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

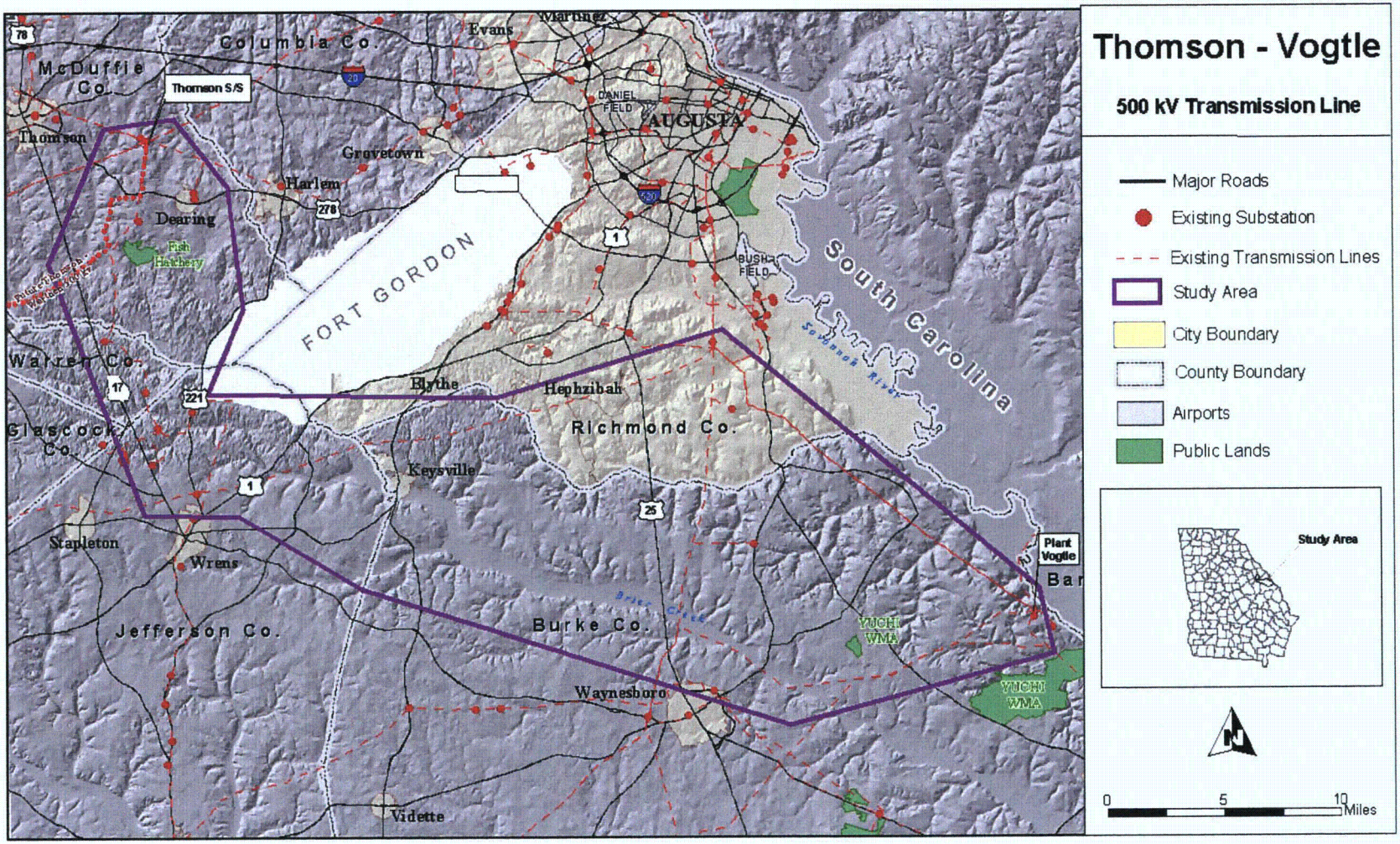
The Thomson-Vogtle 500-kV transmission line project Study Area is located in East Central Georgia, to the west and south of the Augusta-Richmond County urban area. (See map of Study Area in Figure 1 on Page 4.) The Study Area includes 289,274 total acres. Notable features within or adjacent to the Study 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



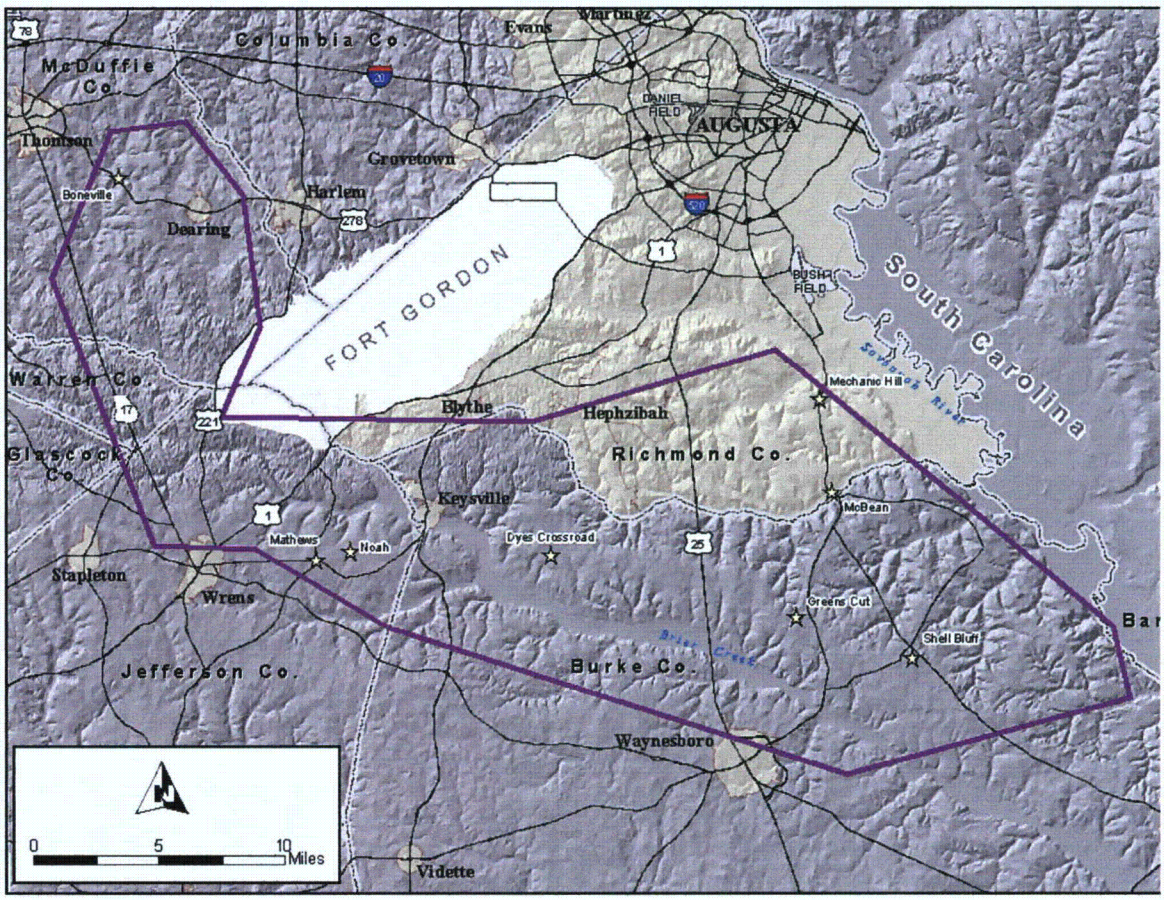
The Study Area encompasses a number of incorporated cities and towns, including:

- 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



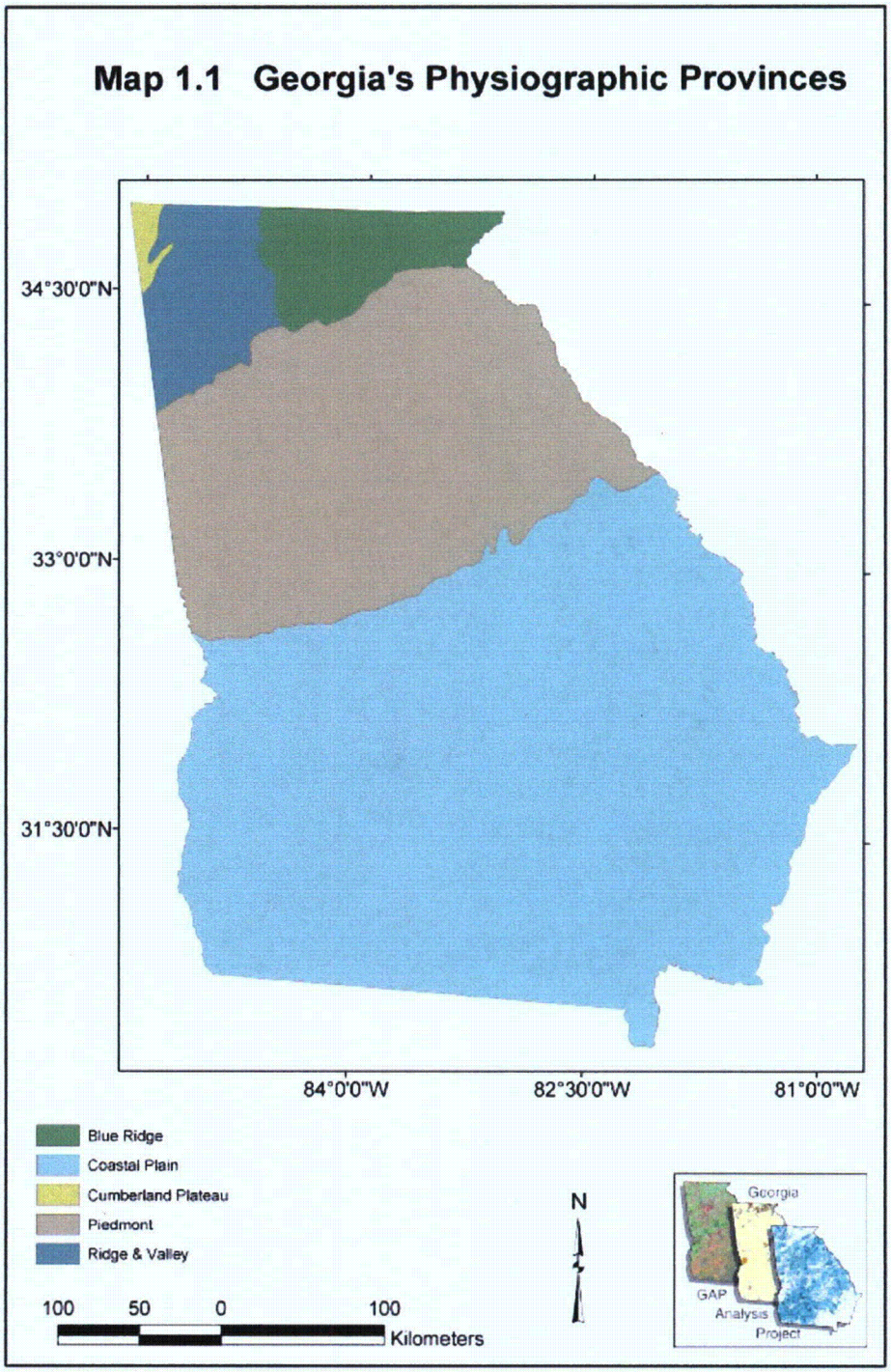
2. Study Area Characteristics

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

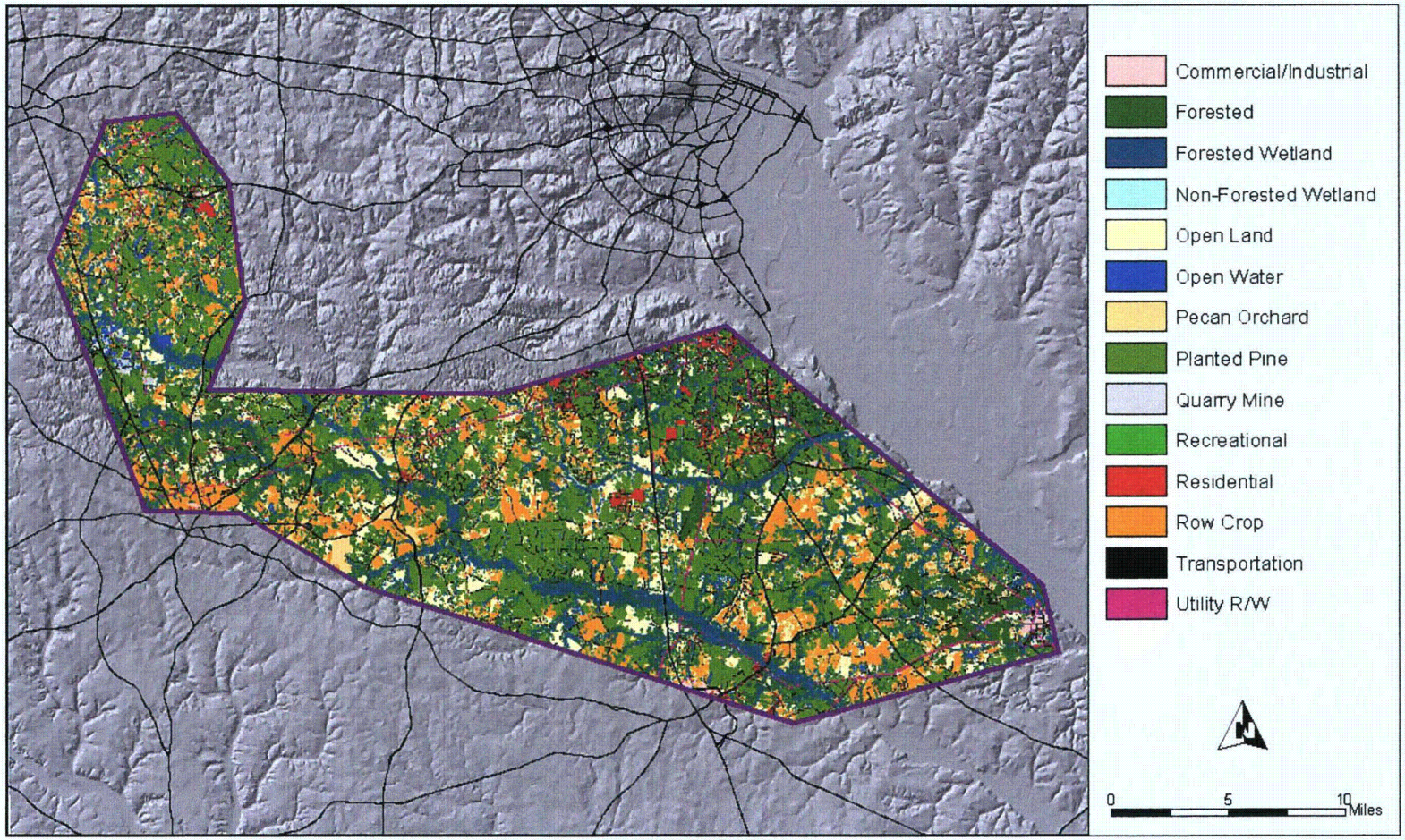


TABLE 3: Socioeconomic Profiles of Study Area Counties

	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).

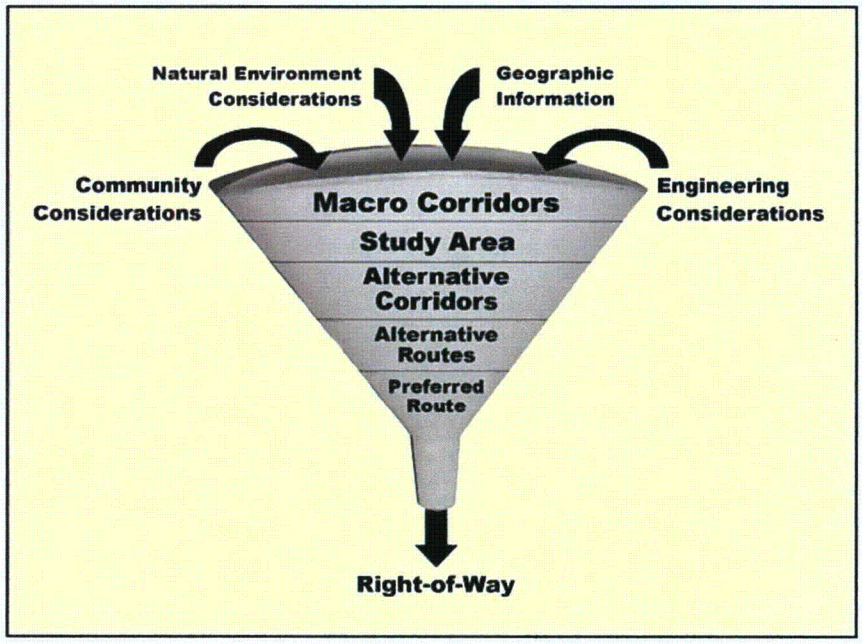
Part IV: Overview of Suitability Analysis

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

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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
Background	9
Land Use	**19.1%**
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.

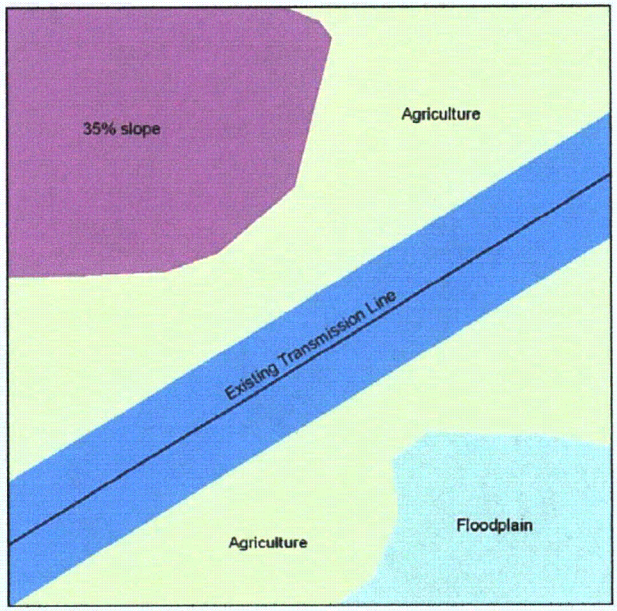
Data from aerial photography, geographic information systems, publicly available datasets and other sources are used to identify features within each grid cell. Based on these features and the values and data layer weights determined in the Georgia Siting Model, the methodology then assigns a suitability 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.

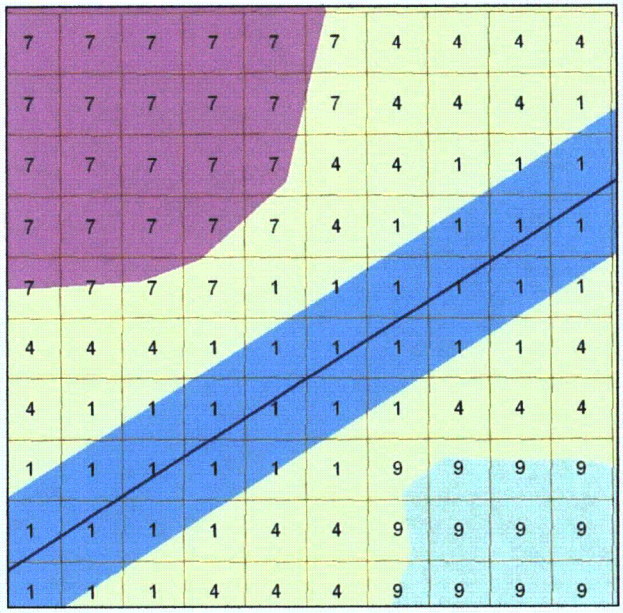
Figure 7 displays an example area that has four features: an existing transmission line through the center of the area, surrounded by agricultural land with an area of steep slopes to the northwest and a floodplain to the southeast.

FIGURE 7: Feature Map of Example Area



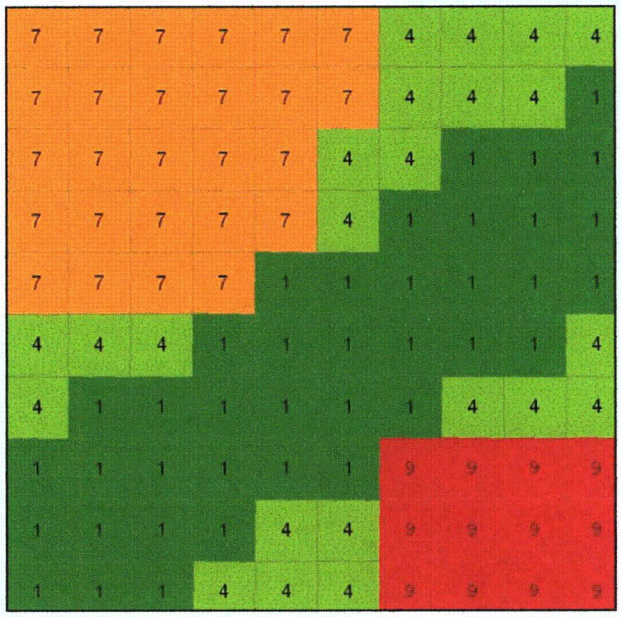
In Figure 8, grid cells are overlain and assigned suitability values based on the features. (The suitability values used in this example do not necessarily correspond to the Georgia Siting Model.) The area of the existing line is considered highly suitable. Agricultural land is moderately suitable. Steep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

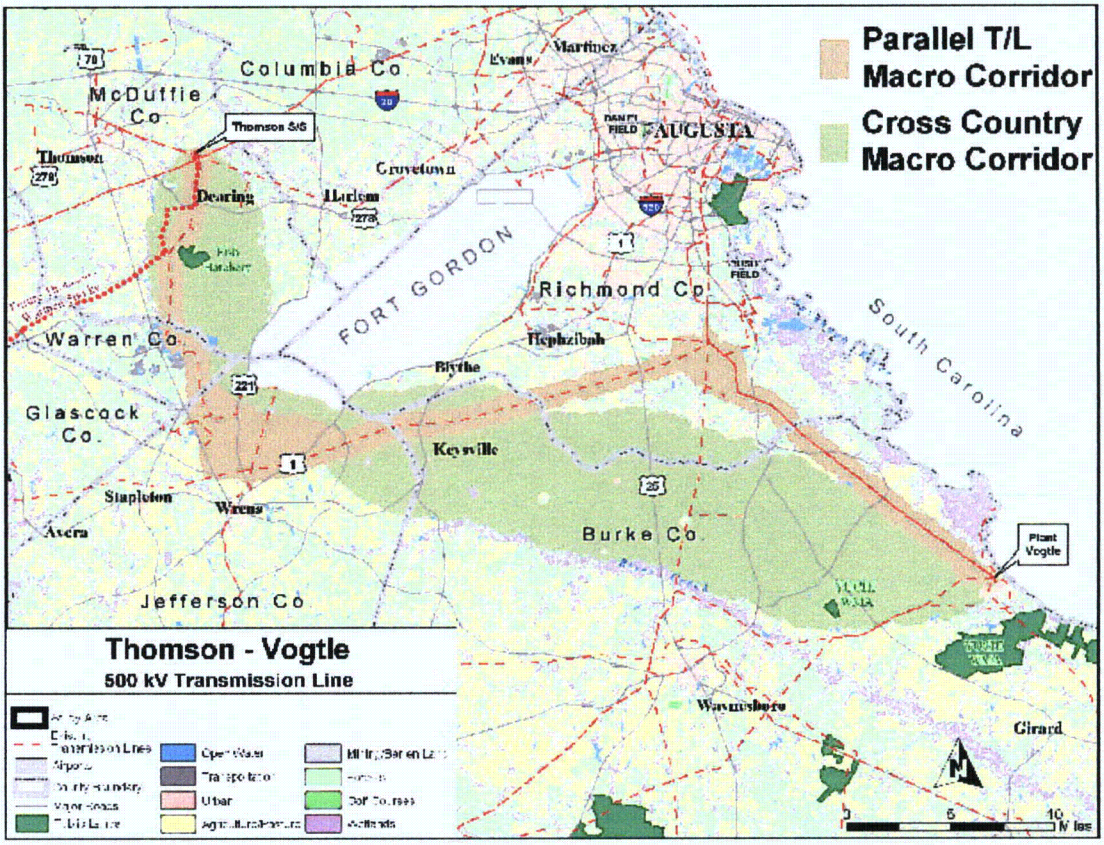


FIGURE 11: Thomas - Vogtle Study Area

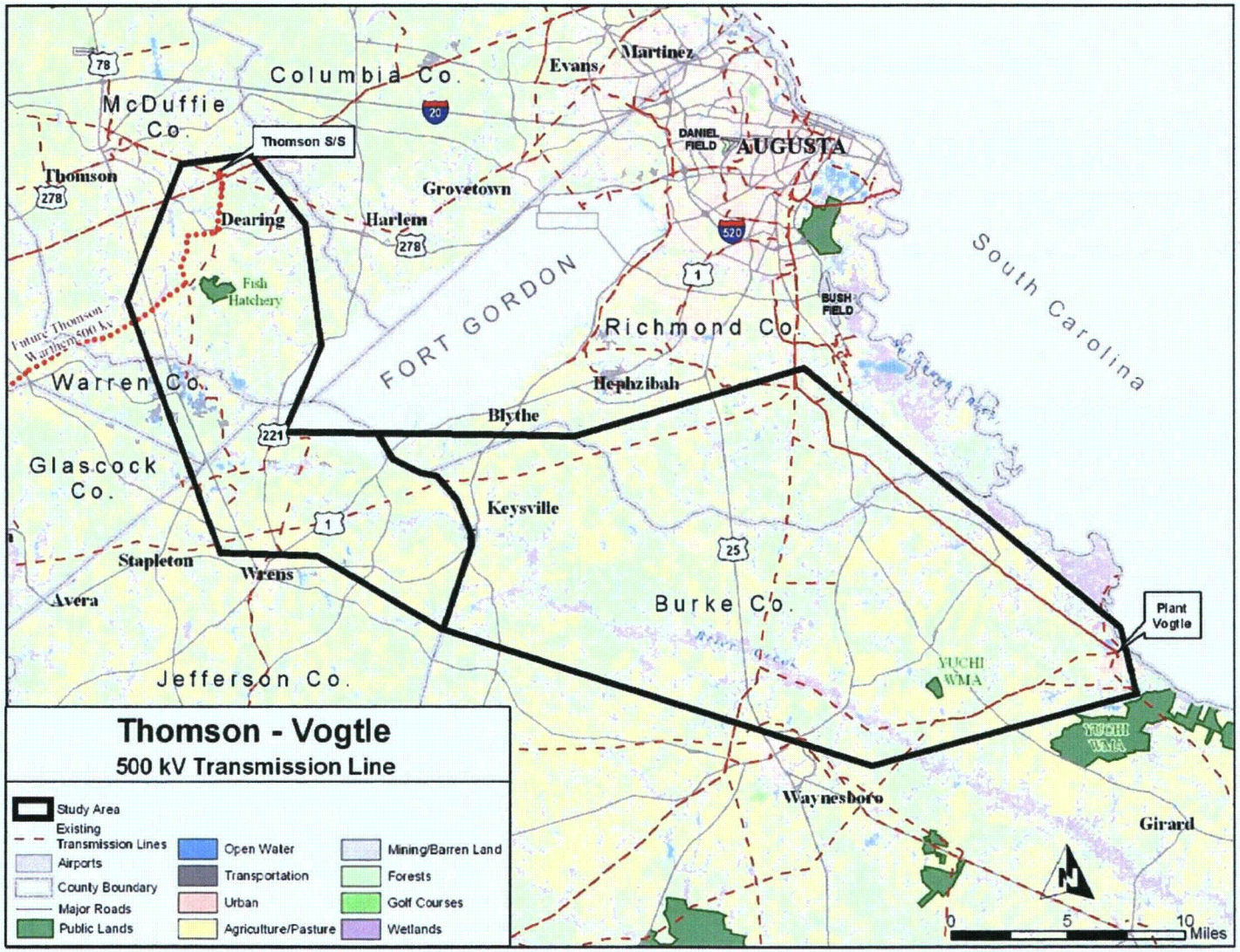
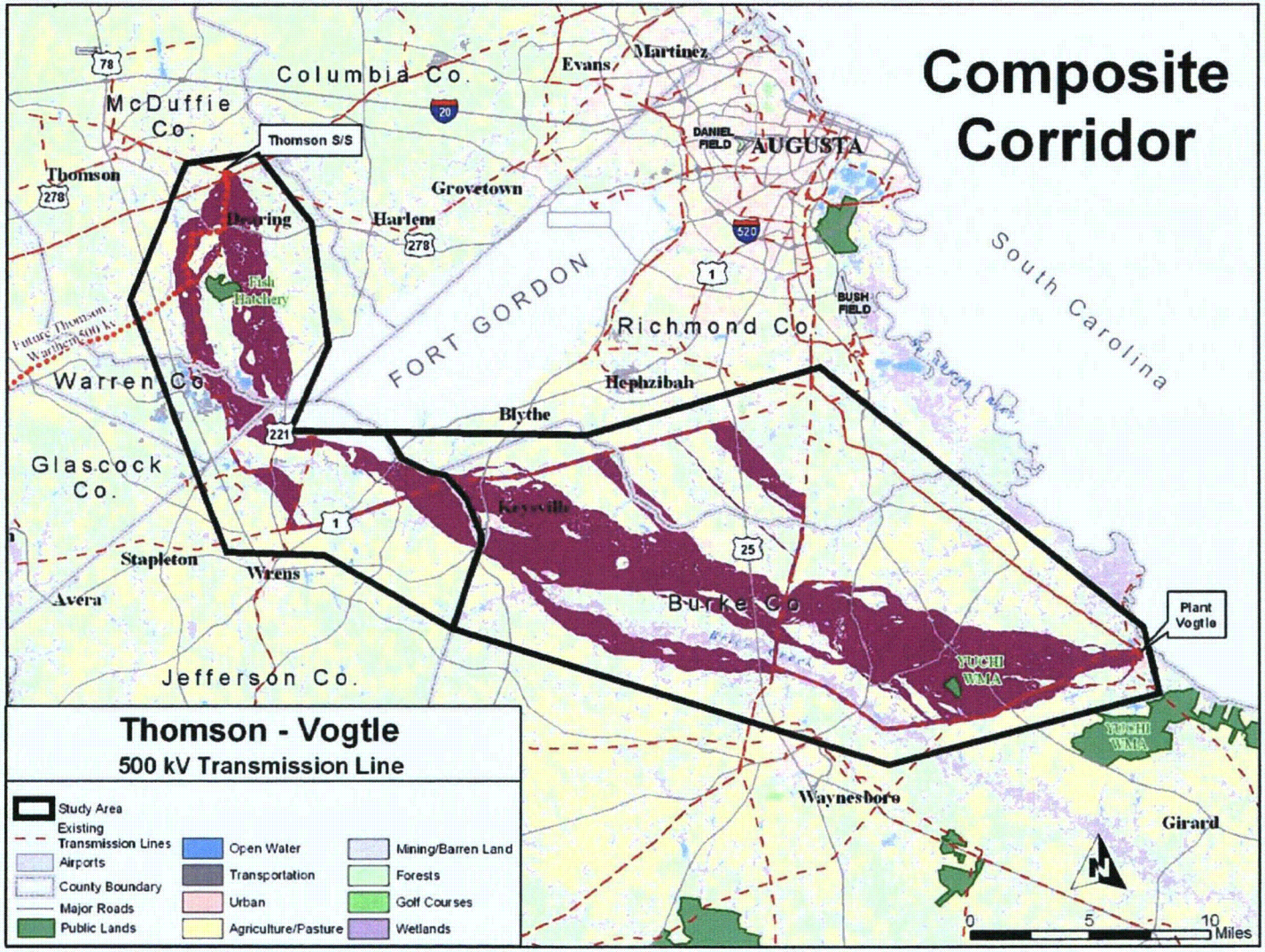


FIGURE 12: Built, Engineering, Natural and Simple Average Alternative Corridors, Thomas - Vogtle

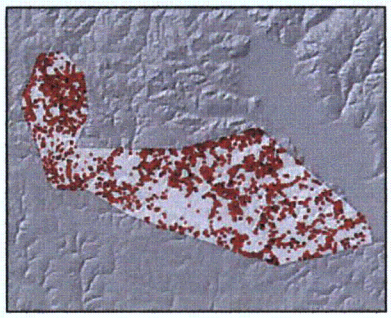


PART V: ENGINEERING ENVIRONMENT

1. Avoidance Areas

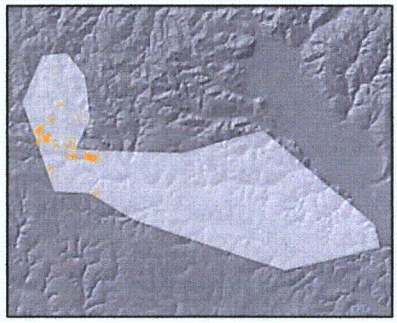
Avoidance Area: Buildings

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

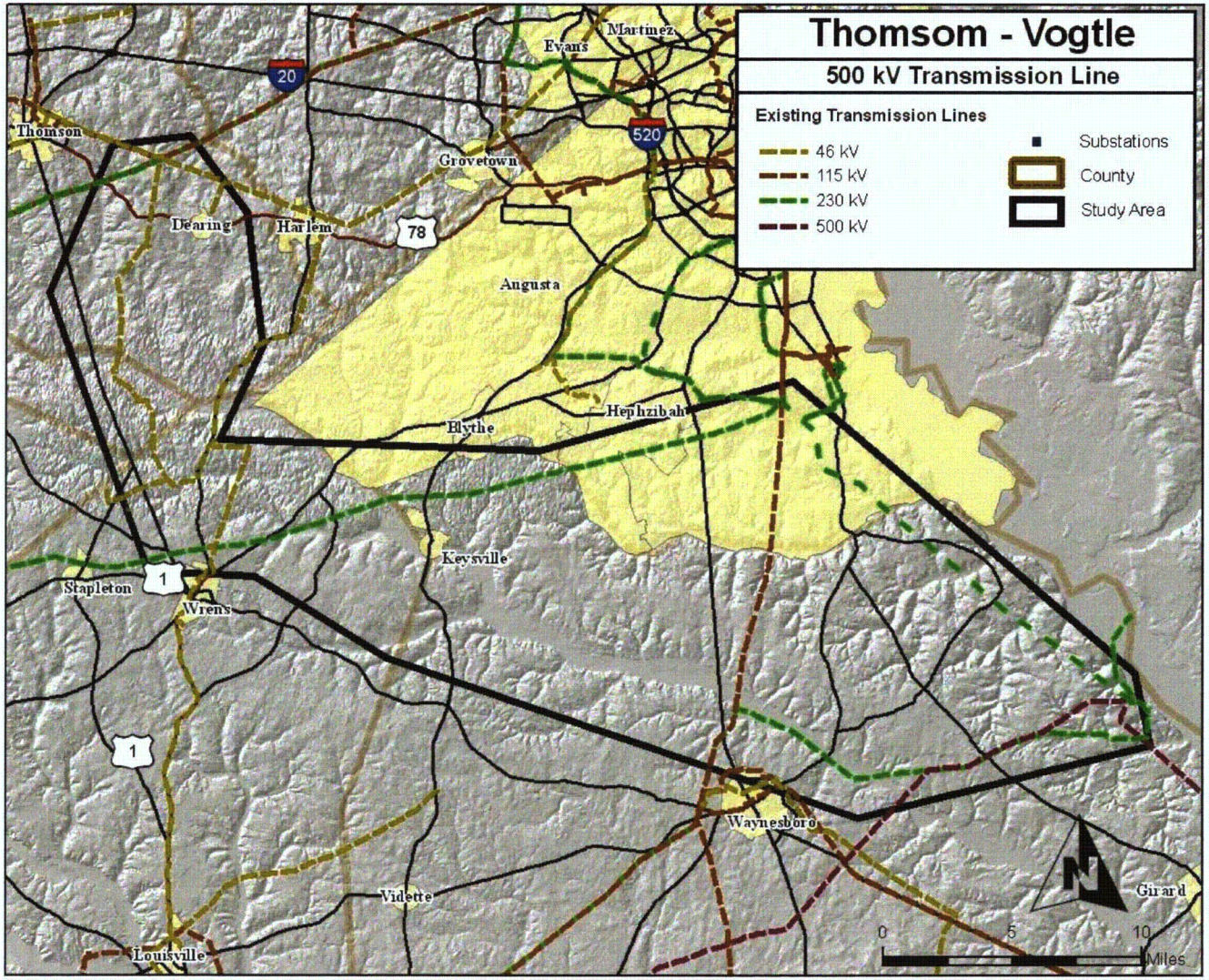
2. Linear Infrastructure Features

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.

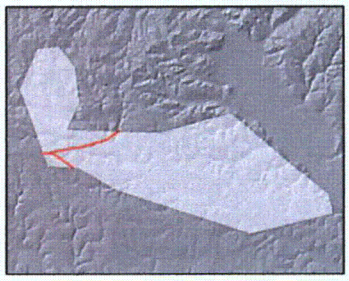
- SNG Tap, 46kv
- Clark Road Tap, 115kv
- Boykin Road - Goshen 230kv
- Mills Road Loop 115kv
- Vogtle - Goshen #2, 230kv
- Vogtle - Goshen #3, 230kv
- Vogtle - Goshen #1, 230kv
- Greens Cut Tap, 115kv
- SNG Underground Tap, 46kv
- Georgia Kaolin Tap, 46kv
- Vogtle - West McIntosh, 500kv
- Savannah River 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



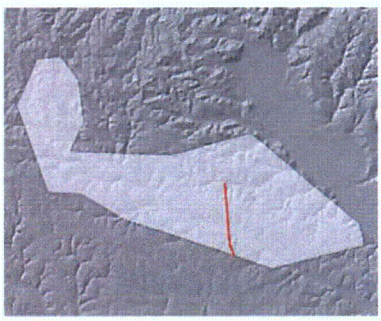
Moderate Suitability: Parallel Pipelines

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.



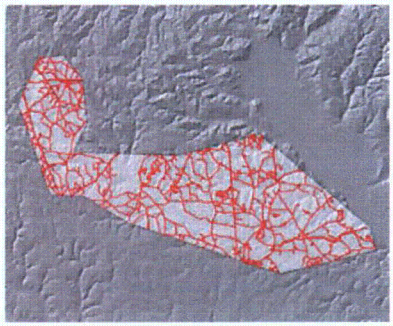
Low Suitability: Future Department Of Transportation Plans

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.



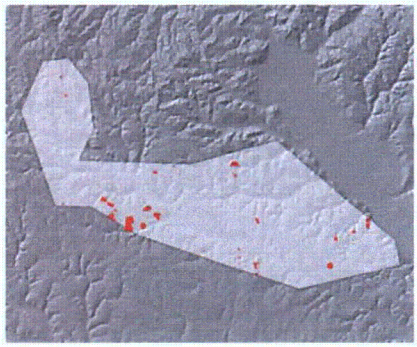
Low Suitability: Road Rights of Way, Railroad Rights of Way

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.



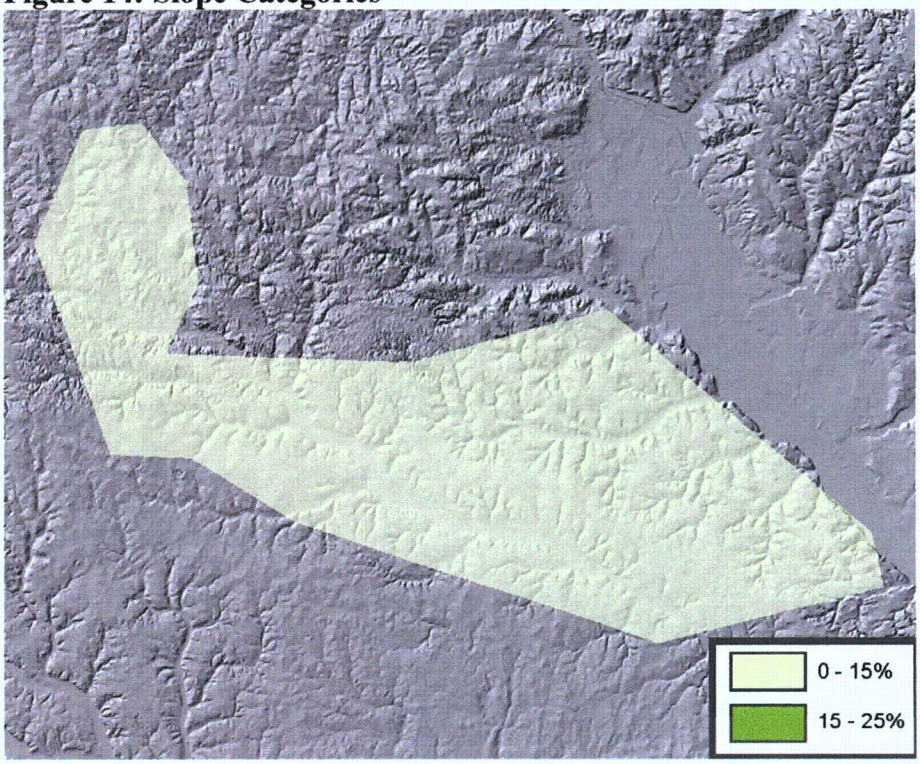
4. Slope Features

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.

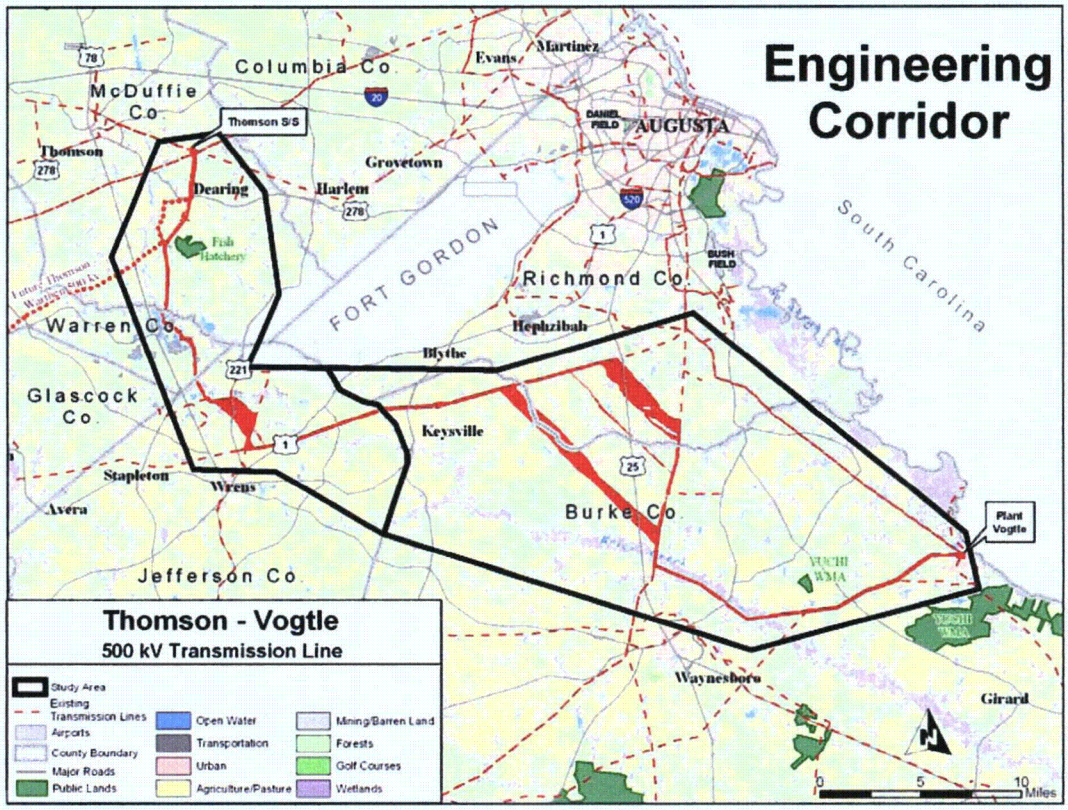
TABLE 7: Engineering Environment Data Layers and Relative Weights	
Layer	**Weight**
Linear Infrastructure	48.3%
Slope	9.1%
Intensive Agriculture	42.6%

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

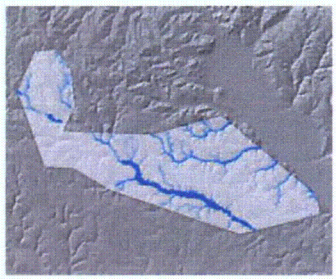
1. Avoidance Areas

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

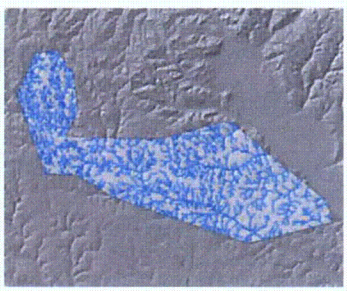
The Natural Environment of the Georgia Siting Model gives very low suitability to locating transmission lines in the 100-year floodplain. The corridors of several waterways include areas that are included in the 100-year floodplain, notably areas along Brier Creek, Newberry Creek, Boggy Gut Creek, Little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



3. Streams/Wetlands

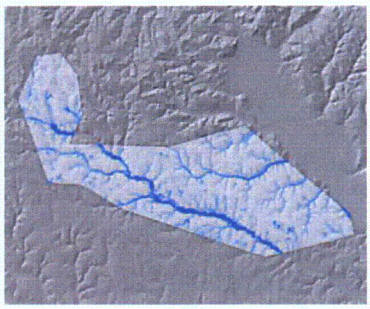
Moderate to Low Suitability: Streams & Rivers

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

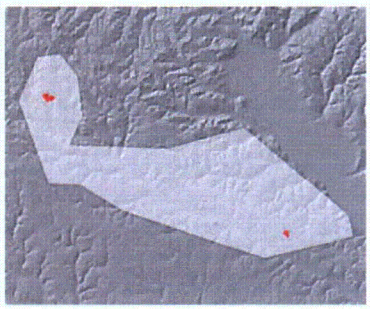
Wetlands have a low suitability value for locating transmission lines in the Natural Environment of the Georgia Siting Model. There are numerous wetlands areas throughout the Study Area. Information was obtained from the U.S. Geological Survey.



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.

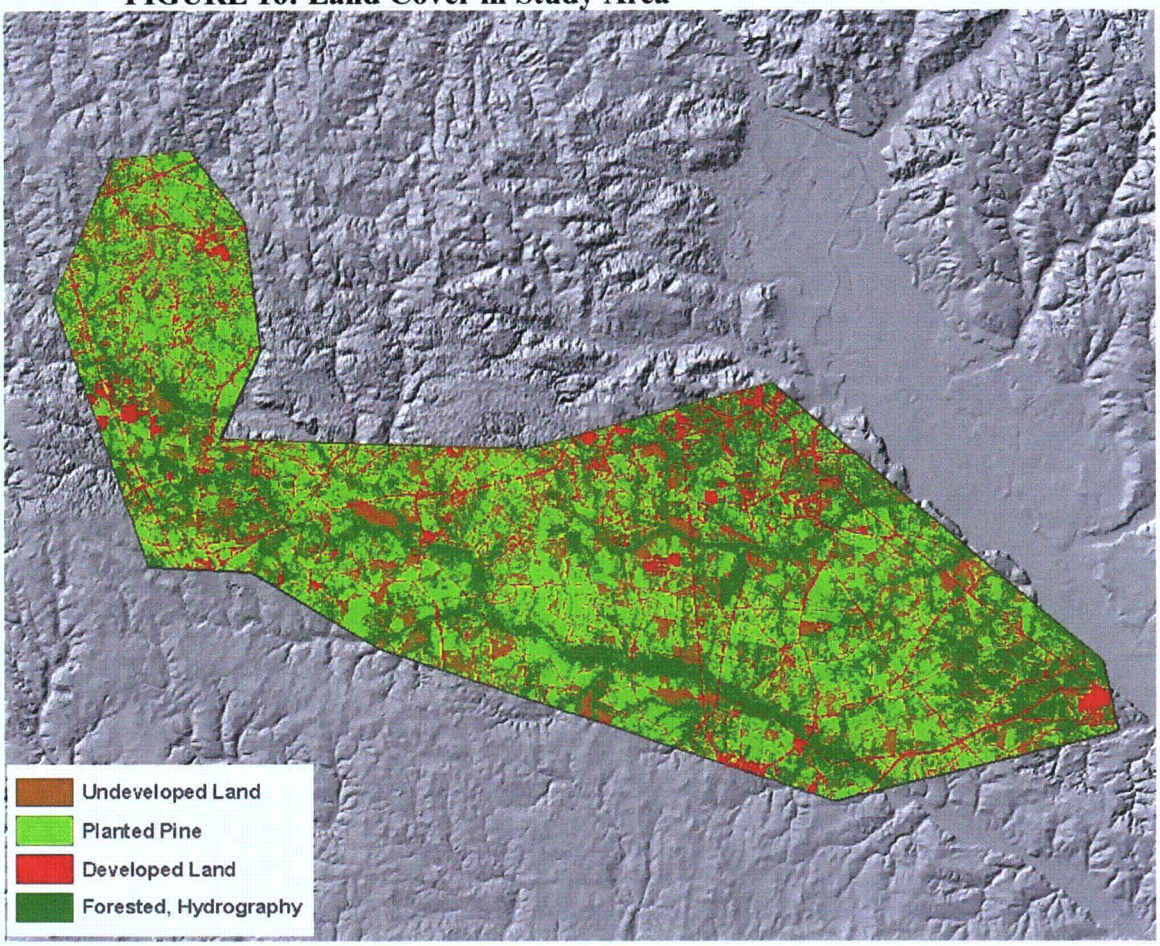
The Yuchi WMA located in the southeast portion of the study area, the NRCS conservation easement located in the mid-south portion, the McDuffie County Public Fishing Area in the northern portion of the study area, and a small Nature Conservancy conservation easement along the study area boundary in the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

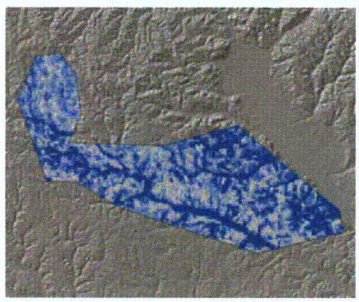
6. Wildlife Habitats

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

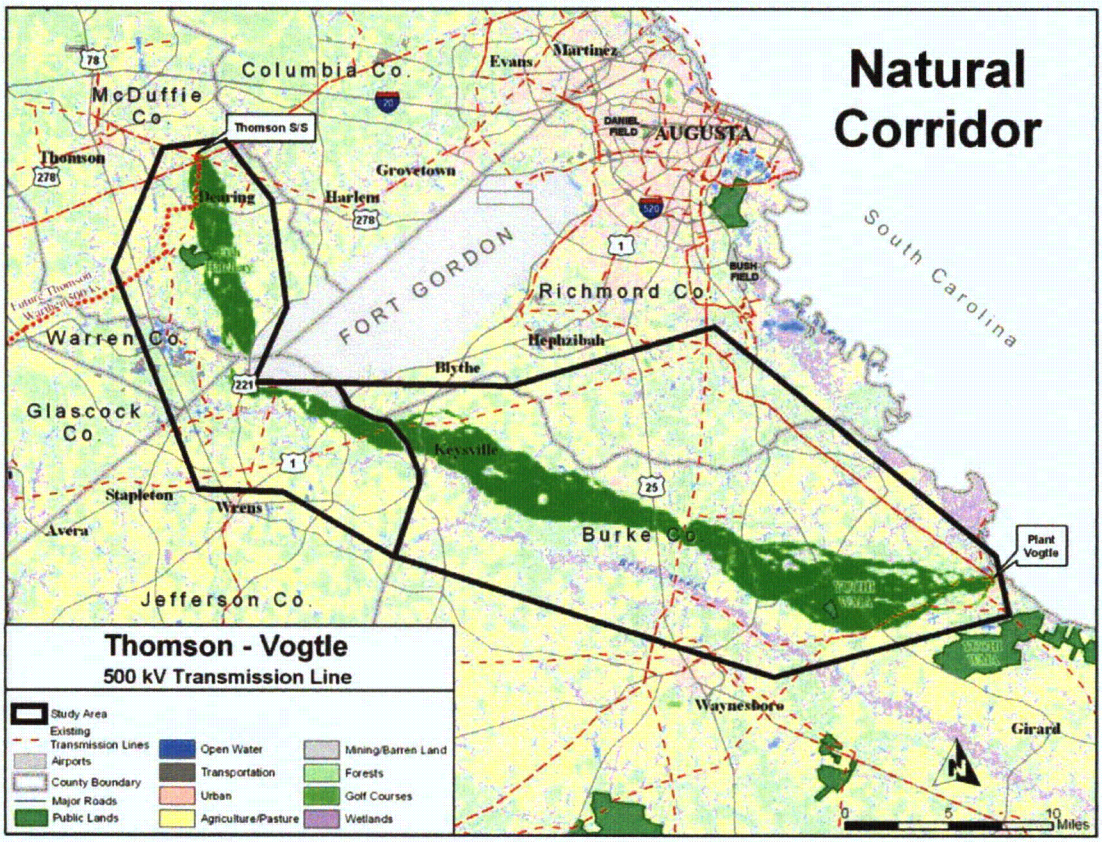
The Natural Environment data layers and their relative weights are summarized in Table 8 below.

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

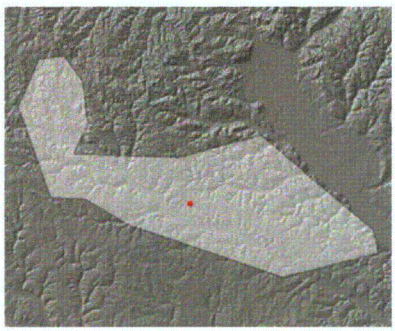


PART VII: BUILT ENVIRONMENT

1. Avoidance Areas

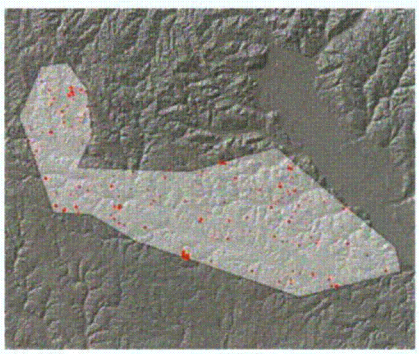
Avoidance Area: Listed National Register of Historic Places Sites

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.

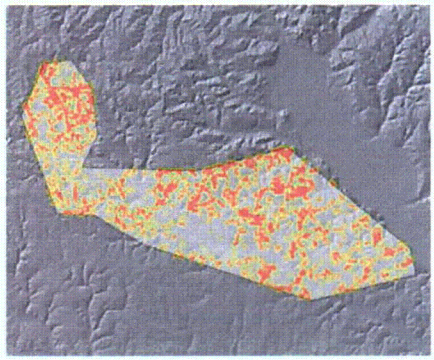


TABLE 9: Suitability, Proximity to Building

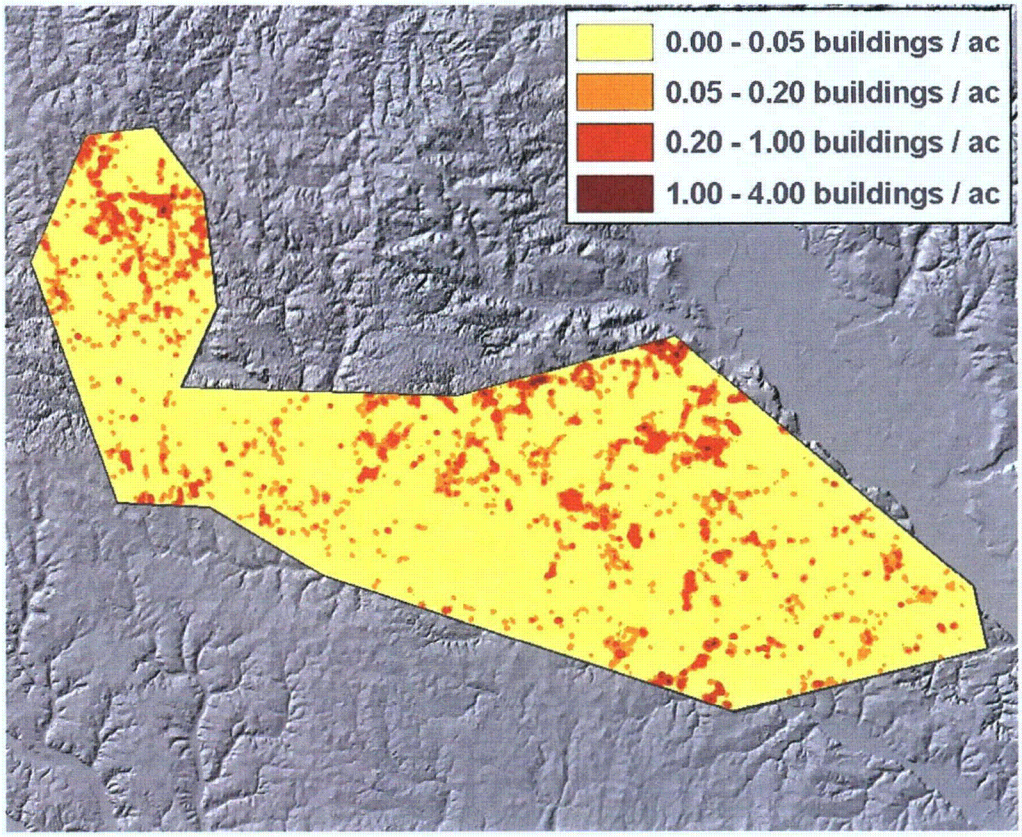
Distance from building	Suitability Value from Model	Suitability
0-300 feet	9.0	Low
300-600 feet	4.2	Moderate
600-900 feet	2.6	Moderate
900-1,200 feet	1.8	Moderate
Background	1.0	High

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

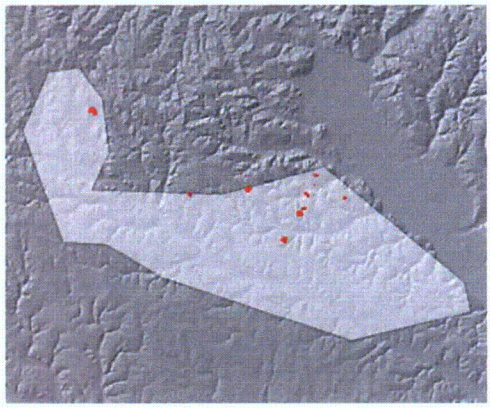
FIGURE 18: Building Density in Study Area



4. Proposed Development

Low Suitability: Proposed Development

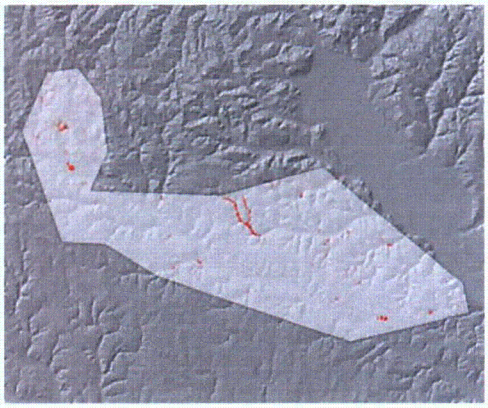
According to the Georgia Siting Model, areas of proposed developments are deemed to have low suitability for locating transmission lines. In the Study Area, these locations tend to be concentrated near the suburbs of Augusta. Data was obtained from local planning/zoning officials and from aerial photography.



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

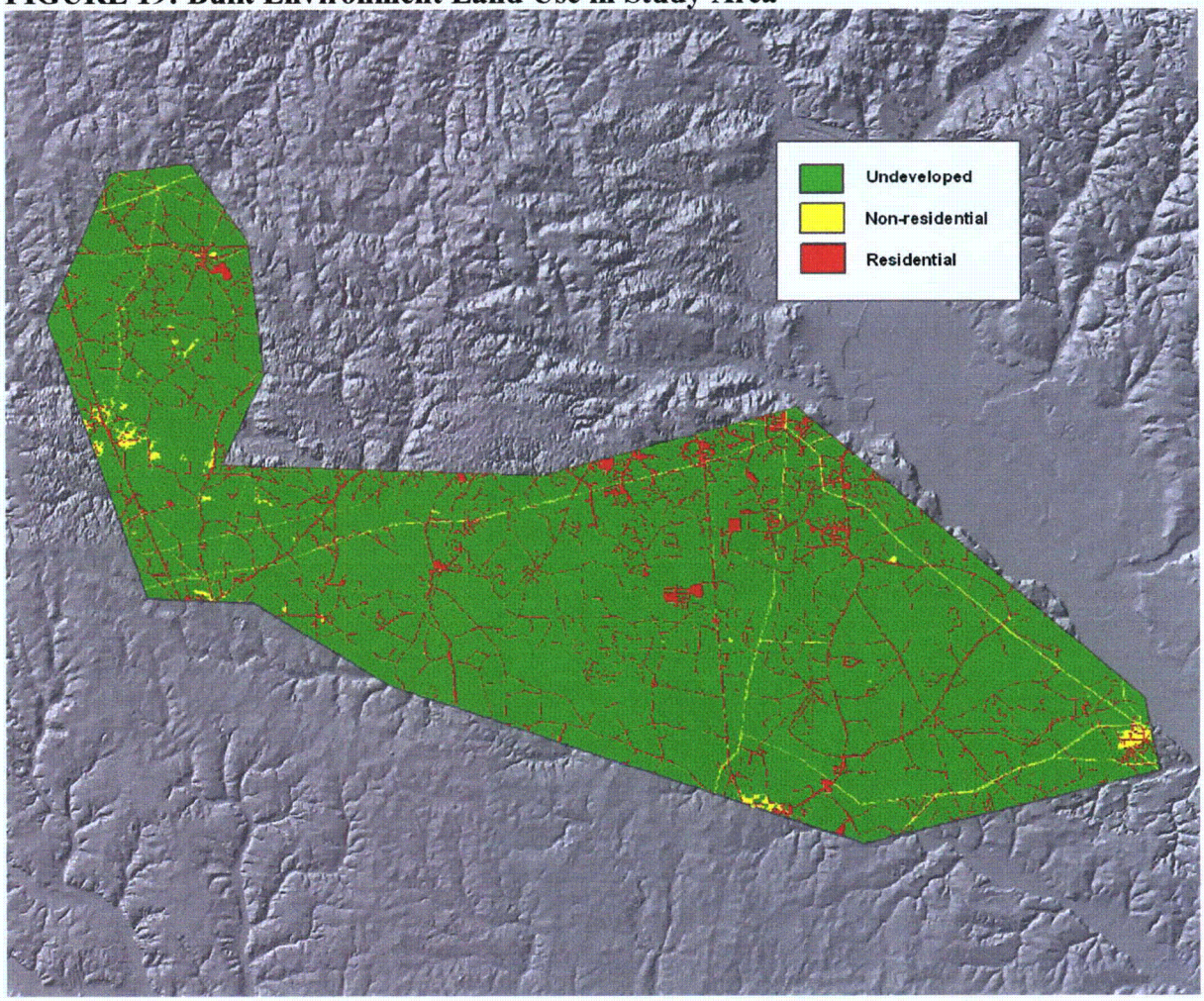
Compared to other land uses, the Built Environment of the Georgia Siting Model considers undeveloped land to be the most suitable for locating transmission lines. Developed lands are least suitable in the Built Environment of the model. See Table 11 below for a summary of land-use suitability values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

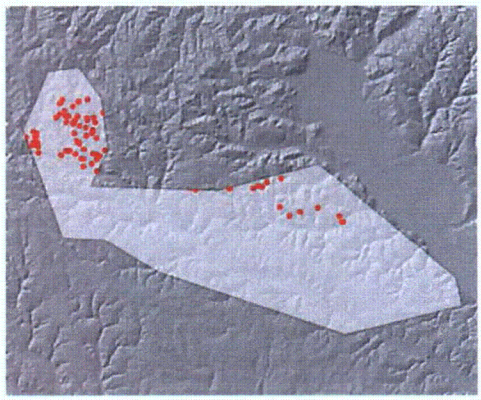


TABLE 12: Suitability of Eligible Historic Sites		
Distance from site	**Suitability Value from Model**	**Suitability**
0 - 1500	9.0	Low
Background	1.0	High

8. Built Environment Data Layer Weights

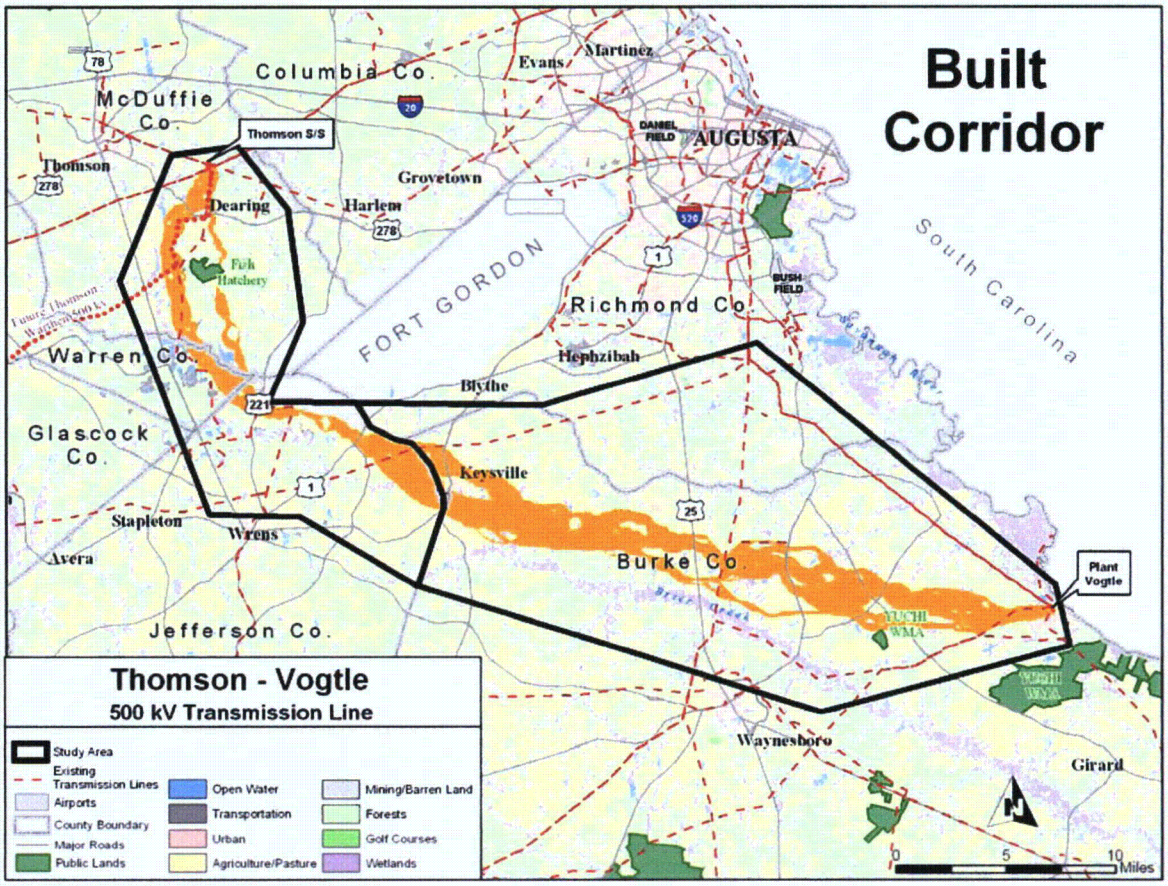
The Built Environment data layers and their relative weights are summarized in Table 13 below.

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

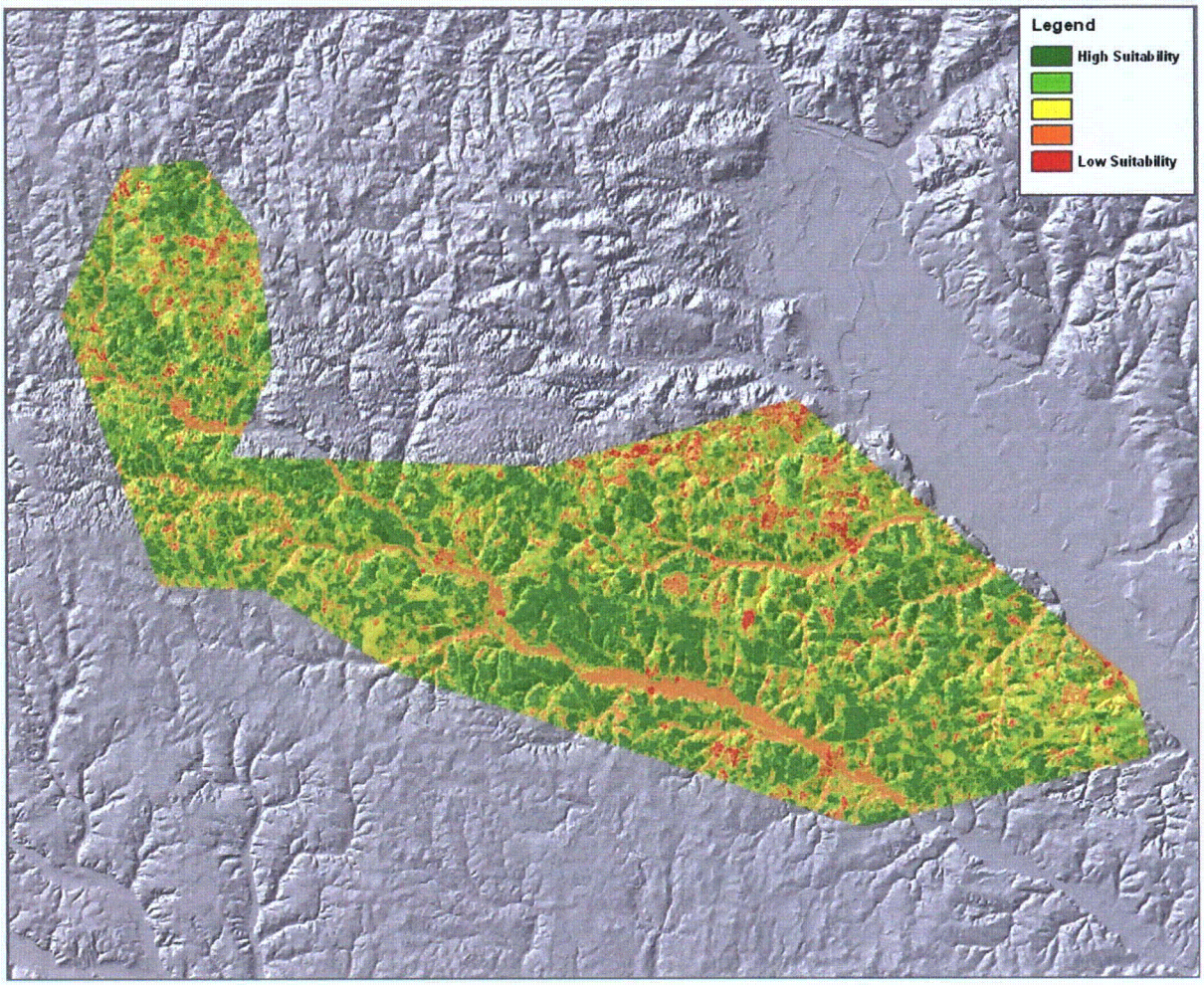


PART VIII: AVERAGE ALTERNATIVE CORRIDOR

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

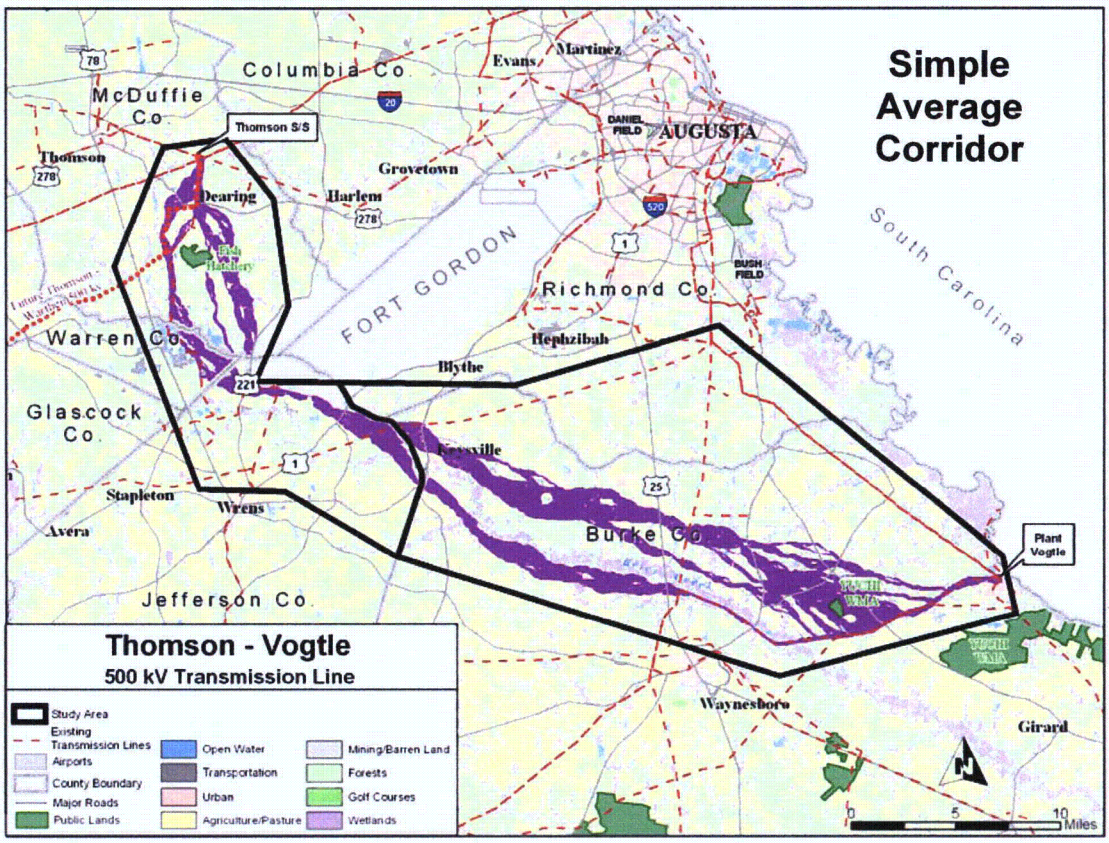


Table 14: Land Use Acreage – Built, Natural, Engineering, and Simple Environments

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

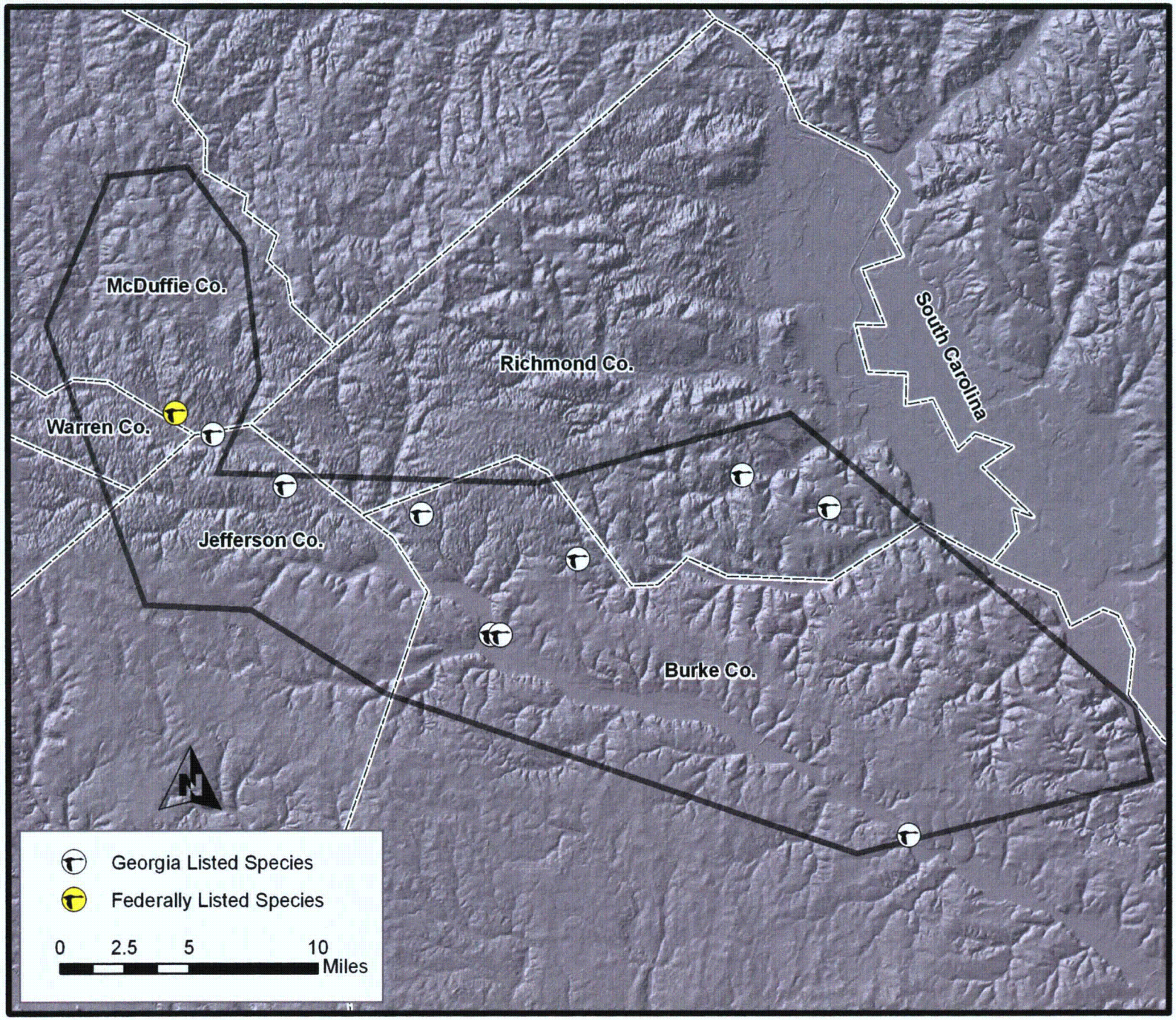
- "EPRI-GTC Overhead Electric Transmission Line Siting Methodology," Electric Power Research Institute & Georgia Transmission Corp., February 2006

- 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


McDuffie Co.
Warren Co.
Richmond Co.
South Carolina
Jefferson Co.
Burke Co.
N
Georgia Listed Species
Federally Listed Species
0 2.5 5 10
Miles

January 5, 2007

Mr. Scott Hendricks
Georgia Power Company
241 Ralph McGill Boulevard NE
Atlanta, Georgia 30308-3374

Re: Cultural Resource Literature Review of the Thomson-Vogtle Transmission Line Study Areas

Dear Mr. Hendricks,

This letter report contains a summary of the findings of the cultural resource literature review of the Thomson-Vogtle Transmission Line Study Areas conducted by New South Associates between December 27, 2006 and January 4, 2007. The background research included historic architectural properties, archaeological sites, and previous archaeological investigations found within Study Area A and Study Area B.

A literature review was conducted to determine the previously recorded architectural resources and the archaeological sites and surveys located within both project study areas. The architectural review included the National Register of Historic Places (NRHP) files, county architectural survey files, and the historical architectural reports on file at the Historic Preservation Division's (HPD) office in Atlanta. Additionally, the NAHRGIS system was consulted to determine the architectural resources located within the study areas. NAHRGIS is web-based GIS system developed in a cooperative effort between the HPD and the University of Georgia to organize spatial data relating to cultural resources. The NAHRGIS system was also consulted to determine the identified archaeological sites within the study areas. To determine the nature of previous archaeological investigations the records at the Georgia Archaeological Site Files, located at the University of Georgia, Athens were examined. The combined research identified a total of 135 recorded architectural resources, 206 archaeological sites, and 23 archaeological investigations within Study Areas A and B (Figures 1-4). Table 1 summarizes the data concerning the previously recorded historic buildings, their location, and National Register eligibility, while Table 2 summarizes the archaeological sites identified within the study areas.

The buildings listed as historic architectural resources were identified during a series of countywide surveys conducted under the supervision of HPD. Many of the survey records are listed on the NAHRGIS system, but surveys conducted prior to 1988 are not listed online. Additionally, some surveys conducted in 1988 do not appear on NAHRGIS. Therefore, the buildings listed in Table 1 with a five-digit identification number were located online while the remaining architectural resources were pulled from survey files at HPD. A majority of the architectural resources examined either are potentially eligible for the NRHP, or already appear on the Register.

One property within Study Area B is listed on the NRHP (Resource 80782), and a single historic district (Resource 80831) listed on the NRHP lies outside of Study Area B, in Waynesboro. While the Waynesboro Historic District is the only district listed on the Register, numerous small Georgia towns have local historic district designations, or these older municipalities meet the criteria for designation on the NRHP, even if the buildings within the district are not eligible individually.

The archaeological sites identified come from both the historic and prehistoric periods. A majority of the sites identified within the study areas are prehistoric in nature. Most of the prehistoric archaeological sites were recommended ineligible for the NRHP or the eligibility was listed as unknown. Prehistoric sites that represented significant occupations were recommended as potentially eligible for the NRHP. Historic archaeological sites consisted of artifact scatters, house sites, cemeteries, and a single battlefield. As with prehistoric sites, most of the identified archaeological sites from the historic period were not recommended for listing on the NRHP. The distribution of sites within the study areas is skewed due to the incomplete coverage over the entire area. However, some general patterns have been observed in the distribution of archaeological sites. Prehistoric sites tend to cluster near water sources, such as river floodplains, and near natural resources, like chert outcroppings, while historic archaeological sites will group around transportation centers, like railroads and bridges. However, agricultural sites associated with the historic period can be more widely spread. Sites from both the prehistoric and historic periods are prevalent on high, level land within a short distance of a reliable water source.

A majority of the archaeological investigations conducted within the study areas consisted of Phase I, survey projects. These projects were concerned with either a parcel or a corridor. Corridor surveys can offer some insight into the distribution of archaeological sites. The site distribution encountered on previous corridor surveys within the study areas can serve as an analogue for future projects. A rough estimate of site distribution can be calculated by comparing the total number of archaeological sites identified to the total length of the survey corridor. When this comparison is applied to the corridor surveys conducted in Study Areas A and B, one archaeological site occurs approximately every one-mile.

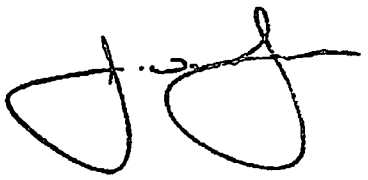
Attached to this letter are two tables summarizing the architectural and archaeological resources within Study Areas A and B. Table 1 features properties listed on the NAHRGIS system as well as properties that are only found in the hardcopy files at the HPD offices. Table 1 includes the resource number, the property type, the approximate year of construction, the county, a UTM coordinate, potential eligibility to

the NRHP, and the year the architectural survey was conducted. Similarly, Table 2 summarizes data relating to the archaeological sites within the study areas. The table includes the state site number, site type, size in meters, county, UTM, and recommended eligibility to the NRHP. In addition to this letter, GIS shapefiles were created from Tables 1 and 2 to provided the point data in a format readable by GIS mapping programs. These files sent via email on January 4, 2007.

We hope this report serves your planning needs. Please call either Matt Tankersley or myself if you have any further questions.

Sincerely,

NEW SOUTH ASSOCIATES, INC.



J.W. Joseph, Phd. RPA
Principal Investigator

Wm. Matthew Tankersley
Author

Resource Number	Resource Name Original Use/Type	Construction Date	County	UTM Zone 17 (NAD 27)		NHRP Eligibility
80782	Hopeful Baptist Church	1850	Burke	394296	3674898	Listed
80831	Waynesboro Commercial Historic District	1783	Burke	405203	3672804	Listed
51244	Single dwelling	1920	McDuffie	361525	3692740	Appears to meet criteria
51249	Single dwelling	1890	McDuffie	362000	3691690	Appears to meet criteria
51245	Single dwelling	1910	McDuffie	362125	3692450	Appears to meet criteria
51250	Single dwelling	1890	McDuffie	362450	3690900	Appears to meet criteria
51252	Single dwelling	1910	McDuffie	363125	3691325	Appears to meet criteria
51251	General store	1910	McDuffie	363190	3691300	Appears to meet criteria
51253	Single dwelling	1920	McDuffie	363320	3691615	Appears to meet criteria
51259	Single dwelling	1890	McDuffie	363320	3693300	Appears to meet criteria
51257	Single dwelling	1930	McDuffie	363515	3692500	Appears to meet criteria
51258	Single dwelling	1930	McDuffie	363680	3692580	May meet criteria
51260	Single dwelling	1890	McDuffie	363800	3693040	Appears to meet criteria
51256	Single dwelling	1920	McDuffie	363900	3691640	May meet criteria
51254	Single dwelling	1930	McDuffie	364010	3690990	May meet criteria
51255	General store	1930	McDuffie	364020	3690000	May meet criteria
51267	Single dwelling	1910	McDuffie	366200	3691105	Appears not to meet criteria
51195	Single dwelling	1930	McDuffie	366620	3695225	Appears not to meet criteria
51196	Single dwelling	1920	McDuffie	366825	3694925	More information needed
51197	Single dwelling	1900	McDuffie	366890	3695540	Appears to meet criteria
51262	Single dwelling	1900	McDuffie	367000	3691190	Appears not to meet criteria
51261	Single dwelling	1890	McDuffie	367150	3691615	More information needed
51268	Single dwelling	1910	McDuffie	367210	3689900	Appears not to meet criteria
51198	Single dwelling	1920	McDuffie	367460	3696105	Appears to meet criteria
51200	Single dwelling	1920	McDuffie	367460	3697890	Appears to meet criteria
51269	Single dwelling	1900	McDuffie	367550	3689590	Appears to meet criteria
51161	Single dwelling	1900	McDuffie	367860	3698440	May meet criteria
51202	Single dwelling	1930	McDuffie	368175	3696700	Appears to meet criteria
51203	Single dwelling	1930	McDuffie	368200	3696675	More information needed
51206	Single dwelling	1890	McDuffie	368300	3695790	Appears to meet criteria
51263	Single dwelling	1910	McDuffie	368300	3690300	Appears to meet criteria
51208	Single dwelling	1920	McDuffie	368350	3694820	Appears not to meet criteria
51207	Single dwelling	1930	McDuffie	368450	3694825	May meet criteria
51205	Single dwelling	1900	McDuffie	368585	3695790	Appears to meet criteria
51264	General store	1920	McDuffie	368585	3690210	Appears to meet criteria

Resource Number	Resource Name Original Use/Type	Construction Date	County	UTM Zone 17 (NAD 27)		NHRP Eligibility
51265	Mill/processing/manufacturing facility	1920	McDuffie	368620	3690200	Appears to meet criteria
51204	Single dwelling	1900	McDuffie	368805	3695720	Appears to meet criteria
51162	Single dwelling	1910	McDuffie	368840	3698650	Appears not to meet criteria
51266	Anderson's Grocery	1920	McDuffie	368900	3690300	Appears to meet criteria
51212	Iron Hill Advent Christian Church	1870	McDuffie	369460	3694700	Appears to meet criteria
51217	Single dwelling	1920	McDuffie	369460	3694200	More information needed
51199	Single dwelling	1900	McDuffie	369485	3697400	Appears to meet criteria
51211	General store	1930	McDuffie	369485	3694500	More information needed
51210	Single dwelling	1890	McDuffie	369505	3694500	Appears to meet criteria
51209	Single dwelling	1920	McDuffie	369540	3694185	More information needed
51213	Single dwelling	1900	McDuffie	369590	3694800	Appears to meet criteria
51273	Single dwelling	1870	McDuffie	369630	3693010	Appears to meet criteria
51284	Single dwelling	1930	McDuffie	369790	3689710	May meet criteria
51214	Single dwelling	1870	McDuffie	369800	3695095	Appears to meet criteria
51215	Single dwelling	1890	McDuffie	369800	3695095	Appears to meet criteria
51274	Single dwelling	1890	McDuffie	370050	3691800	Appears to meet criteria
51216	Single dwelling	1890	McDuffie	370190	3695700	Appears to meet criteria
51275	Single dwelling	1890	McDuffie	370200	3691600	Appears to meet criteria
51164	Single dwelling	1890	McDuffie	370325	3698115	Appears to meet criteria
51282	Single dwelling	1920	McDuffie	370325	3689300	More information needed
51163	Single dwelling	1870	McDuffie	370410	3698190	Appears to meet criteria
51277	Single dwelling	1890	McDuffie	370425	3691390	Appears to meet criteria
51218	Single dwelling	1870	McDuffie	370450	3694200	Appears to meet criteria
51281	Single dwelling	1930	McDuffie	370650	3688980	Appears to meet criteria
51280	Single dwelling	1900	McDuffie	370990	3687750	Appears to meet criteria
51283	Single dwelling	1880	McDuffie	371000	3688940	Appears to meet criteria
51276	Single dwelling	1910	McDuffie	371075	3690500	May meet criteria
51219	Single dwelling	1910	McDuffie	371460	3693900	Appears to meet criteria
51285	Single dwelling	1910	McDuffie	371475	3692600	Appears to meet criteria
51221	Single dwelling	1920	McDuffie	371650	3695390	Appears to meet criteria
51223	Single dwelling	1900	McDuffie	371700	3695090	Appears to meet criteria
51222	Single dwelling	1890	McDuffie	371710	3695190	Appears to meet criteria
51278	Single dwelling	1930	McDuffie	371740	3689400	Appears not to meet criteria
51220	Single dwelling	1930	McDuffie	371785	3695410	Appears not to meet criteria
51224	Single dwelling	1880	McDuffie	371810	3698450	Appears to meet criteria
51289	Single dwelling	1920	McDuffie	371985	3693115	More information needed
51288	Single dwelling	1870	McDuffie	372000	3693075	Appears not to meet criteria

Resource Number	Resource Name Original Use/Type	Construction Date	County	UTM Zone 17 (NAD 27)		NHRP Eligibility
51290	Single dwelling	1910	McDuffie	372300	3688160	Appears to meet criteria
51297	Multiple dwelling	1870	McDuffie	372400	3692990	Appears to meet criteria
51296	Single dwelling	1900	McDuffie	372480	3693130	May meet criteria
51292	Single dwelling	1910	McDuffie	372500	3689750	May meet criteria
51293	Single dwelling	1930	McDuffie	372500	3689690	Appears not to meet criteria
51231	Road-related (vehicular)	1930	McDuffie	372550	3693510	Appears to meet criteria
51233	Single dwelling	1900	McDuffie	372700	3695475	Appears to meet criteria
51234	Multiple dwelling	1910	McDuffie	372950	3694700	Appears to meet criteria
51298	Single dwelling	1910	McDuffie	372950	3692450	Appears not to meet criteria
51291	Reeves School House School	1920	McDuffie	373100	3688790	Appears to meet criteria
51299	Single dwelling	1890	McDuffie	373100	3692200	Appears to meet criteria
51301	Single dwelling	1920	McDuffie	373100	3687000	Appears to meet criteria
51294	Single dwelling	1870	McDuffie	373115	3689650	Appears to meet criteria
51295	Single dwelling	1900	McDuffie	373600	3689350	May meet criteria
51230	School	1900	McDuffie	374130	3695375	Appears not to meet criteria
51228	Single dwelling	1940	McDuffie	374200	3696210	Appears to meet criteria
51229	Single dwelling	1930	McDuffie	374340	3695520	More information needed
51300	Single dwelling	1920	McDuffie	374400	3690310	Appears to meet criteria
RI-28	Single dwelling	1880-1884	Richmond	387165	3694225	Appears to meet criteria
RI-29	Single dwelling	1910	Richmond	387500	3684200	Appears to meet criteria
RI-30	Single dwelling	1920	Richmond	387640	3684190	Appears to meet criteria
RI-31	Single dwelling	1920	Richmond	387660	3684135	Appears to meet criteria
RI-32	Single dwelling	1880	Richmond	387715	3684145	Appears to meet criteria
RI-33	Single dwelling	1890	Richmond	387900	3684125	May meet criteria
RI-34	Single dwelling	1910-1919	Richmond	387905	3684165	Appears to meet criteria
RI-35	Hayes Grocery	1900-1929	Richmond	388085	3684165	Appears to meet criteria
RI-40	Warehouse	1900-1914	Richmond	388110	3684110	Appears to meet criteria
RI-39	General store	1890	Richmond	388140	3684080	Appears to meet criteria
RI-37	Blythe Red & White Store	1900-1909	Richmond	388160	3684110	Appears not to meet criteria
RI-38	Palmer Reese Company/ Single dwelling	1900-1909	Richmond	388160	3684095	Appears not to meet criteria
RI-36	Farmers Bank	1900-1909	Richmond	388170	3684105	Appears to meet criteria
Ri-46	Single dwelling	1900-1909	Richmond	388250	3684240	May meet criteria
RI-47	Single dwelling	1890	Richmond	388275	3684105	Appears to meet criteria
RI-49	Single dwelling	1900	Richmond	388280	3684040	Appears to meet criteria
RI-48	Single dwelling	1900	Richmond	388320	3684070	Appears to meet criteria
RI-50	Single dwelling	1900-1909	Richmond	388365	3684090	Appears to meet criteria
RI-51	Single dwelling	1890	Richmond	388400	3684040	Appears to meet criteria

Resource Number	Resource Name Original Use/Type	Construction Date	County	UTM Zone 17 (NAD 27)		NHRP Eligibility
RI-52	Single dwelling	1890	Richmond	388460	3684110	Appears to meet criteria
RI-53	Single dwelling	1910	Richmond	388470	3684020	More information needed
RI-54	Single dwelling	1910	Richmond	388480	3683980	Appears to meet criteria
RI-55	Single dwelling	1915-1924	Richmond	388560	3683930	Appears to meet criteria
BK-B-56	Blythe Baptist Church	1880	Richmond	388590	3683820	Appears to meet criteria
55823	Pleasant Grove School	1930	Richmond	393870	3683840	Appears to meet criteria
55873	Single dwelling	1850	Richmond	397560	3683890	May meet criteria
55866	Southern Methodist Church	1969	Richmond	397900	3684830	Appears not to meet criteria
55874	Single dwelling	1850	Richmond	398940	3684035	Appears to meet criteria
55875	Single dwelling	1870	Richmond	399635	3682385	Appears not to meet criteria
55878	Single dwelling	1830	Richmond	399705	3684830	Appears to meet criteria
55877	Single dwelling	1810	Richmond	401700	3680915	Appears to meet criteria
55879	Single dwelling	1920	Richmond	401920	3685380	Appears to meet criteria
55880	Single dwelling	1900	Richmond	403140	3679470	Appears to meet criteria
55881	Berlin Methodist Church	1870	Richmond	404800	3680115	Appears to meet criteria
55882	Single dwelling		Richmond	404880	3680075	Appears to meet criteria
55911	Single dwelling	1900	Richmond	407635	3680720	Appears to meet criteria
55909	Single dwelling	1915	Richmond	410840	3684620	More information needed
55910	Richmond County Recreation Center/School	1926	Richmond	410960	3679380	May meet criteria
55900	Single dwelling	1920	Richmond	411330	3678455	Appears to meet criteria
55901	Single dwelling	1910	Richmond	411360	3678505	Appears not to meet criteria
55897	General store	1910	Richmond	411380	3678410	Appears to meet criteria
55898	Gin house	1920	Richmond	411470	3678400	Appears to meet criteria
55899	Four tenant houses	1920	Richmond	411580	3678375	Appears to meet criteria
RI-114	Single dwelling	1840	Richmond	398330	3684230	Appears to meet criteria
RI-122	Single dwelling	1890	Richmond	404275	3687455	Appears to meet criteria

Table 2 Archaeological Sites Identified Within the Study Areas

Site Number	Site Type	Size Size (meters)	County	UTM Zone 17 (NAD 83)		NHRP Eligibility
9WR10	Prehistoric Artifact Scatter	70 x 20	Warren	365000	3689340	Recommended Ineligible
9WR11	Prehistoric Artifact Scatter	170 x 60	Warren	364920	3689350	Recommended Eligible
9WR12	Prehistoric Artifact Scatter	60 x 60	Warren	365280	3689360	Recommended Eligible
9WR13	Prehistoric Artifact Scatter	10 x 10	Warren	364960	3689180	Recommended Ineligible
9WR14	Prehistoric Artifact Scatter	65 x 30	Warren	365080	3689250	Recommended Ineligible
9WR15	Prehistoric Artifact Scatter	70 x 50	Warren	364567	3688914	Recommended Ineligible
9WR21	Prehistoric Artifact Scatter	6 x 5	Warren	348730	3698810	Recommended Ineligible
9WR3	Historic Cemetery/ Prehistoric Artifact Scatter	300 x 200	Warren	364750	3689600	Recommended Eligible
9WR34	Historic Artifact Scatter	20 x 20	Warren	365010	3687190	Recommended Ineligible
9WR35	Prehistoric Artifact Scatter	50 x 54	Warren	365150	3686800	Recommended Ineligible
9WR36	Prehistoric Artifact Scatter	12 x 22	Warren	365350	3686510	Recommended Ineligible
9WR37	Prehistoric Artifact Scatter	70 x 70	Warren	366365	3683926	Recommended Ineligible
9WR38	Prehistoric Artifact Scatter	88 x 66	Warren	366517	3683500	Recommended Ineligible
9WR39	Prehistoric Artifact Scatter	48 x 54	Warren	366740	3683100	Recommended Ineligible
9WR4	Prehistoric Artifact Scatter	300 x 90	Warren	365000	3689600	Recommended Eligible
9WR5	Prehistoric Artifact Scatter	62 x 50	Warren	364490	3689150	Recommended Ineligible
9WR6	Prehistoric Artifact Scatter	70 x 30	Warren	364620	3689380	Recommended Ineligible
9WR7	Prehistoric Artifact Scatter	30 x 10	Warren	364620	3689720	Recommended Ineligible
9WR8	Prehistoric Artifact Scatter	90 x 75	Warren	364720	3689050	Recommended Ineligible
9WR9	Prehistoric Artifact Scatter	50 x 30	Warren	364820	3689100	Recommended Ineligible
9RI1031	Prehistoric/Historic Artifact Scatter	140 x 20	Richmond	389130	3699130	Recommended Ineligible
9RI1033	Prehistoric Artifact Scatter	60 x 50	Richmond	402380	3679880	Recommended Ineligible
9RI1034	Prehistoric Artifact Scatter	150 x 80	Richmond	402100	3684250	Recommended Ineligible
9RI1035	Prehistoric Artifact Scatter	20 x 5	Richmond	401780	3685460	Recommended Ineligible
9RI1036	Prehistoric Artifact Scatter	110 x 50	Richmond	401740	3685560	Recommended Eligible
9RI187	Prehistoric/Historic Artifact Scatter	170 x 64	Richmond	408360	3685760	Recommended Eligible
9RI188	Historic Artifact Scatter	50 x 20	Richmond	409200	3684980	Recommended Eligible
9RI189	Historic Artifact Scatter		Richmond	409380	3684840	Recommended Eligible
9RI190	Historic Artifact Scatter	60 x 75	Richmond	409480	3683700	Recommended Eligible
9RI191	Prehistoric/Historic Artifact Scatter	80 x 80	Richmond	409500	3683540	Recommended Eligible
9RI192	Prehistoric Artifact Scatter		Richmond	417060	3682040	Unknown
9RI193	Prehistoric Artifact Scatter		Richmond	412020	3681660	Recommended Ineligible
9RI194	Prehistoric/Historic Artifact Scatter		Richmond	412120	3681540	Recommended Eligible
9RI195	Prehistoric/Historic Artifact Scatter		Richmond	413100	3680540	Recommended Ineligible
9RI196	Prehistoric/Historic Artifact Scatter		Richmond	413200	3680440	Recommended Ineligible
9RI197	Prehistoric/Historic Artifact Scatter		Richmond	413340	3680280	Recommended Ineligible
9RI198	Prehistoric/Historic Artifact Scatter		Richmond	413460	3680160	Recommended Ineligible
9MF100	Prehistoric Artifact Scatter	100 x 60	McDuffie	372580	3687260	Recommended Eligible
9MF101	Prehistoric Artifact Scatter	50 x 20	McDuffie	373660	3688620	Unknown

Site Number	Site Type	Size Size (meters)	County	UTM Zone 17 (NAD 83)		NHRP Eligibility
9MF102	Prehistoric Occupation	400 x 250	McDuffie	372160	3686850	Recommended Eligible
9MF103	Prehistoric Artifact Scatter	65 x 15	McDuffie	373720	3688550	Unknown
9MF104	Prehistoric Occupation	130 x 60	McDuffie	372320	3686660	Recommended Eligible
9MF105	Prehistoric Artifact Scatter/ Prehistoric Artifact Scatter	40 x 40	McDuffie	374290	3689700	Unknown
9MF106	Prehistoric Artifact Scatter	60 x 40	McDuffie	373790	3688400	Unknown
9MF107	Prehistoric Artifact Scatter	50 x 10	McDuffie	374500	3689410	Unknown
9MF108	Prehistoric Artifact Scatter	40 x 10	McDuffie	374320	3689290	Unknown
9MF109	Prehistoric/Historic Artifact Scatter	40 x 40	McDuffie	373520	3688190	Unknown
9MF110	Prehistoric Artifact Scatter	10 x 10	McDuffie	374250	3689190	Unknown
9MF111	Prehistoric Artifact Scatter	50 x 30	McDuffie	373690	3689140	Unknown
9MF112	Prehistoric Artifact Scatter	40 x 20	McDuffie	374320	3689150	Unknown
9MF113	Prehistoric Artifact Scatter/ Prehistoric Artifact Scatter	90 x 60	McDuffie	373850	3688600	Recommended Eligible
9MF114	Prehistoric Artifact Scatter	450 x 180	McDuffie	374350	3688900	Recommended Eligible
9MF115	Prehistoric Occupation	165 x 45	McDuffie	374000	3688700	Recommended Eligible
9MF116	Prehistoric Artifact Scatter	40 x 10	McDuffie	374370	3689760	Unknown
9MF117	Prehistoric Artifact Scatter	180 x 90	McDuffie	374040	3688960	Unknown
9MF118	Prehistoric Artifact Scatter	10 x 10	McDuffie	374280	3689950	Unknown
9MF119	Prehistoric/Historic Artifact Scatter	120 x 50	McDuffie	374120	3689700	Unknown
9MF12	Prehistoric Artifact Scatter	50 x 25	McDuffie	374330	3689400	Unknown
9MF120	Prehistoric Artifact Scatter	10 x 10	McDuffie	374980	3690020	Recommended Ineligible
9MF121	Prehistoric Occupation	60 x 40	McDuffie	374199	3689570	Recommended Eligible
9MF122	Prehistoric Artifact Scatter	20 x 15	McDuffie	373950	3689460	Unknown
9MF123	Prehistoric Artifact Scatter	140 x 30	McDuffie	374040	3689210	Unknown
9MF124	Prehistoric Artifact Scatter	240 x 75	McDuffie	374350	3689000	Unknown
9MF125	Prehistoric Artifact Scatter	20 x 15	McDuffie	374570	3689680	Unknown
9MF126	Prehistoric Artifact Scatter	90 x 80	McDuffie	374620	3690050	Unknown
9MF127	Prehistoric Artifact Scatter	30 x 20	McDuffie	374630	3690300	Unknown
9MF128	Prehistoric Artifact Scatter	90 x 30	McDuffie	374460	3690300	Unknown
9MF16	Prehistoric Artifact Scatter	30 x 30	McDuffie	374750	3689610	Recommended Ineligible
9MF17	Prehistoric Artifact Scatter	50 x 20	McDuffie	374750	3689580	Unknown
9MF22	Prehistoric Artifact Scatter	200 x 100	McDuffie	373030	3687080	Recommended Ineligible
9MF23	Prehistoric Artifact Scatter	160 x 90	McDuffie	373900	3688160	Recommended Ineligible
9MF499	Historic Artifact Scatter	30 x 22	McDuffie	362490	3696940	Recommended Ineligible
9MF500	Prehistoric Artifact Scatter	30 x 26	McDuffie	362710	3695800	Recommended Ineligible
9MF500	Prehistoric Artifact Scatter	30 x 26	McDuffie	362710	3695800	Recommended Ineligible
9MF501	Prehistoric Artifact Scatter	110 x 40	McDuffie	363100	3694350	Recommended Ineligible
9MF502	Prehistoric Artifact Scatter/ Prehistoric Artifact Scatter	200 x 110	McDuffie	363404	3693165	Recommended Ineligible
9MF503	Prehistoric Artifact Scatter	32 x 10	McDuffie	363490	3692910	Recommended Ineligible
9MF504	Historic Artifact Scatter	30 x 18	McDuffie	363260	3693600	Recommended Ineligible
9MF505	Prehistoric Artifact Scatter	24 x 24	McDuffie	363700	3692300	Recommended Ineligible

Site Number	Site Type	Size Size (meters)	County	UTM Zone 17 (NAD 83)		NHRP Eligibility
9MF506	Historic Artifact Scatter	66 x 36	McDuffie	364200	3690350	Recommended Ineligible
9MF80	Prehistoric/Historic Artifact Scatter	50 x 60	McDuffie	373300	3688050	Unknown
9MF81	Prehistoric Artifact Scatter	80 x 60	McDuffie	372950	3686880	Recommended Eligible
9MF82	Prehistoric Artifact Scatter	60 x 30	McDuffie	373520	3687840	Unknown
9MF83	Prehistoric Artifact Scatter	250 x 100	McDuffie	372750	3686810	Unknown
9MF84	Prehistoric Artifact Scatter	40 x 20	McDuffie	373350	3687630	Unknown
9MF85	Prehistoric Artifact Scatter	15 x 15	McDuffie	372580	3687810	Unknown
9MF87	Prehistoric Artifact Scatter	100 x 50	McDuffie	372410	3686860	Recommended Eligible
9MF88	Prehistoric/Historic Artifact Scatter	180 x 20	McDuffie	373110	3688380	Unknown
9MF89	Prehistoric Artifact Scatter	10 x 10	McDuffie	372700	3687170	Unknown
9MF898	Prehistoric Artifact Scatter		McDuffie	373976	3689612	Unknown
9MF90	Prehistoric/Historic Artifact Scatter	500 x 140	McDuffie	372640	3687020	Recommended Eligible
9MF91	Prehistoric Occupation	65 x 30	McDuffie	372500	3686750	Recommended Eligible
9MF916	Prehistoric Artifact Scatter	60 x 55	McDuffie	366723	3689210	Recommended Ineligible
9MF917	Prehistoric Artifact Scatter	75 x 40	McDuffie	366848	3689075	Recommended Ineligible
9MF918	Prehistoric Artifact Scatter	110 x 110	McDuffie	366858	3689697	Recommended Ineligible
9MF92	Prehistoric Artifact Scatter	35 x 20	McDuffie	372250	3687320	Unknown
9MF93	Prehistoric Artifact Scatter/ Prehistoric Artifact Scatter	100 x 90	McDuffie	372150	3687110	Unknown
9MF94	Historic Cemetery/ Prehistoric Artifact Scatter	200 x 100	McDuffie	372300	3687520	Unknown
9MF95	Historic Artifact Scatter	30 x 50	McDuffie	372660	3688220	Unknown
9MF96	Prehistoric Artifact Scatter	90 x 50	McDuffie	372430	3687540	Unknown
9MF97	Prehistoric Artifact Scatter	80 x 60	McDuffie	373670	3689210	Unknown
9MF98	Prehistoric Artifact Scatter	150 x 105	McDuffie	372520	3687480	Unknown
9MF99	TrashDump	25 x 10	McDuffie	373350	3688840	Unknown
9JF108	Prehistoric Occupation	50 x 40	Jefferson	372020	3685150	Recommended Ineligible
9JF109	Prehistoric Artifact Scatter/ Prehistoric Artifact Scatter	280 x 90	Jefferson	372000	3684760	Recommended Ineligible
9JF110	Prehistoric Artifact Scatter	70 x 55	Jefferson	371860	3685000	Recommended Ineligible
9JF111	Prehistoric/Historic Artifact Scatter	210 x 100	Jefferson	371900	3685350	Recommended Ineligible
9JF142	Prehistoric Artifact Scatter	60 x 40	Jefferson	378820	3682620	Unknown
9JF143	Prehistoric Artifact Scatter/ Prehistoric Artifact Scatter	80 x 80	Jefferson	379000	3682350	Recommended Ineligible
9JF144	Prehistoric Artifact Scatter		Jefferson	378490	3682540	Recommended Ineligible
9JF145	Prehistoric Artifact Scatter	150 x 60	Jefferson	378320	3682500	Recommended Ineligible
9JF153	Prehistoric Artifact Scatter	200 x 160	Jefferson	372350	3685360	Recommended Ineligible
9JF177	Prehistoric Artifact Scatter	40 x 20	Jefferson	378980	3682140	Recommended Ineligible
9JF178	Prehistoric Artifact Scatter	90 x 40	Jefferson	377260	3680240	Recommended Ineligible
9JF179	Prehistoric Artifact Scatter		Jefferson	374810	3678200	Recommended Ineligible
9JF193	Prehistoric Artifact Scatter	20 x 20	Jefferson	375790	3678740	Recommended Ineligible
9JF214	Prehistoric Artifact Scatter	70 x 50	Jefferson	368375	3679050	Recommended Eligible
9JF215	Prehistoric Artifact Scatter	36 x 28	Jefferson	368480	3678860	Recommended Ineligible

Site Number	Site Type	Size Size (meters)	County	UTM Zone 17 (NAD 83)		NHRP Eligibility
9JF216	Prehistoric Artifact Scatter	60 x 70	Jefferson	368640	3678400	Recommended Ineligible
9JF218	Prehistoric Artifact Scatter		Jefferson	368950	3679770	Recommended Eligible
9JF219	TrashDump	10 x 10	Jefferson	373960	3680600	Recommended Ineligible
9JF220	Prehistoric/Historic Artifact Scatter	130 x 30	Jefferson	373520	3680560	Recommended Ineligible
9JF221	Prehistoric Artifact Scatter	65 x 50	Jefferson	368670	3680810	Recommended Ineligible
9JF222	Prehistoric Artifact Scatter	10 x 10	Jefferson	374140	3682290	Recommended Ineligible
9JF31	Prehistoric Artifact Scatter/ Prehistoric Artifact Scatter	600 x 80	Jefferson	371980	3685790	Unknown
9JF49	Prehistoric Artifact Scatter	80 x 200	Jefferson	379100	3682660	Unknown
9JF50	Historic Artifact Scatter		Jefferson	377940	3681020	Recommended Ineligible
9JF83	Prehistoric Artifact Scatter/ Prehistoric Artifact Scatter	340 x 220	Jefferson	378170	3682570	Recommended Ineligible
9JF84	Prehistoric Artifact Scatter	70 x 70	Jefferson	378520	3682400	Recommended Ineligible
9JF86	Prehistoric/Historic Artifact Scatter	60 x 40	Jefferson	378220	3682770	Recommended Ineligible
9BK100	Prehistoric Artifact Scatter	70 x 70	Burke	426620	3669440	Recommended Eligible
9BK35	Prehistoric Artifact Scatter		Burke	425810	3665800	Recommended Eligible
9BK79	Prehistoric Artifact Scatter	140 x 140	Burke	437560	3653240	Recommended Eligible
9BK83	Prehistoric Artifact Scatter	65 x 65	Burke	436340	3657600	Recommended Eligible
9BK84	Prehistoric Artifact Scatter	22 x 22	Burke	434000	3661220	Recommended Eligible
9BK85	Prehistoric Artifact Scatter	35 x 35	Burke	431940	3663200	Recommended Eligible
9BK88	Prehistoric/Historic Artifact Scatter	50 x 50	Burke	416500	3677500	Recommended Eligible
9BK90	Prehistoric/Historic Artifact Scatter	95 x 95	Burke	418380	3675980	Recommended Eligible
9BK96	Prehistoric/Historic Artifact Scatter	251 x 54	Burke	425500	3670300	Recommended Eligible
9BK97	Prehistoric/Historic Artifact Scatter	130 x 130	Burke	426180	3669780	Recommended Eligible
9BK101	Prehistoric Artifact Scatter	75 x 75	Burke	426720	3669360	Recommended Ineligible
9BK102	Prehistoric Artifact Scatter	60 x 60	Burke	426940	3669220	Recommended Ineligible
9BK103	Prehistoric Artifact Scatter	36 x 36	Burke	427260	3668980	Recommended Ineligible
9BK104	Prehistoric/Historic Artifact Scatter	390 x 30	Burke	414060	3679500	Recommended Ineligible
9BK105	Prehistoric Artifact Scatter	95 x 95	Burke	414720	3678960	Recommended Eligible
9BK106	Prehistoric Artifact Scatter/ Prehistoric Artifact Scatter	50 x 50	Burke	415360	3678420	Recommended Eligible
9BK107	Prehistoric Artifact Scatter	55 x 25	Burke	403220	3667620	Recommended Ineligible
9BK108	Historic Artifact Scatter	20 x 20	Burke	403260	3667260	Recommended Ineligible
9BK109	Prehistoric Artifact Scatter	200 x 100	Burke	403240	3670580	Recommended Ineligible
9BK12	Prehistoric Artifact Scatter		Burke	388800	3673300	Unknown
9BK20	Prehistoric Artifact Scatter		Burke	427850	3668600	Unknown
9BK21	Prehistoric Artifact Scatter		Burke	427500	3667700	Unknown
9BK22	Prehistoric Artifact Scatter		Burke	427400	3667520	Unknown
9BK358	Prehistoric Artifact Scatter	150 x 35	Burke	403300	3664240	Recommended Eligible
9BK359	Prehistoric Artifact Scatter	5 x 5	Burke	403220	3664900	Recommended Ineligible
9BK36	Prehistoric Artifact Scatter		Burke	425690	3665750	Recommended Ineligible
9BK360	Prehistoric/Historic Artifact Scatter	140 x 60	Burke	403140	3664490	Recommended Ineligible
9BK361	Prehistoric/Historic Artifact Scatter	100 x 30	Burke	402810	3667750	Recommended Ineligible

Site Number	Site Type	Size Size (meters)	County	UTM Zone 17 (NAD 83)		NHRP Eligibility
9BK362	Prehistoric/Historic Artifact Scatter	150 x 40	Burke	402600	3669910	Recommended Ineligible
9BK363	Prehistoric Artifact Scatter	40 x 5	Burke	402540	3671550	Recommended Ineligible
9BK369	Prehistoric/Historic Artifact Scatter	2 x 2	Burke	396750	3671370	Unknown
9BK37	Prehistoric Artifact Scatter		Burke	425410	3665680	Recommended Ineligible
9BK370	Battle Field/ Prehistoric Artifact Scatter		Burke	405350	3667320	Unknown
9BK38	Prehistoric Artifact Scatter		Burke	425880	3665830	Recommended Ineligible
9BK385	Prehistoric Artifact Scatter	200 x 100	Burke	397650	3669800	Unknown
9BK386	Prehistoric Artifact Scatter		Burke	414100	3678040	Unknown
9BK39	Historic Artifact Scatter		Burke	417550	3663590	Recommended Ineligible
9BK393	Mill	100 x 100	Burke	424750	3672550	Unknown
9BK396	Historic Cemetery		Burke	424900	3673200	Unknown
9BK397	Historic Artifact Scatter		Burke	424700	3673300	Unknown
9BK398	Historic Artifact Scatter		Burke	424980	3672900	Unknown
9BK40	Prehistoric/Historic Artifact Scatter		Burke	417310	3663570	Recommended Ineligible
9BK41	Historic Artifact Scatter		Burke	415560	3662820	Recommended Ineligible
9BK414	Prehistoric Artifact Scatter	60 x 30	Burke	427541	3667613	Recommended Ineligible
9BK415	Prehistoric Artifact Scatter	60 x 70	Burke	427175	3667495	Recommended Ineligible
9BK46	Historic Artifact Scatter		Burke	416300	3663610	Recommended Ineligible
9BK460	Prehistoric Artifact Scatter	15 x 2	Burke	428212	3668600	Unknown
9BK462	Prehistoric Artifact Scatter	5 x 5	Burke	427862	3668426	Unknown
9BK463	Prehistoric Artifact Scatter	45 x 15	Burke	427087	3668384	Unknown
9BK464	Prehistoric Artifact Scatter	30 x 15	Burke	427002	3668369	Unknown
9BK465	Prehistoric Artifact Scatter	60 x 30	Burke	426853	3668276	Unknown
9BK87	Historic Artifact Scatter	25 x 25	Burke	417900	3676360	Recommended Ineligible
9BK88	Prehistoric/Historic Artifact Scatter	50 x 50	Burke	416500	3677500	Recommended Eligible
9BK89	Historic Artifact Scatter	40 x 40	Burke	418380	3675980	Recommended Ineligible
9BK90	Prehistoric/Historic Artifact Scatter	95 x 95	Burke	418380	3675980	Recommended Eligible
9BK91	Prehistoric/Historic Artifact Scatter	96 x 96	Burke	420620	3674020	Recommended Ineligible
9BK92	Historic Artifact Scatter	145 x 69	Burke	422080	3672900	Recommended Ineligible
9BK93	Prehistoric Artifact Scatter	40 x 40	Burke	422520	3672600	Recommended Ineligible
9BK94	Historic Artifact Scatter	50 x 50	Burke	422600	3672640	Unknown
9BK95	Prehistoric Artifact Scatter	50 x 50	Burke	424580	3670980	Recommended Ineligible
9BK96	Prehistoric/Historic Artifact Scatter	251 x 54	Burke	425500	3670300	Recommended Eligible
9BK97	Prehistoric/Historic Artifact Scatter	130 x 130	Burke	426180	3669780	Recommended Eligible
9BK98	Prehistoric/Historic Artifact Scatter	170 x 170	Burke	426180	3669780	Recommended Eligible
9BK99	Historic Artifact Scatter	100 x 50	Burke	426460	3669580	Recommended Ineligible
9BK42	Prehistoric/Historic Artifact Scatter		Burke	413630	3660700	Recommended Ineligible
9BK43	Historic Artifact Scatter		Burke	413720	3660810	Recommended Ineligible
9BK395	Historic Artifact Scatter		Burke	424950	3673550	Unknown
9BK461	Prehistoric Artifact Scatter	40 x 10	Burke	428390	3668408	Unknown
9BK459	Prehistoric Artifact Scatter	60 x 30	Burke	428415	3668610	Unknown

Site Number	Site Type	Size Size (meters)	County	UTM Zone 17 (NAD 83)		NHRP Eligibility
9BK417	Still	15 x 15	Burke	429302	3668149	Recommended Ineligible
9BK423	Camp	50 x 150	Burke	429344	366849	Recommended Eligible
9BK1	Prehistoric Artifact Scatter		Burke	429517	3668058	Unknown
9BK421	Prehistoric Artifact Scatter	10 x 10	Burke	429135	3667767	Recommended Ineligible
9BK419	Camp	192 x 30	Burke	429373	3667886	Unknown
9BK420	Camp	100 x 65	Burke	429792	366761	Unknown
9BK418	Camp	83 x 117	Burke	428220	3667742	Recommended Ineligible

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Southern Nuclear Operating Company

AR-07-0061

Enclosure 3

Electronic Files on CDs

Providing Data and Information

Requested by RAIs

AR-07-0061
Enclosure 3
Electronic Files on CD

List of Enclosed Reports/Documents

The following electronic reports/documents are included on the enclosed CD:

Folder Prefix	Description of Folder Contents
E2.4-1e	PDF Maps and Drawing Overlay File
E2.4-2b	VEGP T&E survey locations and GIS files
E4.3-1d	Habitat map and accompanying GIS data vegetation coverage
E3.9-2	GIS data files & Disturbed Area Figure (GIS).PDF
E9.3-3	2002 Final Report, Threatened and Endangered Species Surveys: Joseph M. Farley Nuclear Plant and Associated Transmission Line Corridors (2001-2002)[1]
E9.3-8	1999 Final Report, Threatened and Endangered Species Surveys: E. I. Hatch Nuclear Plant Units 1 and 2[2]

[1] This document provided for information only and is not formatted for ADAMS. However, it is currently in ADAMS via a license renewal submittal.
[2] Same as Footnote No. 1.