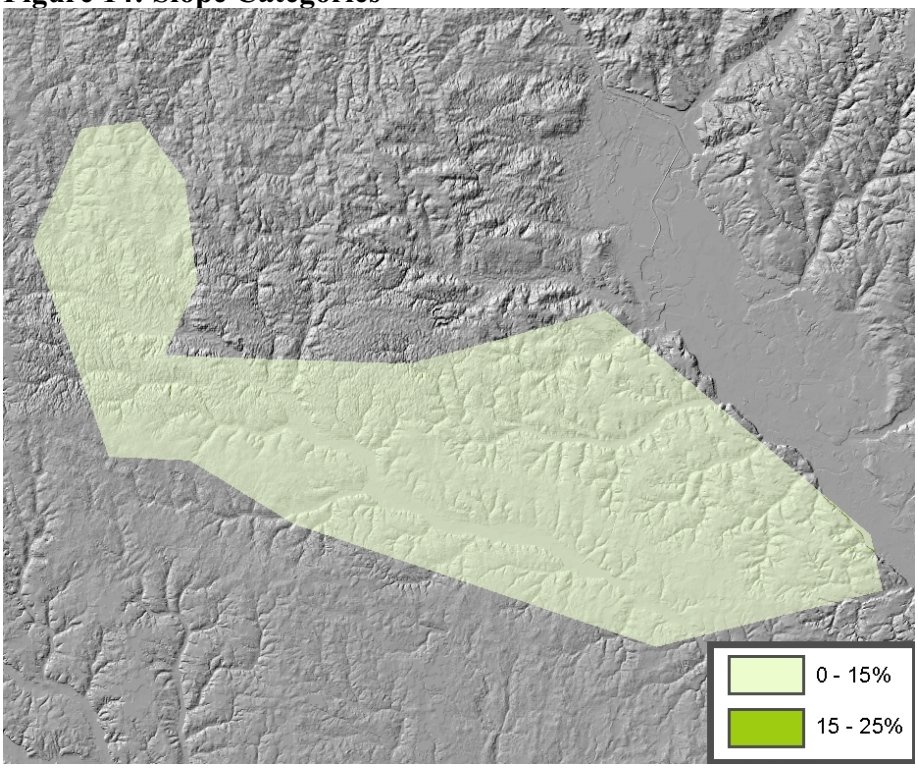
4. Slope Features

Recognizing the challenges of constructing a transmission line on steep slopes, the Engineering Environment of the Georgia Siting Model categorizes slopes, and slopes become less suitable as they become steeper. Table 5 below summarizes the suitability of slope categories in the model.

TABLE 6: Categories, Suitability Values of Slopes		
Angle of Slope	**Suitability Value from Model**	**Suitability**
Slope 0-15%	1.0	High
Slope 15-30%	9.0	Low

Slopes of 0-15% dominate the Study Area. Only a few areas exhibit slopes greater the 15% and are difficult to distinguish in the figure below. These areas are concentrated along the Savannah River, and along the "Fall Line" in the northwest center of the study area around the kaolin mines. Slope information was obtained from the U.S. Geological Survey.

Figure 14: Slope Categories



5. Engineering Environment Data Layer Weights

The Engineering Environment data layers and their relative weights are summarized in Table 6 below.

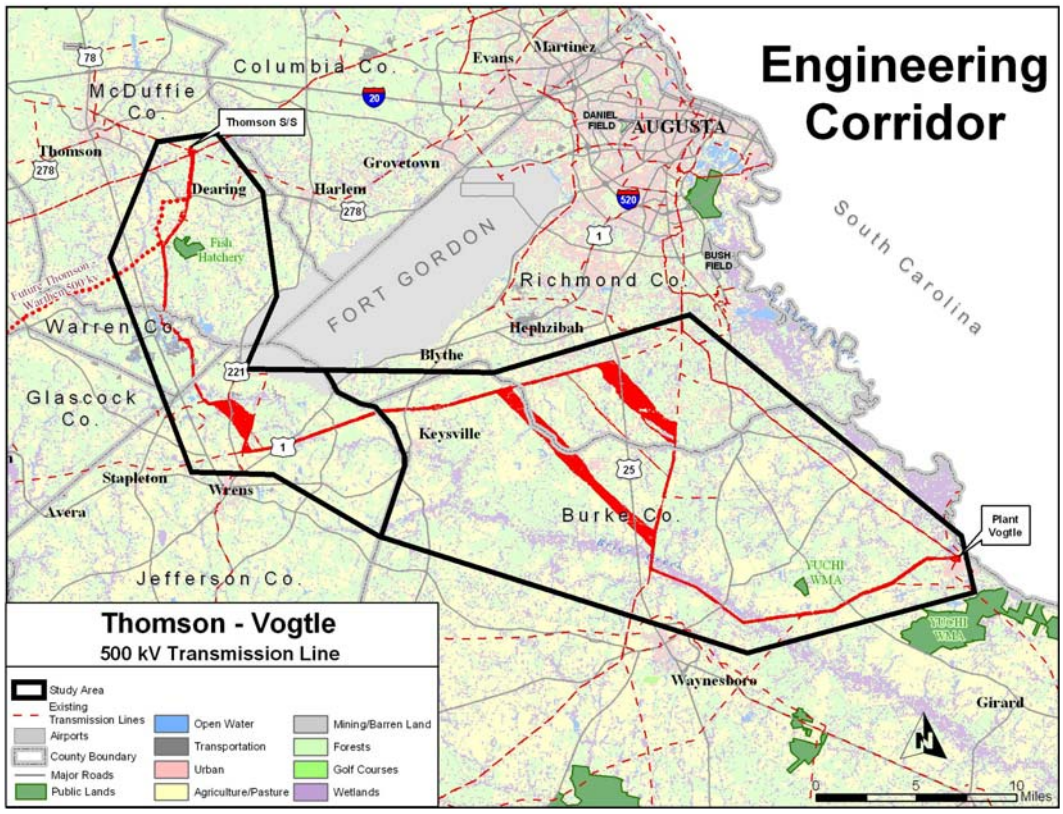
TABLE 7: Engineering Environment Data Layers and Relative Weights	
Layer	**Weight**
Linear Infrastructure	48.3%
Slope	9.1%
Intensive Agriculture	42.6%

6. Engineering Alternative Corridors

When the feature suitability values and data layer weightings were combined and the least-cost path algorithm was applied to the available datasets, the result was the Engineering Alternative Corridors displayed in Figure 15 below. The Engineering Environment of the Georgia Siting Model is heavily weighted toward co-location. As a result, it is not surprising that the Engineering corridors primarily are located along the paths of existing transmission lines.

Beginning at Thomson Substation to the northwest, the corridor follows the 46-kV Thomson – Thiele Kaolin and the 500-kV Thomson – Warthen lines south to US Hwy 278. It then forks into two options, one portion follows Thomson – Warthen and the other continues along Thomson – Thiele Kaolin. The corridor comes back together about 2.5 miles south and continues along the transmission corridor until it intersects with US Highway 221. The corridor heads southeast cross-country until it intersects the Branch – Goshen 230kV, which it follows northeast for about approximately 13 miles. The corridor breaks away from the Branch – Goshen line, heads cross country in three places and intersects the Goshen – Waynesboro Primary 115kV and heads south. At the junction with the Waynesboro Primary – Wilson, the corridor follows this line to just west of Vogtle where it follows the Vogtle – Warthen 500kV to the termination into Vogtle.

FIGURE 15: Engineering Environment Alternative Corridors



PART VI: NATURAL ENVIRONMENT

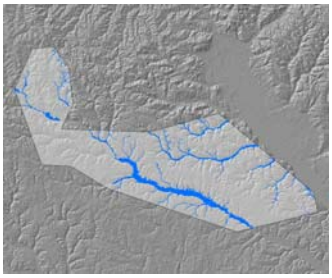
1. Avoidance Areas

In the available datasets, an E.PA. Superfund Site was the only feature found within the Study Area. These features are deemed avoidance areas in the Natural Environment of the Georgia Siting Model. USFS Wilderness Areas, Wild/Scenic Rivers, and Wildlife Refuges, and State and National parks did not occur in the Study Area.

2. Floodplains

Low Suitability: 100-Year Floodplain

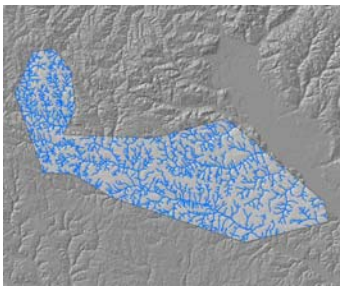
The Natural Environment of the Georgia Siting Model gives very low suitability to locating transmission lines in the 100-year floodplain. The corridors of several waterways include areas that are included in the 100-year floodplain, notably areas along Brier Creek, Newberry Creek, Boggy Gut Creek, Little Spirit Creek, and Headstall Creek. Data was obtained from the Federal Emergency Management Agency and the U.S. Geological Survey.



3. Streams/Wetlands

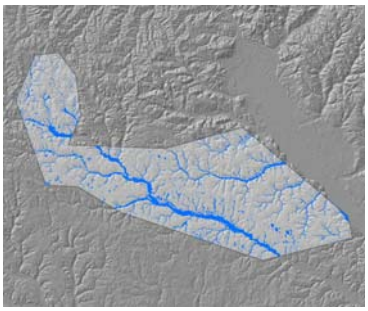
Moderate to Low Suitability: Streams & Rivers

The Natural Environment categorizes streams as those that flow with either less than or more than 5 cubic feet of water per second (cfs). It is moderately suitable (5.1) to locate a transmission line in the regulatory buffer of a stream that flows with less than 5 cfs. The model gives low suitability (7.4) to locating a line in the regulatory buffer of a stream or river that flows with greater than 5 cfs. There are numerous streams throughout the study area. Information was obtained from the U.S. Geological Survey.



Low Suitability: Wetlands

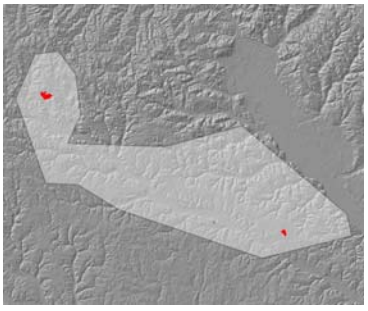
Wetlands have a low suitability value for locating transmission lines in the Natural Environment of the Georgia Siting Model. There are numerous wetlands areas throughout the Study Area. Information was obtained from the U.S. Geological Survey.



4. Public Lands

The Natural Model takes into account lands that are public property including Wildlife Management Areas (state owned, and non-stated owned), Conservation Lands, and US Forest Service Lands and assigns a low suitability value for these areas.

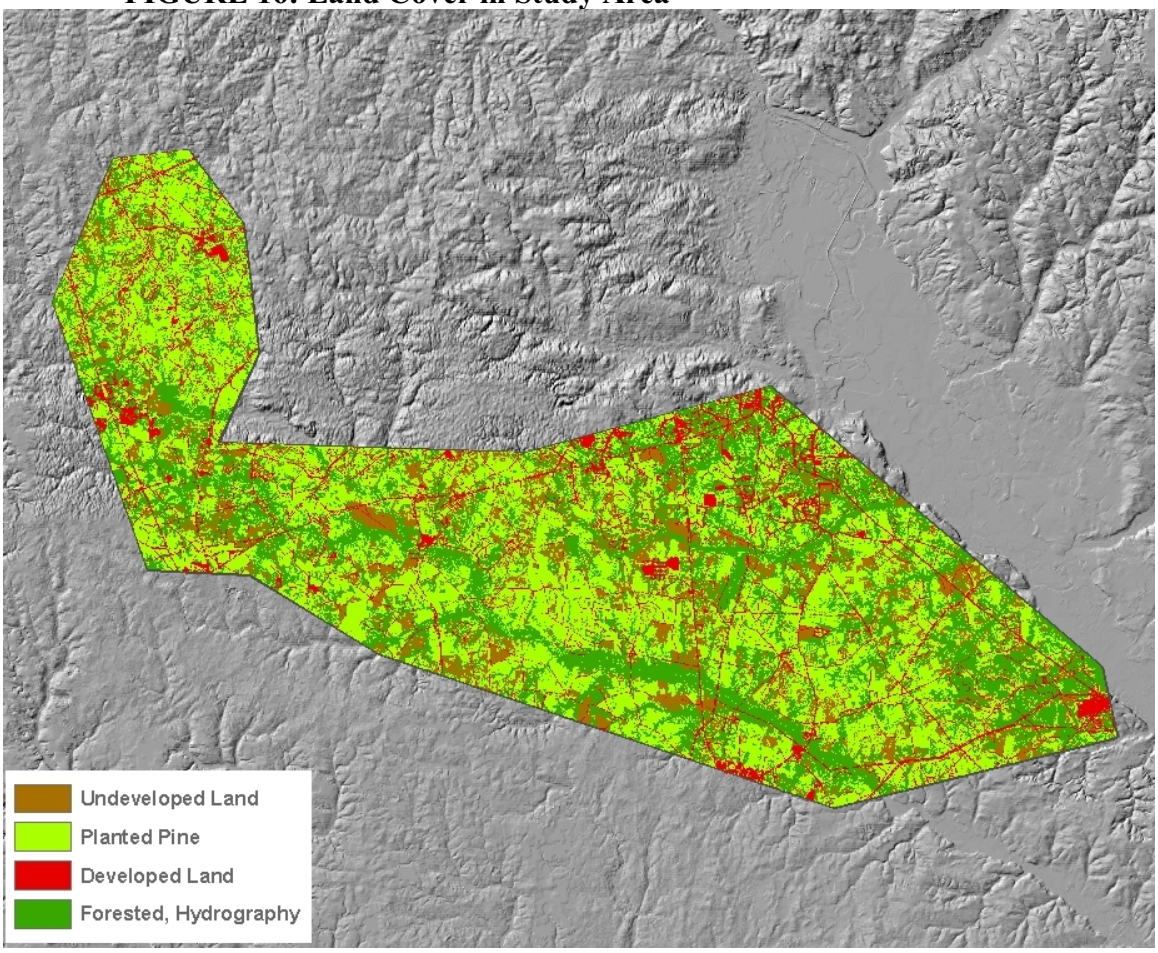
The Yuchi WMA located in the southeast portion of the study area, the NRCS conservation easement located in the mid-south portion, the McDuffie County Public Fishing Area in the northern portion of the study area, and a small Nature Conservancy conservation easement along the study area boundary in the southeast portion along the Savannah River.



5. Land Cover

Figure 16 below shows land cover in the Study Area.

FIGURE 16: Land Cover in Study Area



High Suitability: Open Land, Pine Plantations, Agriculture

In the Natural Environment, which is concerned with protecting water resources, plants and animals, the Georgia Siting Model finds open land, pine plantations, and agriculture to be highly suitable for transmission lines.

Moderate Suitability: Developed Land

In the Natural Environment of the Georgia Siting Model, developed land is considered moderately suitable. The concentrations of developed land occur mainly in the mid-northern portion of the study area around the suburbs of Augusta and around the Thomson Substation.

Low Suitability: Forests

In the Natural Environment, forested land consisting of hardwoods, mixed, and natural coniferous woodlands are considered unsuitable for locating transmission lines. There is a significant amount of forested land in the Study Area with particular concentrations around Vogtle and along the waterways. Forested land makes up approximately 42 percent of the Study Area.

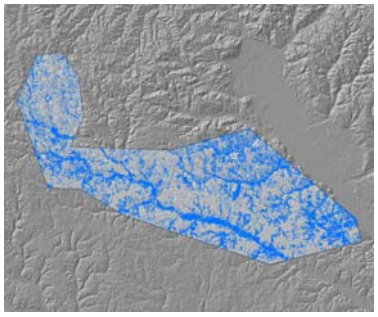
6. Wildlife Habitats

Avoidance: Federal Listed Species

A 600 foot buffer around the location of the known bald eagle nesting site in McDuffie County is excluded from consideration. This buffer corresponds to current management zones, recommended by the U.S. Fish and Wildlife Service and incorporated by GA DNR (Jim Ozier, personal communication, 2007).

Low Suitability: Species of Concern

In the Natural Environment of the Georgia Siting Model, habitats for species of concern have a low suitability for locating transmission lines, as well as natural areas that may contain habitats for species of concern. Specific locations with known records of Georgia protected species were also assigned the lowest suitability weight.



7. Natural Environment Data Layer Weights

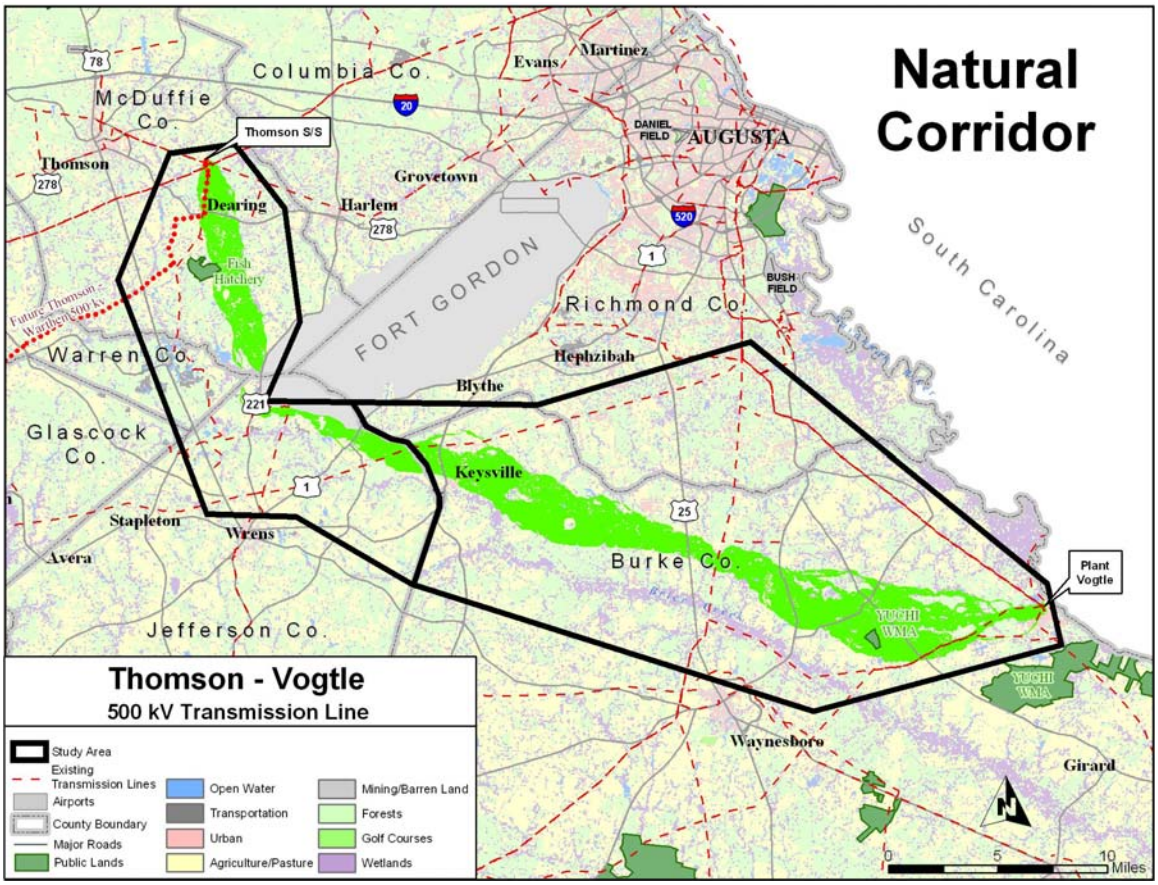
The Natural Environment data layers and their relative weights are summarized in Table 8 below.

TABLE 8: Natural Environment Data Layers and Relative Weights	
Layer	**Weight**
Floodplain	6.2%
Streams/Wetlands	20.9%
Public Lands	16%
Land Cover	20.9%
Wildlife Habitat	36%

8. Natural Environment Alternative Corridors

When the "least-cost path" algorithm was applied to the available datasets in the Natural Environment, the result was the Natural Environment Alternative Corridors displayed in Figure 17 below. The corridor follows a similar path to the built corridor, except in the northwestern portion of the study area. On the eastern end, coming out of Vogtle, the corridor generally follows a westerly direction. The corridor seeks out open land, croplands, and pine plantations, which mainly occur parallel and north of Reedy Creek. The corridor follows this general northwesterly direction until it intersects Hwy 221. The corridor follows Hwy 221 for a short distance until it passes most of the Kaolin mines. Once past the Kaolin mines, the corridor takes a more northerly direction between 2 stream systems until it reaches the Thomson Substation. (The Natural Environment model gives natural forested land the lowest suitability value of 9.)

FIGURE 17: Natural Environment Alternative Corridors

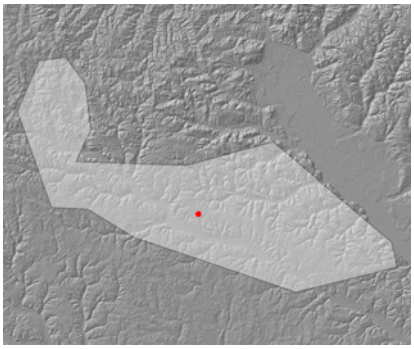


PART VII: BUILT ENVIRONMENT

1. Avoidance Areas

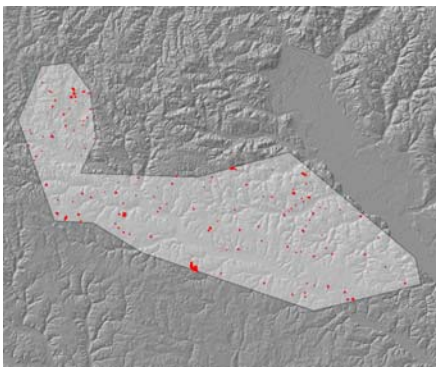
Avoidance Area: Listed National Register of Historic Places Sites

There is 1 site in the Study Area that is listed on the National Register of Historic Places. The site is the Hopeful Baptist Church in Burke County. Information was compiled by New South Associates (see appendix C).



Avoidance Areas: City/County Parks, Day Care, Cemetery, School and Church Parcels

City & county parks, day cares, cemeteries, schools and churches are all considered avoidance areas in the Built Environment. There are records of approximately 167 such parcels in the available datasets. Information was developed by Photo Science from data available from public sources and from analysis of aerial photography.



Other Avoidance Areas:

There were no Listed NHRP Districts or Listed Archaeological sites in the study area. Information was compiled by New South Associates (see appendix C).

2. Proximity to Buildings

In the Built Environment of the Georgia Siting Model, it is considered more suitable to locate transmission lines farther away from buildings. The model has five categories for proximity to buildings. These are listed below in Table 9, along with their respective suitability values. Background constitutes all areas that are farther than 1,200 feet from a building. Structure locations are presented in the map at right. Buildings are particularly concentrated south of Augusta and around the Thomson Substation. This information was developed by Photo Science Inc. from analysis of aerial photography.

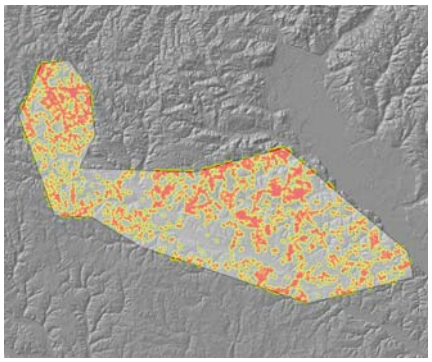


TABLE 9: Suitability, Proximity to Building

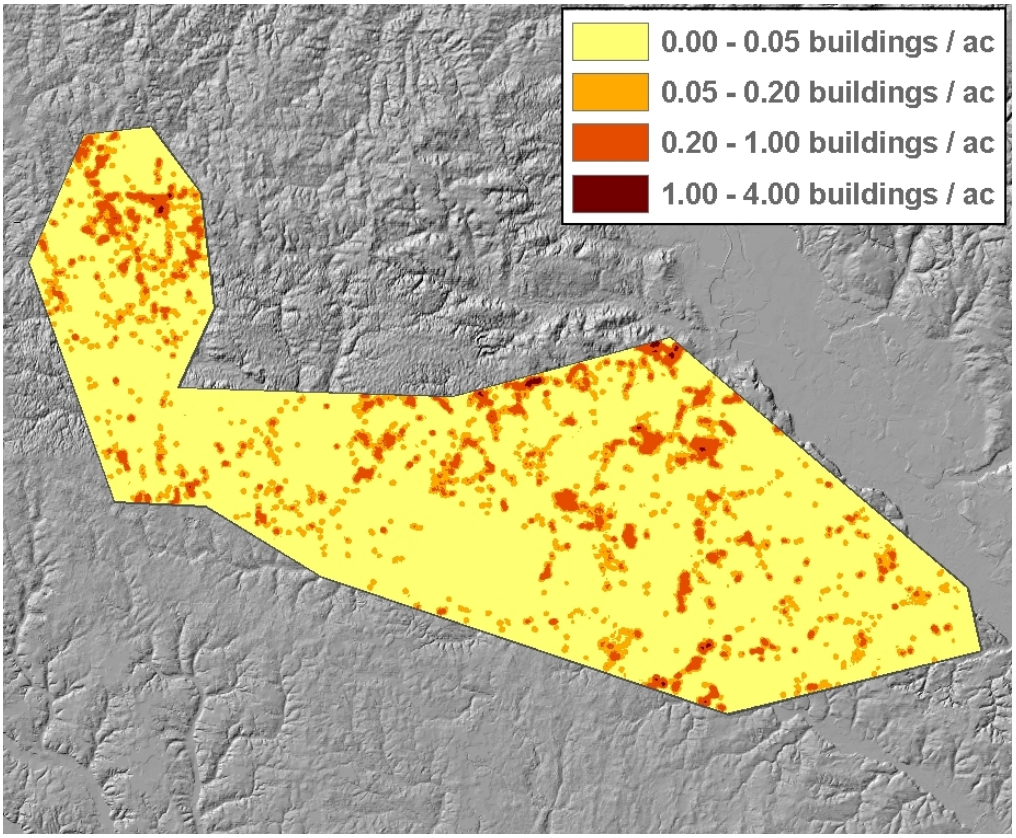
Distance from building	Suitability Value from Model	Suitability
0-300 feet	9.0	Low
300-600 feet	4.2	Moderate
600-900 feet	2.6	Moderate
900-1,200 feet	1.8	Moderate
Background	1.0	High

3. Building Density

In the Built Environment of the Georgia Siting Model, transmission lines are more suitable in areas of lower building density. The model features five categories of building density, summarized in Table 10 below. Figure 18 shows building density categories mapped within the Study Area. Areas of higher density tend to occur around Waynesboro, Dearing, and the suburbs of Augusta. This information was developed by Photo Science Inc. from analysis of aerial photography.

TABLE 10: Suitability, Building Density		
Building Density	**Suitability Value from Model**	**Suitability**
0-0.05 buildings/acre	1	High
0.05-0.2 buildings/acre	3.7	High
0.2-1.0 building/acre	6.3	Moderate
1-4 buildings/acre	9.0	Low

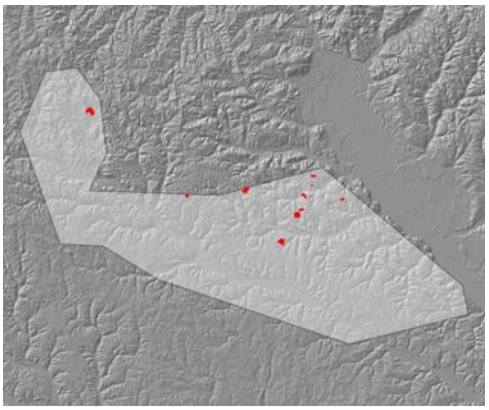
FIGURE 18: Building Density in Study Area



4. Proposed Development

Low Suitability: Proposed Development

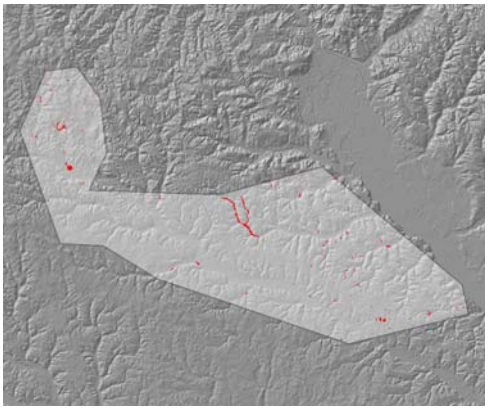
According to the Georgia Siting Model, areas of proposed developments are deemed to have low suitability for locating transmission lines. In the Study Area, these locations tend to be concentrated near the suburbs of Augusta. Data was obtained from local planning/zoning officials and from aerial photography.



5. Spannable Lakes and Ponds

Low Suitability: Spannable Lakes and Ponds

The Built Environment of the model considers spannable lakes and ponds unsuitable for locating transmission lines. There are numerous lakes and ponds dotted throughout the Study Area. This information was obtained from the U.S. Geological Survey National Hydrography Dataset.



6. Land Use

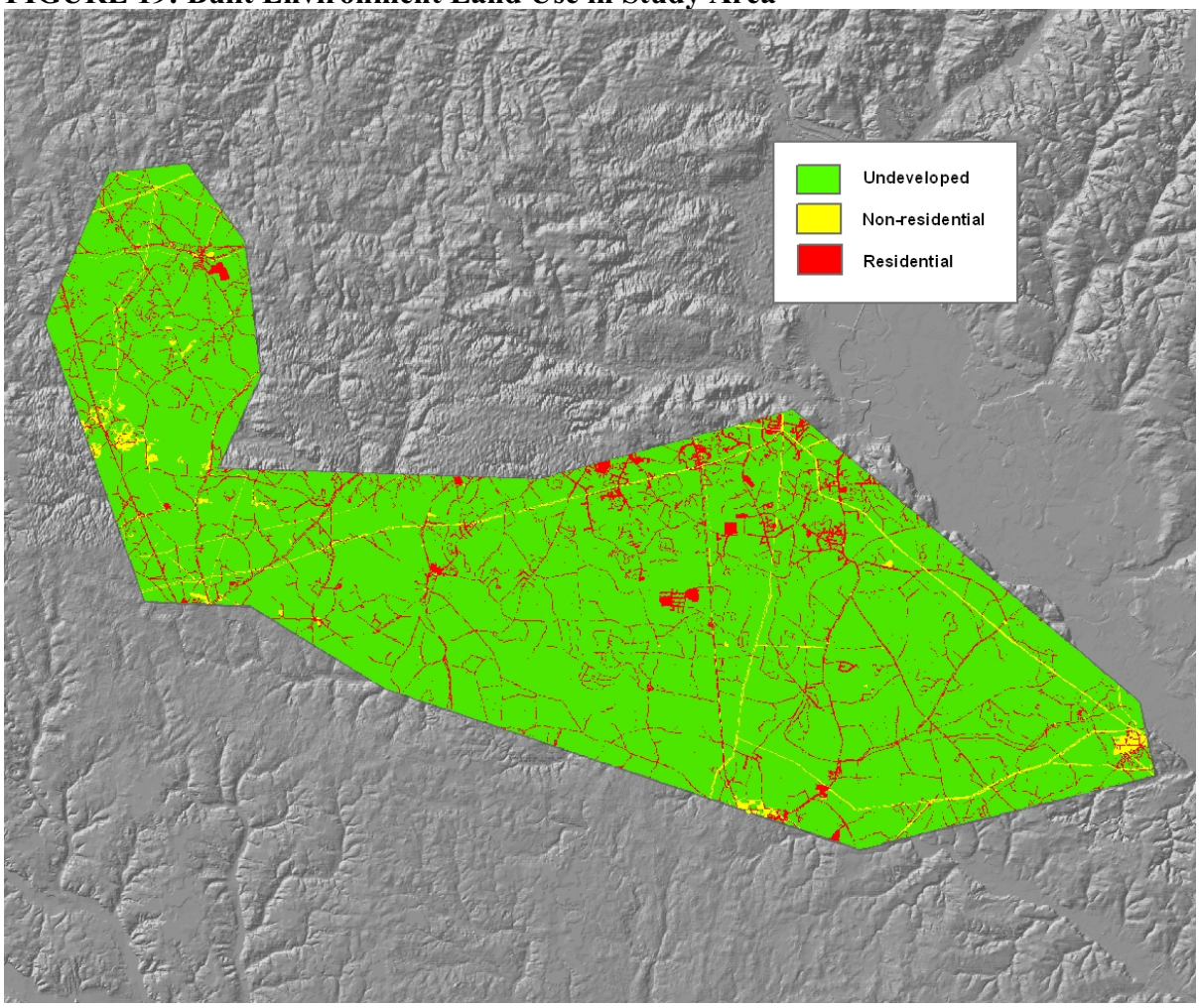
Compared to other land uses, the Built Environment of the Georgia Siting Model considers undeveloped land to be the most suitable for locating transmission lines. Developed lands are least suitable in the Built Environment of the model. See Table 11 below for a summary of land-use suitability values as determined in the model.

TABLE 11: Suitability, Land Uses

Land Use	Suitability Value from Model	Suitability
Undeveloped - Agriculture, Forested, Hydrography, Open Land	1.0	High
Nonresidential – Commercial/Industrial, Mining, Utilities	3.0	Moderate
Residential	9.0	Low

Figure 19 on Page 46 shows land uses in the Study Area. Undeveloped land makes up the majority of the Study Area with a major portion being pine forests. Commercial/industrial tracts are concentrated for the most part in and around Waynesboro and mining facilities are concentrated on the fall line between Dearing and Wrens. Residential tracts tend to be concentrated in the northeastern portion of the Study Area in the suburbs of Augusta.. The most common land use in the Study Area is forested land. This information was developed by Photo Science Inc. from analysis of satellite imagery, aerial photography, and from other public sources.

FIGURE 19: Built Environment Land Use in Study Area



7. Eligible Historic Sites

The Built Environment of the model considers sites that are eligible to be listed on the National Register of Historic Places to be unsuitable for transmission lines. The model considers anything within 1500 feet of an eligible site to be not suitable for transmission lines, and anything outside of that 1500 foot (background) is suitable. This information was complied by New South Associates.

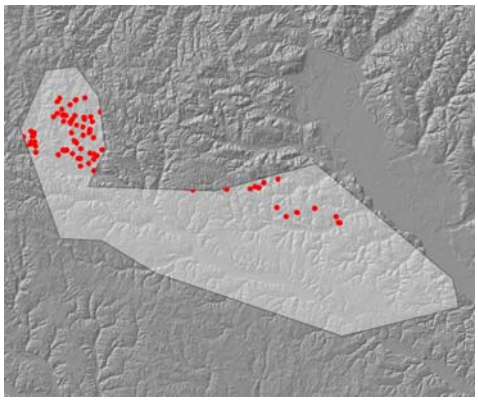


TABLE 12: Suitability of Eligible Historic Sites		
Distance from site	**Suitability Value from Model**	**Suitability**
0 - 1500	9.0	Low
Background	1.0	High

8. Built Environment Data Layer Weights

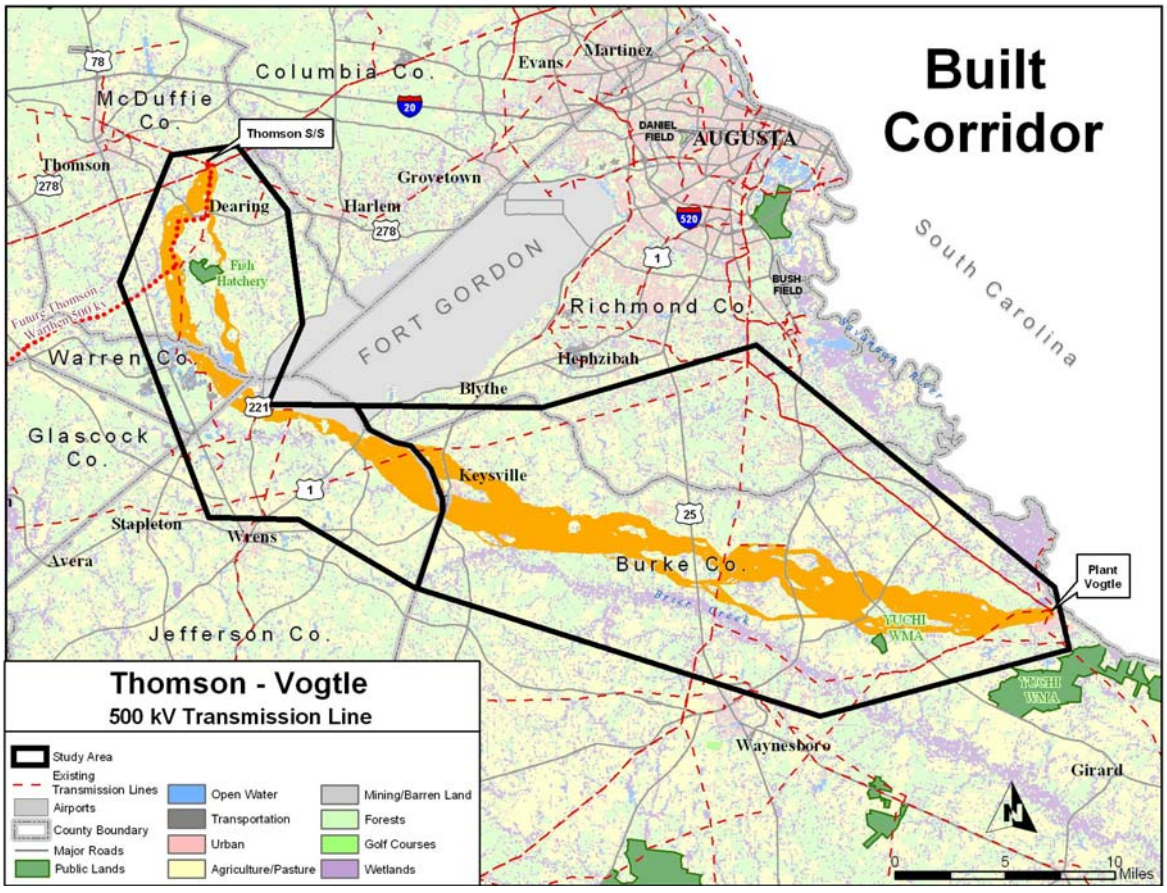
The Built Environment data layers and their relative weights are summarized in Table 13 below.

TABLE 13: Built Environment Data Layers and Relative Weights	
Layer	**Weight**
Proximity to Buildings	12.5%
Building Density	40.6%
Proposed Development	6.9%
Spannable Lakes & Ponds	4.1%
Land Use	20.8%
Eligible Historic Structures	15.1%

9. Built Environment Alternative Corridors

Figure 20 below displays the Built Environment Alternative Corridors. Beginning at Thomson substation in the west, the "least-cost path" alternative corridors for the Built Environment generally follows the corridor of the Thomson Primary – Thiele Kaolin existing line on the west side and a narrow swath of forests and cropland to the east to a point at Hwy 221. From there, the Built Environment corridor generally follows southeasterly direction across crop and forestland until it reaches the town of Keysville. At this point the corridor splits into 2 portions and goes around Keysville and comes back together. From here, the corridor generally stays to the north of Brier Creek and splits up a few times to avoid clusters of buildings that are concentrated around major highway intersections before termination into Vogtle.

FIGURE 20: Built Environment Alternative Corridors

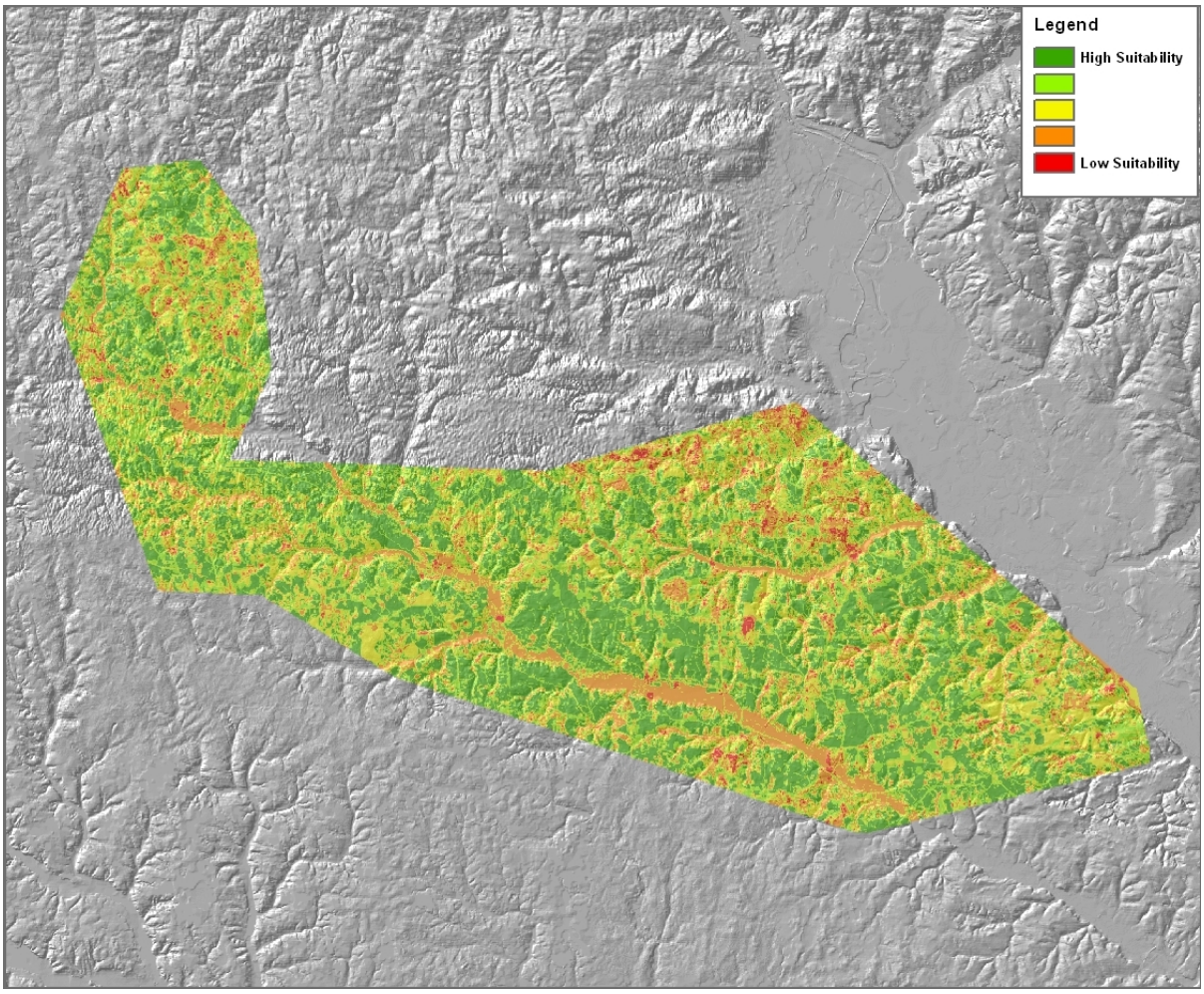


PART VIII: AVERAGE ALTERNATIVE CORRIDOR

1. Suitability Surface Map

After generating an Alternative Corridor for each environment, an average corridor is generated. This is accomplished by applying the "least-cost path" algorithm and averaging the suitability values and data layer weights to develop a suitability score for each grid cell on the surface of the Study Area, with a grid cell size of 30 feet, representing land area. The resulting suitability surface map is displayed below in Figure 21. Areas displayed in red are least suitable, while areas displayed in green are most suitable.

FIGURE 21: Suitability Surface Map, Thomson - Vogtle Study Area



2. Description of Simple Average Alternative Corridor

By taking the top (or most suitable) 3 percent of possible routes across this suitability surface from one endpoint to the other, an average Alternative Corridor is produced. This is the final Alternative Corridor. It is displayed in Figure 22 below. This Alternative Corridor begins at Thomson Substation on the western end of the Study Area and follows the existing Thomson Primary – Thiele Kaolin and Thomson – Warthen where it splits and continues to follow these lines to the west and follows a swath of forest and cropland to the east. The corridor comes back together at Hwy 221. The corridor follows a southeasterly bearing until it reaches Keysville, where it splits into 2 sections. The northern section generally follows Brier Creek to the north crossing primarily forests and cropland. The southern section follows Brier Creek to the south also crossing primarily forests and cropland. The southern section intersects the Waynesboro Primary – Wilson and follows this line to the terminus at Vogtle. The northern section breaks into many pieces at the intersection of Hwy 25, crosses cropland and forest and comes together with the Vogtle – Warthen line just before termination into Vogtle.

Table 14 on Page 53 details land uses within each environment's Alternative Corridor and within the simple average Alternative Corridor.

FIGURE 22: Simple Average Alternative Corridor

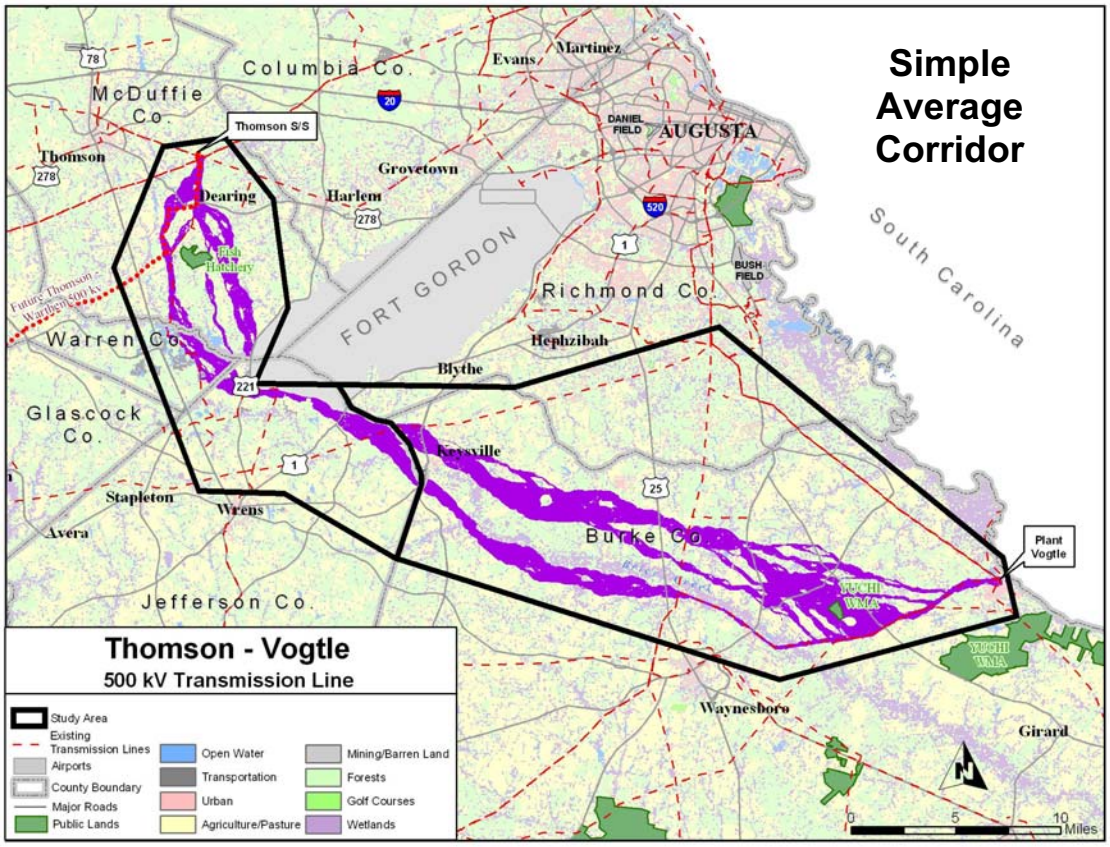


Table 14: Land Use Acreage – Built, Natural, Engineering, and Simple Environments

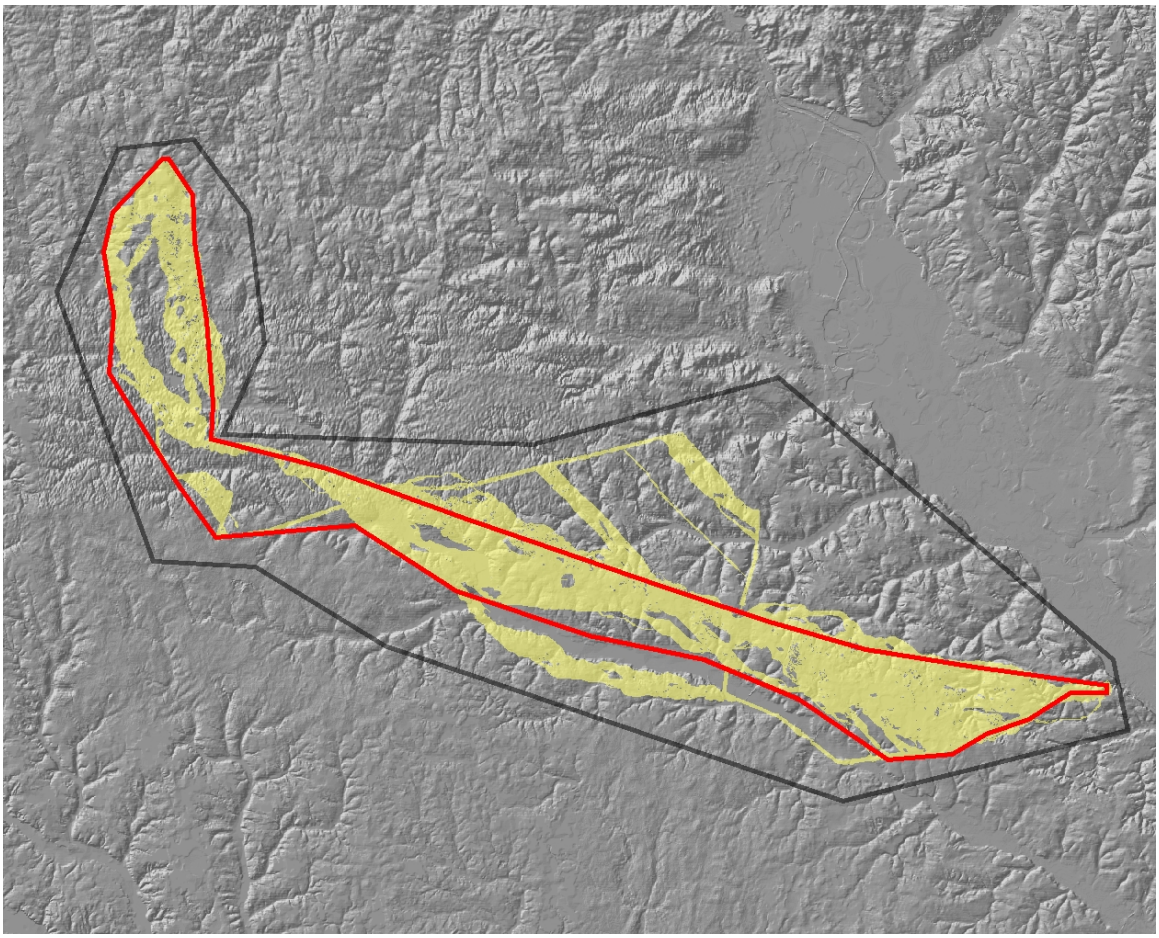
Land Use	Simple Average Corridor Acres		Built Corridor Acres		Engineering Corridor Acres		Natural Corridor Acres		Composite Corridor Acres	
Commercial/Industrial	47.25	*0.10%*	92.11	*0.20%*	17.23	*0.12%*	181.34	*0.39%*	184.3	*0.21%*
Forested	8180.26	*17.12%*	11801.46	*25.63%*	4260.22	*29.23%*	7531.31	*16.20%*	20337.2	*23.72%*
Open Land	8529.08	*17.85%*	6663.34	*14.47%*	2261.55	*15.52%*	7811.25	*16.81%*	14213.14	*16.58%*
Open Water	291.1	*0.61%*	311.38	*0.68%*	94.67	*0.65%*	221.6	*0.48%*	575.91	*0.67%*
Pecan Orchard	23.94	*0.05%*	26.86	*0.06%*	0	*0.00%*	7.3	*0.02%*	50.39	*0.06%*
Planted Pine	18598.93	*38.92%*	18003.73	*39.10%*	4219.87	*28.96%*	18143.96	*39.04%*	30411.29	*35.47%*
Quarry Mine	84.28	*0.18%*	26.73	*0.06%*	48.8	*0.33%*	6.99	*0.02%*	53.73	*0.06%*
Recreational	0	*0.00%*	0	*0.00%*	6.8	*0.05%*	0	*0.00%*	6.79	*0.01%*
Residential	143.54	*0.30%*	112.44	*0.24%*	235.87	*1.62%*	249.7	*0.54%*	529.11	*0.62%*
Row Crop	8337.33	*17.45%*	6208.43	*13.48%*	1006.47	*6.91%*	8668.72	*18.65%*	12888.51	*15.03%*
Transportation	2469.85	*5.17%*	2228.18	*4.84%*	759.21	*5.21%*	3012.26	*6.48%*	4586.95	*5.35%*
Utility	1080.01	*2.25%*	567.26	*1.24%*	1662.47	*11.40%*	644.84	*1.39%*	1890.2	*2.20%*
TOTAL	**47785.58**		**46041.93**		**14573.15**		**46479.26**		**85727.52**	

PART IX: REPRESENTATIVE DELINEATED CORRIDOR

1. Field Verified Corridor

Original corridors (natural, engineering, built, and simple as provided by initial model) were field verified and evaluated for further definition by the Georgia Power Company Location Committee, the original corridors are depicted on figure 23 in yellow. The resulting study corridor is depicted with red outline on figure 23. Appendix A (Alternative Corridors Maps) shows the field verified corridor, the alternative corridors, and the project data.

Figure 23: Field Verified Corridor



During field examination, the determination was made to constrain the study corridor on the south by the Briar Creek wetlands basin. By limiting crossings of the basin and eliminating parallel traversing of the wetland area, impacts to the basin as well as wetland habitats are reduced.

Field examination determined to constrain the study corridor on the north to reduce the impacts on community as well as to reduce the total length of transmission line.

2. Representative Route Within the Field Verified Corridor

A feasible route within the field verified corridor was hypothetically produced to represent potential impacts to land use. The data in table 15 below is representative of a 150' right-of-way.

Table 15: Land Use Acreage – 150' Representative Right-Of-Way

Land Use	Acres	Percentage
Forested	148.332	*14.41%*
Forested Wetland	91.498	*8.89%*
Open Land	157.570	*15.31%*
Open Water	6.412	*0.62%*
Planted Pine	328.967	*31.97%*
Mine / Quarry	10.247	*1.00%*
Residential	4.705	*0.46%*
Transportation	57.827	*5.62%*
Utility	73.187	*7.11%*
Row Crop	150.324	*14.61%*
Total	**1029**	

PART X: CONCLUSION

The Representative Delineated Corridor (Figure 23) of the Photo Science Study is based on the EPRI-GTC siting model, developed in Georgia, to identify a reasonable corridor within the Study area for locating the Thomson - Vogtle transmission line. The siting model takes into consideration important features, including residential and other developed areas, mining activities, wetlands and sensitive land uses, cultural resources and endangered and other species of special interest. The Representative Delineated Corridor was aerial field-verified by Georgia Power and represents a narrowing of the modeled corridor to avoid wetlands and stream crossings and reduce the overall length and land area potentially affected. This Corridor depicts areas in which a transmission line should minimize adverse impact on people, places and cultural resources, protect water resources, plants and animals, maximize co-location of the new line and balance these considerations to reduce the overall impact of the line.

As stated in the Corridor Study, Georgia Power will use the Representative Delineated Corridor as the basis for identifying actual routing of rights-of-way alternatives within it, consistent with Georgia Power's routing procedures under Georgia law. See, Environmental Site Permit Application, Part 3 – Environmental Report, Section 4.1.2.

PART XI: REFERENCES

- "EPRI-GTC Overhead Electric Transmission Line Siting Methodology," Electric Power Research Institute & Georgia Transmission Corp., February 2006

- GADNR. 2006. Element Occurrence Database – Covered by Terms and Conditions of 2004 Data Sharing Agreement Between Georgia Power Company and the Georgia Department of Natural Resources Wildlife Resources Division.

- USFWS. 2006. Federally listed species by County. United States Fish and Wildlife Service website: http://www.fws.gov/athens/endangered/counties_endangered.html.

PART XII: APPENDIX

- Appendix A: Alternative Corridors Maps
- Appendix B: Wildlife Resources Map
- Appendix C: New South Associates Report