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Environmental Impact Statement for the Proposed City of Tallahassee Southwestern Transmission Line, Leon County, Florida

FINAL
March 2012

Prepared for:

and

Prepared by:

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FINAL
ENVIRONMENTAL IMPACT STATEMENT
Proposed City of Tallahassee Southwestern Transmission Line
Leon County, Florida
March 2012

Lead Agency: USDA Forest Service

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Abstract: This Final Environmental Impact Statement (FEIS) evaluates the potential environmental impacts associated with the Southwestern Transmission Line project (the project) proposed by the City of Tallahassee (the City). Based on the United States Department of Agriculture Forest Service (USFS) review of the FEIS, a Record of Decision (ROD) has been issued by the USFS to implement Alternative 1, as described in the FEIS, which would require the USFS to authorize a Special Use Permit to the City for the operation and maintenance of a 230-kV transmission line on the Apalachicola National Forest (ANF). The Alternative 1 route would be approximately 8.75 miles long and would require a 60-foot-wide permanent right-of-way (ROW). The entire 8.75-mile ROW would be co-located with existing utilities, allowing for overlap in the ROW. Seven of the 8.75 miles would be located within the 60-foot-wide temporary work space which was previously cleared of forested vegetation during improvement work on the existing 80-foot-wide Florida Gas Transmission Company, LLC (FGT) pipeline ROW in 2010. Of the 7 miles of the Alternative 1 ROW co-located with the FGT ROW, 6.48 miles is located within the ANF. The project would provide enhanced system benefits that would meet the North American Electric Reliability Corporation's mandated requirements and would improve overall system performance and reliability of service to City utility customers. In addition to the alternative selected in the ROD, the USFS considered two other alternatives in detail, including an off-forest alternative and the No Action Alternative. In addition, three other alternatives were considered but eliminated from detailed study in the EIS because of likely impacts. The No Action Alternative is the environmentally preferred alternative. A more detailed comparison of these alternatives can be found in Section 2.5 of the FEIS.

Administrative Review (Appeals) Opportunities: The USFS ROD is subject to appeal pursuant to 36 CFR 215.11. Individuals or organizations that submitted comments during the Notice and Comment period of the Draft Environmental Impact Statement may appeal. A written appeal must meet content requirements described in 36 CFR 215.14. Appeals must be postmarked or received within 45 days after the date the legal notice of ROD is published in the newspaper of record (*Tallahassee Democrat*).

Appeals must be filed with the Regional Forester for the Southern Region at:

USDA Forest Service
Attn: Appeal Reviewing Officer
1720 Peachtree Road, NW, Suite 811N
Atlanta, GA 30309-9102

Appeals may also be faxed to (404) 347-5401 or mailed electronically in a common digital format to *appeals-southern-regional-office@fs.fed.us*. Hand-delivered appeals must be received within normal business hours of 7:30 a.m. to 4:00 p.m.; closed on federal holidays.

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ACRONYMS AND ABBREVIATIONS

ANF	Apalachicola National Forest
ANF PETS List	Apalachicola National Forest Potential Endangered and Threatened Species List
BA	Biological Assessment
BEBR	(University of Florida) Bureau of Economic and Business Research
BMP	best management practice
CEQ	Council on Environmental Quality
CFA	core foraging area
CFR	Code of Federal Regulations
City, the	City of Tallahassee
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
dB	decibel(s)
dBA	A-weighted decibel(s)
DNL	daytime-nighttime noise level, also abbreviated as Ldn
e.g.	for example
EIA	Environment Impact Analysis
EIS	Environmental Impact Statement
EMF	electromagnetic field
EO	Executive Order
ESA	Endangered Species Act
F.S.	Florida Statute
FAA	Federal Aviation Administration
FAC	Florida Administrative Code
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FGS	Florida Geological Society

Acronyms and Abbreviations, continued

FGT	Florida Gas Transmission Company, LLC
FGT FEIS	Final Environmental Impact Statement Phase VIII Expansion Project
FGT Project	Florida Gas Transmission Company, LLC, Phase VIII Expansion Project
FHWA	Federal Highway Administration
FLUCCS	Florida Land Use, Cover, and Forms Classification System
FNAI	Florida Natural Areas Inventory
FWC	(Florida) Fish and Wildlife Conservation (Commission)
GHG	greenhouse gas
GIS	Geographic Information System
i.e.	that is
IROL	Interconnection Reliability Operating Limit
kV	kilovolt(s)
L_{dn}	daytime-nighttime noise level, also abbreviated as DNL
L_{eq}	equivalent sound pressure level
Line 31	the existing Hopkins-Crawfordville 230-kilvolt transmission line
Line 33	the new overhead 230-kilovolt electric transmission line proposed by the City of Tallahassee's Southwestern Transmission Line Project
LRMP	Land and Resource Management Plan (for National Forests in Florida)
MA	management area
MBTA	Migratory Bird Treaty Act
MII	May Impact Individuals But Not Likely to Cause a Trend to Federal Listing or a Loss of Viability
MP	milepost
MRI	magnetic resonance imaging
MSA	Metropolitan Statistical Area
MW	megawatt(s)
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NE	No Effect
NEPA	National Environmental Policy Act of 1969
NERC	North American Electric Reliability Corporation
NFI	Natural Features Inventory
NHPA	National Historic Preservation Act
NI	No Impacts

Acronyms and Abbreviations, continued

NLAA	Not Likely to Adversely Effect
NLJ	Not Likely to Jeopardize Proposed Species or Adversely Modify Proposed Critical Habitat
NOA	Notice of Availability
NO	nitrogen oxide
NO_2	nitrogen dioxide
NOI	Notice of Intent
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWFWMD	Northwest Florida Water Management District
NWI	National Wetlands Inventory
O_3	ozone
OSHA	Occupational Safety and Health Administration
Pb	lead
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than 2.5 microns
project, the	proposed Southwestern Transmission Line project, the subject of this Environmental Impact Statement; *also* the SWTL Project
PSC	(Florida) Public Service Commission
RCW	red-cockaded woodpecker
ROI	Region of Influence
ROW	right-of-way
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Office
SMS	Scenery Management System
SO_2	sulfur dioxide
SOL	System Operating Limit
SR	State Road
SSURGO	Soil Survey Geographic database
SUP	Special Use Permit
SWPPP	Stormwater Pollution Prevention Plan

Acronyms and Abbreviations, continued

SWTL Project	the Southwestern Transmission Line project, the subject of this Environmental Impact Statement; *also* the project
TLSA	(Florida Electric) Transmission Line Siting Act
TVMP	Transmission Vegetation Management Program
U.S. Census Bureau	United States Bureau of the Census
U.S.C.	United States Code
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFS	United States Department of Agriculture, Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VOCs	volatile organic compounds

1 PURPOSE OF AND NEED FOR ACTION

1.1 INTRODUCTION

This Environmental Impact Statement (EIS) is being prepared through a third-party agreement with the United States Department of Agriculture, Forest Service (USFS) and the City of Tallahassee (the City) to evaluate the potential environmental impacts associated with the proposed Southwestern Transmission Line project (the project; *also* the SWTL Project). This EIS has been prepared in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA), and the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508) as well as the USFS NEPA Regulations (36 CFR 220). The City proposes to construct, operate, and maintain a 230-kilovolt (kV) transmission line (Line 33) connecting the existing Hopkins-Crawfordville 230kV transmission line (Line 31) with the existing Substation BP-5. The City proposes to traverse a previously disturbed portion of the Apalachicola National Forest (ANF), which would require the ANF to issue the City a Special Use Permit (SUP).

NEPA requires federal agencies to integrate environmental values in their decision-making processes by considering the environmental impacts of, and reasonable alternatives to, their Proposed Action. For major federal actions that have the potential to cause significant adverse impacts on the environment, NEPA requires the agency undertaking the action to prepare an EIS. Should the Preferred Alternative be selected, the ANF would be impacted; therefore the USFS is the lead agency for this EIS. The USFS, as lead agency, has concluded that this project would constitute a major federal action that may significantly affect the quality of the natural and human environment. Therefore, the USFS has determined that this action requires the preparation of an EIS.

The City of Tallahassee owns, operates, and maintains an electric generation, transmission, and distribution system that provides electrical service to approximately 113,700 customers. The City's electric utility service area covers approximately 221 square miles and includes three City-owned and operated generating plants located to the west and south of town (Figure 1-1). The C. H. Corn Power Plant is one of only two hydroelectric generating plants in the state and is located 20 miles southwest of Tallahassee on Lake Talquin. The Arvah B. Hopkins Generating Station is located 7 miles west of Tallahassee and the Sam O. Purdom Generating Station is located approximately 19 miles southeast of Tallahassee in the city of St. Marks (City of Tallahassee 2011a). Together, these three plants provide a total net summer installed generating capability of 794 megawatts (MW) and a net winter capability of 870 MW (City of Tallahassee 2011b).

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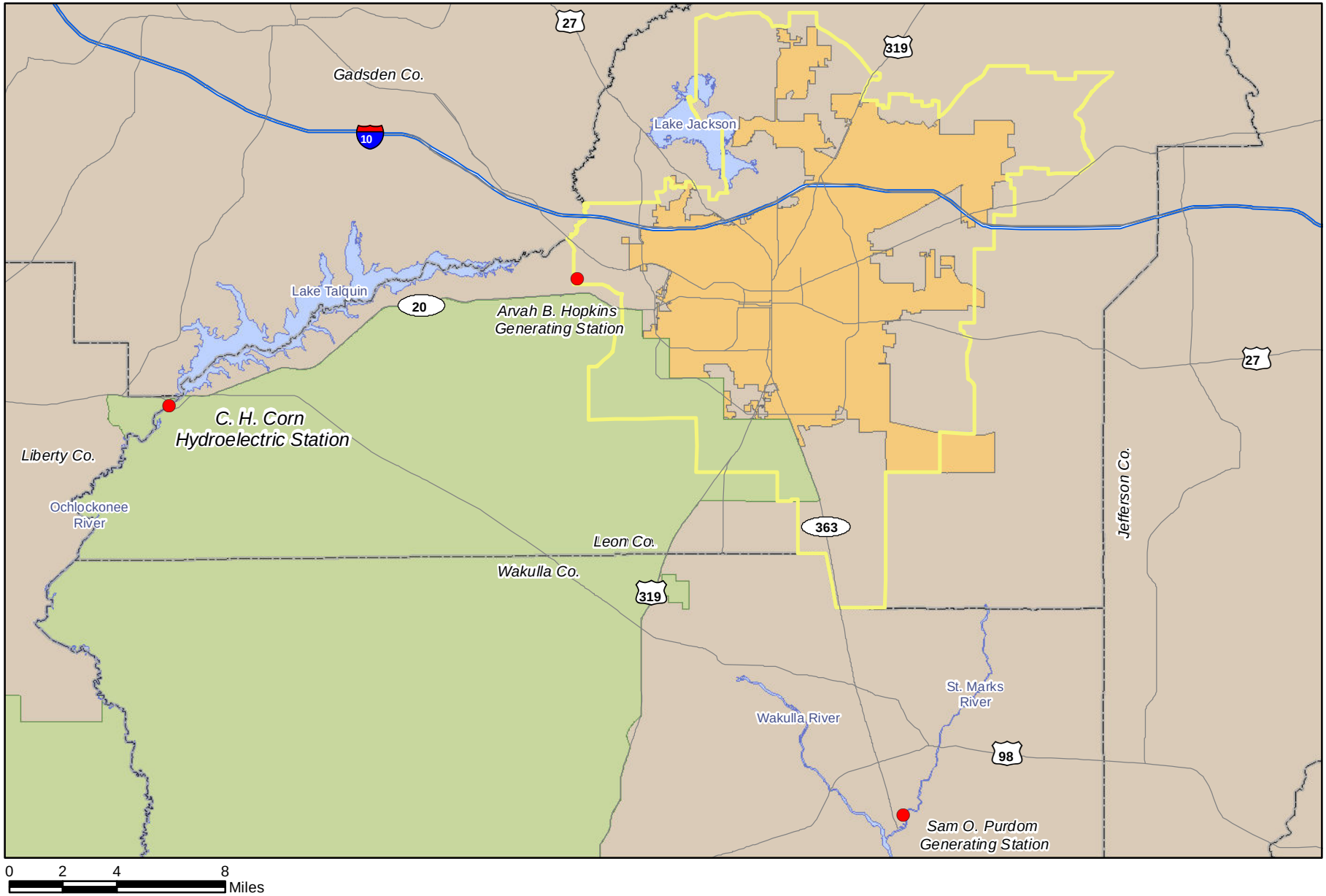


Power Plant
Apalachicola National Forest
Tallahassee City Limits
City of Tallahassee Electric Utility Service Area
Lake/River
County

Figure 1-1
Electric Utility Service Area and Generating Stations
Southwestern Transmission Line
City of Tallahassee Electric Utilities, Florida

Data Source: ESRI, 2010; City of Tallahassee 2011, USFS 2010

City of Tallahassee Your Own Utilities
AMPIRICAL SOLUTIONS LLC

1.2 PROJECT PURPOSE AND NEED

The City proposes this project to meet projected future electric transmission demands and to maintain system reliability in compliance with North American Electric Reliability Corporation (NERC) Reliability Standards. The NERC was authorized under the Energy Policy Act of 2005 to ensure the reliability of the North American bulk power system[1]. The NERC is certified by the Federal Energy Regulatory Commission (FERC) to develop and enforce reliability standards for the bulk power system. Additionally, the NERC assesses adequacy annually via a 10-year forecast, and summer and winter forecasts; monitors the bulk power system; and educates, trains, and certifies industry personnel (NERC 2011).

In 2006, the NERC released its "Transmission Operator/Balancing Authority Reliability Readiness Audit Report, City of Tallahassee, Florida," which found "no significant operational problems and concluded that the balancing authority/transmission operator [i.e., City of Tallahassee] has adequate facilities, processes, plans, procedures, tools, and trained personnel to perform the balancing authority/transmission operator functions necessary to maintain the reliable operation of the bulk power system."

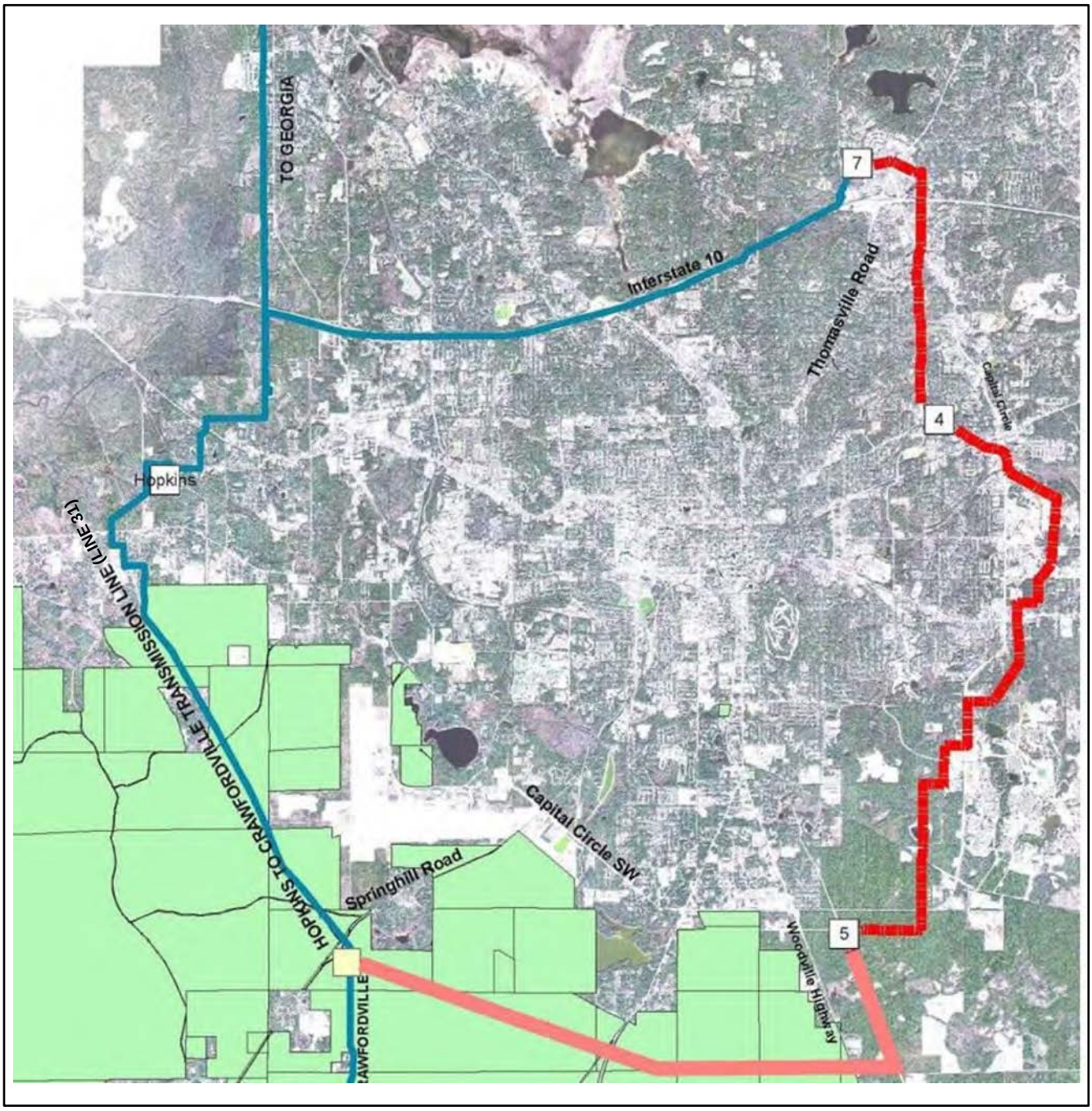
In addition to assessments conducted by the NERC, City staff conducts annual studies to evaluate the reliability of its electric transmission network to ensure the system will meet applicable NERC Reliability Standards for a 10-year period. While the City is currently in compliance with all applicable NERC Reliability Standards, results of these recent assessments, which consider existing power loads and expected growth, reveal that system improvements are necessary to ensure future NERC compliance.

While the City must comply with all NERC Reliability Standards, those particularly pertinent to the need for this project include TPL-001 through TPL-004, and TOP-004. TPL-001 through TPL-004 are mandatory planning standards that ensure a reliable bulk electric system is developed that meets specific performance requirements. These planning standards require planning assessments to ensure that the system remains stable, facilities remain within applicable thermal and voltage limits, that there are no cascading outages, and under what conditions the loss of firm load and transfers is permitted as required for the applicable contingency category with sufficient lead time. TOP-004 is a mandatory operating standard that ensures the transmission system is operated within the Interconnection Reliability Operating Limits (IROLs) and System Operating Limits (SOLs), ensuring that instability, uncontrolled separation, or cascading outages will not occur as a result of the most severe single contingency and specified multiple contingencies.

Presently, the majority of the City's existing load and expected growth is concentrated in the northeastern and eastern parts of the City, while the City's three generating stations are located to the west and south (Figure 1-1). Additionally, over 60% of the City's generating capability is located at the Hopkins Generating Station, west of town. Two primary delivery paths exist from the Hopkins Generating Station to the electric system: one to the north and another to the south (Figure 1-2). City planning assessments have concluded that without improvements to the system, the existing lines forming the southern delivery path from Hopkins will exceed their applicable limits (thermal, voltage, IROLs, and/or SOLs) as a result of contingencies (i.e., loss of lines or substations) impacting the northern delivery path.

[1] Unlike water or gas, electricity cannot be stored; it must be generated as needed and must be kept in balance with demand. Electricity is generated at power plants and other generating facilities and transported across high-voltage transmission and lower-voltage distribution lines to reach homes and businesses. Transformers at substations step the electric voltage up and down to efficiently deliver power to the customers. The Generation and Transmission components make up the "bulk power system." (NERC 2011)

Path: M:\Tallahassee\SWTL\3108_SWTL\mxd\Final Figures\Figure 1-2 future_230kV_system.mxd



Potential Planned 230kV Transmission Lines
Proposed 230kV Transmission Line on National Forest System Lands
Existing 230kV Transmission Lines
Sub-Station Connections
Proposed 230kV Tap Station
Apalachicola National Forest Lands

Figure 1-2
The City of Tallahassee's Overall Future Planned 230kV Transmission System
Tallahassee, Leon County, Florida

Data Source: City of Tallahassee, 2010

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The Proposed Action is needed to ensure that the City continues to operate the transmission system within applicable limits consistent with the requirements of the referenced Transmission Planning and Transmission Operating Standards. City planning studies indicate that system improvements must be implemented by December 2012 in order to maintain compliance with NERC Reliability Standards. Failure to comply with these standards could lead to diminished reliability of the City's transmission system and mandatory fines or penalties from the NERC. The Proposed Action would provide enhanced system benefits that would meet the NERC-mandated requirements and would improve overall system performance and reliability of service to City utility customers.

1.3 REGULATORY FRAMEWORK

This section summarizes principal federal and state regulations affecting the permitting process and the required environmental documentation for the proposed project.

1.3.1 Federal Land Policy and Management Act

Should the Preferred Alternative be selected, the City would apply to the USFS for an SUP to construct, operate, and maintain the proposed Southwestern Transmission Line, which would traverse a portion of the ANF. The ANF Forest Supervisor has authority to approve or deny certain special uses within the ANF and would determine whether to issue an SUP for this project in accordance with the Federal Land Policy and Management Act, as amended in 1976.

The Proposed Action, and thereby the Forest Supervisor's decision, must comply with other applicable laws and regulations, including but not limited to:

- Endangered Species Act (ESA) of 1973;
- Clean Water Act, as amended in 1972;
- Archaeological Resource Protection Act;
- Native American Graves Protection and Repatriation Act (NAGPRA);
- National Environmental Policy Act (NEPA) of 1969;
- Energy Policy Act of 2005;
- Rangeland Renewable Resources Planning Act of 1974;
- Multiple Use Sustained Yield Act of 1960;
- Section 106 of the National Historic Preservation Act (NHPA);
- National Forest Management Act;
- Federal Land Policy & Management Act, as amended in 1976; and
- Executive Order (EO) 13112 "Invasive Species."

In addition to compliance with the above laws and regulations, any action taken by the Forest Supervisor must be consistent with the objectives of the "Land and Resource Management Plan for National Forests in Florida" (LRMP; USFS 1999). The USFS prepared the LRMP to guide all natural resource management activities and set management standards for national forests in Florida. Specifically, this EIS, the Proposed Action, and the alternatives were developed in compliance with the following LRMP standards:

- **LA-8.** Evaluate special-use applications to see if they are in the public interest. At a minimum, these proposals should:
  - Be consistent with management area objectives as identified in the LRMP standards, and desired future conditions;
  - Be consistent with other applicable federal, state, and local statutes and regulations; and
  - Not be undertaken on national forest land if they can be reasonably accommodated on private land.
- **LA-9.** Designate existing transportation and utility routes, and rights-of-way (ROWs) capable of accommodating these facilities as ROW corridors. Subsequent ROW grants will, to the extent practicable, be confined to designated corridors. Transportation and utility route proposals for crossing national forest land will be evaluated initially on a National Forest System policy basis. Purpose, need, surrounding issues, Forest Plan desired future conditions, public values for national forests, and alternative locations off national forests will be reviewed in detail.

The Energy Policy Act of 2005 directs federal agencies to establish procedures to ensure that corridors for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities on federal land are identified and designated as necessary. The Act also directs federal agencies to expedite applications to construct or modify such pipelines and facilities within such corridors:

> …*(1) ensure that additional corridors for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities on Federal land are promptly identified and designated as necessary; and (2) expedite applications to construct or modify oil, gas and hydrogen pipelines and electricity transmission and distribution facilities within such corridors, taking into account the designation of such corridors. (d) Considerations—In carrying out this section, the Secretaries shall take into account the need for upgraded and new electricity transmission and distribution facilities to (1) improve reliability; (2) relieve congestions; and (3) enhance the capability of the national grid to deliver electricity…* (Public Law 109-58, Section 368, August 8, 2005)

This EIS will assist the Forest Supervisor in making a decision whether or not to issue an SUP to construct, operate, and maintain the proposed Southwestern Transmission Line in accordance with the aforementioned laws, regulations, and plans.

1.3.2 Decision Framework

Given the purpose and need, the deciding official (i.e., the USFS) reviews the proposed action, the other alternatives, and the environmental consequences in order to make the following decisions:

- Whether or not to authorize an SUP to the City for the operation and maintenance of a 230-kV transmission line on the ANF as described in the Proposed Action (see Section 2) of this EIS.

1.3.3 Florida Transmission Line Siting Act

The Florida Transmission Line Siting Act (TLSA), Sections 403.52 through 403.5365, Florida Statutes (F.S.) is the state's centralized process for licensing electrical transmission lines rated 230kV or greater. However, this Act only applies to newly constructed transmission lines rated 230kV or greater

that are longer than 15 miles and cross a county boundary. For projects subject to the TLSA, the utility must justify the need for the new transmission line to the Florida Public Service Commission (PSC), which regulates utilities. The alternatives analyzed in this EIS do not meet these criteria, and therefore do not require TLSA review or Florida PSC authorization.

Section 403.524(4), F.S., requires the City to "notify the [Florida] Department [of Environmental Protection] in writing, before the start of construction, of its intent to construct a transmission line exempted under this section." This notice is only for information purposes and may be included in any submittal filed with the Department before the start of construction demonstrating that the new transmission line complies with the applicable electric and magnetic field standards.

1.4 PUBLIC INVOLVEMENT

1.4.1 Scoping

The City initiated public involvement early in this process through scoping. Scoping, as required by NEPA, is defined as the process by which lead agencies solicit input from the public and interested agencies on the nature and extent of issues and impacts to be addressed in the EIS and the methods by which they will be evaluated. The intent of the scoping process is to provide opportunities for the public and agencies to learn about and comment on the Proposed Action and alternatives.

1.4.2 Federal Register Notice of Intent

As required by NEPA, a Notice of Intent (NOI) to prepare an EIS was published in the *Federal Register* (75 FR 63141) on Thursday, October 14, 2010 (see Appendix A). This notice set forth the USFS's intent to prepare an EIS with the City to evaluate the potential effects of the proposed construction, occupancy, and use of National Forest System land for a 230kV electric transmission line. The NOI announced the Proposed Action (Alternative 1), proposed Alternatives 2 and 2A, and the purpose and need for the Proposed Action. The NOI also provided the public scoping meeting time and location, contact information for questions about the proposal, and the closing date of the public comment period.

The 30-day public scoping period for the EIS officially began on October 14, 2010, with the publication of the NOI in the *Federal Register*, and ended on November 19, 2010.

1.4.3 Scoping Letters

On October 7, 2010, the USFS mailed letters to various government agencies, landowners within 0.25 mile of the alternative routes, tribal entities, and the current ANF mailing list of concerned citizens who have expressed interest in Forest Service projects to inform them of the opening of the formal scoping period, methods of providing comments, and the scoping meeting date, time, and location. Following scoping and meetings with the USFS, an additional off-Forest Service property route (Alternative 3) was identified. On March 31, 2011, the USFS prepared and disseminated a new letter to all landowners within 0.25 mile of the new route, agencies, and other interested individuals and organizations soliciting comment on Alternative 3.

1.4.4 Scoping Meeting

On October 28, 2010, the City conducted a scoping meeting at the Woodville Elementary School cafeteria from 5:00 to 7:00 p.m. The goals of this meeting were to introduce the community to the EIS process, provide available project information, answer questions from community members, and solicit public input on important issues and concerns. Comment forms and boxes were available for concerned stakeholders to provide comments and input on the project.

1.4.5 Additional Scoping Efforts

In addition to publication of the NOI in the *Federal Register*, the City provided the following additional efforts to ensure that the public remained informed about the proposed project.

- The project was listed on the USFS Schedule of Proposed Actions beginning in October 2010.
- The City issued a press release on October 22, 2010, announcing the date, time, location, and purpose of the scoping meeting.
- The City placed a notification describing the project in the *Tallahassee Democrat* "Local" section on October 23, 2010.
- The City developed a project Web site to provide the public with details about the public scoping meeting and general project information, including a discussion of the need for the project, the project background, and its potential routes: http://www.talgov.com/YOU/electric/swtline.cfm. The City's Web site was updated concurrent with the mailing of the March 31, 2011, letters soliciting comment on the off-Forest Service property route alternative to reflect this new information.
- Additionally, the USFS provided the scoping letter on its Web site at http://www.fs.fed.us/r8/florida/apalachicola/resources/projects.php. The USFS's Web site also was updated concurrent with the mailing of the March 31, 2011, letters soliciting comment on the off-Forest Service property alternative to reflect this new information.

City personnel were interviewed by local news stations WTXL (ABC Channel 27) and WCTV (CBS Channel 6). WTXL prepared a segment on the project and aired the segment on the evening news on October 26, 2010. WTXL and WCTV conducted interviews with City personnel at the scoping meeting on October 28, 2010, and these segments aired that same evening.

1.4.6 Issues

Comments received at the public meeting, during the public scoping period, and during the secondary public outreach efforts expressed a general concern for the potential disturbance to the ANF for environmental and recreational reasons under Alternative 1 and the potential impacts to private property owners under Alternative 3. Lastly, commenters suggested the evaluation of placing the transmission line underground, which is discussed further in Section 2.4.3.

Based on the comments received and the evaluation of the interdisciplinary team, the USFS identified the following issues.

1. Permanently increasing the width of the existing utility corridor to 140 feet within the ANF under the Proposed Action could impede movement of some small reptile and amphibian wildlife species and/or increase their predation. Species of concern include Florida gopher frogs, striped newt and Florida pine snakes. A related concern is the limited known information on these species, especially population-related information.
2. Not authorizing the SUP could result in the City constructing the transmission line off the ANF which could potentially affect neighborhood aesthetics and property values.

1.4.7 Federal Register Notice of Availability

As required by NEPA, a Notice of Availability (NOA) of a Draft EIS was published in the *Federal Register* (76 FR 80367) on Friday, December 23, 2011 (see Appendix A). This notice set forth the availability of the Draft EIS for the proposed construction, operation, and maintenance of the 230-kV electric transmission line and that occupancy and use of National Forest System Lands for the project would require a SUP to be issued by the ANF. The NOA announced the contact information for the Draft EIS, and the closing date of the public comment period.

The 45-day public comment period for the Draft EIS officially began on December 23, 2011, with the publication of the NOA in the *Federal Register*, and ended on February 6, 2012.

1.4.8 Additional Notifications Regarding the Draft EIS

In addition to publication of the NOA in the *Federal Register*, the City and or USFS provided the following additional efforts to ensure that the public was made aware of the availability of the Draft EIS and opportunity to provide comments on the project through review of this document:

- The USFS placed a legal notice regarding the Draft EIS in the *Tallahassee Democrat* on December 28, 2011.
- The City provided the Draft EIS on its Web site at http://www.talgov.com/you/learn/utilities/electric/swtline.cfm. The document was made available on the City's Web site on or before the date that the NOA was published in the *Federal Register*.
- Paper copies of the Draft EIS were made available for public review at the City's Electric Utilities Department office.
- The USFS and City provided paper copies and/or compact disks of the documents to federal, state, and local agencies; tribes; citizen groups; entities; and other interested parties identified on Table 7.4-1.
- Additionally, the USFS provided the Draft EIS on its Web site at http://www.fs.fed.us/r8/florida/apalachicola/resources/projects.php. The document was made available on the USFS's Web site on or before the date that the NOA was published in the Federal Register.

1.4.9 Comments on the Draft EIS

During the 45-day public comment period, there were six comment letters or electronic mails received on the Draft EIS, including three from tribes and three from government agencies; no comments were received from the public. These comments have been addressed in the Final EIS as outlined in Section 1.5. Appendix B provides copies of all comment letters and electronic mail received on the Draft EIS.

1.5 CHANGES FROM THE DRAFT TO THE FINAL EIS

Tribes and government agencies presented their comments on the Draft EIS via written correspondence (see Appendix B). Several of the comments received by the USFS did not warrant revisions to the Draft EIS, as the information requested was addressed in the Draft EIS or the comment was not applicable to the project. Conversely, several of the comments received by the USFS warranted revisions to the Draft EIS in order to complete the Final EIS. A comment/response matrix is provided in Appendix B. This matrix indicates where information addressing a particular comment can be found in

the EIS and where additional information for the Final EIS was revised. Revisions to the Draft EIS for the Final EIS included the following:

- Update of the EIS Cover Sheet, including a revision of the abstract subsection.
- Removal of the stand-alone Abstract.
- Addition of Sections 1.4.7 (*Federal Register* Notice of Availability), 1.4.8 (Additional Notifications Regarding the Draft EIS), and 1.4.9 (Comments on the Draft EIS) to summarize additional public involvement opportunities that have occurred since scoping.
- Addition of Section 1.5 (Changes from the Draft to the Final EIS) to identify how the Draft EIS was modified for the Final EIS.
- Modification in the numbering of Section 1.5 in the Draft EIS to Section 1.6 in the Final EIS (no change in text; renumbering required because of the addition of Section 1.5 [see above] in the Final EIS).
- Additional analysis and language discussing population trends of birds within the ANF and potential impacts to breeding bird population trends due to the proposed action (see Section 3.4.3.1.2; Environmental Impacts to Wildlife from Alternative 1).
- Acknowledgement of receipt of a concurrence letter from the USFWS on the Biological Assessment (BA) obtained for the project (letter is provided as an attachment to the BA).
- Based on preference stated by the USFS, the use of hay as an option for mulching or stabilizing the ROW was removed. However, weed-free straw may still be used to mulch the ROW.
- Based on preference stated by the USFS, the required protective buffer zone for wetlands and waterbodies was increased (i.e., more restrictive or protective) from the 50-foot buffer zone indicated in the Draft EIS to a 100-foot buffer zone in the Final EIS.
- Clarification of the justification for the use of census blocks in evaluating environmental justice impacts and additional language regarding environmental justice impacts and mitigation (including comprehensive scoping and public involvement opportunities for the project) for Alternatives 1 and 3 (see Sections 3.9.3.1 [Environmental Impacts to Environmental Justice for Alternative 1], 3.9.3.2 [Environmental Impacts to Environmental Justice for Alternative 3], and 3.9.5 [Mitigation Measures for Environmental Justice]).
- Revision of the Environmental Justice section of Table 4.1-1 (Summary of Mitigation Measures) to reflect the changes made to Section 3.9.5 (Mitigation Measures for Environmental Justice; see above).
- Addition of references in Section 8 (References) to include one new technical document and Draft EIS comment letters.
- Addition of Appendix A (*Federal Register* Notices).
- Addition of Appendix B (Comments on Draft EIS).

1.6 RELATED ENVIRONMENTAL DOCUMENTATION

Under the Preferred Alternative, a portion of the proposed transmission line would be co-located with the previously cleared temporary construction ROW for the Florida Gas Transmission Company, LLC (FGT) Phase VIII Expansion Project (referred to herein as the FGT Project). On October 31, 2008, FGT filed an application with the FERC under the Natural Gas Act and in September 2009, FERC staff prepared the "Final Environmental Impact Statement Phase VIII Expansion Project" (referred herein to as the FGT FEIS) to assess the construction of 482.8 miles of pipeline in portions of Florida and Alabama.

On January 11, 2010, the USFS signed a Record of Decision to authorize the portion of the FGT Project that crosses the ANF. For those portions of the Preferred Alternative for the SWTL Project that would be co-located with the prior FGT study area, this EIS incorporates the environmental analysis from the FGT FEIS (FERC 2009), where appropriate.

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2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This section provides a description of a typical transmission and distribution system (Section 2.1); describes the Proposed Action (Section 2.2); presents a detailed description of the alternatives identification process (Section 2.3); identifies alternatives that were eliminated from further consideration (Section 2.4); and describes the alternatives that are evaluated in this EIS (Section 2.5).

2.1 DESCRIPTION OF A TYPICAL TRANSMISSION AND DISTRIBUTION SYSTEM

A typical transmission and distribution system, as illustrated on Figure 2-1, is a process of moving electricity through power lines from the power-generating plants to the community's distribution system. A transmission system is made up of high-voltage lines that carry electric energy ranging from 69kV to 765kV. Appliances and standard business equipment cannot use electricity at high transmission voltages, so the voltages must eventually be reduced and delivered to a distribution system for use in homes and businesses.

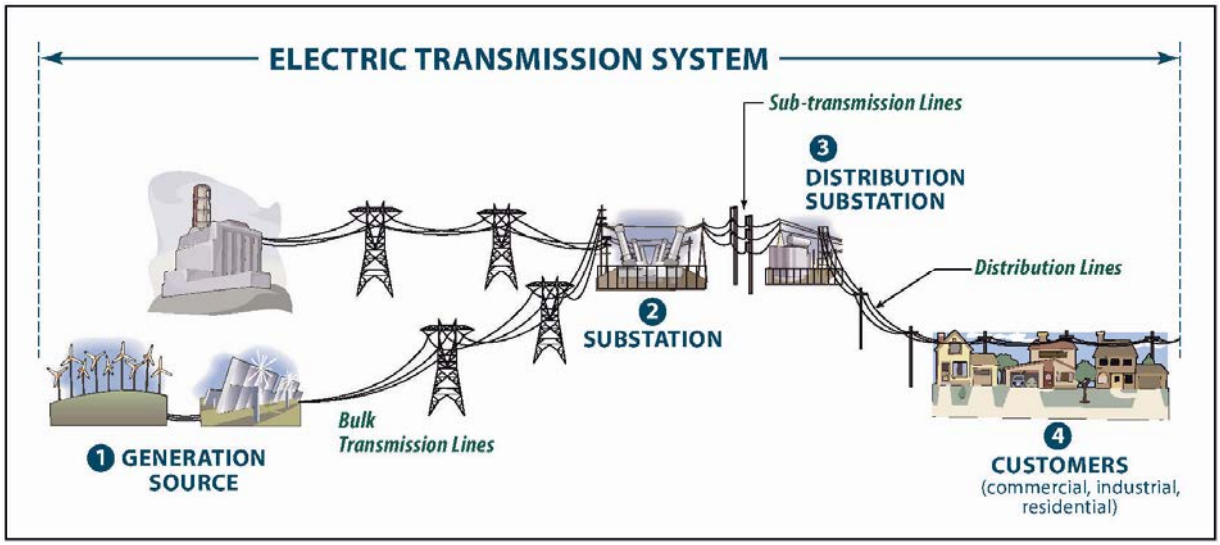


Figure 2-1 Typical Transmission and Distribution System

Electricity is delivered from the transmission system to customers' homes and businesses through a primary distribution system comprised of a network of power lines delivering electricity at lower voltage. A transformer reduces the voltage again. At this point, it changes from primary to secondary distribution voltage and is at a voltage level appropriate for operating household appliances and office equipment. Voltage on a distribution system ranges from 120 to 50,000 volts and links directly to the customer's meter. In addition to transformers for reducing voltage, distribution systems include regulating and protective equipment to help ensure steady and safe operation of electrical equipment (NERC 2011).

2.2 DESCRIPTION OF THE PROPOSED ACTION

Under the Proposed Action, the City would construct, operate, and maintain a new overhead 230kV electric transmission line (Line 33) in southwestern Leon County, Florida. The proposed line would connect the existing Hopkins-Crawfordville 230kV transmission line (Line 31) with the existing Substation BP-5, southeast of the intersection of Capital Circle SE and Woodville Highway (Figure 1-2). This action would include the development of a new tap station on Line 31.

2.2.1 Transmission Design/Facilities Description

2.2.1.1 Structures

The placement of overhead structures for a transmission line takes into consideration a number of factors including the technical feasibility of installing the structure in different terrains, the space available for the footprint of the structure, engineering and aesthetic concerns. Given this, structure height for this project would range from 80 to 120 feet, with higher structures being utilized to cross existing infrastructure, to accommodate a wider span, or to avoid other features. While distances between structures would vary depending upon terrain and configuration, structures would typically be erected with a span of 700 to 800 feet. Most, if not all, structures would be self-supporting, limiting the necessary footprint and eliminating the need for guy wires.

Two primary types of monopole structures would be utilized under the Proposed Action. Self-supported monopoles would be utilized in areas where the line forms an angle or dead-ends. Tangent poles would be utilized for structures with little or no line angle. In this document, the terms ‘structures’ and ‘poles’ are used interchangeably.

- The large line angle and dead-end poles would measure approximately 50 to 60 inches in diameter at ground level depending on their location. These structures would have a concrete drilled pier foundation varying in diameter from 5 to 7 feet and 15 to 30 feet deep dependent upon structure loads and local geological conditions.
- The tangent poles would measure approximately 30 inches in diameter at ground level and would be buried into the ground approximately 15 to 20 feet depending upon local geologic conditions and the location of the structure. Typically, the tangent monopoles would be directly embedded into the ground and the hole would be backfilled with concrete.

2.2.1.2 Conductors

Conductors are wires that carry the electrical current and typically consist of many aluminum wires wrapped around a steel core for reinforcement. These lines are strung along the transmission structures, connecting generation facilities, substations, and distribution stations to electricity consumers, as depicted on Figure 2-1. The Proposed Action would utilize 954 aluminum-conductor steel-reinforced cables with a height of no less than 27 to 28 feet from ground to mid-span at any given location.

2.2.1.3 Circuits and Configurations

Transmission lines consist of multiple conductors along which the electrical current flows; these are called circuits. Alternating current power transmission lines generally use a three-phase system for each circuit. The three-phase system consists of three conductors that carry electric current at the same frequency and different time cycles. Each phase typically consists of only one wire, but may contain two or more bundled conductors. Transmission structures can be designed to support either single circuits or double circuits. Structures under the Proposed Action would be designed to support a three-phase, single-circuit system.

Under the Proposed Action, two different structural configurations would be implemented depending upon location, tree density, and other factors. The primary configuration would include the use of vertical framing (Figure 2-2). The vertical framing configuration is designed to ensure that all phases point in the same direction. The secondary configuration would be inverted delta framing (Figure 2-3), in which one phase points in one direction, and the other two phases point in the opposite direction. Vertical framing would be utilized on USFS land to ensure that the conductors remain away from the tree line. Inverted Delta framing allows for a shorter pole structure and may be used in areas with lower tree density where trees would be less likely to fall or grow into the upper phase.

2.2.1.4 Tap Station Design and Maintenance

Tap stations are an important part of an electrical transmission system. The terms tap yard, tap station, switch yard, switching station, or transmission substation can be used interchangeably. The design and location of the tap station on Line 31 would vary depending upon the selected route alternative as detailed in Section 2.5. The area of the proposed tap station would be cleared and graded. Earthwork, including excavation, may be necessary to prepare the site for installation of the tap station equipment. Following construction, the tap station would be fenced and access would be restricted to authorized personnel only.

Over the life of the tap station, weekly inspections would be performed to maintain equipment and make necessary repairs. Routine maintenance would be conducted as required to remove undesirable vegetation that may interfere with the safe and reliable operation of the tap station. All maintenance and operations conducted on USFS property would be conducted in accordance with the terms and conditions of the SUP.

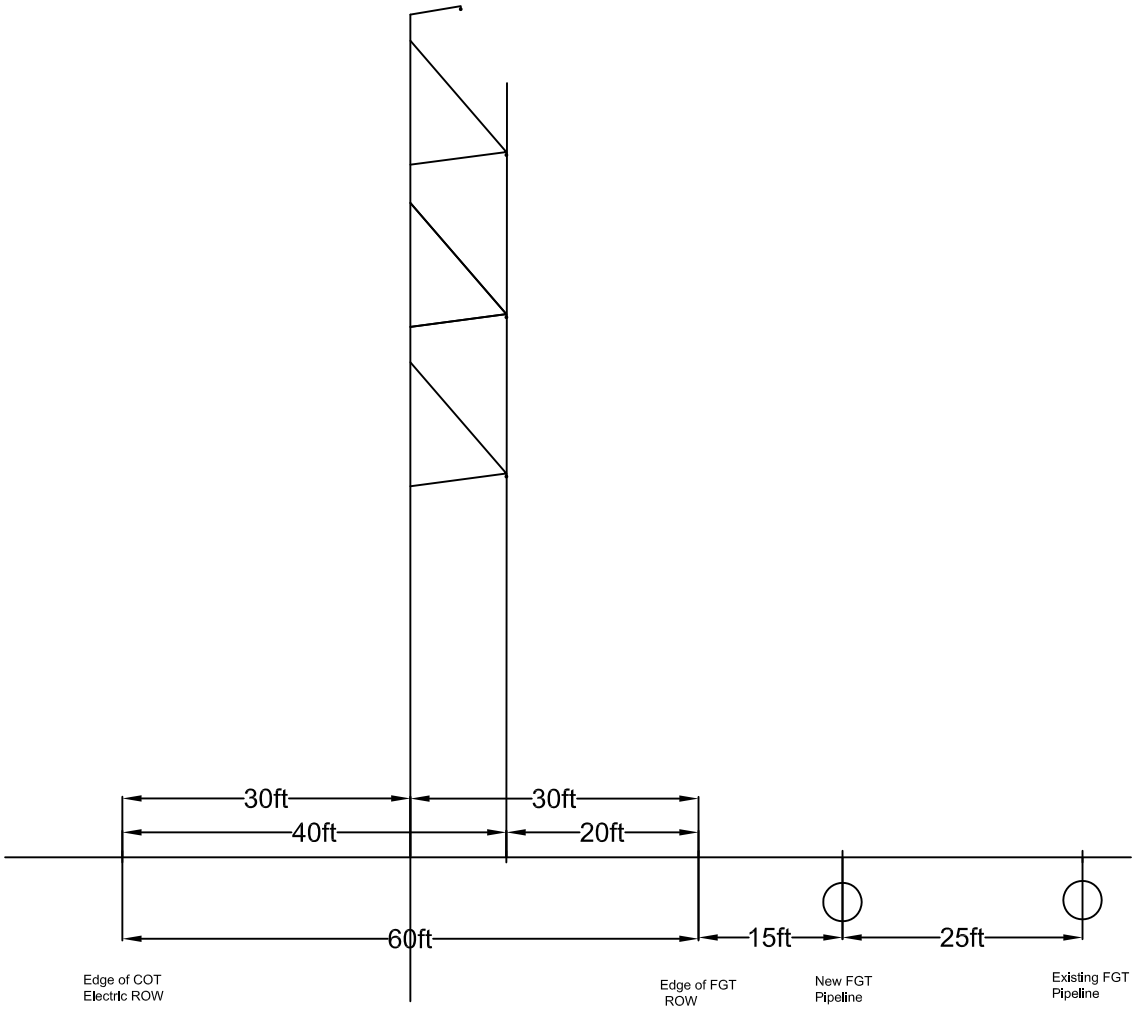
2.2.1.5 Access Roads and Temporary Work Space

The project would be designed to utilize existing roads, ROW, and other previously cleared areas for access to the extent possible to minimize disturbance associated with construction of new access roads. Under the Preferred Alternative, no new access roads would be needed, but new roads would be needed under Alternative 3. The specific design and location of all access roads would be determined during final project design. All construction would be conducted within the transmission line ROW; therefore, no additional temporary work space would be required for this project.

2.2.2 Construction Procedures

The City requires an in-service date of December 1, 2012, in order to maintain compliance with NERC Reliability Standards. Project construction would commence upon the final approval of the USFS SUP, permitting, final design, and necessary easement acquisitions. The average anticipated total work force required during construction activities would be approximately 30 persons at a given time.

Once access is obtained, the City would begin preparing the ROW for construction activities in coordination with landowners. Underground utilities would be identified to minimize any conflicts with existing infrastructure. Staging areas would be established within the ROW for temporary storage of materials and equipment consistent with local, state, and federal regulations and permit requirements. Staging areas would be of sufficient size to lay down materials and assemble some structural components or hardware, and to store conductors and the equipment necessary for stringing operations. All land clearing, tree and vegetation removal, erosion control, tree protection and maintenance practices would be conducted in accordance with the City Electric Department's NERC Transmission Vegetation Management Program (TVMP) Standard except as restricted by the SUP; USFS regulations; and local, state, and federal regulations and permit requirements.



Scale: 1:20

Figure 2-2

Corridor Cross Section Primary Configuration – Vertical Framing

Southwestern Transmission Line,

City of Tallahassee Electric Utilities, Florida

Source: Ampirical Solutions, LLC
2010

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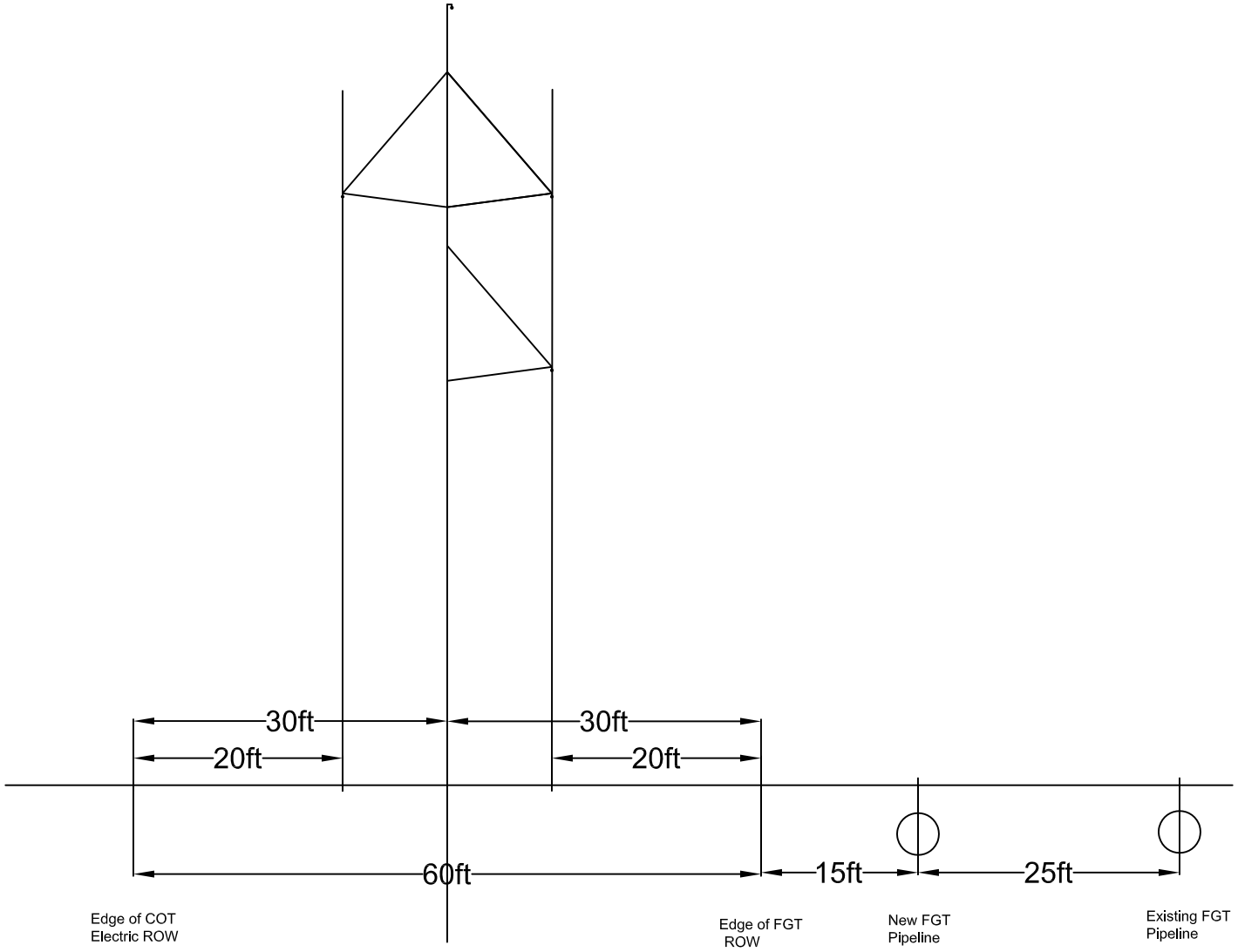

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Figure 2-3

Corridor Cross Section Primary Configuration – Inverted Delta Framing

Southwestern Transmission Line,

City of Tallahassee Electric Utilities, Florida

Source: Ampirical Solutions, LLC
2010

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Once the ROW is cleared, an approximate 20-foot by 20-foot workspace would be required at each pole location to stage equipment used for erecting structures, to lay down the pole structure, and to drill and pour pole bases. The typical construction sequence for erecting poles and stringing the line is as follows. Structures and insulator assemblies are typically assembled on the ground then raised into position. Tangent monopoles would be directly imbedded into augured holes, lifted into place by a large crane, and the holes would then be backfilled with concrete. Large angle and dead-end monopoles would have a concrete, drilled pier foundation utilizing large auger equipment to excavate a circular hole of the appropriate diameter and depth; reinforcing steel and anchor bolts would then be set into position and then concrete would be placed in the excavation. After allowing adequate curing time, the pole structure base plates would be bolted to the concrete foundations. The stringing process would begin once structures are in place and have been fitted with stringing blocks, a type of pulley attached to the insulator assembly that supports first a pulling rope or "p-line" and then a wire rope or "hard line," which in turn supports the conductor before it is permanently "clipped in." Once conductors are strung, they would be tightened at pulling sites and would terminate at the existing Substation BP-5.

2.2.3 Restoration Procedures

Upon completion of construction activities, the ROW would be cleared of all signs of construction as quickly as practical including, but not limited to, removing all temporary facilities, staging and laydown areas, equipment, construction materials, and debris.

Post-construction reclamation activities would restore groundcover to a mix of native grass and herbaceous species. Restoration activities within the ANF would utilize a native seed mix that would be collected on the ANF in accordance with the Operating Plan of the SUP for this project. Restoration would include the protection of slopes subject to rapid erosion as necessary. Restoration would be accomplished by native seeding and mulching, sod replacement, or sprigging where appropriate. In areas where native seeding and mulching would not prevent erosion, additional measures such as water control humps, thatch, sprigging, or sodding would be used. Only sterile mulch such as straw would be utilized. Sod would be used in developed areas where an established stand of grass exists prior to construction and would be restored as close to its original state as possible. Sprigging involves planting live sprigs with uninjured roots in rows no more than 1 foot apart. (City of Tallahassee 2011c)

Following completion of construction activities, existing access roads would be repaired as necessary. Additional temporary access roads on USFS property are not anticipated. Temporary roads required on off-Forest Service property would be reclaimed and erosion control measures installed, land re-graded, areas reseeded, etc., and then blocked to restrict unauthorized travel following completion of the project.

2.2.4 Operation and Maintenance Activities

The City has an extensive inspection, testing, and maintenance program for all substations and transmission lines. In accordance with this program, substation inspections would be conducted weekly and an infrared inspection of all substation equipment, buses, switches, and transmission lines would be conducted annually. Ground inspections would be limited to the ROW and to areas where obstructions or terrain may require off-ROW access. If problems are found during inspections, repairs would be performed accordingly. Routine inspections and maintenance activities would be conducted consistent with local, state, and federal regulations and permits.

ROW maintenance would be conducted to control vegetation that may interfere with the operation and maintenance of the transmission line and tap station structures. All vegetation management and maintenance, including tree trimming and mowing would be conducted in compliance with the City Electric Department's NERC TVMP Standard except as restricted by the SUP. Mowing of the ROW is desirable on an annual basis. The ROW would be maintained to be clear of all trees in order to provide control of hazardous areas in terms of fire potential, minimize potential disruptions to service and to

ensure access to crews for construction/maintenance of the lines (City of Tallahassee 2011c). The City would trim trees on a three-year cycle, but may trim more often where necessary to maintain a safe clearance from the conductors (NERC 2006). All maintenance and operations conducted on USFS property would be conducted in accordance with the SUP for that portion of the route.

2.2.5 Decommissioning

The expected lifespan for the project with proper maintenance is 50 years. If the project was decommissioned, transmission structures and tap station components would be removed. Without vegetation management along the transmission ROW or tap station site, surrounding vegetation would reclaim the area. Decommissioning on USFS lands would occur as outlined in the operation plan for the SUP and would require reforestation to native trees and groundcover.

2.3 ALTERNATIVES IDENTIFICATION PROCESS

Alternatives were identified through early routing studies, the NEPA scoping process, consistent collaboration between the City and the USFS, and through supplemental studies and consultations conducted by the City and the USFS as part of the environmental review process. Four potential routes were identified. Each of the alternative routes considered would include the typical transmission system components as detailed in Section 2.1, with slight variations in engineering to accommodate changes in terrain and existing infrastructure. The alternatives that have been identified differ primarily with regard to route and tap station layout and design. Alternative 1 has been identified as the Preferred Alternative and is included as the preferred route for the Proposed Action.

The identification of potential transmission line routes included all reasonable routes that would connect Line 31 with the existing Substation BP-5. However, numerous constraints were identified during development of these alternative routes, including the presence and location of the ANF (the largest forest in Florida covering 571,088 acres [USFS n.d.]), which is situated southwest of the City (Figure 1-1). Other major siting obstacles included the Tallahassee Regional Airport with its accompanying Federal Aviation Administration (FAA) height restrictions; the Thomas P. Smith Water Reclamation Facility; Blueprint 2000 & Beyond expansion plans for the portion of Capital Circle SE between Line 31 and Substation BP-5; the designation of Springhill Road (County Road 2203) as a portion of the Big Bend Scenic Byway; and privately owned lands.

Additionally, Alternative 3 is analyzed in this document to comply with the "Land and Resource Management Plan for National Forests in Florida" (USFS 1999; herein referred to as the LRMP), which guides management and uses of the National Forests in Florida. As discussed in Section 1.4, LRMP Standards LA-8 and LA-9 guide the granting of SUPs and require that in order for an SUP to be granted, proposals must demonstrate that the project cannot be "reasonably accommodated on private land" and such "alternative locations off National Forests will be reviewed in detail." Therefore, more detailed environmental analysis has been provided for Alternative 3 as the off-Forest Service property route alternative. Impacts and constraints associated with Alternative 3 are indicative of any route that would completely avoid traversing the ANF.

2.4 ALTERNATIVES CONSIDERED BUT NOT EVALUATED IN DETAIL

Other alternative routes, discussed below, were considered in the alternative identification process to address the purpose of and need for the project. However, these alternatives were eliminated from detailed analysis because they have constraints that make the alternative unreasonable, have increased environmental impacts, or they are not feasible for economic or other reasons.

2.4.1 Alternative 2

Under Alternative 2, the route would be 6.9 miles in length and would tap into the existing Line 31 near the intersection of New Hope Church Road and Springhill Road (Figure 2-4). From that tap point, the proposed transmission line would head northeast along Springhill Road for approximately 1.5 miles, after which point the proposed route would proceed east traversing a 2-mile undisturbed portion of the ANF. Upon exiting the ANF, the route would turn to follow the south side of Capital Circle SW and SE until reaching the existing City 115kV easement east of Woodville Highway. The route would then turn south and would be co-located with the existing City 115kV line until terminating at Substation BP-5. This proposed route would traverse, intersect, or impact portions of the Big Bend Scenic Byway (Springhill Road), Crawfordville Highway, Woodville Highway, the Tallahassee-St. Marks Historic Railroad State Trail, and several privately owned properties.

The portion of this route co-located along Springhill Road would require 20 feet of ROW on the east side of the road. This would require the clearing of both ANF lands and lands along the Big Bend Scenic Byway. Once the corridor turns east to head across the ANF, a 100-foot ROW would be required through approximately 2.1 miles of undisturbed forest lands, resulting in the clearing of 24.9 acres. The portion along Capital Circle SW and SE would require an additional 20-foot ROW, impacting numerous private property owners and aesthetics along that 2.9-mile portion of the route. Both the quantity of private properties crossed and the planned widening of Capital Circle SE under the Blueprint 2000 & Beyond initiative would create time delays in engineering, permitting, and ROW acquisition, prohibiting the City from meeting their NERC-mandated in-service date of December 2012. Finally, the proposed north-south portion co-located with the existing City 115kV transmission line would require an additional 30-foot ROW on the east side of the existing transmission line easement.

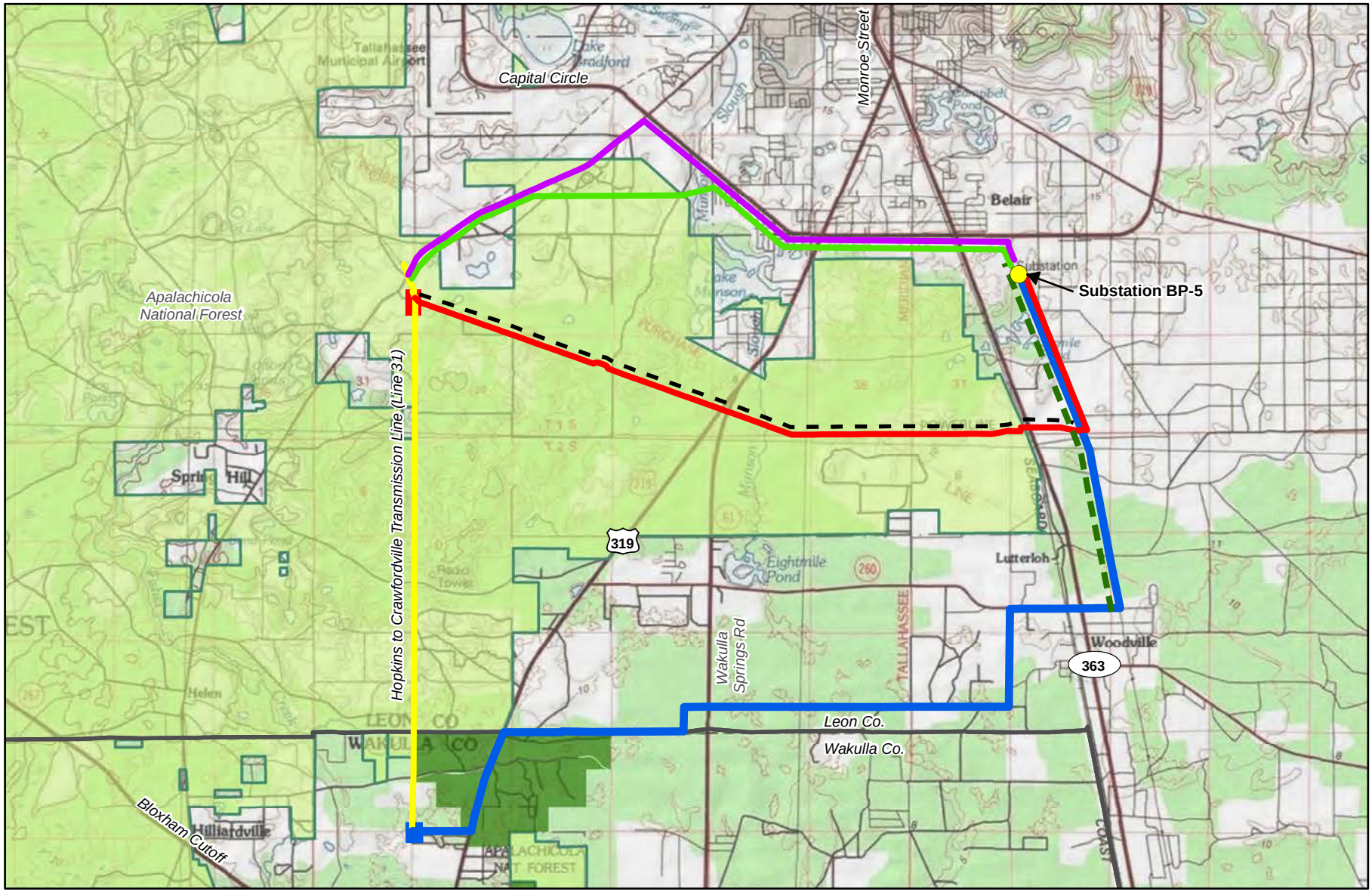
Overall, the selection of Alternative 2 would reduce the total length of the transmission line as compared to the other alternatives, but the entire length of the corridor would require ROW acquisition, which would require numerous private property acquisitions and clearing of undisturbed portions of the ANF. Along the Springhill Road portion of the corridor, an additional 20 feet of permanent ROW width on the east side of the road would be required, resulting in impacts to the overall scenic quality of this portion of the Big Bend Scenic Byway and necessitating up to 3.5 acres of clearing. Most importantly, the selection of this route would require the clearing of a new 2.1-mile route and 24.9 acres of undisturbed forest through the ANF. Clearing of these areas would result in the fragmentation of approximately 300 acres of important sandhills habitat in the ANF, potentially impeding the movement of some small mammal species and making these species more vulnerable to predation. Given the above mentioned impacts, this alternative has been eliminated from further detailed study.

2.4.2 Alternative 2A

Under Alternative 2A, the route would be 7.3 miles in length. The proposed transmission line would tap into the existing Line 31 near the intersection of New Hope Church Road and Springhill Road (Figure 2-4). From this point, the proposed transmission line would head northeast along Springhill Road until reaching the intersection of Springhill Road and Capital Circle SW. The proposed line would then turn east and continue along the south side of Capital Circle SW and SE for 3.9 miles until reaching the existing City 115kV transmission line easement east of Woodville Highway. From this easement, the line would turn south along the existing easement and terminate at Substation BP-5.

The portion of the Alternative 2A route co-located along Springhill Road would require 20 feet of ROW on the east side of the road. This would require the clearing of both ANF lands and lands along the Big Bend Scenic Byway. Once the corridor turns east where it would be co-located along the south side of Capital Circle SW and SE, an additional 20-foot ROW would be required, impacting numerous private property owners, aesthetics, and the environment along that 3.9-mile portion of the route. Both the quantity of private properties crossed and the planned widening of Capital Circle SE under the Blueprint

Path: M:\Tallahassee\SWTL\3108_SWTL\mxd\Final Figures\Figure 2-4 230kV Southwestern Transmission Line Alternatives topo.mxd



0 0.5 1 2 Miles

- Substation BP-5
- Alternative 1 - Preferred Alternative
- Alternative 3 - Off - Forest Alternative
- Existing Line
- Alternative 2
- Alternative 2A
- Existing City 115 KV Transmission Line
- FGT Phase VIII Expansion Project ROW
- Alternative 1 - Tap Station
- Alternative 3 - Tap Station
- County
- Apalachicola National Forest
- Wakulla Springs State Park

Figure 2-4
230kV Southwestern Transmission Line Alternatives
City of Tallahassee Electric Utilities, Florida

Data Source: ESRI, 2010; City of Tallahassee 2011, USFS 2010

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2000 & Beyond initiative would create time delays in engineering, permitting, and ROW acquisition, prohibiting the City from meeting their NERC mandated in-service date of December 2012. Finally, the proposed north-south portion co-located with the existing 115kV transmission line would require an additional 30-foot ROW on the east side of the existing transmission line easement.

The Thomas P. Smith Water Reclamation Facility is situated on the southeastern corner of the intersection of Capital Circle SW and Springhill Road. The Alternative 2A route would require the acquisition of 20 additional feet of permanent ROW along the western and northern boundaries of this plant. Additionally, this area has an extensive network of underground water and wastewater utility pipes. Constructing a high-voltage transmission line on top of such infrastructure would likely constrain future construction, maintenance, and/or repair work on these existing utilities.

In addition the Alternative 2A route would traverse the Runway Protection Zone of the Tallahassee Regional Airport. The Runway Protection Zone extends 2,500 feet beyond the end of the runway and is designated in order to restrict development that may be incompatible with airplane take-off or landing at the airport. FAA rules and regulations on Objects Affecting Navigable Airspace (Federal Aviation Regulation Part 77) would prohibit the development of an electrical transmission line within this zone. Additionally, Policy 4.2.3 of the Transportation Element of the Tallahassee-Leon County Comprehensive Plan states that "additional land uses shall not be permitted in airport zones if, due to structural height, they hinder airport operation or reduce navigable airspace (Tallahassee-Leon County Planning Department 2010). Given the above mentioned impacts, this alternative has been eliminated from further detailed study.

2.4.3 Underground Transmission Line Alternative

In response to comments received during the public scoping period, this EIS analyzes the potential for placing the proposed east-west 230kV transmission line underground. While underground installation of lower voltage distribution lines such as those feeding homes and businesses is fairly common, as voltage increases so does the complexity of engineering, the length of construction, and the need for more specialized materials and labor (Public Service Commission of Wisconsin 2009). It has been concluded, that while the underground installation of 230kV transmission lines is technically feasible, it is seldom implemented on high-voltage projects because it poses construction, operation, and maintenance issues, resulting in an increase in overall project costs A 2006 Virginia Joint Legislative Audit and Review Commission report estimated that constructing underground transmission lines ranges 4 to 10 times more expensive when compared to overhead lines of the same voltage (Public Service Commission of Wisconsin 2009).

Typically, underground transmission lines reduce impacts to aesthetic resources, other than at the overhead/underground transition locations referred to as "risers." In addition, although underground installation of utilities avoids tree trimming that is necessary with overhead lines and that results in damage to the crowns of trees, the underground installation of the utilities would likely result in an increase in earth moving and ground disturbance, thereby affecting the root structure of a tree. While tree trimming costs can be avoided with underground installation, the permanent ROW must remain free of woody vegetation. Open trench construction to underground the proposed project would require the clearing of all woody vegetation for a swath of 40 feet (25 feet permanent and 15 feet temporary ROW). Alternatively, using direct boring construction to underground, there would still be an area of disturbance measuring approximately 40 to 50 feet wide and 100 to 150 feet long due to the installation of a vault and room for cable pulling and conduit installation equipment every 2,000 feet. While direct boring can reduce impacts to a tree's root structure, it does so at a minimum cost difference of 6 to 7 times that of open trench construction. (City of Tallahassee n.d.)

In general, underground transmission lines are reliable; however, repair times for underground lines are much longer than those of overhead lines and vary widely depending on circumstances of

failure, the availability of parts, the skill level of the repair personnel, and the material from which the lines are constructed. Repairs may range from a few days to several months (Public Service Commission of Wisconsin 2009). In contrast, overhead lines have very high reliability because of their physical design and the fact that most transmission lines are in a "loop" configuration that provides a back-up source if one of the transmission lines experiences an outage (City of Tallahassee n.d.).

Further, areas where other underground infrastructure such as water and sewer lines are present must be avoided, to the greatest extent practicable, precluding the use of the Alternative 2A route where underground utilities are present due to the nearby water reclamation facility.

General concerns with maintaining or repairing an underground line if an outage occurs, including the increased environmental impacts associated with construction and maintenance as well as the increased cost of constructing and operating the line, outweigh potential benefits. Through extensive planning, the City has identified several alternatives that reduce impacts of the project to the extent practicable. Therefore, the alternative of undergrounding utilities was considered in the planning process, but was determined to be a non-viable option and was eliminated from further study.

2.5 ALTERNATIVES CONSIDERED IN THE FINAL EIS

The No Action Alternative, Alternative 1 (the Preferred Alternative), and Alternative 3 (the off-Forest Service property alternative route) are carried forward through the EIS. These alternatives are detailed in this section and evaluated in Section 3.

2.5.1 No Action Alternative

The No Action Alternative considers the environmental impacts if the proposed project or its alternatives were not built. Evaluation of the No Action Alternative is a requirement of NEPA and its associated implementing regulations (40 CFR 1502.14[d]) to allow federal decision-makers (in this case, the USFS) to compare the impacts of the proposed project and its alternatives with the impacts of not approving the project. The Forest Service only has authority to authorize an SUP for the construction and maintenance of the proposed transmission line on National Forest System Lands. Not authorizing the SUP would not prohibit the City from constructing the transmission line off of National Forest System Lands. Consideration of the No Action Alternative in this EIS compares the impacts should the City of Tallahassee decide not to construct a transmission line off of National Forest System Lands.

Under the No Action Alternative, the electrical transmission system proposed to connect Line 31 to the existing Substation BP-5 would not be constructed. Proposed improvements to the City's transmission system are necessary in order for the City to continue its operation within applicable limits consistent with the requirements of NERC Reliability Standards. Without the proposed system improvements, City planning assessments indicate that the existing lines forming the southern delivery path could exceed their applicable limits (thermal, voltage, IROLs, and/or SOLs) as a result of contingencies impacting the northern delivery path. Further, a USFS decision approving the No Action Alternative would result in the City being in non-compliance with NERC Reliability Standards, resulting in potential fines and penalties.

2.5.2 Alternative 1 (Preferred Alternative)

Alternative 1 (the Preferred Alternative) consists of the proposed transmission line route as described in Section 2.5.2.1 and the associated proposed tap station discussed in Section 2.5.2.2. Alternative 1 is also referred to herein as the Preferred Alternative when collectively describing the route and the tap station.

2.5.2.1 Alternative 1 Transmission Line Route

The proposed transmission line under Alternative 1 would be approximately 8.75 miles long and would require a 60-foot-wide permanent ROW. The entire 8.75-mile ROW would be co-located with existing utilities, allowing for overlap in the ROW. Seven of the 8.75 miles would be located within the 60-foot-wide temporary work space which was previously cleared of forested vegetation during improvement work on the existing 80-foot-wide FGT ROW in 2010. Of the 7 miles of the Alternative 1 ROW co-located with the FGT ROW, 6.48 miles is located within the ANF.

The Alternative 1 route would begin at a tap point along the existing Line 31 utilizing a new tap station near Bice Road (Forest Road 317), in the vicinity of the intersection of Springhill Road (County Road 2203) and Bice Road (Figure 2-4). From the proposed tap station, the Alternative 1 route would continue east, primarily co-located along the south side of the existing FGT natural gas pipeline corridor through the ANF for approximately 6.48 miles.

Approximately 3 miles east of the proposed tap station, the Alternative 1 route would cross an existing City 115kV transmission line. The proposed line would proceed east crossing Crawfordville Highway (US 319) and Wakulla Springs Road (State Road [SR] 61). Almost immediately to the east of Wakulla Springs Road, the Alternative 1 route would cross Munson Slough.

Continuing along the co-located corridor approximately 5 miles east of the proposed tap station, the Alternative 1 route would cross another existing City 115kV transmission line and would continue east, crossing the Tallahassee-St. Marks Historic Railroad State Trail and Woodville Highway (SR 363). Approximately 0.5 mile east of Woodville Highway, after crossing a third existing City 115kV transmission line, the route would turn northwest and would continue north co-located along the east side of this existing transmission corridor for approximately 1.75 miles before terminating at the existing Substation BP-5 south of Capital Circle SE.

Approximately 7 miles of the east-west portion of the Alternative 1 route would be co-located along the existing FGT pipeline corridor; 6.48 miles of which would be within the ANF. As documented in the FGT FEIS (FERC 2009), FGT added a new pipeline to this corridor, resulting in the co-location of three pipelines. Due to the proposed co-location with an existing linear corridor, this alternative would be in compliance with the LRMP and would not require an amendment to the plan. Standard LA-9 governs the granting of SUPs and states that the USFS shall "designate existing transportation and utility routes, and rights-of-way capable of accommodating these facilities [facilities for which SUPs are sought] as right-of-way corridors. Subsequent right-of-way grants would, to the extent practicable, be confined to designated corridors."

FGT was granted an SUP for the portion of the pipeline corridor traversing the ANF. As part of that project, FGT obtained a 60-foot wide temporary workspace ROW along the south side of the three existing pipelines, which was completely cleared of vegetation. Alternative 1 would utilize this previously cleared corridor, resulting in the conversion of FGT's 60-foot-wide temporary workspace into a 60-foot-wide permanent ROW for the proposed 230kV transmission line, thereby minimizing the need for any additional disturbance to ANF property or other lands, but widening the existing 80-foot FGT corridor to a total combined width of 140-feet for the life of the Alternative 1 SUP.

The north-south portion of the Alternative 1 route would be co-located with an existing City 115kV power line for approximately 1.75 miles and would terminate at the existing Substation BP-5. The permanent ROW for the existing 115kV power line is 100 feet wide. Co-location of the Alternative 1 route with the existing line would require widening the existing permanent ROW by 30 feet on the east side of the existing line, resulting in a total permanent ROW of 130 feet wide. The additional 30 feet of ROW width would be required along 1.75 miles of the route and would result in approximately 6.22 acres of new ROW (see further discussion in Section 3.1.2 and Table 3.1-2).

The east-west portion of the route would traverse a sparsely populated and primarily undeveloped area; the north-south portion would impact five private property owners. Additional clearing along the portion co-located with the FGT pipeline would not be required as all work would be conducted within the existing 60-foot-wide cleared temporary workspace ROW.

Under Alternative 1, no new access roads would be necessary for construction and maintenance of the Proposed Action. The Alternative 1 route would utilize access roads previously utilized by FGT for their pipeline construction efforts and existing City access roads on the existing City 115kV transmission line easement. An extensive network of existing Forest Roads and existing publicly maintained roadways also would be utilized by construction and maintenance equipment. Two staging or laydown areas (see Section 2.2.2) would be required for Alternative 1. These staging areas would be located within the existing FGT temporary construction ROW. One staging area would be located west of Munson Slough near the proposed Alternative 1 tap station (see Section 2.5.2.2). The second laydown area would be located east of Munson Slough, outside the ANF. Therefore, no additional workspace outside the ROW footprint or existing roads would be needed for the transmission line.

2.5.2.2 Alternative 1 Tap Station Improvements

Under Alternative 1, the proposed tap station would be located within the ANF. The design for the tap station would have two breakers west of Bice Road and one breaker east of Bice Road (Figure 2-5). The proposed design would require an additional 100-foot-wide ROW (9,000 square feet) to connect the tap station to power line structures.

The proposed tap station equipment (Figure 2-5) would occupy approximately 0.33 acre and would require approximately 3 acres for construction. Construction of the proposed tap station would begin with clearing and grading of approximately 3 acres. A fence would be installed around the perimeter of the tap station to provide for public safety and security. Access to the tap station for construction activities would be via Bice Road. Construction of Alternative 1 and the tap station would occur over an approximately six-month timeframe and would require a temporary workforce of approximately 30 personnel.

2.5.3 Alternative 3

Alternative 3 is being analyzed in compliance with the USFS's 1999 LRMP Standards LA-8 and LA-9 which govern the issuance of SUPs. Standard LA-8 states that proposals for an SUP should "not be undertaken on national forest land if they can be reasonably accommodated on private land." Further, Standard LA-9 states that "alternative locations off national forests [which can accommodate the proposal] will be reviewed in detail." Selection of this alternative is not within the authority of the USFS. If issuance of an SUP is denied by the USFS, the City may pursue this or other alternatives outside of the ANF following applicable local and state procedures without involvement from the USFS. However, it will be analyzed herein to comply with the LRMP Standards described above.

2.5.3.1 Alternative 3 Transmission Line Route (Off-Forest Service Property Route)

Alternative 3 is a potential route off National Forest System Lands which the City could choose to evaluate if the SUP under Alternative 1 is not authorized by the USFS. The route would be 12.65 miles in length, and would connect Line 31 with the existing Substation BP-5. It would be co-located within existing road and utility ROW for approximately 55% of the route. This alternative route would connect to Line 31 in northern Wakulla County with a proposed tap point immediately north of the dead-end of Crestwood Lane adjacent to Line 31 (Figures 2-4 and 2-6). From this tap station, the line would run east for 0.6 mile, crossing over Crawfordville Highway (US 319) then turning north to co-locate along the east side of Crawfordville Highway. The line would run north along the east side of Crawfordville Highway

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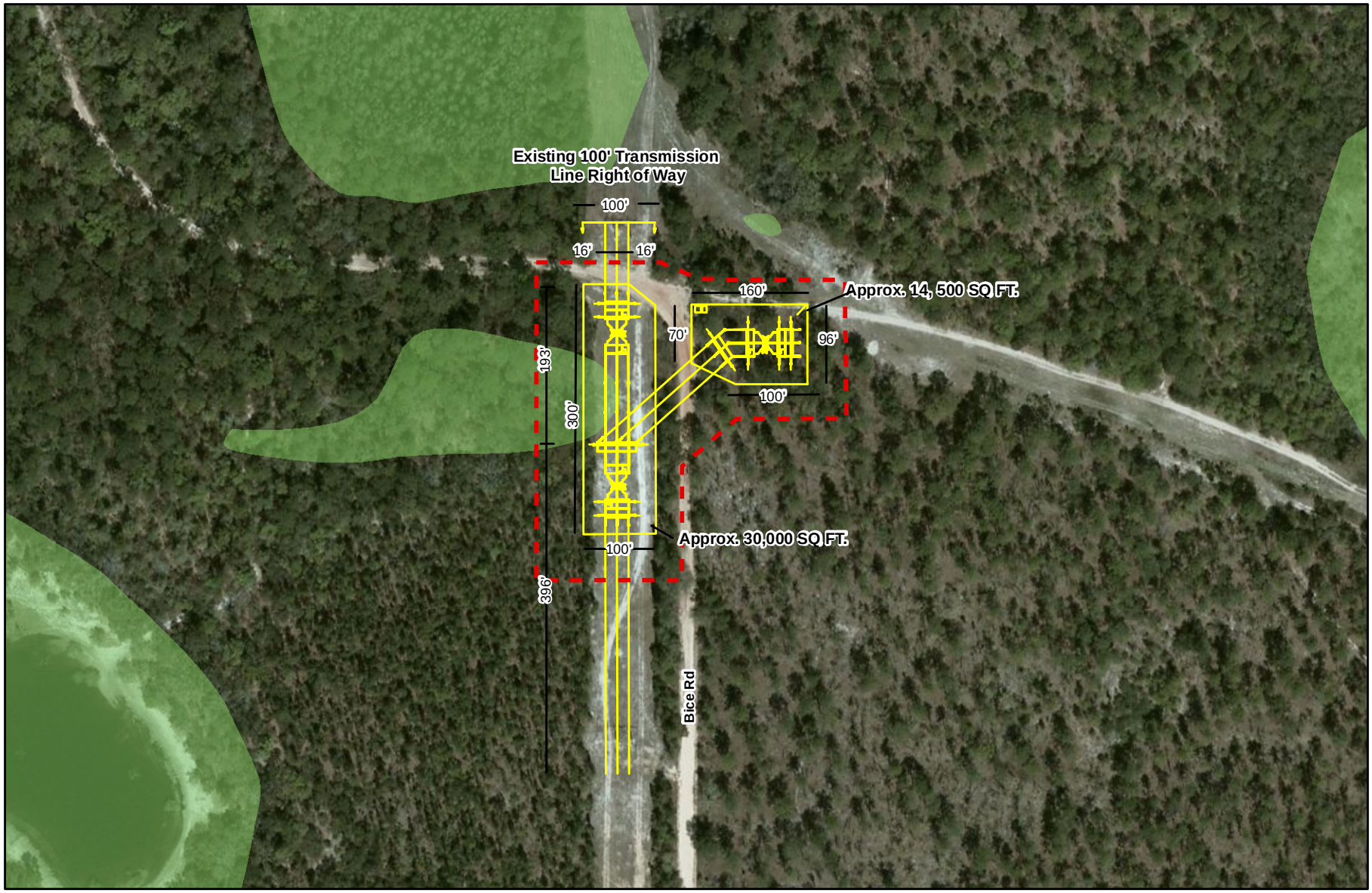

0 50 100 200 Feet

Maximum Extent of Clearing - 3 acres
Karst Area
Alternative 1 Tap Station - Proposed

Figure 2-5
Alternative 1 Tap Station - Proposed
Southwestern Transmission Line
City of Tallahassee Electric Utilities, Florida

Data Source: Microsoft Virtual Earth, 2011
Ampirical Solutions, LLC 2010

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*Entire Map Area within Apalachicola National Forest

for 1.05 miles before turning east along the Leon-Wakulla County line. This portion of the Alternative 3 route would traverse portions of the River Sinks parcel of the Edward Ball Wakulla Springs State Park.

The line would then continue east along the County line for approximately 0.58 mile in Wakulla County then shift north into Leon County and continue east for 1.23 miles. The route would jog to the north near Heron Street then would turn east again on the north side of Limpkin Lane. The line would then continue east for 2.02 miles, crossing Wakulla Springs Road (SR 61) and an existing City 115kV line and finally co-locating with Sunflower Road. The line would continue east co-located along the south side of Sunflower Road and then would turn north before reaching Elgin Road. The line would then run north for 0.99 mile straddling an existing section line until it intersects with Oak Ridge Road. The line would then turn east and travel along the south side of Oak Ridge Road East, would cross the Tallahassee-St. Marks Historic Railroad State Trail and Woodville Highway, and would continue along Oak Ridge Road East until intersecting the existing City 115kV easement. The line would then turn north and would be co-located along the east side of the existing City 115kV easement for 3.55 miles before terminating at existing Substation BP5.

Portions of the route co-located with existing paved roadways would require an additional 50 feet of ROW width. These include the areas co-located with Crawfordville Highway (through the River Sinks parcel of the Wakulla Springs State Park), Sunflower Road, and Oak Ridge Road for a total of 3.05 miles. The portion co-located along the south side of Oak Ridge Road east of Woodville Highway (0.35 mile), a dirt road, would require a 90-foot-wide new ROW. The 3.55 miles that would be co-located with the existing City 115kV transmission line would require an additional 30 feet of ROW width and would overlap with existing ROW for 30 feet of the width. All undisturbed portions of the route would require a new 100-foot-wide ROW for 5.70 miles. Several staging or laydown areas (see Section 2.2.2) would be required for Alternative 3. These staging areas would be located within the proposed Alternative 3 ROW. The exact locations of these laydown areas within the Alternative 3 ROW would be identified during final engineering design.

2.5.3.2 Alternative 3 Tap Station Improvements

The tap station for Alternative 3 would be located just north of the intersection of existing Line 31 and Crestwood Lane in northern Wakulla County (Figure 2-6). The proposed tap station for Alternative 3 would contain equipment and facilities similar to the tap station for Alternative 1. The tap station equipment for Alternative 3 would cover approximately 0.8 acre; clearing and grading activities would be anticipated on approximately 1 acre. Construction of Alternative 3 and the tap station would occur over an approximate nine-month timeframe and would require a temporary workforce of approximately 40 to 45 personnel.

Path: Y:\2001-3000\3108_SWTL\mxd\DOPPA\Route 3 Tap Station - Proposed.mxd

0 100 200 400 Feet

Maximum Extent of Clearing - 1 acre
Flood Zone A - 1 acre
Alternative 3 Tap Station - Proposed

Figure 2-6
Alternative 3 Tap Station - Proposed
Southwestern Transmission Line
City of Tallahassee Electric Utilities, Florida

Data Source: Microsoft Virtual Earth, 2011
Ampirical Solutions, LLC 2010

City of Tallahassee Your Own Utilities
AMPIRICAL SOLUTIONS LLC

3 AFFECTED ENVIRONMENT, ENVIRONMENTAL IMPACTS, AND MITIGATION MEASURES

3.1 INTRODUCTION

This section describes the existing environment and evaluates the potential environmental impacts of the Proposed Action. A comparison of alternatives is provided in Section 3.1.1, including ground-disturbance estimates. These alternatives include Alternative 1 (the Preferred Alternative), Alternative 3 (the off-Forest Service property route), and the No Action Alternative (No Action).

The specific locations of transmission line structures cannot be determined until final design is complete. Estimates of permanent and temporary ground disturbance were calculated to help assess and compare the potential impacts of the alternatives on specific resources. Disturbance estimates were based on preliminary design specifications for the 230kV transmission line (Sections 2.5.2 and 2.5.3).

Both direct and indirect impacts are evaluated for each of the two action alternatives. Direct impacts are those that would occur within or immediately adjacent to the proposed transmission line ROW during construction and would have an immediate effect on the resource being evaluated. Generally, direct impacts would be confined to the proposed ROW. Indirect impacts are those that would occur after construction or in an area adjacent to construction activities or outside the proposed ROW. For example, the introduction of noxious weeds following vegetation removal that results in lower quality habitat for wildlife would be a potential indirect impact.

This section also describes the mitigation measures to reduce or eliminate anticipated direct and indirect impacts identified for each resource area.

3.1.1 Comparison of Alternative Routes

Table 3.1-1 summarizes key differences among the alternatives, including ground-disturbance estimates for the various project components. These estimates will be recalculated for the Operations Plan of the SUP when final design is complete and the precise locations of structures are known.

Table 3.1-1
Summary of Key Project Components by Alternative

		Alternative 1	Alternative 3
Transmission Length (miles)		8.75	12.65
Tap Station Summary	Equipment Footprint (acres)	0.33	0.80
	Total Footprint (acres)	3.00	1.00
ROW Co-located with Existing Rights-of-Way (miles / %)	Roadways	--	3.40 / 27%
	Utilities [a]	8.75 / 100%	3.55 / 28%
ROW Crossing Public Lands (miles)	Apalachicola National Forest	6.48	--
	Wakulla Springs State Park	--	2.13
Crossing Public Lands (acres)	Apalachicola National Forest (ROW)	47.14 [b]	--
	Apalachicola National Forest (Tap Station)	3.00	--
	Wakulla Springs State Park	--	3.46
	Total Public Lands Crossed	**50.14 [c]**	**3.46**

Table 3.1-1
Summary of Key Project Components by Alternative

		Alternative 1	Alternative 3
Total construction costs [d]		$11.3 M	$14.8 M
Number of Residential Structures Within 100 feet Either Side of Centerline [e]		0	22
Area Potentially Affected (acres; short-term)	Right-of-Way – Forested Area	6.22	89.04
	Right-of-Way – Non-Forested and Previously Cleared Area	51.24	16.05
	Total ROW Area	**57.46**	**105.09**
	Tap Station Total Footprint Area (Forested)	3.00	1.00
	Total Area (ROW and Tap Station)	**60.46**	**106.09**

Notes:
(a) Includes natural gas pipeline and existing electrical transmission lines.
(b) All of which was previously cleared for the 2010 FGT project. Acreage calculation does not include the 3 acres for the tap station which is forested and is shown as a separate line item on this table.
(c) The calculation of 50.14 acres represents the total land removed from forestry management within the ANF for the long-term operation and maintenance of Alternative 1 (including the tap station). This is the acreage that is subject to USFS approval for the SUP.
(d) Includes construction costs associated with construction and installing the transmission line and constructing the associated tap station for each alternative.
(e) Residential structures were inferred from aerial imagery and may include houses as well as outbuildings.

3.1.2 Summary of Co-location and Impacts

The impacts discussed throughout Section 3 were estimated using the total length and width of the ROW for Alternative 1 (8.75 miles by 60 feet wide) and Alternative 3 (12.65 miles by 100 feet wide). Actual impacts are anticipated to be less than those described in this section because the entire ROW would not be disturbed in all areas due to co-location with existing utilities and existing roads, as detailed in Table 3.1-2, and due to construction workspace design that would minimize impacts. While these areas have been included in worst-case scenario calculations of impacts, they generally would not be impacted.

Table 3.1-2
Right-of-Way Co-location Summary by Alternative [a]

Proposed Route	Length (miles)	Acreage of New Permanent ROW Required [b] (acres)	Existing Permanent ROW	New Permanent ROW Required	Total Combined ROW
Alternative 1 ROW Co-location Summary					
Co-located w/ FGT Pipeline	7.00	51.24	80-foot width	60-foot width [c]	140-foot width [d]
Co-located w/ 115 kV line	1.75	6.22	100-foot width	30-foot width	130-foot width
Total	**8.75**	**57.46**			
Alternative 3 ROW Co-location Summary					
Co-located w/paved road	3.05	18.50	Varies	50-foot width	Varies
Co-located with unpaved road	0.35	3.81	Varies	90-foot width	Varies
Co-located w/115 kV line	3.55	12.94	100-foot width	30-foot width	130-foot width
Greenfield	5.70	69.84	NA	100-foot width	NA
Totals	**12.65**	**105.09**			

Notes:
(a) Tap station acreage is not included in this table as ROW; however, it should be noted that the footprint of the Alternative 1 tap station is 3 acres and Alternative 3 is 1 acre.
(b) These acreages were calculated in Geographic Information System (GIS) to capture the actual footprint of the ROW and accounting for turns, therefore, a straight calculation of length in miles x ROW width x 5,280 feet per mile/43,560 square feet per acre would result in a slightly different acreage calculation.
(c) While this is calculated as new ROW, it is actually conversion of temporary to permanent ROW.
(d) The Alternative 1 ROW is 60-feet. However, in areas where Alternative 1 is co-located with FGT, the total permanent ROW will be a combined 140 feet in width which includes 80 feet for the existing FGT ROW and 60 feet for the proposed Alternative 1 ROW.

In forested areas, the entire ROW would be cleared and stumps would be removed with mechanized equipment, which would result in disturbance of vegetation and soils across the entire ROW. In non-forested areas, construction workspace would be designed to minimize impacts. For example, where herbaceous vegetation is present, clearing and stumping would not be required and disturbance would be limited to: areas requiring grading to create a level and safe ROW, staging areas within the ROW used for temporary storage of materials and equipment (impacts could be negligible depending on weather conditions during construction), the designated temporary travel lane within the ROW (potential disturbance to the ground within the temporary travel lane could be negligible depending upon weather conditions during construction and degree of rutting, etc.) and at the approximately 20-foot by 20-foot workspace area (0.009 acre) at each pole location.

Construction-related disturbance for the portion of Alternative 1 within the ANF would be further minimized due to the entire ROW having been previously cleared and graded by the FGT Project and the presence of an existing, designated travel lane that is currently used by the USFS, recreational users, and FGT, and which would also be used by the City during the construction of the SWTL Project. This same existing travel lane would continue to be used by the entities noted above and the City after the SWTL Project is completed. Therefore, new ground disturbance within the ANF during construction would be limited primarily to the 3-acre tap station and the estimated 73 pole locations required within the ANF. At each pole location, a 20-foot by 20-foot (0.009 acre) workspace, or 0.66 acre total for all 73 pole locations, would be disturbed to erect the structures, totaling approximately 3.66 acres of total ground disturbance within the ANF. Between the pole locations, to minimize potential impacts during construction activities, the City would restrict travel to the specifically designated existing travel lanes. Implementation of these activities and others would further minimize impacts within the ANF and for Alternative 1 as detailed in Table 3.1-2.

3.2 Land Use, Utilities, Transportation, and Recreation

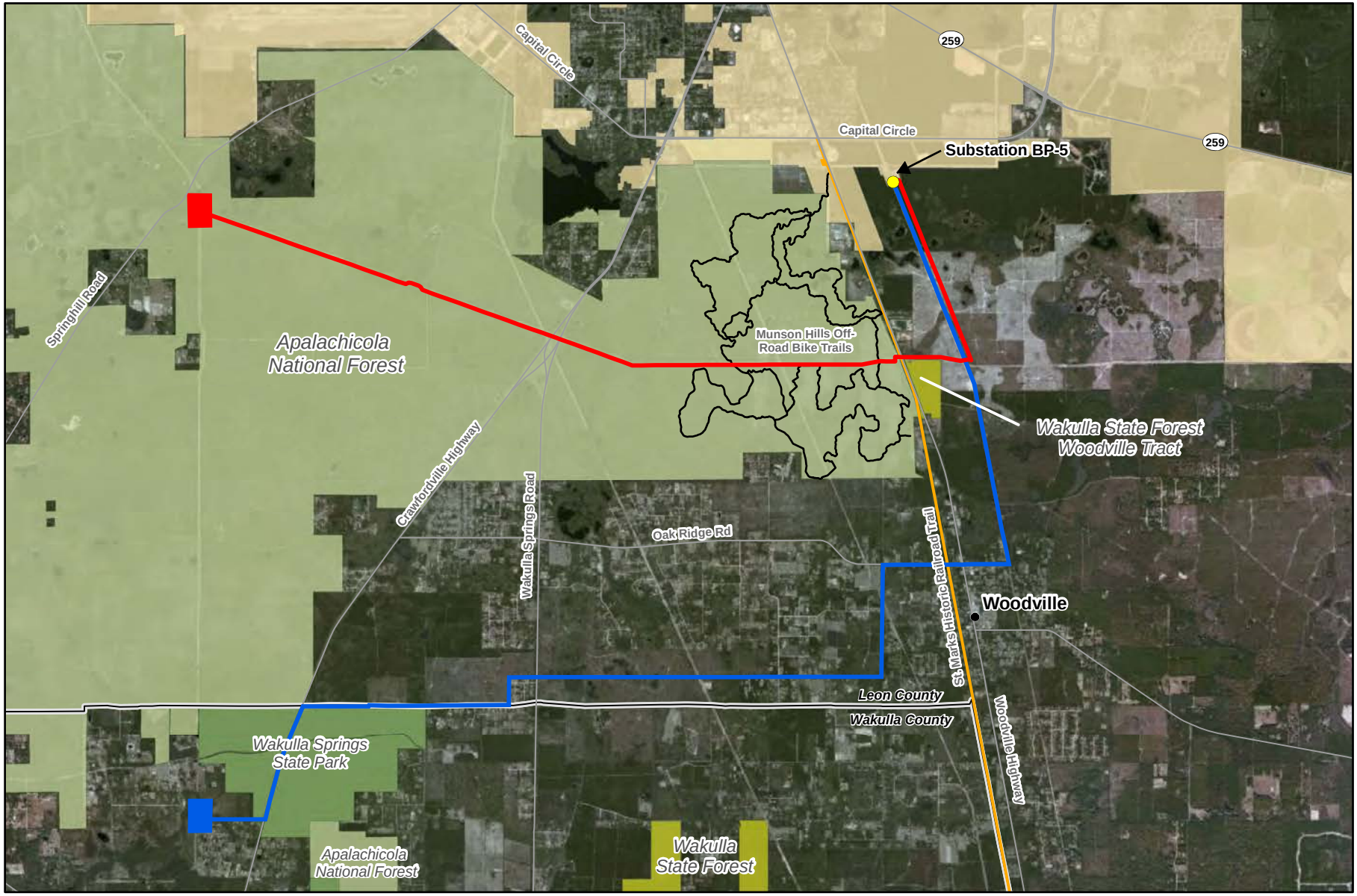
This section describes the land use, utilities, transportation, and recreation resources in the vicinity of Alternatives 1 and 3, the potential impacts of the route alternatives, as well as the No Action Alternative, on those resources, and potential mitigation measures to reduce or eliminate those potential impacts.

3.2.1 Inventory and Methodology

In general, land use describes the management context for a given property or parcel of land. Land use was analyzed in the southern portion of Leon County including the unincorporated town of Woodville and the northeastern portion of Wakulla County, as illustrated on Figure 3.2-1. As analyzed, the preferred and alternative 230kV transmission line routes would traverse federal, state, and private lands between Line 31 and its terminus at the existing Substation BP-5 near Capital Circle SE (Figure 3.2-1). Land uses associated with each alternative route include residential, commercial, conservation, agriculture, and forestry in both the public and private sectors.

Data presented in this section were obtained from planning documents, communication with agencies and field reconnaissance. Geographic Information System (GIS) data and aerial photography were also analyzed. Tables 3.1-1 and 3.1-2 provide a comparison between the alternatives to be evaluated in this EIS.

Path: M:\Tallahassee\SWTL\3108_SWTL\mxd\Final Figures\Figure 3.2-1 federal and state lands.mxd



Substation BP-5
Munson Hills Off-Road Bike Trails
Alternative 1 - Preferred Alternative
Alternative 3 - Off-Forest Alternative
Alternative 1 - Tap Station
Alternative 3 - Tap Station
St. Marks Historic Railroad Trail

Tallahassee City Limits
State Forest
State Park
Apalachicola National Forest
County Boundary

Figure 3.2-1
Federal and State Lands
Southwestern Transmission Line
City of Tallahassee Electric Utilities, Florida

N

0 0.75 1.5 Miles

Sources: USFS, 2008 FLMA, 2010 UF GeoPlan Center, 2009 Florida Division of Forestry, 2008 Florida Natural Areas Inventory

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3.2.2 Alternative 1 (Preferred Alternative)

3.2.2.1 Affected Environment

3.2.2.1.1 Land Use Under Federal Jurisdiction

Apalachicola National Forest

Alternative 1 would traverse the ANF for approximately 6.48 miles (see Figure 3.2-1). Established in 1936, the ANF is located in the Florida Panhandle southwest of the City of Tallahassee (Figure 3.2-1). The forest covers approximately 510,088 acres of land in portions of Leon, Wakulla, Franklin, and Liberty Counties (USFS n.d.). The USFS manages the ANF consistent with the "multiple-use" principle and supports a variety of land uses such as conservation, timber management, and recreation, among others. Additionally, as a fire-dependent ecosystem, the ANF is maintained by the largest national forest prescribed burn program in the United States.

The National Forest Management Act of 1976, as amended, requires that each national forest be managed in accordance with an LRMP. The LRMP that covers the ANF ("Land and Resource Management Plan for National Forests in Florida," dated February 1999) is a 10- to 15-year strategic plan for all national forests in Florida. The LRMP provides program-level direction for national forest management throughout the state and includes land use determinations and classifications, best practices, and other standards and guidelines to support natural resources management decisions for these large areas of public land (USFS 1999). The USFS administers land use in the ANF, including requests for "special use" authorizations, in accordance with the LRMP (USFS 1999). Additional guidance for "special use" requests is provided in Forest Service Manual 2700, *Special Uses Management*.

The LRMP details the goals, objectives, and desired future conditions for the ANF and other national forests in Florida. More specifically, forest management areas (MAs) define the context for natural resources management throughout the national forest and further support decisions for land use authorizations that must be consistent with MA standards and guidelines. In addition, federal law establishes interim MA direction for certain areas within the forest, including research natural areas, wilderness and wilderness study areas, and wild and scenic rivers. Table 3.2-1 identifies the MAs established for the ANF that support USFS determinations for compatible use within the forest. The Preferred Alternative (Alternative 1) is within MA 9.2.

Table 3.2-1
Apalachicola National Forest Management Areas

Number	Type	Acreage
0.1	Trail-less Wilderness	8,090
0.2	Wilderness with Trails	24,612
0.3	Wild and Scenic River	18,529
0.4	Wilderness Study Area	5,635
2.1	Research Natural Area	489
3.1	Special Interest Area	7,659
4.4	Moderate Recreational Development	16,606
4.5	Developed Recreation Area	740
7.1	Longleaf/Slash Pine Adaptive Management (Red-cockaded Woodpecker)	376,486
7.2	Longleaf/Slash Pine Adaptive Management (Red-cockaded Woodpecker, Cattle)	44,071
9.2	Forest/Urban Interface	72,572
	Total	**575,489**

Source: USFS 1999.

3.2.2.1.2 Land Use Under State Jurisdiction

Tallahassee-St. Marks Historic Railroad Trail State Park

Alternative 1 would traverse the Tallahassee-St. Marks Historic Railroad Trail west of Woodville Highway (see Figure 3.2-1). The Tallahassee-St. Marks Historic Railroad Trail runs adjacent to the eastern boundary of portions of the ANF for 16 miles from the trailhead along Woodville Highway to St. Marks, Florida (Figure 3.2-1). The trail corridor is approximately 60 feet wide and includes a main (paved) trail ranging from 8 to 12 feet in width and an adjacent (unpaved) trail for off-road uses such as horseback riding (Florida Department of Environmental Protection [FDEP] 2011b).

Wakulla State Forest: Woodville Tract

Alternative 1 parallels the northern boundary, but is outside the Woodville Tract of the Wakulla State Forest (see Figure 3.2-1). The Woodville Tract is located in Leon County on the east side of Woodville Highway adjacent to the ANF (Figure 3.2-1). This 73-acre land parcel was acquired by the State of Florida in 1946 for the purpose of water quality protection (Florida Department of Agriculture and Consumer Services [FDACS] 2011). It also supports a wide variety of recreational activities.

The "Wakulla State Forest Management Plan" guides land use decisions for these state forest lands. Key goals of the plan include water quality protection for Wakulla Springs, ecosystem restoration, and outdoor recreation and tourism (FDACS 2005). This plan states that the use of forest property for utility lines, pipelines, linear facilities, and transportation corridors should be discouraged to the maximum extent possible unless such encroachments are unavoidable. Furthermore, the plan states that the use of previously disturbed sites would be the preferred option to limit disruption to natural resource-based management activities within the forest (FDEP 2007). Requests for utility corridor easements are handled according to the linear facilities policy in the State Forest Handbook.

3.2.2.1.3 Land Use Under Local Jurisdiction

The proposed substation (BP-5) lies just within the municipal limits of Tallahassee, while the portion of Alternative 1 that is outside the ANF is under the jurisdiction of Leon County. Florida growth management law requires local jurisdictions to adopt and implement comprehensive plans that guide current and future development activities. Adopted in 1990, the Tallahassee-Leon County Comprehensive Plan 2030, as amended, meets this requirement for the City of Tallahassee and for Leon County.

3.2.2.1.4 Utilities

Utility systems associated with Alternative 1 primarily include natural gas pipelines and electrical power lines. Approximately 7 miles of Alternative 1 would be co-located with a portion of the existing FGT natural gas pipeline corridor that extends from Alabama to southern Florida. Three pipelines of varying diameters (24-, 30-, and 36-inch) are associated with the FGT ROW. In addition, Alternative 1 would traverse three transmission line ROWs; two of which would traverse the ANF from north to south, the third is the 115kV transmission line owned and operated by the City, with which Alternative 1 would be co-located for 1.75 miles. In addition, force and gravity sewer lines, buried telephone and telephone fiber optic lines, and buried fiber optic traffic cable are in the vicinity of Alternative 1.

3.2.2.1.5 Transportation

Four arterial roadways comprise the major transportation network in the vicinity of Alternative 1. As illustrated on Figure 3.2-1, these roadways include Crawfordville Highway (US 319), Wakulla Springs Road (SR 61), Woodville Highway (SR 363), and Capital Circle SW and SE (western half is SR 263; eastern half is US 319/SR 261). Each of these roadways, except Capital Circle, is traversed by the Alternative 1 ROW, and all are maintained by the Florida Department of Transportation (FDOT). Capital Circle SE is located approximately 0.25 mile north of Substation BP-5. Each roadway is two lanes with

the exception of Capital Circle SE east of Woodville Highway – which is a four-lane roadway. The local transportation network also includes various improved and unimproved roadways managed by Leon County and some private landowners. Roads within the ANF are maintained by the USFS and include both improved and unimproved roadways. Additionally, the Tallahassee Regional Airport is located adjacent to the ANF and in the vicinity of the Alternative 1 route. Future plans for, or renovations to, the existing transportation resource (e.g., roadway widening) are discussed in Section 5, Cumulative Impacts.

3.2.2.1.6 Recreation

Several federally and state-owned lands provide various recreational opportunities for local residents as well as for out-of-state visitors. These areas are detailed below and illustrated on Figure 3.2-1. Typical recreational activities in the vicinity of Alternative 1 include swimming, hiking, camping, boating, fishing, hunting, biking, and horseback riding.

The ***Apalachicola National Forest*** is the largest recreational use area in the greater Tallahassee area. National Forests in Florida represent key areas for the statewide greenway system and provide integral links to other recreation opportunities with adjacent public lands. As the largest of three national forests in Florida, the ANF provides a variety of semi-primitive and rural landscapes that support dispersed recreation activities. Recreational activities include hunting, fishing, hiking, camping, kayaking or canoeing, horseback riding, and motorized and non-motorized all-terrain vehicle/bicycle use, among others (United States Department of Agriculture [USDA] 2011a). Many of the recreational uses have designated areas within the ANF; however, primitive camping and horseback riding are permitted throughout the ANF. Other key recreational attractions associated with the ANF are the various trails scattered throughout the forest.

The ***Munson Hills Off-Road Bicycle Trail*** is a designated mountain bike trail located on the northeastern side of the ANF. Parking and trail access is available at the Tallahassee-St. Marks Historic Railroad Trailhead on SR 363. The Munson Hills mountain bike trail offers 21-miles of scenic and challenging biking through rolling terrain and narrow pine trees (FDEP, 2011a). A bike rack, water fountain, and restrooms are available near the trail entrance. Members of the Munson Hills Off-Road Bicycle Trail Association maintain the trail in cooperation with the USFS (FDEP 2011a).

The ***Tallahassee-St. Marks Historic Railroad Trail*** facilities are located adjacent to the west side of SR 363 south of the City of Tallahassee. The main paved trail is the site of an abandoned railroad bed that runs 16 miles from Tallahassee, adjacent to the eastern boundary of the ANF, and ends in the coastal community of St. Marks, Florida. Facilities provide for access to this paved trail as well as a system of unpaved equestrian trails, parking areas, and other support facilities. The state-managed trail remains a popular attraction for various outdoor activities (biking, walking, jogging, and skating) with more than 171,000 visitors recorded between 2001 and 2002 (FDEP 2003). The trailhead also provides access to the Munson Hills Off-Road Bicycle Trail (see above).

The ***Woodville Tract of the Wakulla State Forest*** was primarily set aside to enhance water quality protection for Wakulla Springs, an important source of public drinking water (FDACS 2011). This non-contiguous, discrete parcel of the Wakulla State Forest also supports various types of recreation, including hiking, off-road bicycling, horseback riding, primitive camping, picnicking, bird watching, and nature study.

3.2.2.2 Environmental Impacts

3.2.2.2.1 Land Use Under Federal Jurisdiction

As indicated in Table 3.1-1, approximately 6.48 miles or 74% of the Alternative 1 route would be located within the ANF within the previously disturbed FGT pipeline temporary construction ROW. Alternative 1 also would include the construction of a tap station on approximately 3 acres of previously undisturbed land within the ANF. Alternative 1 would traverse a land management area within the ANF

that is designated MA 9.2 (Forest/Urban Interface; see Table 3.2-1). Land uses associated with MA 9.2 include conservation, timber production, and recreation, among other compatible uses. The selection of Alternative 1 would be consistent with ANF management objectives for MA 9.2. Alternative 1 also would be consistent with LRMP Standard LA-9 which directs the USFS, to the extent practicable, to confine ROW approvals to existing utility routes or corridors designated for this purpose.

3.2.2.2.2 Land Use Under State Jurisdiction

The selection of the Alternative 1 route would create temporary, minor impacts to recreational users of the Tallahassee-St. Marks Historic Railroad Trail. The City would be required to obtain an easement from the FDEP Office of Greenways and Trails to traverse this facility. Impacts would be negligible given the limited duration that construction activity would impact the trail system. Public safety requirements associated with construction in a publicly accessible area would further mitigate potential adverse impacts associated with Alternative 1. Because Alternative 1 is immediately adjacent to the Woodville Tract of the Wakulla State Forest, short-term, temporary impacts from construction activities could occur; however, these impacts would be indirect and negligible given the construction timeline.

3.2.2.2.3 Land Use Under Local Jurisdiction

Alternative 1 would be located in Leon County, Florida, and subject to consistency with the Tallahassee-Leon County Comprehensive Plan. The tap station and the first 6.48 miles of Alternative 1 would be located within the ANF.

In accordance with the Tallahassee-Leon County Comprehensive Plan, the existing land use designation for the ANF is Open Space State and National Forest. Outside of the ANF, Alternative 1 would traverse an area designated as Single Family Detached/Mobile Home and Open Space (Undesignated). Alternative 1 would terminate at the BP-5 substation located just past the urban service boundary where jurisdiction shifts to the City of Tallahassee. Under Alternative 1, existing land use impacts would be limited to a single residence that is classified as Single Family Detached/Mobile Home by the Comprehensive Plan. The Comprehensive Plan also contains future land use maps for the City of Tallahassee and Leon County. The Leon County Future Land Use Map depicts zoning classifications associated with the Alternative 1 route. For the west-to-east portion of Alternative 1, future land use classifications include Recreation/Open Space and Rural (Unincorporated Area). For the north-south portion of Alternative 1, the zoning classification is Government Operational. Therefore, the portion of Alternative 1 that would be located outside the ANF is consistent with the zoning map.

Any potential adverse impacts to the land use resource associated with Alternative 1 would be mitigated through the Leon County Department of Development Support and Environmental Management's Linear Infrastructure Variance permitting process pursuant to Section 10-4.503(d) of the Leon County Land Development Code.

3.2.2.2.4 Utilities

Alternative 1 would be co-located entirely with established utility corridors. Within the ANF, the Alternative 1 route would cross two existing City 115kV transmission lines and be co-located with the existing FGT pipeline for approximately 7 miles. Alternative 1 would cross the FGT pipeline in two locations. Prior to its termination at substation BP-5 in the City of Tallahassee, Alternative 1 would be co-located with an existing City 115kV transmission line for approximately 1.75 miles. The City would comply with applicable local, state, and federal requirements for the safe separation and/or crossing of utility lines. In addition, all such utilities would remain in service during the construction of Alternative 1. In terms of electrical service and capacity, Alternative 1 would improve system reliability and reduce the risk of future blackouts.

3.2.2.2.5 Transportation

Alternative 1 has the potential to result in direct short-term impacts on transportation from increased traffic generated by construction vehicles and disruptions to traffic from temporary dual-lane closures which typically would be scheduled during the night. The temporary increase in construction-related traffic would represent a small increase in daily traffic volume that would not be expected to substantially degrade traffic operation on the local roads. At a few transmission line corridor crossings of local roads, implementation of Alternative 1 would require short-term dual-lane closures which typically would be scheduled during the night and would result in localized, temporary traffic delays. However, the selection of Alternative 1 would not substantially degrade traffic operations and impacts would be negligible. Within the ANF, Alternative 1 would not require the establishment of any additional access roads.

3.2.2.2.6 Recreation

Potential impacts to recreational land could include the temporary disruption of recreational activities, specifically access to Munson Hill trails and the Tallahassee-St. Marks Historic Railroad State Trail. Alternative 1 would cross the Munson Hills Off-Road Bicycle Trail at two locations and the Tallahassee-St. Marks Historic Railroad State Trail at one location (approximately 2 miles south of the main trailhead). The proposed route also would run adjacent to the northern boundary of the Woodville Tract of the Wakulla State Forest (see Figure 3.2-1). Horseback riding is a permitted use throughout the ANF, however, construction of the Proposed Action is not expected to have a measurable negative impact on access to areas for horseback riding.

Crossing of these recreational trails may result in temporary impacts on recreation resources from construction-related disturbance associated with the transmission line and from operation and maintenance activities. During construction, personnel and equipment would be visible along these recreation areas, which could temporarily detract from the enjoyment of some visitors. Visual impacts are discussed in more detail in Section 3.3.

Because construction in this area would be brief, direct impacts on recreation would be negligible. In addition, Alternative 1 would temporarily impact small sections of these recreational trails that are located within larger public lands that offer many other recreational activities. Long-term impacts would primarily be associated with the construction of permanent aboveground utility structures and recreational activities such as nature study that are premised on visual or aesthetic and sound quality.

3.2.3 Alternative 3

3.2.3.1 Affected Environment

3.2.3.1.1 Land Use Under Federal Jurisdiction

No federal lands would be traversed by Alternative 3.

3.2.3.1.2 Land Use Under State Jurisdiction

Wakulla Springs State Park

Alternative 3 would enter the Edward Ball Wakulla Springs State Park just west of its intersection with Crawfordville Highway and would traverse the park for approximately 2.13 miles along Highway 319. Wakulla Springs State Park is a 6,000-acre wildlife sanctuary that serves to protect Wakulla Springs, one of the largest freshwater springs in the world (Figure 3.2-1; Florida Park Service 2011). The state park includes four separate properties: (1) the Main Basin and Recreational Facilities; (2) the Cherokee Sink property (west of the main park across SR 61); and (3 and 4) the River and Turner Sink parcels located to the northwest along the Leon and Wakulla County lines and adjacent to the ANF (FDEP 2007).

The River Sink parcel is located adjacent to the Alternative 3 route along Crawfordville Highway and includes management areas for pine production and numerous sinkhole lakes that support water-based recreation activities.

The "Edward Ball Park Management Plan" guides land use decisions for this state park, which is primarily managed for natural resource-driven public recreation (FDEP 2007). The Park Management Plan states that an additional 3.5 miles of trails will be developed to increase recreational access to the River Sink area.

Tallahassee-St. Marks Historic Railroad Trail State Park

Alternative 3 would traverse the Tallahassee-St. Marks Historic Railroad Trail (see Section 3.2.2.1.2) at the intersection of Woodville Highway and Oak Ridge Road in Leon County.

3.2.3.1.3 Land Use Under Local Jurisdiction

Alternative 3 would commence in Wakulla County and enter Leon County west of Wakulla Springs Road near the Leon-Wakulla County line. Adopted in 1995, the Wakulla County Comprehensive Plan (as amended; Kimley-Horn and Associates, Inc. 2009) meets the requirements for local comprehensive planning in Florida. The majority of Alternative 3, however, is located in Leon County and is subject to the Tallahassee-Leon County Comprehensive Plan 2030 (see Section 3.2.2.1.3).

3.2.3.1.4 Utilities

Utility systems associated with Alternative 3 include the three City electrical power lines discussed in Section 3.2.2.1.4. In addition, Alternative 3 would cross the existing FGT pipeline near the Woodville Tract of the Wakulla Springs State Forest in Leon County.

3.2.3.1.5 Transportation

In general, the transportation network for Alternative 3 is an extension of the main arterials discussed in Section 3.2.2.1.5. In Wakulla County, Crawfordville Highway (SR 319) passes to the west of the Edward Ball Wakulla Springs State Park and proceeds south intersecting with CR 373. Wakulla Springs Road traverses the eastern side of the State Park in a north-south direction. In Leon County, Alternative 3 (after crossing Wakulla Springs Road) would proceed east on Sunflower Road and turn to the north towards Oak Ridge Road before crossing Woodville Highway.

3.2.3.1.6 Recreation

Edward Ball Wakulla Springs State Park is another prominent recreation attraction within the region. The numerous sinkhole lakes in the park provide for visual and/or water-based recreational activities such as scuba diving and fishing. Recreational support facilities within the park are concentrated around the main spring and lodge on roughly 60 acres. The majority of recreational opportunities are associated with the natural environment, including a variety of plant and animal species (Florida Park Service 2011). Access points from the main spring and lodge offer limited access to hiking trails and sinkhole lakes.

Alternative 3 also would traverse the ***Tallahassee-St. Marks Railroad Trail State Park***, which is state-owned land previously discussed in Section 3.2.2.1.6.

3.2.3.2 Environmental Impacts

3.2.3.2.1 Land Use Under State Jurisdiction

Alternative 3 would traverse the Tallahassee-St. Marks Railroad Trail State Park. Impacts to this facility would be similar to those described for Alternative 1 in Section 3.2.2.2. The City would be required to obtain an easement from the FDEP Office of Greenways and Trails to traverse this facility.

Alternative 3 would originate in Wakulla County and traverse the Wakulla Springs State Park in a northeast direction adjacent to Crawfordville Highway. The selection of Alternative 3 would impact approximately 3.46 acres of Wakulla Springs State Park. The Park Management Plan states that linear facilities such as utility lines (among other land and water uses) are not consistent with the park's management objectives (FDEP 2007).

3.2.3.2.2 Land Use Under Local Jurisdiction

Existing land use associated with Alternative 3 that is subject to the Wakulla County Comprehensive Plan is mostly under forest cover (i.e., hardwood coniferous [mixed]). Future land use or zoning classifications potentially affected by the selection of Alternative 3 include Agriculture, Rural-1, Rural-2, and Conservation. Alternative 3 generally is not consistent with the existing land use and zoning maps for Wakulla County as the majority of land is under forest cover.

Alternative 3 would enter southern Leon County east of Wakulla Springs Road near the Leon-Wakulla County line. The proposed route would then proceed east and turn north until its intersection with Oak Ridge Road following it east across Woodville Highway. Alternative 3 would then co-locate with the existing City 115 kV line to its end point – substation BP5. Existing land use associated with Alternative 3 in Leon County includes Single Family Detached/Mobile Home, Vacant, Multi-Family, Government Operation, and Retail. The selection of Alternative 3 would impact existing private and public sector development in southern Leon County and therefore would not be consistent with the county comprehensive plan.

The Leon County Future Land Use Map or zoning map designates the Alternative 3 route as Urban Fringe, Woodville Rural Community, Government Operational, and Rural (Unincorporated Area).

3.2.3.2.3 Utilities

Similar to the Alternative 1 route, Alternative 3 would cross two existing City electrical power lines that traverse Leon and Wakulla Counties from north to south and would be co-located with the City's 115kV transmission line. The City would comply with applicable local, state, and federal requirements for the safe separation and/or crossing of utility lines. In addition, all such utilities would remain in service during the construction of Alternative 3. In terms of electrical service and capacity, Alternative 3 would improve system reliability and reduce the risk of future blackouts.

3.2.3.2.4 Transportation

Potential adverse impacts to the transportation network associated with Alternative 3 would be similar in nature to those described for Alternative 1. The Alternative 3 route would cross two major roadways: Woodville Highway and Wakulla Springs Road. Additionally, Alternative 3 would be co-located with several roadways including Crawfordville Highway, Sunflower Road, and Oak Ridge Road and would result in localized, temporary traffic delays. However, the selection of Alternative 3 would not substantially degrade traffic operations and all such impacts would be negligible.

3.2.3.2.5 Recreation

Alternative 3 would have short-term impacts on recreation resources. Similar to Alternative 1, crossing of the Tallahassee St. Marks Historic Railroad State Trail would likely result in temporary impacts due to construction-related disturbance associated with the transmission line and operation and maintenance activities. The Alternative 3 route also would cross the Edward Ball Wakulla Springs State Park, co-located with U.S. 319. Recreational uses of this area, such as hiking and wildlife viewing would be expected to predominantly occur set back from the highway, therefore, direct impacts to recreational activities in this area are not anticipated. Indirect impacts to water-based recreation, hiking or wildlife view could occur due to construction-related disturbance associated with the transmission line and operation and maintenance activities; however, these impacts would be short-term and negligible.

3.2.4 No Action Alternative

Under the No Action Alternative, the project would not be constructed and there would be no direct impacts to land use, utilities, transportation, and recreation; however, the capacity and reliability of the electrical supply system that supports public access and use of these lands would be negatively affected over the long-term.

3.2.5 Mitigation Measures for Land Use, Utilities, Transportation and Recreation

If the Proposed Action is implemented, the City will implement the following mitigation measures to avoid or minimize impacts on residents and local land uses, including recreational uses:

- Locate the utility line parallel and adjacent to existing easements, where feasible;
- Utilize previously disturbed lands to support construction and maintenance of the transmission line, to the maximum extent possible;
- Use vertical framing during construction where necessary to ensure conductors remain a safe distance from the tree line during operation;
- Maintain ROW restriction measures such as fences and gates, where appropriate;
- Temporarily close/detour roadways or trails in the interest of public safety;
- Disseminate public information; and
- Restore disturbed land to pre-construction conditions, to the extent practicable.

3.3 AESTHETICS AND VISUAL QUALITY

This section describes the aesthetics and visual qualities and the potential impacts of the route alternatives, as well as the No Action Alternative, on those qualities, and potential mitigation measures to reduce or eliminate those potential impacts.

3.3.1 Inventory and Methodology

Aesthetics and visual quality are analyzed for this project within the Woodville Karst Plain physiographic region, extending from the Tallahassee Hills to the Gulf of Mexico. As detailed in Section 3.4, the predominant vegetative character adjacent to the proposed ROWs includes coniferous plantations and coniferous forests with, to a lesser extent, mixed hardwood forests (Northwest Florida Water Management District [NWFWMD] 2004). The Woodville Karst Plain is pocketed with sink holes, including Wakulla Springs, a first magnitude spring.

Aesthetic impacts are dependent upon several factors, including the physical relationship of the viewer and the transmission line (distance and sight line); the activity of the viewer (living in the area, driving through, or sightseeing); and the background or context of the transmission line (whether the line stands out or blends into the existing landscape). A transmission line can affect aesthetics by removing a resource, such as clearing vegetation; degrading the surrounding environment (intruding on the view of the landscape); or by enhancing a resource (evoking an image of economic strength in a developing business or industrial area) (Public Service Commission of Wisconsin 2011).

As detailed in Section 3.2, lands in the vicinity of Alternatives 1 and 3 are under the jurisdiction of various entities including the USFS, the State of Florida, Leon County, Wakulla County, and private landowners. Leon County, Wakulla County, and the City of Tallahassee do not have established methodologies for the assessment of visual resources.

The USFS's 1999 LRMP indicates that their Visual Resource/Scenery Management System (SMS) is undergoing revision; however, USFS staff have indicated that the former USFS SMS has been revoked, and the replacement system has not been adopted (Hegg 2011). Per the USFS, in the absence of an adopted SMS, sensitive viewing areas including travel corridors such as roads and trails, as described in the LRMP, will be considered in this analysis. Residences are not typical within national forests and the LRMP does not specifically address residences as sensitive viewers; but residences are of concern when a proposed action may impact private lands. Since the USFS has no adopted system to evaluate the existing landscape condition or modifications of the landscape by the Proposed Action, this analysis addresses residences, travelers, and recreational users as potential sensitive viewers.

3.3.2 Alternative 1 (Preferred Alternative)

3.3.2.1 Affected Environment

As stated above, the Alternative 1 route would traverse the Woodville Karst Plain and would be co-located with existing linear facilities along its entire length. The east-west portion of the route would traverse an unpopulated and undeveloped area and the north-south portion would impact five private property owners. Additional clearing along the portion co-located with FGT's pipeline would be restricted to the tap station, as all work along the route would be conducted within the existing 60-foot cleared ROW. Furthermore, under Alternative 1, no new access roads would be necessary for construction and maintenance of the Proposed Action. The Alternative 1 route would utilize the proposed ROW, access roads previously utilized by FGT for the pipeline construction project, and existing City access roads along the existing 115kV transmission line easement. No additional workspace outside the ROW footprint would be necessary.

Adjacent to the corridor within the ANF, the dominant native ecosystem is sandhill habitat, consisting of tall longleaf pines and an open, grassy groundcover interspersed with turkey oaks and other hardwood species. Additionally, within the ANF, the Preferred Alternative would cross potential viewing locations such as forest roads, Crawfordville Highway, and Wakulla Springs Road. Upon exiting the ANF, the Alternative 1 route would span additional potential viewing locations, such as the Tallahassee-St. Marks Historic Railroad Trail as detailed in Section 3.2.2 and would continue east across Woodville Highway for 0.6 mile prior to turning north along the east side of the City's existing 115kV transmission line easement. The route then would continue north for 1.75 miles along the eastern side of the City's existing 115kV easement until terminating at the existing Substation BP-5. The area traversed by this 1.75-mile portion of the ROW is currently coniferous plantations of limited ecological and aesthetic value.

3.3.2.2 Environmental Impacts

Implementation of the Preferred Alternative would result in the long-term maintenance of the 60-foot wide previously cleared FGT temporary work space in a non-forested condition both in the ANF (i.e., for the life of the SUP) and outside the ANF. Under Alternative 1, no residences would be located within 100 feet in either direction of the centerline of the route. Individuals traveling along Crawfordville Highway, Wakulla Springs Road, and Woodville Highway would be able to view the proposed line along this alternative route. Typically, views along these travel routes are short in duration due to posted speed limits, resulting in reduced sensitivity compared to slower speeds. Further, as illustrated on Photographs 3.3-1 through 3.3-5, the visual character of these highway crossings has been previously impacted by the FGT Project and exhibit the nature of a permanently cleared utility ROW. The Alternative 1 route would be engineered to situate the pole structures at the greatest distance possible from roadways and trails to minimize any negative aesthetic impacts.

The proposed tap station under Alternative 1 would be located adjacent to Bice Road (Forest Road 317) at the intersection of existing Line 31. Presently, planned roadway improvements by Leon

County include the paving of Bice Road south of the EW Reeves Road intersection. Upon completion, the USFS intends to close the northern portion of Bice Road to public access. Once closed, this portion of Bice Road would be accessible only by authorized personnel and ANF users.

Photograph 3.3-1: Typical existing condition of Alternative 1 ROW (i.e., existing FGT ROW) through National Forest.

Implementation of the Preferred Alternative would result in aesthetic impacts to travelers of Crawfordville Highway, Woodville Highway, and Wakulla Springs Road. The Preferred Alternative would not be co-located with any roadways, but would cross each roadway. Given the rate of speed along each roadway, the placement of the pole structures as far as feasible from the roadway, and the height of the conductors (no lower than 27 to 28 feet from the ground), visual impacts to travelers are anticipated to be minimal but long-term given that the ROW would be permanently maintained in a non-forested condition and would provide a view of the powerline where none previously existed. Anticipated impacts would be further minimized by implementing best management practices (BMPs) or mitigation measures, as identified in Section 3.3.5, during the construction, operation, and maintenance of the proposed transmission line.

Photograph 3.3-2: Alternative 1 route crossing of Crawfordville Highway (foreground) and Wakulla Springs Road (background). Intersection of Crawfordville Highway and Wakulla Springs Road is south (right).

Photograph 3.3-3: View north along Woodville Highway at the Preferred Alternative/FGT Project crossing.

Photograph 3.3-4: Preferred Alternative route crossing of Woodville Highway, facing east. View is from the Tallahassee-St. Marks Historic Railroad Trail.

Photograph 3.3-5: Preferred Alternative route crossing of Woodville Highway, facing west. Tallahassee-St. Marks Historic Railroad Trail is in the foreground.

The Alternative 1 route would cross the Tallahassee-St. Marks Historic Railroad Trail west of Woodville Highway. Traversing this area would negatively impact trail users during construction and operation. During construction, recreational users would experience, short-term impacts associated with the degraded scenic nature associated with clearing and construction activities. Long-term aesthetic impacts during operation would be mitigated by designing the line to increase the spacing between the poles and place them as far from the trail as feasible. Therefore, moderate, negative impacts to this trail would be expected from the implementation of Alternative 1.

Photograph 3.3-6: View to the north along Crawfordville Highway. The Alternative 3 route would be located along the east side (right) of the road ROW.

3.3.3 Alternative 3

3.3.3.1 Affected Environment

Similar to Alternative 1, the Alternative 3 route would traverse the Woodville Karst Plain; however, the Alternative 3 route would traverse a more diverse landscape as illustrated in Photographs 3.3-6 through 3.3-12. As detailed in Section 3.4, the Alternative 3 ROW would cross a large amount of coniferous plantation cover (55% of route), hardwood/coniferous mixed forests, and is within 100 feet of 22 residences. Additionally, Alternative 3 would include 5.70 miles of greenfield construction (defined as constructing across a previously undeveloped [i.e., green] area).

Photograph 3.3-7: Wakulla Springs Road crossing facing north.

The proposed transmission line would originate at the tap station and would travel east through mixed hardwood/coniferous forest and coniferous plantation lands. Along this portion of the route, the proposed line would be adjacent to a low-density residential area. Next, the route would be co-located along Crawfordville Highway until reaching the county line. Along this portion of the route, the proposed line would impact approximately 3.46 acres of the Wakulla Springs State Park; travelers along Crawfordville Highway would be able to view the proposed line for approximately 1.05 miles. East of Crawfordville Highway, the route would cross coniferous plantation and mixed hardwood/coniferous forests. Along Sunflower Road, the proposed route would continue within close proximity to a few rural residential areas, would shift to the north, and would continue through more rural residential areas until reaching Oak Ridge Road. At this point, the line would then continue east along the south side of Oak Ridge Road, along which there are several residences, as well as a fire station and some commercial uses. Across Woodville Highway, the route would be co-located with a tree canopy-covered unpaved (i.e., dirt) portion of Oak Ridge Road. Next, the route would be co-located with the existing City 115kV line, traversing coniferous plantations.

Photograph 3.3-8: Typical view along Sunflower Road, looking east.

Photograph 3.3-9: View along Oak Ridge Road facing east (west side of Woodville Highway).

Photograph 3.3-10: View of Alternative 3 route crossing of Tallahassee-St. Marks Historic Railroad Trail. Oak Ridge Road is in the background.

Photograph 3.3-11: Oak Ridge Road heading east at the intersection of Woodville Highway and Oak Ridge Road.

3.3.3.2 Environmental Impacts

Photograph 3.3-12: View of Oak Ridge Road (east side of Woodville Highway) looking east.

Under Alternative 3, approximately 22 residential structures (residences and out-buildings) would be located within 100 feet of the centerline and would experience direct short-term negative impacts during construction and clearing activities and long-term impacts from the loss of vegetation on the permanently cleared ROW and the addition of pole structures and conductors to the landscape. Homeowners would be expected to experience the most severe negative visual impacts due to their extended proximity to the transmission line and the permanently altered landscape resulting from the implementation of Alternative 3.

In addition to the route's proximity to residential structures, The Alternative 3 route would be co-located along major roadways for approximately 3.4 miles. Affected transportation routes would include: Crawfordville Highway, Royal Oaks Court, Sunflower Road, Oak Ridge Road, Wakulla Springs Road, Ranchero Road, and Woodville Highway. Sunflower and Oak Ridge Roads require a low rate of speed and demonstrate a residential character. Individuals traveling along co-located roadways or areas with lower rates of speed than other roads in proximity to the route would experience views of the line over a longer duration and would therefore experience moderate, negative visual impacts. Views experienced by travelers along arterial roadways with higher rates of speed, such as Wakulla Springs Road where the line would cross the roadway, would experience a shorter duration of views of the line and, therefore, minor, negative visual impacts. Furthermore, the Alternative 3 route would traverse the commercial district of Woodville near the intersection of Oak Ridge Road and Woodville Highway, a highly traveled intersection with a traffic light and adjacent light commercial uses (Photograph 3.3-11).

Permanent clearing of the transmission line ROW of woody vegetation also would contribute to visual effects, resulting in long-term moderate negative impacts. Along Oak Ridge Road, the proposed line would be built within an existing electrical distribution line ROW, but would require additional clearing on the south side of the road. This portion of Oak Ridge Road is an unpaved rural roadway with a canopy of mature trees (Photograph 3.3-12). Additional clearing also may be required on the north side of the road to maintain cleared vegetation at required distances. Along this portion of the route, moderate, long-term negative aesthetic impacts would result from removal of the existing canopy of mature trees.

The Alternative 3 route would cross the Tallahassee-St. Marks Historic Railroad Trail as it intersects Oak Ridge Road, and impacts to the trail caused by the implementation of Alternative 3 would be similar to those described for Alternative 1 in Section 3.3.2.2.

3.3.4 No Action Alternative

Under the No Action Alternative, there would be no direct or indirect impacts to existing visual and scenic resources. This alternative would not introduce new transmission lines into the landscape, trees would not be cleared, and no other construction activities would take place. Residents and visitors in the vicinity of Alternatives 1 and 3 would continue to view and use the visual resources in the current manner.

3.3.5 Mitigation Measures for Aesthetics and Visual Quality

If the Proposed Action is implemented, under either Alternatives 1 or 3, the transmission line and its ROW will be engineered and designed to avoid direct impacts to residences, to the extent practicable. While visual impacts to residences will be minimized with vegetative buffers where possible, some residences may be situated such that a vegetative buffer is not feasible. Anticipated impacts will be minimized, to the maximum extent practicable, through the implementation of BMPs or mitigation measures during engineering and design, construction, operation, and maintenance of the proposed transmission line.

If the Proposed Action is implemented, the City will implement the following mitigation measures to avoid or minimize impacts on aesthetics and visual resources:

- Span water bodies where possible;
- Place structures at the maximum possible distance from trails, water bodies, and highways; and
- Parallel existing transmission line and pipeline easement to the extent possible.

3.4 BIOLOGICAL RESOURCES

This section describes the biological resources that would be crossed by the alternative routes, the potential impacts of the alternatives, as well as the No Action Alternative, on those resources, and the potential mitigation measures to reduce or eliminate those potential impacts.

3.4.1 Inventories and Methodology

This section describes the biological characteristics of each proposed alternative route, including upland vegetative cover and noxious weeds (Section 3.4.2), common wildlife species (Section 3.4.3), and special status species (Section 3.4.4). Wetlands are discussed separately in the Water Resources section (Section 3.6).

No additional habitat classification surveys were conducted in preparing this document. Upland vegetative communities within both alternative ROWs and tap stations were obtained by reviewing recent aerial photographs (Tallahassee-Leon County GIS 2009) and the Florida Land Use, Cover, and Forms Classification System (FLUCCS) maps (NWFWMD 2004) and generally were confirmed during site reconnaissance of each alternative conducted by the City. The ROW widths and the acreages for the tap stations for both alternatives are listed in Tables 3.1-1 and 3.1-2 and are described in detail in Sections 2.5.2 (Alternative 1) and 2.5.3 (Alternative 3). The ROW widths detailed in Table 3.1-2 were used to calculate upland vegetation impacts presented in Sections 3.4.2.1.2 (Alternative 1) and 3.4.2.2.2 (Alternative 2).

General wildlife information was obtained from the USFS, the FGT FEIS, and local field observations. Special status species are those species for which the federal or state agencies provide protection by law, regulation, or policy. This includes species that are either federally listed or proposed for federal listing under the federal ESA, as amended, or are considered candidates for such listing by the United States Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service. Those animal species that are state-listed as threatened, endangered, or of special concern by the Florida Fish and Wildlife Conservation Commission (FWC) also are included, as well as applicable plant species that are on Florida's "Regulated Plant Index" (Coile and Garland 2003). This EIS also addresses species listed on the ANF Potential Endangered and Threatened Species List (ANF PETS List [ANF 2001]), which includes both federally and state-protected species and species of conservation interest to the USFS within the ANF. The *2010 Annual Monitoring and Evaluation Report for National Forests in Florida* (USDA

2011b) was reviewed to better understand population trends for breeding bird populations in the ANF. No additional species surveys were conducted for the purposes of preparing this document.

In addition to using the USFWS county lists for federally protected species, as well as review of state-protected species lists, existing information regarding the habitats and ranges for species presented herein was reviewed and evaluated. GIS analyses, interpretation of aerial photos, and a June 2011 Florida Natural Areas Inventory (FNAI) Standard Data Report were obtained and evaluated to determine historical, documented element occurrences and to confirm the presence or absence of potential habitat for species along the alternative ROWs. The term "element occurrence" is defined by the FNAI as a documented occurrence of species or natural communities. Element occurrences of animals and plants generally refer to more than a casual sighting; they usually indicate a viable population of the species. Some element occurrences represent historically documented observations of species that may no longer be extant and are indicated by the FNAI as such. Other element occurrences are indicated as only in the "general vicinity." Element occurrences should not be interpreted as a legal determination of presence or absence of species; however, the FNAI is the single most comprehensive source of information available on the locations of protected species in the State of Florida.

A BA for Alternative 1 has been completed for this project as part of Section 7 consultation with the USFS and the USFWS Panama City Field Office to address special status species within the ANF. In a letter dated March 1, 2012, the USFWS concurred with the findings of the BA (USFWS 2012). The BA is on file in the project record and is available for review on request, and the FNAI Standard Data Report referenced throughout this section is Appendix A to the BA.

3.4.2 Upland Vegetation and Noxious Weeds

The following descriptions of upland cover types within the Alternatives 1 and 3 ROW and tap station locations were classified using the habitat type descriptions in the FLUCCS published by the NWFWMD (NWFWMD 2004). The text provides a summary of potential impacts on upland vegetation cover types associated with each alternative, as well as mitigating measures that would be used to avoid and minimize these potential impacts.

3.4.2.1 Alternative 1 (Preferred Alternative)

3.4.2.1.1 Affected Environment

The Alternative 1 route would traverse the following upland vegetation communities.

Barren Land

Approximately 7 miles of the Alternative 1 route would be located within the previously disturbed FGT 60-foot-wide temporary construction ROW. Because the FGT Project was placed in service in spring 2011 and construction of that project involved ground disturbance within that area, the FGT construction ROW still remains primarily bare ground (see Photograph 3.3-1) or has a minimum amount of herbaceous cover that can be classified as barren land under FLUCCS. Barren land is defined as disturbed lands that have been

Photograph 3.4-1: Existing City of Tallahassee 115kV line ROW.

changed due primarily to human activities other than mining (FDOT 1999).

Coniferous Plantation

The remaining 1.75 miles of the Alternative 1 route would be co-located with an existing City 115kV line that traverses recently cleared coniferous plantations interspersed with even-age stands (averaging 60 feet tall) of planted slash pines (*Pinus elliottii*) (Photograph 3.4-1). Typical understory species associated with coniferous plantations include saw palmetto (*Serenoa repens*), wax myrtle (*Morella cerifera*), and gallberry (*Ilex glabra*). Coniferous plantations are almost exclusively pine forests artificially generated by planting seedling stock or seeds. These stands are characterized by high numbers of trees per acre, low species diversity, and their uniform appearance. Row patterns often stand out unless the stand is the result if aerial seeding (FDOT 1999).

Approximately 0.13 acres of land within the Alternative 1 tap station consists of coniferous plantation. The remainder of the 3-acre area consists of electric power transmission lines or roads (i.e., Bice Road; 1.29 acres) and upland coniferous forest (1.58 acres; see description below) (FDOT 1999; see Photograph 3.4-2 and Figure 2-5).

Photograph 3.4-2: Alternative 1 tap station location.

Upland Coniferous Forest

Approximately 1.58 acres of land within the tap station for Alternative 1 consists of upland coniferous forest, which is described as any natural forest stand whose canopy is at least 66% dominated by coniferous species. The remainder of the 3-acre are consists of electric power transmission lines or roads (i.e., Bice Road) (1.29 acres) and coniferous plantation (0.13 acres; see description above) (FDOT 1999; see Photograph 3.4-2 and Figure 2-5).

3.4.2.1.2 Environmental Impacts

Construction of Alternative 1 would result in both short- and long-term direct impacts to upland vegetation communities. These impacts are summarized in Tables 3.4-1 and 3.4-2.

Short-term upland vegetation impacts would occur where herbaceous cover is disturbed or woody vegetation is cleared and the land subsequently graded for construction of the transmission line or tap station. Following construction, contours would be restored, as necessary, the ROW would be reseeded, and herbaceous vegetation would be allowed to return to the transmission ROW during the long-term operation of the transmission line.

The construction of the Alternative 1 route and the associated tap station would temporarily impact 56.40 acres of upland vegetation, consisting of 47.18 acres of previously forested upland that was cleared for the temporary workspace for the FGT utility corridor, 6.22 acres of coniferous plantation on the north-south portion of the Alternative 1 ROW (where co-located with the City's existing 115 kV line) and 3.00 acres of coniferous plantation/upland coniferous forest located within the footprint of the tap station (see Table 3.4-1).

Table 3.4-1
Summary of Short-Term Upland Vegetation Impacts from Alternative 1

Facility	FLUCCS Upland Community Type	Acres
Right-of-Way	Barren Upland	47.18 [(a)]
	Coniferous Plantation	6.22 [(b)]
	ROW Short-Term Upland Total	**53.40**
Tap Station	Upland Coniferous Forest/Coniferous Plantation	3.00 [(c)]
	Grand Total	**56.40**

Notes:
(a) The short-term impact calculation of 47.18 acres to upland vegetation is a maximum (i.e., worst-case scenario calculation) and assumes that the entire 60-foot ROW where Alternative 1 would be co-located with FGT ROW (i.e., for 7 miles [both within and outside of the ANF]) would be disturbed during construction. However, in these areas, no clearing, stumping, or grading would be required because this area was previously cleared by FGT. Short-term vegetative disturbance of upland communities would not be to the entire 60-foot ROW and would likely be limited to only the areas where transmission structures are erected, where construction and contractor vehicles would travel on the ROW during construction, and within staging areas located within the ROW (see Section 2.2.2).
(b) The existing 6.22 acres of the north-south ROW that would be cleared for permanent ROW are assumed to be all coniferous plantations, although some portions of this area have been previously clear-cut and—as a result—are not covered by a mature canopy.
(c) Construction of the proposed tap station for Alternative 1 would require clearing up to a maximum of 3 acres. Approximately 1.29 acres of the land within this 3-acre area are classified under FLUCCS as either electric power transmission lines or roads (i.e., Bice Road) (FDOT 1999). The remainder of land within this area can be described as upland coniferous forest and coniferous plantation. Therefore, the 3 acres of total clearing shown in this table, exceeds what would be cleared within the Alternative 1 tap station fence line.
Key:
FLUCCS = Florida Land Use, Cover, and Form Classification System.
Source: Tallahassee-Leon County GIS 2009, NWFWMD 2004.

The short-term impact calculation of 47.18 acres to previously cleared upland vegetation (see Table 3.4-1) within the FGT temporary workspace is a maximum (i.e., worst-case scenario calculation) and assumes that the entire 60-foot ROW where Alternative 1 is co-located with the FGT line (i.e., for 7 miles) would be disturbed during construction (see Table 3.4-1). However, in these areas, no clearing, stumping, or grading would be required. Short-term vegetative disturbance of previously cleared land would not be to the entire 60-foot ROW and likely would be limited to only the areas where transmission structures are erected, where construction and contractor vehicles would travel on the ROW during construction, and within staging areas that would be located within the ROW (see Section 2.2.2). The 6.22 acres of coniferous plantation clearing shown in Table 3.4-1 also is a maximum (i.e., worst-case scenario calculation) as some portions of this area have been previously clear-cut and, as a result, are not covered by a mature canopy. The 3 acres of clearing shown in Table 3.4-1 for the Alternative 1 tap station also is a maximum (i.e., worst-case scenario calculation) as approximately 1.29 acres of the land within this 3-acre area are classified under FLUCCS as either electric power transmission lines or roads (i.e., Bice Road) (FDOT 1999).

Short-term upland vegetative disturbance within the ANF would be limited primarily to the 3-acre tap station and the estimated 73 pole locations. A 20-foot by 20-foot (0.009 acre) workspace, or 0.66 acre total for all 73 locations where poles would be erected, would be disturbed to erect the structures, totaling approximately 3.66 acres of total short-term ground disturbance within the ANF. To mitigate for these short-term impacts to the ANF, the City would work with the USFS to develop a Wiregrass Restoration Plan for the 3.66 acres of upland areas disturbed by the project in the ANF as part of the SUP approval process.

Long-term upland vegetation impacts would occur in woody areas traversed by the ROW as maintenance practices associated with the long-term operation of the line would maintain the ROW in an herbaceous condition. The long-term maintenance of Alternative 1 and the tap station would result in the

long-term removal of 56.4 acres of woody upland vegetation consisting of 47.18 acres of mixed rangeland, upland coniferous forest, pine flatwoods, hardwood coniferous mixed, and coniferous plantation that was previously cleared for the temporary workspace for the FGT utility corridor that would have revegetated along the FGT temporary ROW if not maintained during operation of the Alternative 1 ROW; 6.22 acres of coniferous plantation that would be cleared within the north-south portion of the Alternative 1 ROW; and up to 3 acres of upland coniferous forest/coniferous plantation for the Alternative 1 tap station location (see Table 3.4-2).

Table 3.4-2
Summary of Long-Term Upland Forest Vegetation Impacts from Alternative 1

Facility	FLUCCS Upland Forest Community Type	Acres
ROW	Mixed Rangeland [(a)]	0.87
	Upland Coniferous Forest [(b)]	4.92
	Pine Flatwoods [(b)]	17.34
	Hardwood Coniferous Mixed [(b)]	1.78
	Coniferous Plantation [(b,c)]	28.49
	ROW Long-Term Upland Total	**53.4**
Tap Station	Upland Coniferous Forest/Coniferous Plantation [(d)]	3.00
	Total Uplands	**56.4**

Notes:
a) Mixed rangeland includes a mix of both grasslands and shrub-brushland. The latter vegetation community would require clearing during construction, therefore this community type is included in this table.
(b) Vegetation community is not currently within the Alternative 1 ROW, but is a forested vegetation community located *adjacent* to the proposed Alternative 1 ROW and is what the FGT temporary ROW would eventually have reverted to through natural succession if not maintained in association with the long-term operation of Alternative 1.
(c) Includes 6.22 acres of coniferous plantation that would be cleared within the north-south portion of the Alternative 1 ROW, and 22.27 acres of coniferous plantation that would have revegetated along the FGT temporary ROW if not maintained during operation of the Alternative 1 ROW.
(d) Construction of the proposed tap station for Alternative 1 would require clearing up to a maximum of 3 acres. Approximately 1.29 acres of the land within this 3-acre area are classified under FLUCCS as either electric power transmission lines or roads (i.e., Bice Road) (FDOT 1999). The remainder of land within this area can be described as upland coniferous forest and coniferous plantation. Therefore, the 3 acres of total clearing shown in this table exceeds what would be cleared within the Alternative 1 tap station fence line.
Key:
FLUCCS = Florida Land Use, Cover, and Form Classification System.
Source: Tallahassee-Leon County GIS 2009, NWFWMD 2004.

Vegetation baseline conditions along the portion of the Alternative 1 route that would be co-located with the FGT ROW consist of bare ground or minimal herbaceous cover (i.e., barren land; see Photograph 3.3-1). However, the 47.18 acres of long-term upland impacts for Alternative 1 where the route is co-located with the FGT ROW were calculated using the current adjacent forested vegetation communities, which is to what the FGT temporary ROW would eventually revert through natural succession if not maintained in association with Alternative 1 (see Table 3.4-2). These adjacent upland vegetation communities include mixed rangeland, upland coniferous forest, pine flatwoods, hardwood coniferous mixed forest, and coniferous plantation.

Of the 47.18 acres of upland vegetation found along the FGT temporary ROW, 46.48 acres of upland vegetation is located within the ANF. In addition, 0.66 acre of previously forested wetland vegetation is found along the FGT temporary ROW within the ANF (see Section 3.6.2.1.3, Table 3.6-3). Lastly, the 3 acres of upland coniferous forest/coniferous plantation for the Alternative 1 tap station is located within the ANF. The long-term maintenance of the Alternative 1 ROW and tap station would result in the removal of these 50.14 acres of land from forestry management from the ANF and the authorization of an SUP under Alternative 1 would result in the maintenance of these 50.14 acres in a non-forested condition for the life of the permit. To compensate for the long-term impact of removing

forested land from the ANF, the City would acquire land to be added to the ANF. The land acquired would have a vegetative community similar to what is being placed under the SUP.

In addition to the short-term disturbance of herbaceous upland vegetation during construction and the long-term conversion of upland wooded communities to herbaceous communities during operation, clearing of a new linear ROW could result in off-ROW impacts and, therefore, damage to adjacent vegetation if ROW boundaries are not clearly marked and construction crews are not informed of the flagging or staking methodology used to delineate work areas and ROW boundaries. In addition, improper felling of timber could result in off-ROW damage to adjacent vegetation communities. Removal of upland vegetative cover during construction of the transmission line would expose the underlying topsoil and would increase erosion and sedimentation potential in these areas.

Activities associated with construction such as the running of construction equipment or contractor personal vehicles in the vicinity of dried vegetation, inappropriate disposal of cigarettes or other lighted materials, and burning of vegetation for disposal purposes could result in the inadvertent start or spread of fires in the project vicinity, resulting in impacts to proximal upland vegetation located off-ROW.

Under the Federal Noxious Weed Act of 1974 (as amended in 1994), federal agencies are required to develop management plans to control undesirable plants on federal lands under each agency's jurisdiction. The use of straw bales for temporary erosion control and seeds or mulch during restoration of the ROW could result in the inadvertent introduction of noxious weeds or exotic species onto the Alternative 1 ROW. In addition, construction equipment or personal vehicles previously used in weed-infested areas could inadvertently introduce weed seeds onto the SWTL Project ROW. Improper restoration of the ROW, including not returning topographic contours to pre-construction elevations to the extent practicable, selecting the wrong seed mixes for revegetation, or improper seeding techniques, could result in poor or slow revegetation of disturbed areas, allowing an opportunity for noxious or exotic species to populate the ROW before beneficial species can become established.

Measures to reduce the likelihood of impacts to upland vegetation are presented in Section 3.4.2.4.

3.4.2.2 Alternative 3

3.4.2.2.1 Affected Environment

The Alternative 3 route would traverse the following upland vegetation communities.

Improved Pasture

Improved Pasture refers to land that has been cleared and tilled then reseeded with specific grass types and periodically improved with brush control and fertilizer application. Within this vegetation community, water ponds, troughs, feed bunkers, and cow trails may be evident (FDOT 1999).

Shrub and Brushland

Shrub and brushland includes saw palmettos, gallberry, wax myrtle, coastal shrub, and other shrubs and brush. Generally, saw palmetto is the most prevalent plant cover intermixed with a wide variety of other woody scrub plant species as well as various types of short herbs and grasses (FDOT 1999).

Mixed Rangeland

Rangeland is defined as land where the potential natural (climax) plant cover is composed principally of native grasses, forbs, and shrubs that are valuable for forage. Management practices may include brush control and regulating grazing intensity and season of use. If revegetated to improve the

forage cover, rangeland is managed like native vegetation. Generally, rangeland is not fertilized, cultivated, or irrigated. When more than one-third intermixture of either grassland or shrub-brushland species occurs, the specific classification is changed to mixed rangeland (FDOT 1999).

Pine Flatwoods

Pine flatwoods forests are common throughout much of northern and central Florida. Under natural conditions, longleaf pines (*Pinus palustris*) are common on drier sites while slash pines, which are less fire-resistant, are confined to moist sites; wildfire influences this distribution. However, fire control and artificial reforestation have extended the range of slash pine into former longleaf sites. As a result, the pine flatwoods class is dominated by either slash pine, longleaf pine, or both. Common pine flatwoods understory species include saw palmetto, wax myrtle, gallberry, and a wide variety of herbs and brush (FDOT 1999).

Hardwood Coniferous Mixed

Hardwood coniferous mixed is an upland forest community in which neither hardwoods nor conifers achieve a 66% dominance of the crown canopy. The hardwood coniferous mixed forest community is a naturally generated forest that typically grows in mesic environments. This forest type often occurs on upland areas adjacent to streams or waterways or surrounding wetland depressions. Typical tree species include live oak (*Quercus virginiana*), sand post oak (*Quercus margaretta*), black oak (*Quercus velutina*), loblolly pine (*Pinus taeda*), slash pine, hickory (*Carya* spp.), and cabbage palm (*Sabal palmetto*) (FDOT 1999).

Construction of the proposed tap station for Alternative 3 would require clearing of a maximum of 1 acre. Portions of the land within this 1-acre area are classified under FLUCCS as electric power transmission lines (FDOT 1999). The remainder of land within this area can be described as hardwood coniferous mixed (FDOT 1999; see Photograph 3.4-2 and Figure 2-5).

3.4.2.2.2 Environmental Impacts

Construction of Alternative 3 would result in both short- and long-term direct impacts to upland vegetation communities. These impacts are summarized in Table 3.4-3.

In addition to the short-term disturbance of herbaceous upland vegetation and the long-term conversion of upland wooded communities to herbaceous communities noted in Table 3.4-3, construction of Alternative 3 would have impacts to upland vegetation communities similar to those described for Alternative 1 (Section 3.4.2.1.2). The primary BMPs and mitigation measures the City will employ to minimize these potential impacts are discussed in Section 3.4.2.4.

3.4.2.3 No-Action Alternative

Under the No Action Alternative, no land disturbance or upland vegetation clearing would take place. Thus, there would be no short or long-term impacts to, loss of, or changes in the existing upland vegetation communities within the proposed alternative ROWs or tap station locations. This alternative also would not result in increased land erosion or spread of noxious weeds within the project ROWs. The existing acreage of upland cover types would remain unchanged under this alternative.

Table 3.4-3
Summary of Short- and Long-Term Upland Vegetation Impacts from Alternative 3

Facility	FLUCCS Upland Community Type	Acreage Disturbance Short-Term	Acreage Disturbance Long-Term
ROW	Improved Pasture	0.83 [(a)]	NA
	Shrub and Brushland	10.62	10.62
	Mixed Rangeland	2.46	2.46
	Pine Flatwoods	5.01	5.01
	Hardwood Coniferous Mixed	17.82	17.82
	Coniferous Plantation	45.51	45.51
Tap Station	Harwood Coniferous Mixed	1.00 [(b)]	1.00 [(b)]
	Totals	**83.25**	**82.42**

Note:
(a) The calculation of 0.83 acre of short-term impact on improved pasture is a maximum (i.e., worst-case scenario calculation) and assumes that the entire 100-foot ROW would be disturbed during construction. However, within improved pasture, no clearing, stumping, or grading would be required. Short-term vegetative disturbance of improved pasture would not be to the entire 100-foot ROW and would likely be limited to only the areas where transmission structures are erected or where construction and contractor vehicles would travel on the ROW during construction.
(b) Construction of the proposed tap station for Alternative 3 would require clearing up to a maximum of 1 acre. Portions of the land within this 1-acre area are classified under FLUCCS as electric power transmission lines (FDOT 1999). The remainder of land within this area can be described as hardwood coniferous mixed. Therefore, the 1 acres of total clearing shown on this table, exceeds what will be cleared within the Alternative 3 tap station fence line.

Key:
FLUCCS = Florida Land Use, Cover, and Form Classification System.
Source: Tallahassee-Leon County GIS 2009, NWFWMD 2004.

3.4.2.4 Mitigation Measures for Upland Vegetation

If the Proposed Action is implemented, the City will implement the following mitigation measures to avoid or minimize potential adverse impacts on upland vegetation:

- Ensure that ROW boundaries are clearly located and marked prior to construction to minimize the potential for inadvertent off-ROW impacts by clearing or grading crews.
- Educate all construction personnel on the methodology used (i.e., colored flags or stakes) for identifying the boundaries of all work areas and the ROW boundary.
- Fell all timber requiring clearing onto the ROW to minimize damaging adjacent trees and to avoid off-ROW impacts.
- Comply with the upland clearing, erosion control, restoration, and maintenance methods approved in the City's General Environmental Management Utility Permit except as restricted by the SUP; USFS regulations; and local, state, and federal regulations and permit requirements.
- Appropriately dispose of cut or downed vegetation. If burning is selected as the proposed vegetation disposal method, burning will occur only after the appropriate burn permit or authorizations are obtained from local or state agencies and the Florida Forest Service. In addition, all burning activities will be conducted in conformance with all appropriate regulations and in accordance with obtained authorizations. Burning will be contained to the permitted ROW width. Burn piles

will also be located at appropriate distances from live vegetation so as not to cause damage to off-ROW vegetation.

- To further minimize inadvertent fires caused by construction-related activities from occurring, the City will ensure that all lit materials are properly disposed of, and that fire hazard and weather patterns are monitored and considered in determining what acceptable activities may occur during specific construction periods. When conditions indicate a high fire hazard, construction activities may be temporarily suspended until conditions are deemed suitable and safe to continue.
- Minimize grading activities to only those locations where a safe, stable ROW surface must be created.
- Install and maintain erosion control barriers (e.g., silt fencing and/or straw bales) where exposed soils have the potential to contribute to sedimentation of wetland and waterbodies or other sensitive features within or adjacent to the ROW. The use of hay for erosion control barriers is not allowed by the USFS on USFS property.
- Restore pre-construction contours to the extent practicable.
- Break up compacted upland soils, if necessary, by ripping, tilling, or scarifying before reseeding.
- Consult with the USFS to develop a Wiregrass Restoration Plan for the 3.66 acres of upland acres of the ANF that would be disturbed by the project. Within the ANF, the USFS will maintain the responsibility for monitoring the long-term success of the Wiregrass Restoration Plan.
- In areas outside the ANF, seed all disturbed areas as soon as possible with certified noxious-weed-free seed (as certified by the state) to stabilize the disturbed ROW.
- Observe the ROW post-construction in areas outside of the ANF for revegetation success during periodic ground inspections and implement contingency measures as necessary to avoid long-term erosion and sedimentation problems associated with exposed soils in unvegetated areas.
- Acquire lands, with a vegetative community similar to what is placed under the SUP, to be added to the ANF to compensate for the long-term impact of removing 50.14 acres of forested land from the ANF.

To minimize the abundance, introduction, or distribution of invasive, non-native species within the permanent ROW, the City will utilize the following BMPs:

- Prepare and implement a Noxious Weed Management Plan for the project. This document will be developed to take into consideration and complement the City's *Procedures Manual for General Utility Permit* (City of Tallahassee 2007), which is issued in accordance with the City's Land Development Code and the City's TVMP.
- Identify the extent and location of existing noxious weed populations prior to construction. If noxious weeds are identified and need to be removed during construction, they will not be burned or disposed of on site. They will be removed and disposed of at a regulated landfill.
- On off-forest properties, visually inspect construction equipment and personal vehicles, if necessary, prior to entering the construction ROW or before leaving known infested areas. Equipment will be considered free of soil, seeds, vegetative

matter, and other debris when a visual inspection does not disclose such material. If necessary, equipment will be manually brushed or wiped free of indicated material. Neither disassembly of equipment components nor specialized cleaning methods are anticipated to be necessary for this project on off-forest property. Within the ANF, construction equipment will be pressure washed before entering USFS property.

- Use weed-free materials such as weed-free straw bales for erosion control practices. The use of hay for erosion control barriers is not allowed by the USFS on USFS property.
- Consult with the USFS to develop a Wiregrass Restoration Plan for the 3.66 acres of upland acres of the ANF that are disturbed by the project. Within the ANF, the USFS will maintain the responsibility for monitoring the long-term success of the Wiregrass Restoration Plan, including noxious weed issues associated with that revegetation effort.
- Seed all disturbed areas outside the ANF as soon as possible with certified noxious-weed-free seed (as certified by the state) to stabilize the disturbed ROW.
- Observe the ROW post-construction in areas outside of the ANF for revegetation success during periodic ground inspections and implement contingency measures as necessary to eradicate noxious weed problems as necessary.

3.4.3 Wildlife

This section describes general wildlife populations (mammals, birds, amphibians, and reptiles) expected to commonly occur in the vicinity of Alternatives 1 and 3. The primary focus of this section addresses potential impacts to wildlife populations caused by changes in vegetation cover as well as increased human activity and habitat fragmentation resulting from the construction of each alternative. Measures to avoid and minimize potential impacts to wildlife also are addressed.

3.4.3.1 Alternative 1 (Preferred Alternative)

3.4.3.1.1 Affected Environment

Due to geographic proximity and similarity of vegetative communities traversed, the habitats within and surrounding Alternative Routes 1 and 3 are expected to have similar wildlife usage. General wildlife species expected to regularly occur in the vicinity of both alternatives are listed in Table 3.4-4.

Table 3.4-4
Common Wildlife Species Occurring in the Vicinity of Alternatives 1 and 3

Classification	Common Species
Songbirds	Red-Eyed Vireos, Yellow-Throated Vireos, Yellow-Billed Cuckoos, Hooded Warblers, Prairie Warblers, Great-Crested Flycatchers, Summer Tanagers, Rose-Breasted Grosbeaks, American Goldfinches, White-Throated Sparrows, Ruby-Crowned Kinglets, Blue Jays, Crows, Carolina Chickadees, Brown Creepers, American Robins, Tufted Titmice
Raptors	Broad-Winged Hawks, Red-Tailed Hawks, Barred Owls, Great Horned Owls
Game Birds	Wild Turkeys, Bobwhite Quail
Mammals	Gray Squirrels, Striped Skunks, Raccoons, White-Tailed Deer, Cottontail Rabbits, Bobcats, Virginia Opossums, Gray Foxes, Eastern Coyotes
Amphibians and Reptiles	Red Rat Snakes, Box Turtles

3.4.3.1.2 Environmental Impacts

The Migratory Bird Treaty Act (MBTA) of 1918 establishes federal responsibilities for the protection of nearly all species of birds, their eggs, and nests. The MBTA makes it illegal for people to "take" migratory birds, their eggs, feathers or nests. "Take" is defined in the MBTA to include, by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing, or transporting any migratory bird, nest, egg, or part thereof. The Bald and Golden Eagle Protection Act affords additional protection to all bald and golden eagles.

In total, 836 bird species are protected by the MBTA, 58 of which are currently legally hunted as game birds. A migratory bird is any species or family of birds that live, reproduce, or migrate within or across international borders at some point during their annual life cycle.

This EIS analyzes potential impacts to both songbirds, raptors, and game birds (see Table 3.4-4) and to those bird species designated as federally-listed, state-listed, and ANF-sensitive species (see Section 3.4.4, Tables 3.4-5 and 3.4-6). In addition, the *2010 Annual Monitoring and Evaluation Report for National Forests in Florida* (USDA 2011b) was reviewed to better understand population trends for breeding bird populations in the ANF. According to the 2010 report "most populations of Management Indicator Species for which the USFS has adequate monitoring data are either stable or increasing." The bird species addressed in the 2010 annual monitoring report include the northern bobwhite quail (*Colinus virginianus*), southern bald eagle (*Haliaeetus l. leucocephalus*), pileated woodpecker (*Dryocopus pileatus*), prothonotary warbler (*Protonotaria citrea*), southeastern kestrel (*Falco sparverius*), wild turkey (*Meleagris gallopavo*), Bachman's sparrow (*Aimophila aestivalis*), wood stork (*Mycteria americana*), red-cockaded woodpecker (*Picoides borealis*), Florida scrub jay (*Aphelocoma coerulescens*), and Florida sandhill crane (*Grus canadensis pratensis*). Since Alternative 1 will not involve any additional clearing of forest habitat within the ANF, the Proposed Action would not have any measurable effects on the breeding bird population trends described in the 2010 report.

Other potential occasional impacts to birds from implementation of either Alternative 1 or Alternative 3 could include injuries or deaths caused by birds striking the utility poles or power lines while in flight. As detailed in Section 2.2.1, transmission line poles would vary in height from 80 to 120 feet and would be spaced at a distance of 700 to 800 feet with a mid-span clearance of 27 to 28 feet above the ground. Because the transmission wires for the proposed project will be at or near the same height as the top of the forest canopy, implementation of Alternative 1 should not have any measurable negative impacts on songbirds or other breeding bird species that occupy the ANF along the proposed ROW. Sub-canopy bird species that primarily live in the forest understory will fly beneath the transmission line wires and around the poles, just as they fly around tree trunks in the forest. Super-canopy bird species, such as soaring raptors, will primarily fly above the transmission wires. Mitigation measures for avoiding/minimizing impacts from bird strikes are provided in Section 3.4.3.4.

The construction of either Alternatives 1 or 3 would result in the long-term conversion of woody vegetation communities to herbaceous habitat, thereby displacing general wildlife species requiring forested habitat. However, this impact is expected to be negligible given that these species would likely move to adjacent undisturbed habitat. General wildlife species would be disturbed and displaced by human activity and noise during the construction process. However, these impacts would be primarily short-term during construction. Following construction, wildlife utilizing herbaceous habitats would be expected to reoccupy the restored transmission ROW. Human activity associated with long-term maintenance of the ROW would result in periodic, temporary displacement of wildlife, especially songbirds, in adjacent habitats. However, this impact would be short in duration, occurring only when maintenance vehicles traverse the ROW. After the maintenance vehicles leave the ROW, displaced wildlife would likely return to their previously occupied habitats.

Because 80% of the total length of the Alternative 1 ROW would be located within the previously cleared temporary workspace of the FGT utility corridor, this alternative would result in less

new clearing of woody vegetation than Alternative 3 (see Tables 3.4-1 through 3.4-3). However, long-term operation of Alternative 1 would result in the widening of the existing 80-foot FGT utility corridor to a total combined width of 140-feet for the life of the SUP.

As stated in Section 3.4.2.1.2, the long-term maintenance of the Alternative 1 ROW and tap station would result in the removal of 50.14 acres of land from forestry management from the ANF. To compensate for the long-term impact of removing forested land from the ANF that could be used by general wildlife species, the City would acquire land to be added to the ANF. The land acquired would have a vegetative community similar to what is being placed under the SUP.

In general, forest fragmentation has a negative impact on the existing quality of wildlife habitat by creating potential barriers to movement for some species and potentially increasing predation rates. In particular, fragmentation potentially can effect local populations of salamanders, toads, and frogs. Many of these amphibian species require forested migratory access to breeding ponds to maintain viable populations. The conversion of forested habitat to maintained (i.e., non-forested) linear utility lines could be a barrier to amphibian populations reaching their historic breeding ponds. For example, a population of salamanders occupying upland habitat on the north side of a proposed utility line ROW may be cut off from their breeding ponds on the south side of the ROW after utility line construction has been completed. This potential impact is dependent upon the width of the non-forested portion of the newly constructed ROW and the species of amphibians that live along the proposed ROW; that is, different species of amphibians have different tolerances as to the width of non-forested habitat that they will cross to reach their historic breeding ponds.

The implementation of Alternative 1 would increase the permanent non-forested width of the ROW through the ANF from the present 80 feet to 140 feet. However, construction of the proposed project is not expected to result in measurable impacts to the diversity and abundance of the amphibian populations or the general wildlife community in the vicinity of either alternative because of the implementation of the mitigating measures for avoiding/minimizing potential impacts to wildlife populations described in Section 3.4.3.4 and the striped newt discussed in Section 3.4.4.4.

3.4.3.2 Alternative 3

Due to greenfield construction and less co-location opportunities, the Alternative 3 ROW and tap station would require more clearing of forested vegetation than the Alternative 1 ROW (90.04 acres versus 9.22 acres; see Tables 3.1-1 and 3.4-1 through 3.4-3), thereby displacing general wildlife species requiring forested habitat to a greater extent than Alternative 1. However, this impact is expected to be negligible given that these species would likely move to adjacent undisturbed habitat.

Because Alternative 3 is co-located with existing linear features (see Table 3.1-2) and would require widening of said corridors, forest fragmentation impacts, as described in Section 3.4.3.1 could affect amphibian populations or the general wildlife community in the vicinity of Alternative 3. However, because Alternative 3 is located entirely outside of the ANF, it is not surrounded by contiguous forest to the extent of Alternative 1, therefore, forest fragmentation effects would likely be less for Alternative 3 when compared to Alternative 1.

3.4.3.3 No Action Alternative

The No Action Alternative would not result in any injuries to or deaths of migratory birds caused by utility pole or power-line strikes. This alternative would also not result in any disruption or displacement of existing wildlife populations caused by clearing forested habitat or by human activity and noise associated with transmission line construction and maintenance activities. The existing diversity and abundance of wildlife populations would not be affected by this alternative.

3.4.3.4 Mitigation Measures for Common Wildlife

If the Proposed Action is implemented, the City will implement the following mitigation measures to avoid or minimize potential adverse impacts on wildlife species/populations:

- Provide "avian-safe" transmission structures, which are defined as structures that provide adequate clearances between energized and grounded parts to accommodate large birds.
- Reseed any temporarily disturbed areas with a native seed mix acclimated to the project elevation and climate to avoid habitat alterations that could adversely affect prey availability.
- Avoid intentional harm to and professionally removing (using experienced biological personnel) individual wildlife species that are encountered during construction, if necessary. If required for a particular species, the project biologist will possess the required handling permits or authorizations to handle said species.
- Implement a "no-kill" policy, especially with regard to snakes, to avoid the inadvertent take of the eastern indigo snake and Florida pine snake (see further discussion of threatened and endangered species in Section 3.4.4).
- Provide funding for monitoring within the ANF to determine if the increased width of the utility corridors is creating a barrier to movement in amphibian populations.
- Acquire lands, with a vegetative community similar to what is placed under the SUP, to be added to the ANF to compensate for the long-term impact of removing 50.14 acres of forested land from the ANF which could be used by general wildlife species requiring woody habitats.

3.4.4 Threatened and Endangered Species and Forest Service Sensitive Species

This section describes federally threatened and endangered species (Table 3.4-5), Forest Service Sensitive Species, and state-threatened species and species of special concern (Table 3.4-6) in the vicinity of Alternatives 1 and 3; the potential impacts of the alternative routes, as well as the No Action Alternative, on these species; and proposed mitigating measures to avoid or minimize these potential impacts. The term "Forest Service Sensitive Species" is defined below. No species-specific surveys were conducted to prepare this section of the EIS.

The federal ESA of 1973 (as amended, 16 United States Code [U.S.C.] 1531 et seq.), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, as amended, and USFS policies require that federal land be managed to protect and improve habitat for threatened and endangered species and otherwise protected species (i.e., bald and golden eagles). In addition to preparation of this EIS, a stand-alone BA is required to assess effect determinations on species within the ANF. The BA for the SWTL Project is on file in the project record and available for review on request. Because Alternative 3 would not traverse the ANF, it is not addressed in the BA.

Table 3.4-5
Federally Listed Species[(a)] Potentially Occurring in the Proposed Alternative 1 and Alternative 3 Rights-of-Way

Common Name	Scientific Name	Federal Status
Mammals		
Gray Bat	*Myotis grisescens*	Endangered
Birds		
Red-cockaded Woodpecker	*Picoides borealis*	Endangered
Wood Stork	*Mycteria americana*	Endangered
Amphibians and Reptiles		
Eastern Indigo Snake	*Drymarchon corais couperi*	Threatened
Frosted Flatwoods Salamander	*Ambystoma cingulatum*	Threatened
Gopher Tortoise	*Gopherus polyphemus*	Proposed
Striped Newt	*Notophthalmus perstriatus*	Proposed
Plants		
American Chaffseed	*Schwalbea americana*	Endangered
Fringed Campion	*Silene polypetala*	Endangered
Chapman's Rhododendron	*Rhododendron chapmanii*	Endangered
Harper's Beauty	*Harperocallis flava*	Endangered
Cooley's Meadowrue	*Thalictrum cooleyi*	Endangered

Note: (a) Federal status refers to the current rank by the United States Fish and Wildlife Service (USFWS 2009, 2011a, and 2011b).

Table 3.4-6
Forest Service Sensitive Species Potentially Occurring in the Proposed Alternative 1 and Alternative 3 Rights-of-Way

Common Name	Scientific Name	State Status [(a)]
Mammals		
Florida Black Bear	*Ursus americanus floridanus*	Threatened [(b)]
Rafinesque's Big-Eared Bat	*Corynorhinus rafinesquii*	Not Listed
Round-tailed Muskrat	*Neofiber alleni*	Not Listed
Sherman's Fox Squirrel	*Sciurus niger shermani*	Special Concern
Birds		
Bachman's Sparrow	*Aimophila aestivalis*	Not Listed
Bald Eagle [(c)]	*Haliaeetus leucocephalus*	Not Listed
Amphibians and Reptiles		
Apalachicola Dusky Salamander	*Desmognathus apalachicolae*	Not Listed
Apalachicola King Snake	*Lampropeltis getulus goini*	Not Listed
Florida Gopher Frog	*Rana capito aesopus*	Special Concern
One-toed Amphiuma	*Amphiuma pholeter*	Not Listed
Florida Pine Snake	*Pituophis melanoleucus mugitus*	Special Concern
Suwannee Cooter	*Pseudemys concinna suwannienis*	Special Concern
Insects		
Arogos Skipper	*Atrytone arogos*	Not Listed
Say's Dragonfly	*Cordulegaster sayi*	Not Listed
Belle's Sand Clubtail	*Progomphus bellei*	Not Listed
Calvert's Emerald	*Somatochlora calverti*	Not Listed
Plants		
Bent Goldenaster	*Pityopsis flexuosa*	Endangered
Coastal Plain Wild Indigo	*Baptisia simplicifolia*	Threatened

Notes:
(a) State status refers to the current Florida Fish and Wildlife Conservation Commission (for animals [FWC 2011b]) and the Florida Department of Agriculture and Consumer Services (for plants [FDACS 2011]) protective status.
(b) The black bear is state-listed as threatened except for those found in Baker and Columbia Counties and in the ANF.
(c) The bald eagle is protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

Where applicable, the USFWS's findings during Section 7 Consultation under the ESA for certain species analyzed for the FGT Project are referenced herein.

The BA addresses a total of 30 species. Twelve of these species are federally endangered or threatened species or proposed species and were identified as requiring evaluation in this EIS due to their inclusion on the ANF PETS List or on the USFWS Leon and Wakulla county lists (USFWS 2011a and 2011b), or because they were previously evaluated in the FGT FEIS (FERC 2009) and are on Florida's "Regulated Plant Index" (Coile and Garland 2003) (see Table 3.4-5). The remaining 18 species are "Forest Service Sensitive Species" which were identified as requiring evaluation in this EIS due to their inclusion on the ANF PETS List or because they are state-protected plant species that were previously evaluated in the FGT FEIS (FERC 2009) and are on Florida's "Regulated Plant Index" (Coile and Garland 2003) (see Table 3.4-6). The same 30 species addressed in the BA and shown in Tables 3.4-5 and 3.4-6 are assessed herein for potential impacts under the proposed ROW for Alternative 1 (Section 3.4.4.1) and Alternative 3 (Section 3.4.4.2).

No new surveys were conducted for the purposes of preparing this EIS. Information presented in this document was obtained through review of existing information regarding the habitat and population status for the species listed in Tables 3.4-5 and 3.4-6 as potentially occurring in the vicinity of Alternatives 1 and 3 (including the summary of threatened and endangered species impacts for the FGT FEIS). In addition, GIS analyses, interpretation of aerial photos, and an FNAI Standard Data Report were obtained and evaluated to determine historical, documented element occurrences and to confirm the presence or absence of potential habitat for some species in the vicinity of Alternatives 1 and 3. No critical habitat for any federally listed plant or animal species has been designated within the proposed ROWs or tap stations for either alternative. Therefore, this EIS does not discuss the destruction or adverse modification to designated critical habitat.

3.4.4.1 Alternative 1 (Preferred Alternative)

3.4.4.1.1 Affected Environment

Federally Listed Species

Mammals

Gray Bat (*Myotis grisescens*). The gray bat is listed as endangered by both the USFWS and the FWC. The gray bat roosts in caves almost exclusively and forages over creeks, rivers, and lakes surrounded by forests. In Florida, the FWC reports that the gray bat is limited to a few caves north of Marianna County.

The Alternative 1 ROW would not impact any caves that would provide potential primary roosting habitat for the gray bat. Further, the FNAI Standard Data Report does not show any documented element occurrences of the gray bat within or adjacent to the proposed Alternative 1 ROW. Implementation of Alternative 1 would have NO EFFECT on the gray bat.

Birds

Red-Cockaded Woodpecker (*Picoides borealis*). Both the FWC and the USFWS list the red-cockaded woodpecker (RCW) as endangered. RCWs are relatively small woodpeckers distributed throughout the southeastern United States from Florida north to Virginia and west to eastern Texas. RCWs are habitat specialists, occupying only mature, open pine forests consisting of either longleaf pine from 80 to 120 years old or loblolly pine from 70 to 100 years old. Cooperative breeding groups need about 200 acres of forest for foraging. Suitable forests have a low density of small pines, no hardwood or pine mid-story, and usually have abundant native grasses and forbs as groundcover.

FGT received correspondence in 2008 from the USFWS indicating that active RCW cavity trees and colonies are known to occur along FGT's existing ROW in the ANF from about milepost (MP) 426

to east of MP 428 (FGT 2009). In response, FGT conducted species-specific surveys for RCWs in accordance with the survey protocol outlined in the USFWS Recovery Plan for RCWs to determine the presence of suitable nesting and/or foraging habitat during 2008 and early 2009. No active cavity trees or colonies were identified during FGT's surveys within 200 feet of the FGT Project ROW in the ANF (FGT 2009).

Recent (September 2011) USFS RCW survey results identified two RCW trees/colonies located within 200 feet of the Alternative 1 ROW (see Figure 3.4-1). Colony A includes one potential RCW nest tree located at the northern edge of the proposed Alternative 1 ROW, which is identified in the USFS RCW Database as Tree # 6296 (Hess 2011; see Figure 3.4-1). Colony B also includes one potential RCW nest tree located south of the proposed Alternative 1 ROW, which is identified in the USFS RCW Database as Tree # 12516 (Hess 2011; see Figure 3.4-1).

In order to avoid potential impacts to these two RCW colonies and potential nest trees, the City would use existing access roads, which are outside of identified RCW colonies. In addition, work would be scheduled to occur outside the RCW's primary nesting season (May 1 to July 31) for areas within the 200-foot Alternative 1 ROW buffer that would overlap the two RCW colony boundaries shown on Figure 3.4-1. The City also may choose to employ a USFS biologist to perform cluster monitoring to ascertain if a breeding pair is present in these two colonies. If a breeding pair is present, work would discontinue from May 1 until fledging has occurred (which could occur before July 31), allowing operations to continue within the buffer zone(s). If it is determined that the cluster(s) in question is (are) occupied by a single male, and there is no breeding potential, operations could again continue before July 31 after the concurrence from the USFS biologist to proceed.

Based on the City's agreement to avoid any potential construction-related impacts to nesting RCWs (or to retain a USFS biologist to conduct monitoring until fledging has occurred) and implementation of a variety of mitigating measures to avoid/minimize potential RCW impacts, as detailed in Section 3.4.4.4, it is determined that Alternative 1 is NOT LIKELY TO ADVERSELY AFFECT the RCW or its foraging habitat.

M:\Tallahassee\SWTL\3108_SWTL\mxd\Final Figures\Figure 3.4-1 RCW Colony.mxd

- RCW trees
- RCW colonies
- Utility Line 200 foot buffer
- Alternative 1 ROW
- Apalachicola National Forest

Figure 3.4-1
Red-cockaded Woodpecker Colonies and Trees within 200 feet of the Alternative 1 ROW
Southwestern Transmission Line
City of Tallahassee Electric Utilities, Florida

N

0 1,000 2,000 Feet

Data Source: USFS, 2011, Exhibit entitled "Potential Striped Newt Ponds and RCW Trees within ½ Mile of Proposed Utility Corridor".

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Wood Stork (*Mycteria americana*). The wood stork is listed as endangered by both the FWC and the USFWS. Wood storks are large wading birds occurring in Florida, Texas, Central America, and South America. Currently, the breeding population is located in Florida, Georgia, and coastal South Carolina. Wood storks use wetlands for both foraging and nesting habitat. Potential foraging areas include freshwater marshes, stock ponds, shallow roadside ditches, shallow tidal creeks and pools, managed impoundments, and depressions in cypress swamps. Wood storks feed primarily on fish, but can opportunistically feed on arthropods and crustaceans, as well as small amphibians, mammals, reptiles, and birds. Nesting is colonial and colonies may be used for many years. For nesting, wood storks require medium to tall trees, either within a swamp, or on an island surrounded by open water.

The USFWS's August 14, 2009, Section 7 Consultation response letter for the FGT Project states: "In the Florida panhandle, Loop 5 of the proposed pipeline expansion is within the 13-mile Core Foraging Area (CFA) of three active wood stork colonies in Leon County, Florida. No direct impacts to wood stork colonies will occur as a result of the project. FGT will restore all wetland areas crossed by the proposed corridor to pre-construction elevations. Hydrologic connections between wetland areas will also be restored. Therefore, the Service concurs that the proposed work is NLAA the wood stork along Loop 5" (i.e., within the ANF). Loop 5 of the FGT Project is the loop located within the ANF and includes the temporary construction ROW proposed for use as the permanent ROW in association with Alternative 1.

Alternative 1 would not directly impact any wetland areas or hydrologic connections that could support wood stork foraging, roosting, or nesting habitat because no forested wetlands would be cleared for construction or operation. All non-forested wetlands along the ROW would be spanned by the transmission line, and structures would be located outside wetlands. Although CFA is known to occur within 13 miles of the Alternative 1 ROW, any wood storks foraging in the vicinity of the ROW during the time of construction would likely avoid the area until construction is completed. Implementation of Alternative 1 would have NO EFFECT on the wood stork.

Amphibians and Reptiles

Eastern Indigo Snake (*Drymarchon corais couperi*). The eastern indigo snake is listed as threatened by both the USFWS and the FWC. Declines have been attributed to over-collecting for the domestic and international pet trade and loss of habitat to development and agriculture. The eastern indigo snake is a large, black, non-venomous snake found in the southeastern United States. It is widely distributed throughout central and south Florida and in southern Alabama, but primarily occurs in sandhill habitats in northern Florida and southern Georgia.

The eastern indigo snake is a terrestrial predator that will eat any vertebrate small enough to be overpowered. It is most active during the summer and fall months. In the northern part of its range, including the Florida Panhandle, the eastern indigo snake is dependent on the deep burrows dug by federally proposed gopher tortoises (*Gopherus polyphemus*) and uses them as a refuge from extreme hot and cold temperatures.

During construction activities, the Alternative 1 ROW could have temporary impacts on the eastern indigo snake if species displacement occurs from suitable foraging, burrowing, resting, or wintering habitat. However, because eastern indigo snakes use a variety of habitats, Alternative 1 is not expected to result in any measurable long-term loss or contribute to any cumulative loss of habitat for the eastern indigo snake.

Whenever possible, the City would avoid clearing or disturbing active or known gopher tortoise burrows. Direct mortality of eastern indigo snakes is unlikely, as this mobile species would likely avoid the proposed ROW during active construction, but could occur due to impact with vehicles or construction equipment. Based on the implementation of the special habitat and species protective measures described in Section 3.4.4.4, Alternative 1 is NOT LIKELY TO ADVERSELY AFFECT the eastern indigo snake.

Frosted Flatwoods Salamander (*Ambystoma cingulatum*). The flatwoods salamander is listed as threatened by both the USFWS and the FWC. The FWC recently modified the status of the flatwoods salamander based on morphological and molecular studies that concluded there are two separate species recognized rather than the monotype that is currently protected. Species populations found east of the Apalachicola River in Florida, and thus in the geographic area where the project is located, are recognized as the frosted flatwoods salamander. Species populations west of the Apalachicola River and outside the geographic area where the project would be located are recognized as the reticulated flatwoods salamander.

Based on information contained in the 2009 FGT FEIS, the proposed Alternative 1 ROW does not provide any habitat for the frosted flatwoods salamander. Additionally, the FNAI Standard Data Report does not reveal any documented element occurrences of the flatwoods salamander within at least 1 mile of the proposed Alternative 1 ROW. Finally, during meetings with City of Tallahassee representatives and the USFS (USFS 2011a), the USFS stated that the flatwoods salamander does not occur in the area and therefore is of no concern for the Alternative 1 (USFS 2011a). Implementation of the construction of Alternative 1 would have NO EFFECT on the flatwoods salamander.

Gopher Tortoise (*Gopherus polyphemus*). The gopher tortoise is listed as threatened by the FWC and is now listed by the USFWS as Proposed. The gopher tortoise is a relatively large terrestrial turtle with a domed carapace, short hind legs, shovel-like forelimbs, angular projection from the anterior plastron, and a short tail. The anterior surface of the flattened forelimb is covered with seven to eight rows of large scales. Often the surface of the carapace is quite smooth in adults, reflecting the abrasion it receives as an individual repeatedly enters or exits its burrow.

The gopher tortoise is a resident, non-migratory reptile in Florida that feeds primarily on grasses and other herbaceous plants. It most often lives on well-drained sandy soils in transitional (forest and grassy) areas. It is commonly associated with a pine overstory and an open understory with a grass and forb (non-woody) groundcover and sunny areas for nesting. Gopher tortoises can sometimes be found in more marginal habitats such as roadsides, ditch banks, utility and pipeline ROWs, pastures, and even marginal wetland habitat, especially if their preferred habitat has been lost.

Area reduction (habitat loss and fragmentation) and habitat degradation are two of the greatest threats on the gopher tortoise. Any development that fragments a population and/or creates a barrier to the natural movement of gopher tortoises would likely negatively impact that population. Other threats to this species include hunting and trapping, and mortality from traffic on roads. Gopher tortoises and suitable habitat with active and inactive burrows were identified during FGT's 2009 pre-construction field reconnaissance surveys (FGT 2009).

Potential direct effects on the gopher tortoise include temporary displacement from otherwise suitable foraging or nesting habitats during construction activities. Construction of the proposed project facilities may result in a loss or alteration of some suitable habitat. Long-term implementation of Alternative 1 would result in the maintenance of good quality habitat within the utility corridor since the gopher tortoise prefers open ground conditions.

Additionally, if construction occurs during the active nesting season, noise and activity from construction could potentially disturb or disrupt any nearby nests. Direct mortality of adults could occur due to impact with vehicles or equipment. Gopher tortoises may attempt to move from the construction area by crossing roads and would be at higher risk of impact from increased vehicle traffic. Because tortoises are slow-moving, they are at risk from impact with construction vehicles and equipment within the project construction area. However, the City would use existing roadways and the increase in vehicular traffic would be minimal. The City also would instruct employees that they are prohibited from intentionally harming any wildlife, including gopher tortoises.

Mass relocation of gopher tortoise individuals, which was required for the FGT Project, may not be necessary for the SWTL Project for several reasons. Currently, there are few, if any, gopher tortoise burrows on the existing FGT ROW because individuals have not yet moved back to the area due to absence of vegetative cover (USFS 2011a). Secondly, the absence of major grading for the Alternative 1 ROW may make avoidance of burrows, rather than relocation of individuals, an option.

The City would conduct comprehensive gopher tortoise field surveys by an FWC-approved authorized gopher tortoise agent (i.e., Authorized Agent) prior to the start of construction on the project in accordance with the FWC's Gopher Tortoise Permitting Guidelines (FWC 2011a). As required in these guidelines, the City would obtain the appropriate gopher tortoise permits from the FWC prior to the start of construction, based on the survey findings. The City would employ reasonable and prudent measures to avoid harm to gopher tortoises during project construction by either: avoiding all construction-related activity within 25 feet of the mouths of gopher tortoise burrows; by relocating gopher tortoises from burrows that cannot be avoided during construction or by structure placement; or by relocating gopher tortoises out of the active work areas to suitable habitats where they would be released unharmed, if necessary. An Authorized Agent would be on site during relocation and construction activities. The City would record any mortality of gopher tortoises during relocation and construction activities and would submit monthly reports to the appropriate USFWS and/or USFS offices during the relocation and construction period. The City would prepare and submit a final project report to the USFS and FWC once all gopher tortoise relocation and construction activities are completed. All activities associated with the handling and/or relocation of gopher tortoises would be in accordance to the FWC's Gopher Tortoise Permitting Guidelines (FWC 2011a).

The FNAI Standard Data Report shows several documented element occurrences of the gopher tortoise within 0.5 mile of the proposed Alternative 1 ROW. Even though the proposed Alternative 1 ROW was recently (2009-2010) disturbed by the FGT Project and there are currently no known additional or new burrows on the proposed Alternative 1 ROW, the City would perform the required gopher tortoise surveys prior to the commencement of construction. In addition, the City would implement mitigating measures as described in Section 3.4.4.4 designed to avoid and minimize potential impacts to gopher tortoise habitat and individuals. Implementation of Alternative 1 is NOT LIKELY TO JEOPARDIZE THIS SPECIES OR ADVERSELY MODIFY PROPOSED CRITICAL HABITAT for the gopher tortoise.

Striped Newt (*Notophthalmus perstriatus*). The striped newt is considered rare in Florida by the Special Committee on Amphibians and Reptiles (Florida Committee on Rare and Endangered Plants and Animals) and is now listed as Proposed by the USFWS.

The striped newt is known to occur only from southeast Georgia and northern Florida, west to Tallahassee and south to Orlando. Striped newts are found discontinuously throughout this range and are restricted in occurrence to two types of isolated ephemeral ponds without predatory fish. The first type is sinkhole ponds (ephemeral ponds) in high pine (i.e., sandhills). The second type is cypress and bay ponds in pine flatwoods. In the northern peninsula of Florida, the striped newt is found in seasonal ponds and cypress bay heads.

The terrestrial stage of the striped newt is considered a typical resident of the high pine community, but is rarely observed except during fall and winter rains when it moves to and from its breeding ponds. Eggs are laid in March, hatchlings appear in April, but can be found as late as December.

During a site reconnaissance on December 16, 2010 performed by Ecology and Environment, Inc., the City, and the USFS to review the portion of proposed Alternative 1 within the ANF, the USFS identified an ephemeral pond approximately at MP 1.98 of the Alternative 1 ROW that was originally located within the FGT Project construction ROW. To avoid impacts to this pond, FGT narrowed the temporary ROW (and restricted clearing of trees) by approximately 10 to 15 feet for approximately 80 feet.

The FNAI Standard Data Report identifies 11 documented element occurrences of striped newts within 0.5 mile of the Alternative 1 ROW. However, it should be noted that the date of the latest of these documented element occurrences is the year 2000. In addition, recent information provided by both the USFWS (Mitchell 2011) and the USFS (2011a) confirms that the striped newt has not been documented or observed in the ANF in more than 10 years.

The effects of degraded habitat have been shown to disrupt metapopulation dynamics in several amphibian species. The term metapopulation is defined as a group of spatially separated populations of the same species which interact at some level. However, the USFS has no current data to indicate which landscape features (such as the width of linear ROWs) hinder natural metapopulation patterns for many of the pond-breeding amphibians. The Alternative 1 ROW would require permanent widening of a corridor through the middle of the only remaining habitat in the ANF for the striped newt. The impact of these activities has not been studied in southern landscapes although there are known examples of corridors affecting movement in salamanders of the Appalachians. Many related questions remain unanswered for these species, including whether there is any semblance of a functioning metapopulation, what natural levels of migration are, and the amount of genetic diversity that may even remain. These characteristics are fundamental for any long-term population, as genetic variation is essential for an organism's long-term persistence and ability to adapt to environmental change. Moreover, the loss of genetic diversity is often associated with inbreeding depression, physical and developmental abnormalities, and an overall reduction in reproductive fitness. For many of the pond-breeding amphibians it has been difficult to discern population size and virtually impossible to discern the extent of dispersal and subsequent gene flow (Rothermel 2004; deMaynadier and Hunter 1999). As described in Section 3.4.4.4, the City will fund project monitoring to determine if the increased width of the utility corridor creates a barrier to striped newt movement in populations. A variety of population genetic methods have been developed to address this issue. Microsatellites are highly variable repeats in the nuclear genome that will allow inferences to be made about population structure. This information will allow the USFS to estimate levels of local genetic variation, the potential kinship structure of local populations, genetic effective sizes, and the rate of reciprocal migration between populations. A variety of methods are available for estimating effective population sizes. Because the existing striped newt population is too small in number to be used to conduct this monitoring, a surrogate species may be available to measure the impact of the corridor since the USFS have long-standing examples to compare the effect of both narrow and wide corridors. The City also would fund habitat improvement activities surrounding 33 potential and confirmed striped newt ponds within 0.5 mile of the utility corridor. These activities include the removal of undesirable woody vegetation using chainsaws, herbicide applications, and prescribed burning to improve striped newt habitat. The habitat improvement actions needed and herbicide treatments were analyzed and approved in the January 2010 Gopher Tortoise Habitat Improvement Environmental Assessment (USDA 2009) which was a previous NEPA decision that is not a part of this analysis for Alternative 1. Implementation of the Alternative 1 is NOT LIKELY TO JEOPARDIZE THIS SPECIES OR ADVERSELY MODIFY PROPOSED CRITICAL HABITAT for the striped newt.

Plants

American Chaffseed (*Schwalbea americana*). American chaffseed is listed as endangered by the FWC, the USFWS, and the FDACS. American chaffseed is a perennial herb with an erect, usually unbranched, hairy stem to 2 feet tall. It occurs in sandy (sandy peat, sandy loam), acidic, seasonally moist to dry soils. This species is generally found in habitats described as pine flatwoods, fire-maintained savannas, ecotonal areas between peaty wetlands and xeric sandy soils, and other open grass-sedge systems. American chaffseed appears to be shade intolerant and, therefore, occurs in areas maintained in an open to partially open condition. The species was once known from nine counties in north and central Florida, however, only one population in Leon County has survived. This population occurs on private land.

The FNAI Database indicates that no documented element occurrences of American chaffseed have been identified within 1 mile of the proposed Alternative 1 ROW. In addition, this plant was not observed during FGT's 2009 field surveys within the ANF, which covered the area potentially affected by Alternative 1.

Alternative 1 would not be constructed across any known or survey-identified populations of American chaffseed. In addition, the Alternative 1 ROW and tap station would not traverse habitat for this species. Also, standard ROW maintenance designed to curtail the encroachment of woody species actually would increase the amount of unshaded potential habitat for the shade-intolerant American chaffseed. Implementation of the Alternative 1 would have NO EFFECT on the American chaffseed.

Fringed Campion (*Silene polypetala*). Fringed campion is listed as endangered by the FWC, the USFWS, and the FDACS. Fringed campion is a perennial herb, spreading by runners, rooting at nodes in the leaf litter, and forming mats. Flowers are up to 3 inches across, pale pink, with five deeply fringed petals. Fringed campion inhabits hardwood forests on slopes and stream terraces, usually mid- to lower slopes, over low-acid soils. This species is restricted to the Florida Panhandle near the Apalachicola River in Jackson and Gadsden Counties. There are seven known populations of fringed campion in Florida, all on conservation lands. Its habitat has been destroyed throughout its range by clear cutting; it also is threatened by exotic species, such as nandina (*Nandina domestica*) and Japanese honeysuckle (*Lonicera japonica*), which out-compete fringed campion.

In FGT's review of FNAI records, the fringed campion was not reported as occurring within 5 miles of the FGT Project's ROW (FGT 2009). Also, no incidental observations of this species occurred during FGT's March and June 2009 field surveys (this species flowers from mid-March to May) along portions of the FGT ROW (Loop 5) within the ANF (FGT 2009). In addition, according to information provided in the FNAI Standard Data Report, Alternative 1 would not cross any known populations of fringed campion. Finally, there would be no clearing of hardwood forests on slopes and stream terraces within the proposed ROW, and the proposed Alternative 1 tap station consists of coniferous, not hardwood forest habitat. Implementation of Alternative 1 would have NO EFFECT on the fringed campion.

Chapman's Rhododendron (*Rhododendron chapmanii*). Chapman's rhododendron is listed as endangered by the FWC, the USFWS, and the FDACS. Chapman's rhododendron is a shrub approximately 2 to 9 feet tall, with stiff, erect branches tipped by terminal buds. Young twigs, buds, and leaves are covered with small, round, rust colored scales. Leaves are 1 to 3 inches long, evergreen, alternate, wider above the middle, usually with in-rolled margins. Flowers are pink in showy clusters at the tips of the branches. Each flower is approximately 0.5 to 1.5 inches long, with five lobes, and 10 stamens about the same length as the petals. Fruit is an elongated capsule about 0.5-inch long, present nearly year-round, and covered with rusty scales.

Chapman's rhododendron typically occurs in the ecotone between upland sandhills and floodplain swamps or bogs. They also may grow within mesic pine flatwoods or on the lower elevations of the sandhills. The species requires acidic sandy soils with some organic matter, good drainage with no chance of flooding, and a water table near the surface. Full sun to moderate shade appears to be optimum growing conditions, but the species will tolerate heavy shade once the plants are mature. Fire is historically common in sandhill and flatwood communities and Chapman's rhododendron is known to resprout prolifically following a burn.

Chapman's rhododendron is endemic to Florida. There are three separate populations of this species: one in Clay County, the second in Gulf County, and the third on the county line of Gadsden and Liberty Counties. At the present time, all known populations of Chapman's rhododendron are on private timber lands.

According to information provided by the FNAI Standard Data Report, Alternative 1 would not cross any known populations of Chapman's rhododendron. In addition, FGT did not identify Chapman's rhododendron during its March 2009 (flowers mid-March to mid-April) field surveys (FGT 2009). Neither the proposed Alternative 1 ROW nor the tap station consists of appropriate habitat for this species. Given both the lack of documented habitat for and the non-presence of Chapman's rhododendron within the proposed ROW, implementation of Alternative 1 would have NO EFFECT on the Chapman's rhododendron.

Harper's Beauty (*Harperocallis flava*). Harper's beauty is listed as endangered by the FWC, the USFWS, and the FDACS. Harper's beauty is a perennial herb. Flowers stalk to approximately 2 feet tall and the plant is leafless except for three to five tiny bracts, with one flower per stalk. Flowers have six yellow, spreading sepals (three petals and three sepals), six stamens, and ovaries with three to six lobes.

Harper's beauty occurs in wet prairies; seepage slopes; pitcher-plant bogs, especially in transitions to shrub zones; and in nearby roadside ditches. It is endemic to Franklin and Liberty Counties in the Florida Panhandle. It also occurs in a small area within the ANF and its vicinity where 15 small populations are known and new observations confirm this plant in Calhoun and Leon Counties.

Harper's beauty was not observed during FGT's spring 2009 field reconnaissance surveys. In FGT's review of FNAI records, the Harper's beauty was not reported as occurring within 5 miles of the FGT Project ROW. No incidental observations of the species occurred during any of FGT's spring field surveys (this species flowers in May) (FGT 2009). Also, according to information provided in the FNAI Standard Data Report, Alternative 1 would not be constructed across any known populations of Harper's beauty. Neither the proposed Alternative 1 ROW nor the tap station consists of appropriate habitat for this species. Finally, standard ROW maintenance designed to curtail the encroachment of woody species, could actually increase the amount of unshaded potential habitat for the shade-intolerant Harper's beauty. Implementation of Alternative 1 would have NO EFFECT on Harper's beauty.

Cooley's Meadowrue (*Thalictrum cooleyi*). Cooley's meadowrue is listed as endangered by the FWC, the USFWS, and the FDACS. Cooley's meadowrue is a perennial herb with erect, smooth stems and grows to approximately 4 feet tall. Leaves are alternate, smooth, divided into numerous narrow, stalked leaflets about 1 inch long with two to three teeth at the tips. Cooley's meadowrue is typically found in wet pine savannas, grass-sedge bogs, and savanna-like areas with circum-neutral soils, in habitat kept open by frequent fire or other disturbance. The species is found on fine sandy loams that are at least seasonally, usually winter, moist or saturated and are only slightly acidic. Currently, Cooley's meadowrue is known from Florida, North Carolina, and Georgia. There is one known population of Cooley's meadowrue in Walton County, Florida.

Cooley's meadowrue was not observed during FGT's field reconnaissance surveys and this species was not reported as occurring within 5 miles of the FGT Project ROW (FGT 2009). Also, according to information provided in the FNAI Standard Data Report, Alternative 1 would not be constructed across any known populations of Cooley's meadowrue. Neither the proposed Alternative 1 ROW nor the tap station consists of appropriate habitat for this species. Implementation of Alternative 1 would have NO EFFECT on the Cooley's meadowrue.

Forest Service Sensitive Species

Mammals

Florida Black Bear (*Ursus americanus floridanus*). The Florida black bear is listed as threatened by the FWC in the state of Florida (except for those found in Baker and Columbia Counties or in the ANF). The Florida black bear is a subspecies of the American black bear that has historically ranged throughout most of Florida and southern portions of Alabama and Georgia. Florida black bears are typically large-bodied with shiny black fur, a light brown nose, and a short stubby tail. A white chest

patch is also common on many, but not all, of the bears. It is currently Florida's largest terrestrial mammal with an average male weight of 300 pounds, and a few have grown to more than 500 pounds. Florida black bears live mainly in forested habitats and are common in sand-pine scrub, oak scrub, upland hardwood forests, and forested wetlands (Defenders of Wildlife 2010). Potential habitat for the Florida black bear was noted on FGT's ROW through the ANF (FGT 2009).

The proposed Alternative 1 ROW consists of bare ground or minimum herbaceous vegetation. In addition, the proposed tap station is not preferred habitat for the Florida black bear. However, because the Alternative 1 ROW is surrounded by forested communities, the Florida black bear could potentially utilize habitat adjacent to the ROW. To minimize possible encounters between construction crews and Florida black bears potentially crossing the existing ROW during construction, the City will implement several mitigation measures, as detailed in Section 3.4.4.4. Implementation of Alternative 1 MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR A LOSS OF VIABILITY for the Florida black bear.

Rafinesque's Big-Eared Bat (*Corynorhinus rafinesquii*). Rafinesque's big-eared bat is primarily found along Florida's Gulf Coast and, as a result, would be only an infrequent visitor to the areas in the vicinity of Alternative 1. It is a mid-story flyer, therefore, if it is occasionally found in the vicinity of the Alternative 1 ROW, the transmission line should have no effect on the species.

The FNAI Standard Data Report does not show any documented element occurrences of the Rafinesque's big-eared bat within or adjacent to the Alternative 1 ROW. Implementation of Alternative 1 would have NO IMPACT on the Rafinesque's big-eared bat.

Round-tailed Muskrat (*Neofiber alleni*). This species, which is also known as the Florida water rat, prefers open marsh habitats with dense herbaceous vegetation.

The Alternative 1 ROW would not impact any marshes that provide preferred habitat for the round-tailed muskrat. Further, the FNAI Standard Data Report does not show any documented element occurrences of the round-tailed muskrat within or adjacent to the proposed Alternative 1 ROW. Implementation of Alternative 1 would have NO IMPACT on the round-tailed muskrat.

Sherman's Fox Squirrel (*Sciurus niger shermani*). In Florida, impacts of widespread development projects, hunting, and the establishment of pine monocultures (tree farms) have resulted in the loss or conversion of mature, fire-maintained pine-turkey oak sandhills, and pine flatwoods, all of which are the fox squirrel's primary habitats. Thus, the FWC has listed the fox squirrel as a Species of Special Concern while the USFWS is still completing its evaluation to determine whether the species should be listed under the federal ESA.

The FGT FEIS did not address any sightings or potential impacts to the Sherman's fox squirrel. No appropriate habitat for Sherman's fox squirrel is located within the Alternative 1 ROW and construction of the Alternative 1 tap station would not result in the clearing of woody vegetation that is appropriate habitat for this species within the ANF. Also, the FNAI Standard Data Report does not show any documented element occurrences of the Sherman's fox squirrel within at least 1 mile of the Alternative 1 ROW. Construction of the Alternative 1 ROW would not involve any additional clearing of preferred Sherman's fox squirrel habitats. However, preferred Sherman's fox squirrel habitats may be located adjacent to the Alternative 1 ROW and individuals occasionally may be found within the Alternative 1 ROW during construction. To minimize potential impacts to Sherman's fox squirrels that occasionally may be found within the Alternative 1 ROW during construction, the City would implement several mitigation measures, as detailed in Section 3.4.4.4. Therefore, implementation of Alternative 1 MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR A LOSS OF VIABILITY for the Sherman's fox squirrel.

Birds

Bachman's sparrow (*Aimophila aestivalis*). Bachman's sparrow is a shy and secretive sparrow of the dry prairie, inhabiting the fire-maintained open pine flatwoods of the ANF. This sparrow is endemic to the southeastern United States, with the densest breeding habitat in Florida and south-central Alabama. The breeding season lasts from early April to late July, with most pairs raising two or three broods in small ground nest depressions lined with animal hair and grass.

The FNAI Standard Data Report lists no documented element occurrences of the Bachman's sparrow within at least 1 mile of the proposed Alternative 1 ROW. In addition, its preferred managed pineland habitat is plentiful within the ANF and construction of the Alternative 1 tap station would not result in the clearing of open pine flatwoods within the ANF. Implementation of Alternative 1 MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR A LOSS OF VIABILITY for the Bachman's sparrow.

Bald Eagle (*Haliaeetus leucocephalus*). The bald eagle was state-listed in Florida as a threatened species, but was delisted by the FWC in 2008. Bald eagles also were delisted by the USFWS in 2007 due to the documented recovery of the population. Although bald eagles are no longer on the federal threatened and endangered species list, they are still protected under both the Bald and Golden Eagle Protection Act and the MBTA.

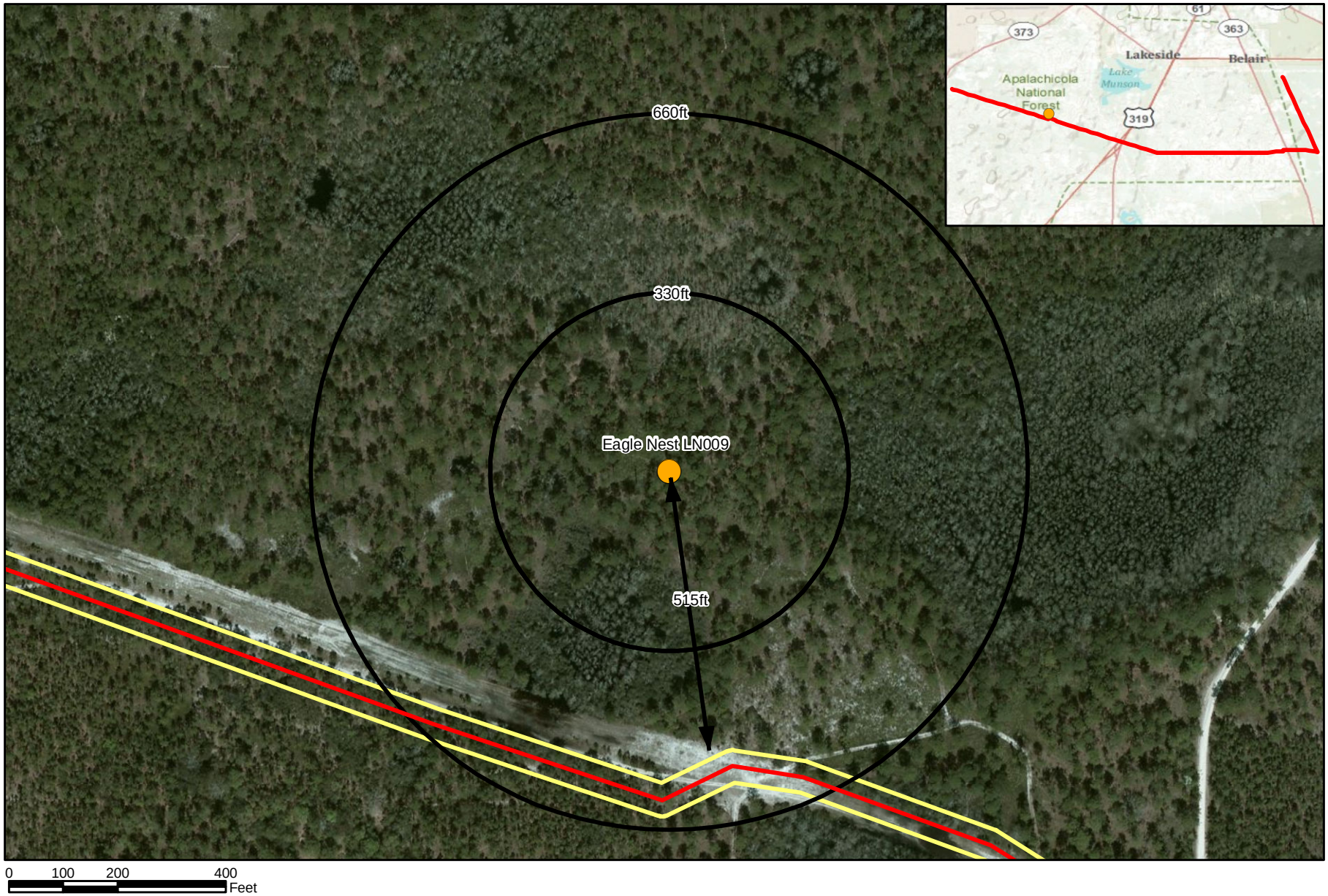
Bald eagles are large diurnal raptors distributed throughout much of North America. The species has the potential to occur anywhere in Florida, which has the largest breeding population of any state besides Alaska, but eagles are much less common in Florida's western Panhandle. Their nesting season is defined as October 1 to May 15.

During its 2008-2009 nesting surveys, FGT documented that an active bald eagle nest (i.e., nest LN009) was reported by the USFS approximately 330 feet north of the proposed pipeline construction footprint near MP 424 in the ANF (FGT 2009). The FNAI Standard Data Report also confirmed a documented element occurrence of the same nest. According to the FWC, bald eagle nest LN009 was last surveyed during the 2010 breeding season and was classified as an active nest (State of Florida 2010). This nest is located approximately 515 feet north of the northern edge of the proposed Alternative 1 ROW (see Figure 3.4-2). After federal delisting of the bald eagle, the USFWS's 2007 National Bald Eagle Management Guidelines recommended the establishment of a single buffer zone 660 feet or less from a bald eagle nest (FWC 2008).

Direct mortality of adult bald eagles is highly unlikely, but could occur due to impact with vehicles or equipment. Bald eagles are occasionally known to feed on carrion, including roadkill, and are therefore at higher risk of impact from increased vehicle traffic than many other birds. However, during both construction and maintenance activities, the City would use only existing roadways and would utilize a construction workforce of 30 personnel, resulting in negligible increases in vehicle traffic.

Because active bald eagle nest LN009 has been identified within the 660-foot primary buffer zone, the City has committed to implementing mitigating measures as described in Section 3.4.4.4 to avoid/minimize potential impacts to adult bald eagles and their young, including constructing outside the primary bald eagle nesting season (October 1 to May 15) or obtaining a Bald Eagle Disturbance Permit from the FWC if the City determines that construction would need to occur during the bald eagle nesting season. Implementation of Alternative 1 MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR A LOSS OF VIABILITY for the bald eagle.

Path: E:\3108_SWTL\mxd\Figures\eagle_nest.mxd



Proposed ROW
Proposed Centerline
Eagle Nest

Figure 3.4-2
Known Bald Eagle Nest Location
Southwestern Transmission Line
City of Tallahassee Electric Utilities, Florida

Data Source: Microsoft Virtual Earth, 2011
FWC, 2010

City of Tallahassee Your Own Utilities
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Amphibians and Reptiles

Apalachicola Dusky Salamander (*Desmognathus apalachicolae*). It is endemic to the lower southeastern U.S. (Alabama, Florida, and Georgia) and can be found within and adjacent to seepage streams within steep-sided ravines in slope forests and sometimes also in mucky floodplain and bottomland forests. Undisturbed, pristine ravines and clean seepage streams provide ideal habitat for this species (FNAI 2001).

The Alternative 1 ROW would not impact any clean-flowing ravines or spring-fed seepage streams that provide preferred habitat for the Apalachicola dusky salamander. In addition, the FNAI Standard Data Report does not show any documented element occurrences of the Apalachicola dusky salamander within or adjacent to the proposed Alternative 1ROW. Implementation of Alternative 1 would have NO IMPACT on the Apalachicola dusky salamander.

Apalachicola King Snake (*Lampropeltis getulus goini*). The Apalachicola king snake is rare in its small home range in the Panhandle of Florida. It is found in the eastern Apalachicola lowlands between the Apalachicola and Ochlocknee Rivers and south of Telogia Creek in Franklin and Liberty Counties (Florida Museum of Natural History n.d.). It is associated with riparian and lowland habitats including pine flatwoods, cypress, and titi swamps.

Proposed Alternative 1 occurs east of the Ochlocknee River outside the documented range of this species. In addition, the FNAI Standard Data Report does not show any documented element occurrences of the Apalachicola king snake within at least 1 mile of the Alternative 1 ROW, and the construction of the Alternative 1 tap station would not result in the clearing of woody habitat utilized by this species. In addition, any species in close proximity to the ROW during construction would likely avoid the area until construction is completed. Implementation of Alternative 1 MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR A LOSS OF VIABILITY for the Apalachicola king snake.

Florida Gopher Frog (*Rana capito aesopus*). The Florida gopher frog is listed by the FWC as a Species of Special Concern in the eastern Panhandle and peninsula of Florida, and a sensitive species within the ANF due to the desirable habitat within the protected and managed lands of the ANF. The dry flatwoods, sandhill, and scrub areas provide the necessary upland habitat, and the ephemeral ponds provide breeding habitat during the October through April breeding migration for Florida gopher frogs. Daytime habitat of the Florida gopher frog often includes gopher tortoise burrows.

The FNAI Standard Data Report shows two documented element occurrences of the Florida gopher frog within 0.5 mile of the Alternative 1 ROW. As described in Section 3.4.3.1.2, the long-term maintenance of the Alternative 1 ROW would increase the permanent non-forested width of the ROW through the ANF from the present 80 feet to 140 feet. This permanently maintained non-forested 140-foot wide ROW could potentially become a barrier to Florida gopher frogs moving between their upland habitats and their ephemeral breeding ponds. This could potentially result in some overall reduction in the number of Florida gopher frogs currently living in the vicinity of the proposed ROW. However, the guidelines, commitments, and mitigation measures described in Section 3.4.4.4 for avoiding impacts to the striped newt (*Notophthalmus perstriatus*) (ephemeral ponds), the pine snake (*Pituophis melanoleucus mugitus*), and gopher tortoise burrows also would protect the Florida gopher frog. Additionally, the habitat within the proposed Alternative 1 ROW was recently disturbed. Implementation of Alternative 1 MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR A LOSS OF VIABILITY for the Florida gopher frog.

One-toed Amphiuma (*Amphiuma pholeter*). The one-toed amphiuma is found in the eastern Gulf Coast from about 30 miles north of Tampa, Florida, west to the Pascagoula River in Mississippi. One-toed amphiumas are active mostly at night when they forage for invertebrate prey. They prefer slow-moving or stagnant, shallow water with either muddy bottoms or areas with weedy vegetation. They have

a special affinity for the semi-fluid mud deposits that accumulate in the swampy floodplains of rivers and streams or along the edges of coastal spring-fed rivers (Mount 1975).

The proposed Alternative 1 ROW would not impact any swampy floodplains or mucky headwater seepage areas that provide preferred habitat for the one-toed amphiuma. Further, the FNAI Standard Data Report does not show any documented element occurrences of the one-toed amphiuma within at least 1 mile of the proposed Alternative 1 ROW. Implementation of Alternative 1 would have NO IMPACT on the one-toed amphiuma.

Florida Pine Snake (*Pituophis melanoleucus mugitus*). The Florida pine snake is listed as a Species of Special Concern by the FWC. The Florida pine snake is a large, stocky tan or rusty-colored snake with darker blotches of color. This snake is found throughout Florida (except the extreme southwestern limits) and likely uses the open-canopied flatwoods, scrubby flatwoods, and sand pine scrub areas of the ANF, which are managed with fire to prevent a succession to closed canopies. Florida pine snakes spend most of their time below ground and often inhabit the burrows of gopher tortoises.

Potential impacts of Alternative 1 on the Florida pine snake may include individual species disturbance during construction activities. However, if a Florida pine snake is found during construction, the City would allow it to leave the construction area on its own accord or be relocated away from the construction zone. Once transmission line construction is complete, it is anticipated that Florida pine snakes would return to their natural habitats, thus the construction would be a temporary disturbance. The Florida pine snake is a mobile species and would be expected to move away from construction activities.

As listed in Section 3.4.4.4, the City would implement a variety of mitigating measures to avoid/minimize potential impacts to the Florida pine snake. In addition, the FNAI Standard Data Report indicates that there are no documented element occurrences of Florida pine snakes within 0.5 mile of the proposed Alternative 1 ROW. In addition, the upland coniferous forest located at the proposed Alternative 1 tap station is not considered habitat for this species. Implementation of Alternative 1 MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR A LOSS OF VIABILITY for the Florida pine snake.

Suwannee Cooter (*Pseudemys concinna suwannienis*). The Suwannee cooter is listed as a Species of Special Concern by the FWC. Suwannee cooters are fairly large turtles (up to 12 inches) that spend the majority of their time in lakes, rivers, and ponds where they can easily be seen basking on rocks and logs in sunny weather. Their preferred habitats are alluvial streams and spring-fed streams with dense aquatic vegetation.

The Alternative 1 ROW would not impact clean-flowing alluvial or spring-fed streams that provide preferred habitat for the Suwannee cooter. In addition, the FNAI Standard Data Report does not show any documented element occurrences of the Suwannee cooter within at least 1 mile of the proposed Alternative 1 ROW. Implementation of Alternative 1 would have NO IMPACT on the Suwannee cooter.

Insects

Arogos Skipper (*Atrytone arogos*). The Arogos skipper is a butterfly of the eastern and midwestern United States with colonies found in Florida, most abundantly in peninsular Florida. They occur in dry prairies and longleaf pine sandhills where the larval host, lopsided indiangrass (*Sorghastrum secundrum*), is found. This butterfly is dependent on the native and managed prairie lands like those found in the ANF.

The FNAI Standard Data Report does not show any documented element occurrences of the Arogos skipper within at least 1 mile of the Alternative 1 ROW. In addition, its preferred managed dry prairie habitat is plentiful within the ANF. Implementation of Alternative 1 would have NO IMPACT on the Arogos skipper.

Say's Dragonfly (*Cordulegaster sayi*), Belle's Sand Clubtail (*Progomphus bellei*), and Calvert's Emerald (*Somatochlora calverti*). Three sensitive species of dragonflies—the Say's dragonfly, the Belle's sand clubtail, and the Calvert's emerald—potentially occur in the vicinity of Alternative 1 in the ANF. The aquatic larvae and aerial adults of these species are predators. These species require wetlands – wet sand, mud, algae, or very shallow water – for egg-laying and forests for foraging adults.

The FNAI Standard Data Report does not show any documented element occurrences of these three dragonfly species within at least 1 mile of the proposed Alternative 1 ROW. In addition, the preferred managed dry prairie habitat of these three species is plentiful within the ANF. Implementation of Alternative 1 would have NO IMPACT on these three dragonfly species.

Plants

Bent Goldenaster (*Pityopsis flexuosa*). Bent goldenaster also known as zigzag silkgrass, is listed as endangered by the FDACS.

For the FGT Project, bent goldenaster was determined to be common within and along the FGT Project's ROW (Pope Environmental, Inc. 2010). The existing FGT corridor provides the open habitat preferred by this species, which is maintained by periodic mowing and prescribed burns conducted by the ANF. However, the open vegetated areas referred to in the Pope Environmental, Inc. 2010 document pertains to the FGT ROW prior to their most recent expansion. Now that the FGT Project is complete, the current ROW has not been revegetated and consists of barren ground. Therefore, it is not anticipated that bent goldenaster specimens would currently be found on the Alternative 1 ROW.

According to information provided by the FNAI Standard Data Report, a documented element occurrence of zigzag silkgrass is located approximately 0.25 mile south of the proposed Alternative 1 ROW. However, the Alternative 1 ROW would not traverse any known populations of bent goldenaster. The proposed Alternative 1 tap station does not consist of appropriate habitat for this species. In addition, the proposed ROW consists of bare ground or minimal vegetative cover as a result of recent disturbance associated with construction of the new FGT pipeline. Also, maintenance of the permanent ROW may actually increase the potential habitat for this species. Implementation of Alternative 1 MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR A LOSS OF VIABILITY for the bent goldenaster.

Coastal Plain Wild Indigo (*Baptisia simplicifolia*). Coastal plain wild indigo, also commonly known as scare-weed, is listed as threatened by the FDACS. Coastal plain wild indigo is typically found in mesic flatwoods in the sandhill community and often grows on disturbed sites. Coastal plain wild indigo was identified along the FGT pipeline corridor. This species was encountered at several locations, but most of these were outside of work areas (FGT 2009). As stated previously, the current FGT ROW has not yet revegetated and consists of barren ground; therefore, it is not anticipated that coastal plain wild indigo specimens would currently be found on the Alternative 1 ROW.

According to information provided by the FNAI Standard Data Report, Alternative 1 would not cross any known populations of coastal plain wild indigo. Given both its lack of documented presence and the fact that the permanent ROW maintenance may actually increase the disturbed habitat preferred for this species, implementation of Alternative 1 MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR A LOSS OF VIABILITY for the coastal plain wild indigo.

3.4.4.1.2 Environmental Impacts

The summary determinations of effects shown in Tables 3.4-7 and 3.4-8 are based on the potential direct and indirect adverse impacts on each species and whether these effects are sufficient to reduce populations or, where appropriate, prevent attainment of the goals described within each species' Recovery Plan. As summarized in Table 3.4-7, potential effects of the implementation of SWTL

Alternative 1 on the 12 federally listed or federally proposed species shown in Table 3.4-5 are classified as either No Effect (NE), Not Likely to Adversely Affect (NLAA), or Not Likely to Jeopardize Proposed Species or Adversely Modify Proposed Critical Habitat (NLJ). As summarized in Table 3.4-8, potential effects of the implementation of SWTL Alternative 1 on the 18 Forest Service sensitive species shown in Table 3.4-6 are classified as either May Impact Individuals But Not Likely to Cause a Trend to Federal Listing or a Loss of Viability (MII) or No Impact (NI).

Table 3.4-7
Summary of Potential Impacts of Alternative 1 on Federally Listed Species Potentially Occurring in the Vicinity of Alternative 1

Common Name	Summary Finding	Comments
Mammals		
Gray Bat	NE	No element occurrences; no impacts to preferred habitat
Birds		
Red-cockaded Woodpecker	NLAA	Mitigating measures will avoid impacts
Wood Stork	NE	No element occurrences; no impacts to preferred habitat
Amphibians and Reptiles		
Eastern Indigo Snake	NLAA	Recently disturbed habitat; mitigating measures will avoid impacts
Frosted Flatwoods Salamander	NE	No element occurrences
Gopher Tortoise	NLJ	Recently disturbed habitat; mitigating measures will avoid impacts
Striped Newt	NLJ	No element occurrences; mitigating measures will avoid impacts
Plants		
American Chaffseed	NE	No element occurrences; project may increase habitat
Fringed Campion	NE	No element occurrences or preferred habitat present
Chapman's Rhododendron	NE	No element occurrences or preferred habitat present
Harper's Beauty	NE	No element occurrences; project may increase habitat
Cooley's Meadowrue	NE	No element occurrences; project may increase habitat

Key:
NE= No Effect.
NLAA=Not Likely to Adversely Affect.
NLJ = Not Likely to Jeopardize Proposed Species or Adversely Modify Proposed Critical Habitat.

Table 3.4-8
Summary of Potential Impacts of Alternative 1 on Forest Service Sensitive Species Potentially Occurring in the Vicinity of Alternative 1

Common Name	Summary Finding	Comments
Mammals		
Florida Black Bear	MII	Mitigating measures will avoid impacts
Rafinesque's Big-Eared Bat	NI	No element occurrences; no impacts to preferred habitat
Round-Tail Muskrat	NI	No element occurrences; no impacts to preferred habitat
Sherman's Fox Squirrel	MII	No element occurrences; mitigating measures will avoid impacts
Birds		
Bachman's Sparrow	MII	No element occurrences; plentiful adjacent habitat
Bald Eagle	MII	Mitigating measures will avoid impacts
Amphibians and Reptiles		
Apalachicola Dusky Salamander	NI	No element occurrences; no impacts to preferred habitat
Apalachicola King Snake	MII	No element occurrences; no impacts to preferred habitat
Florida Gopher Frog	MII	Recently disturbed habitat; mitigating measures will avoid impacts

Table 3.4-8
Summary of Potential Impacts of Alternative 1 on Forest Service Sensitive Species Potentially Occurring in the Vicinity of Alternative 1

Common Name	Summary Finding	Comments
One-Toed Amphiuma	NI	No element occurrences; no impacts to preferred habitat
Florida Pine Snake	MII	Recently disturbed habitat; mitigating measures will avoid impacts
Suwanee Cooter	NI	No element occurrences; no impacts to preferred habitat
Insects		
Arogos Skipper	NI	No element occurrences; plentiful adjacent habitat
Say's Dragonfly	NI	No element occurrences; plentiful adjacent habitat
Belle's Sand Clubtail	NI	No element occurrences; plentiful adjacent habitat
Calvert's Emerald	NI	No element occurrences; plentiful adjacent habitat
Plants		
Bent Goldenaster	MII	No element occurrences; project may increase habitat
Coastal Wild Indigo	MII	No element occurrences; project may increase habitat

Key:
MII = May Impact Individuals But Not Likely to Cause a Trend to Federal Listing or a Loss of Viability.
NI = No Impacts.

3.4.4.2 Alternative 3

3.4.4.2.1 Affected Environment

A total of 30 federally listed, state-listed, and Forest Service sensitive species potentially would be impacted by the implementation of Alternative 3. These species are summarized in Tables 3.4-5 and 3.4-6 and were discussed in Section 3.4.4.1; therefore, details regarding habitat requirements, breeding timeframes, and other characteristics are not repeated in this section. The species discussed below are those for which element occurrences were identified by the FNAI within the Alternative 3 ROW or tap station, or preferred habitat would be affected by implementation of Alternative 3. Where applicable, species-specific mitigation measures in this section are the same referenced in the BA. Although the BA applies to Alternative 1, the majority of species-specific mitigation measures proposed would be applicable to species potentially impacted by the implementation of Alternative 3.

Federally Listed Species

Eastern Indigo Snake

The FNAI Standard Data Report shows no documented element occurrences of the eastern indigo snake within 0.5 mile of the proposed Alternative 3 ROW. ROW construction would impact 5.01 acres of pine flatwoods and 10.62 acres of shrub/brushland, which are preferred habitats of the eastern indigo snake. The overall impacted area would be small in size and scope relative to the surrounding abundance of preferred habitat, and individuals would be expected to vacate the ROW and move to adjacent habitat. It is also feasible that the gopher tortoise could inhabit the Alternative 3 ROW after it has been cleared, providing additional burrows for the indigo snake to inhabit over the long-term. Additional mitigation requirements described in Section 3.4.4.4 for the gopher tortoise would ensure current burrows within Alternative 3 are kept intact for potential use by eastern indigo snakes. Based on the implementation of the special habitat and species protective measures described in Section 3.4.4.4 for the eastern indigo snake (and gopher tortoise), Alternative 3 is NOT LIKELY TO ADVERSELY AFFECT the eastern indigo snake

Gopher Tortoise

The FNAI Standard Data Report shows three documented element occurrences of gopher tortoises within 0.5 mile of the proposed Alternative 3 ROW. However, the gopher tortoise is known to inhabit open lands with a grassy understory, such as transmission line ROWs. Therefore, the vegetative clearing and resulting open lands associated with construction of the Alternative 3 ROW could increase the preferred habitat for this species. Therefore, implementation of Alternative 3 is NOT LIKELY TO JEOPARDIZE THIS SPECIES OR ADVERSELY MODIFY PROPOSED CRITICAL HABITAT for the gopher tortoise.

Forest Service Sensitive Species

Sherman's Fox Squirrel

The FNAI Standard Data Report shows no documented element occurrences of the Sherman's fox squirrel within 1 mile of the proposed Alternative 3 ROW. ROW construction would impact 5.01 acres of pine flatwoods, which is a preferred habitat of the Sherman's fox squirrel; however, the removal of this habitat would be small in scale and scope relative to the abundance of preferred habitat and should have little to no impacts on the Sherman's fox squirrel. In addition, to minimize potential impacts to Sherman's fox squirrels that may temporarily be found within the Alternative 3 ROW after it has been cleared and during construction, the City would implement several mitigation measures, as detailed in Section 3.4.4.4. Therefore, implementation of Alternative 3 MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR A LOSS OF VIABILITY for the Sherman's fox squirrel.

Florida Gopher Frog

The FNAI Standard Data Report shows no documented element occurrences of the Florida gopher frog within 0.5 mile of the proposed Alternative 3 ROW. However, ROW construction would impact 5.01 acres of pine flatwoods and 10.62 acres of shrub/brushland, which are preferred habitats of the Florida gopher frog. The overall impacted area would be small in size and scope relative to the surrounding abundance of preferred habitat, and individuals would be expected to vacate the ROW and move to adjacent habitat. It is also feasible that the gopher tortoise could inhabit the Alternative 3 ROW after it has been cleared, providing additional burrows for the Florida gopher frog to inhabit over the long-term. In addition, the mitigation measures described in Section 3.4.4.4 for this species and for avoiding impacts to gopher tortoise burrows also would protect the Florida gopher frog. Therefore, implementation of Alternative 3 MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR A LOSS OF VIABILITY for the Florida gopher frog.

Florida Pine Snake

The FNAI Standard Data Report shows two documented element occurrences of Florida pine snakes within 1 mile of the proposed Alternative 3 ROW. In addition, ROW construction would impact 5.01 acres of pine flatwoods and 10.62 acres of shrub/brushland, both of which are preferred habitats of the Florida pine snake. The overall impacted area would be small in size and scope relative to the surrounding abundance of preferred habitat, and individuals would be expected to vacate the ROW and move to adjacent habitat. As listed in Section 3.4.4.4, the City would implement a variety of mitigating measures to avoid/minimize potential impacts to the Florida pine snake. Therefore, implementation of Alternative 1 MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR A LOSS OF VIABILITY for the Florida pine snake.

3.4.4.2.2 Environmental Impacts

As stated in Section 3.4.3.2, due to greenfield construction and less co-location opportunities, the Alternative 3 ROW and tap station would require more clearing of forested vegetation than the

Alternative 1 ROW (90.04 acres versus 9.22 acres; see Tables 3.1-1 and 3.4-1 through 3.4-3), thereby displacing federally and state-protected species or Forest Service sensitive species requiring forested habitat to a greater extent than Alternative 1. However, the removal of this forested habitat would be small in scale and scope relative to the abundance of preferred habitat surrounding the project area. Therefore, this impact is expected to be negligible given that these species would likely move to adjacent undisturbed habitat.

Because Alternative 3 is co-located with existing linear features (see Table 3.1-2) and would require widening of said corridors, forest fragmentation impacts, as described in Section 3.4.3.1 could affect federally and state-protected species or Forest Service sensitive species in the vicinity of Alternative 3. However, because Alternative 3 is located entirely outside of the ANF and is not surrounded by contiguous forest to the extent of Alternative 1, forest fragmentation effects are likely to be less for Alternative 3 when compared to Alternative 1.

The summary determinations of effects shown in Tables 3.4-9 and 3.4-10 are based on the potential direct and indirect adverse impacts on each species and whether these effects would be sufficient to reduce populations or, where appropriate, prevent attainment of the goals described within each species' Recovery Plan. As summarized in Table 3.4-9, potential effects of the implementation of Alternative 3 on the 12 federally listed or federally proposed species shown in Table 3.4-5 are classified as either NE, NLAA, or NLJ. As summarized in Table 3.4-10, potential effects of the implementation of Alternative 3 on the 18 Forest Service sensitive species shown in Table 3.4-6 are classified as either MII or NI.

Table 3.4-9
Summary of Potential Impacts of Alternative 3 on Federally Listed Species Potentially Occurring in the Vicinity of Alternative 3

Common Name	Summary Finding	Comments
Mammals		
Gray Bat	NE	No element occurrences; no impacts to preferred habitat
Birds		
Red-cockaded Woodpecker	NLAA	Mitigating measures will avoid impacts
Wood Stork	NE	No element occurrences; no impacts to preferred habitat
Amphibians and Reptiles		
Eastern Indigo Snake	NLAA	No element occurrences; mitigating measures will avoid impacts
Frosted Flatwoods Salamander	NE	No element occurrences
Gopher Tortoise	NLJ	Project may increase habitat
Striped Newt	NLJ	No element occurrences; mitigating measures will avoid impacts
Plants		
American chaffseed	NE	No element occurrences; project may increase habitat
Fringed Campion	NE	No element occurrences or preferred habitat present
Chapman's Rhododendron	NE	No element occurrences or preferred habitat present
Harper's Beauty	NE	No element occurrences; project may increase habitat
Cooley's Meadowrue	NE	No element occurrences; project may increase habitat

Key:
NE = No Effect.
NLAA = Not Likely to Adversely Affect.
NLJ = Not Likely to Jeopardize Proposed Species, or Adversely Modify Proposed Critical Habitat.

Table 3.4-10
Summary of Potential Impacts of Alternative 3 on Forest Service Sensitive Species Potentially Occurring in the Vicinity of Alternative 3

Common Name	Summary Finding	Comments
Mammals		
Florida Black Bear	MII	Mitigating measures will avoid impacts
Rafinesque's Big-Eared Bat	NI	No element occurrences; no impacts to preferred habitat
Round-Tail Muskrat	NI	No element occurrences; no impacts to preferred habitat
Sherman's Fox Squirrel	MII	No element occurrences; mitigating measures will avoid impacts
Birds		
Bachman's Sparrow	MII	No element occurrences; plentiful adjacent habitat
Bald Eagle	MII	Mitigating measures will avoid impacts
Amphibians and Reptiles		
Apalachicola Dusky Salamander	NI	No element occurrences; no impacts to preferred habitat
Apalachicola King Snake	MII	No element occurrences; no impacts to preferred habitat
Florida Gopher Frog	MII	Mitigating measures will avoid impacts
One-Toed Amphiuma	NI	No element occurrences; no impacts to preferred habitat
Florida Pine Snake	MII	Mitigating measures will avoid impacts
Suwanee Cooter	NI	No element occurrences; no impacts to preferred habitat
Insects		
Arogos Skipper	NI	No element occurrences; plentiful adjacent habitat
Say's Dragonfly	NI	No element occurrences; plentiful adjacent habitat
Belle's Sand Clubtail	NI	No element occurrences; plentiful adjacent habitat
Calvert's Emerald	NI	No element occurrences; plentiful adjacent habitat
Plants		
Bent Goldenaster	MII	No element occurrences; project may increase habitat
Coastal Wild Indigo	MII	No element occurrences; project may increase habitat

Key
MII = May Impact Individuals But Not Likely to Cause a Trend to Federal Listing or a Loss of Viability.
NI = No Impacts.

3.4.4.3 No Action Alternative

Under the No Action Alternative, no plant communities would be disturbed, no wildlife habitat would be lost, and no protected species or Forest Service sensitive species would be impacted.

3.4.4.4 Mitigation Measures for Threatened and Endangered Species and Forest Service Sensitive Species

3.4.4.4.1 General

To educate contractors of the presence of protected species in the vicinity of the selected alternative, so that inadvertent impacts to these species caused by personnel, vehicles or construction activities can be minimized, the City will provide a brief summary of said species in the bid documents. This summary will include the protective status, required habitat, illustrative picture, and other pertinent information of the protected species that may be encountered on the project; all mitigation measures approved by the USFWS, FWC, USFS, or other regulatory agencies and a summary of species-specific permit conditions (if obtained by the City as a requirement for construction); and an overview of the federal, state, and local laws and regulations protecting said species. This summary will also clearly state that the contractor and construction personnel shall not harm, handle, kill, maim, or harass said species.

3.4.4.4.2 Species-Specific

Prior to construction, the City will complete any required listed species consultations with the USFWS, the USFS, and the FWC and will file the results of these consultations, including revised plans (if needed), with the appropriate agencies. Species-specific mitigation measures that the City will implement to avoid or minimize potential adverse impacts to T&E or Forest Service sensitive species are summarized below.

Federally Listed Species

Red-cockaded Woodpecker

To avoid, minimize, and compensate for potential project-related impacts on the RCW, the City has committed to the following mitigating measures:

- Use existing access roads that are outside of identified RCW clusters.
- Schedule work outside of the RCW's primary nesting season (May 1 to July 31) for areas within the 200-foot Alternative 1 ROW buffer which overlaps with the two RCW cluster boundaries. The City also may choose to employ a USFS biologist to perform cluster monitoring to ascertain if a breeding pair is present in these two colonies. If a breeding pair is present, work would discontinue from May 1 until fledging has occurred (which could occur before July 31), allowing operations to continue within the buffer zone(s). If it is determined that the cluster(s) in question is(are) occupied by a single male, and there is no breeding potential, operations could again continue before July 31 after the concurrence from the USFS biologist to proceed.
- Prior to construction, complete consultation with the USFWS and the ANF regarding any further mitigating measures that may be required to avoid/minimize impacts to RCWs.

Eastern Indigo Snake

To further avoid/minimize potential impacts to eastern indigo snakes, the City will:

- Conduct pre-construction surveys for gopher tortoise burrows (see first bullet under gopher tortoise below) to identify the potential location of commensal burrow species, including the eastern indigo snake.
- Avoid disturbing, wherever possible, active gopher tortoise burrows.
- Report any capture, handling, or displacement of eastern indigo snakes from the construction corridor to the USFS and USFWS.
- Identify and report any large snake skins discovered within the construction footprint.
- Provide a one-page flyer to project personnel prior to construction that describes the species and summarizes the required habitat, commensal association with gopher tortoise burrows, visual representation of gopher tortoise burrows, and protective status of the eastern indigo snake and inform them that under no circumstances should any snake found within the construction corridor be harmed or killed.
- Specify in the bid documents that equipment refueling and fuel storage is prohibited on the construction ROW.

Gopher Tortoise

To avoid/minimize potential impacts to the gopher tortoise and its habitat, the City will implement the following mitigating measures:

- Conduct gopher tortoise surveys prior to the start of construction to identify all gopher tortoise burrows that may be impacted by the project. Survey methodology will be in accordance with the FWC's Gopher Tortoise Permitting Guidelines (June 2011) and conducted by an Authorized Agent.
- Wherever possible, avoid construction-related activity within 25 feet of the mouth of active gopher tortoise burrows.
- Where avoidance of gopher tortoise burrows is not possible, obtain the appropriate gopher tortoise permits from the FWC prior to the start of construction. Follow FWC's guidelines for excavating and relocating gopher tortoise individuals – and vertebrate commensal species - that may be impacted during construction to suitable adjacent habitat. This work will be completed using an FWC-approved Authorized Agent. Excavated burrows will be collapsed and/or filled subsequent to the capture of individuals. Gopher tortoises relocated to adjacent areas shall be precluded from returning to the ROW during construction by the use of temporary fencing in the relocation area which will be removed upon the completion of construction and after the SWTL ROW has been restored.
- Record all mortality of gopher tortoises during construction and relocation activities and submit monthly reports to the appropriate FWC and/or USFS offices during the relocation and construction period.
- Prepare and submit a final project report to the USFS and the FWC after all gopher tortoise activities during the construction period are complete.
- Use only existing roadways so that the potential of direct mortality of gopher tortoises from vehicular traffic will be minimal.
- Specify in the bid documents that equipment refueling and fuel storage is prohibited on the construction ROW.

Striped Newt

To avoid/minimize potential impacts to habitat for the striped newt (i.e., ephemeral ponds), the City will implement the following mitigating measures:

- Install and maintain erosion-control barriers during construction in the vicinity of any proximal ephemeral ponds.
- Provide funding for monitoring to determine if the increased width of the utility corridor is creating a barrier to movement in populations.
- Fund habitat improvement activities surrounding 33 potential and confirmed striped newt ponds within 0.5 mile of the utility corridor. These activities include the removal of undesirable woody vegetation using chainsaws, herbicide applications, and prescribed burning to improve striped newt habitat.

Forest Service Sensitive Species

Florida Black Bear

To minimize potential encounters between construction crews and Florida black bears potentially crossing the existing ROW during construction, the City will implement FWC-recommended specific precautions when constructing through black bear habitat to avoid/minimize impacts on this species:

- Adjust vehicular activities by mandating slower speeds in wooded zones at dawn and dusk and during the June/July breeding season (if construction occurs during this timeframe).
- Ensure construction crews maintain clean construction sites; storing food and other wildlife-attractant refuse in bear-resistant garbage containers or dumpsters.
- Conduct frequent unannounced site inspections by construction foreman to ensure site managers keep a bear-smart (i.e., clean) worksite.

Sherman's Fox Squirrel

To avoid/minimize potential impacts to Sherman's fox squirrel and its habitat, the City will implement the following mitigating measures:

- Adjust vehicular activities by mandating slower speeds in wooded zones during the December to February and May to June nesting seasons (if construction occurs during these timeframes).
- Report any capture, handling, and/or displacing of Sherman's fox squirrels from the construction corridor to the USFS and the FWC.
- Record any mortality of Sherman's fox squirrels during construction to the appropriate FWC and/or USFS offices.

Bald Eagle

As described in Section 4.2.2, an active bald eagle nest (i.e., nest LN009) has been identified within the 660-foot buffer zone of the proposed Alternative 1 ROW. Because the bald eagle is protected by the federal Migratory Bird Treaty Act, no "take" can be issued for this species. Accordingly, the City has committed to the following bald eagle minimization/avoidance measures:

- Make every attempt to schedule construction outside the primary nesting season which occurs from October 1 to May 15. If construction must occur during this timeframe, the City will apply for, and obtain, a Bald Eagle Disturbance Permit from the FWC prior to the start of any construction activities.
- Work from the outer edge of the 660-foot buffer of an active nest, first on the approach side, and continue inward toward the closer areas and then out the other side of the buffer.
- Conduct no work within the 330-foot buffer of an active nest during the nesting season, although equipment may travel through (without stopping) this buffer to reach the other side of the proposed linear corridor and resume work outside the 330-foot buffer.
- Minimize, to the extent possible, equipment resident time within the 660-foot buffer zone of an active nest.

- Limit personnel on the ground outside vehicles within the 660-foot buffer zone of an active nest to those personnel and activities that require work outside a vehicle.
- Report nest abandonment to the USFWS and/or FWC Regional Biologist in a timely manner to allow rescue/salvage of eggs or eaglets for use in captive/release programs, as appropriate.
- Use only existing roadways so that the potential of direct mortality of bald eagles from vehicular traffic will be minimal.

Florida Pine Snake

The City will employ the following mitigating measures to avoid/minimize potential impacts to the Florida pine snake:

- Conduct pre-construction surveys for gopher tortoise burrows to identify the potential location of commensal burrow species, including the Florida pine snake.
- Wherever possible, avoid disturbing active gopher tortoise burrows.
- Specify in the bid documents that equipment refueling and fuel storage is prohibited on the construction ROW.
- Identify and report any large snake skins discovered within the construction footprint.
- Report any capture, handling, and/or displacing of Florida pine snakes from the construction corridor to the USFS and FWC.

Florida Gopher Frog

The City will employ the following mitigating measures to avoid/minimize potential impacts to the Florida gopher frog:

- Conduct pre-construction surveys for gopher tortoise burrows (see see first bullet under gopher tortoise above) to identify the potential location of commensal burrow species, including the Florida gopher frog.
- Wherever possible, avoid disturbing active gopher tortoise burrows.
- Specify in the bid documents that equipment refueling and fuel storage is prohibited on the construction ROW.

3.5 TOPOGRAPHY, GEOLOGY, SOILS, AND GROUNDWATER

This section describes the topographic, geologic, soils, and groundwater resources in the vicinity of Alternatives 1 and 3, the potential impacts of the alternatives, as well as the No Action Alternative, on those resources, and the potential mitigation measures to reduce or eliminate those potential impacts.

3.5.1 Inventory and Methodology

Soil Survey Geographic (SSURGO) soil maps and database for Leon County, Florida, were used to characterize soil types and characteristics. The SSURGO soils maps and descriptions are general and describe large soil series complexes across the landscape. Further, for karst features and reported sinkhole collapse features throughout the state, the sinkhole database maintained by the Florida Geological Survey (FGS 2011) was used.

3.5.2 Alternative 1 (Preferred Alternative)

3.5.2.1 Affected Environment

3.5.2.1.1 Topography and Geology

Proposed Alternative 1 ranges in elevation from 26 to 34 feet above mean sea level. The route would be located within a distinct region of the Gulf Coastal Lowlands physiographic province known as the Woodville Karst Plain, which extends from the southern edge of Tallahassee, Florida, to the Gulf of Mexico.

The Woodville Karst Plain is comprised of 288,000 acres, bounded to the west by the Apalachicola Lowlands while extending eastward into Jefferson County. The Woodville Karst Plain is characterized by a thin veneer of unconsolidated and undifferentiated Pleistocene quartz sand and shell beds overlying a thick sequence of relatively horizontal carbonates within the Lower Miocene St. Marks Formation at or near the surface. The Woodville Karst Plain area rises from 20 to 60 feet in elevation.

The majority of the water that falls on the Plain enters streams or infiltrates into the subsurface. The thin layer of porous, relatively non-organic sands permit rain water to rapidly move into the underlying soluble limestone, which has undergone considerable dissolution to form sinks that appear as shallow sand-filled depressions (Hendry and Sproul 1966). As a result, the topography is karstic in nature, with numerous sinkholes, karst windows, sinking streams, and large springs (Rupert 1988).

3.5.2.1.2 Soils

Table 3.5-1 provides the predominant soil types for Alternative 1, as classified by the SSURGO database for Leon County, Florida; the amount of each soil type crossed by the Alternative 1 ROW and proposed tap station; and the erosion potential of each soil type.

3.5.2.1.3 Groundwater Resources

The Upper Floridan aquifer is the primary source of water for agricultural and domestic supply in the general area of Alternative 1 via private or public wells completed to depths ranging from 110 to 150 feet. The Upper Floridan aquifer in the area is unconfined and the top of the aquifer is at or near land surface. This direct hydraulic connection between the sand-filled solution features and the Upper Floridan aquifer makes groundwater in this area highly susceptible to surface contamination (Davis 1996).

Table 3.5-1
Soil Classifications and Erosion Potential within the Proposed Alternative 1 Right-of-Way and Tap Station Footprint

Soil Name	Description [(a)]	Wind Erodibility [(b)]	Acres Traversed
Alpin sand, 0-5% slopes	Nearly level to gently sloping excessively drained sand.	Extremely erodible	29.73
Kershaw sand, 0-5% slopes	Nearly level to gently sloping excessively drained sand.	Extremely erodible	14.74
Ortega sand, 0-5% slopes	Nearly level to gently sloping moderately well drained sand.	Extremely erodible	12.28
Blanton fine sand, 0-5% slopes	Nearly level to gently sloping moderately well drained fine sand and sandy loam.	Extremely erodible	1.56
Dorovan mucky peat	Nearly level very poorly drained mucky peat, muck and sand.	Very highly erodible	0.59
Chipley fine sand, 0-2% slopes	Nearly level somewhat poorly drained fine sand.	Extremely erodible	0.59
Plummer fine sand	Nearly level poorly drained fine sand and sandy loam.	Extremely erodible	0.59
Albany loamy sand	Nearly level somewhat poorly drained loamy sand and sandy loam.	Very highly erodible	0.38
		Total	**60.46**

Notes:
(a) Soil descriptions from SSURGO Database (USDA 2011c).
(b) SSURGO wind erodibility group classification (USDA 2011c).

3.5.2.2 Environmental Impacts

As detailed in Section 3.4.2.1 and Table 3.1-1, the Alternative 1 route and associated tap station would encompass 60.46 acres. However, within the ANF, the proposed Alternative 1 ROW consists of barren land. Short-term soil disturbance would not be required across the entire 60-foot ROW and likely would be limited to only the areas where transmission structures are erected, where construction and contractor vehicles would travel on the ROW during construction, and within staging areas that are located within the ROW (see Section 2.2.2). In addition, for the Alternative 1 tap station, up to 3 acres would be cleared, stumped, and graded. Therefore, short-term soil disturbance within the ANF primarily would be limited to the 3-acre tap station and the estimated 73 pole locations. A 20-foot by 20-foot (0.009 acre) workspace, or 0.66 acre total for all 73 pole locations, would be disturbed to erect the structures, totaling approximately 3.66 acres of total disturbance to soils and geologic resources within the ANF.

Outside the ANF, Alternative 1 would traverse an additional 0.5 mile co-located with the FGT ROW where—similar to within the ANF—short-term soil disturbance would not be required across the entire 60-foot ROW and likely would be limited only to the areas where transmission structures would be erected, where construction and contractor vehicles would travel on the ROW during construction, and within staging areas that would be located within the ROW (see Section 2.2.2). For the 1.75 miles where Alternative 1 would be co-located with the City's 115 kV line, clearing, stumping, and grading would be required within approximately 6.22 acres. Construction of Alternative 1 would require no additional workspace as all construction and equipment storage activities would take place within the proposed transmission line ROW. However, construction activities at structure sites within the ROW would result in the exposure of existing soils to rain, possibly resulting in erosion. Holes would be dug for each structure to embed the footings or poles. Soil from these holes would be piled and then used for backfilling the holes once the footings are in place. The piles of exposed soil could erode during rain. Along the majority of the Alternative 1 ROW where the terrain is primarily level, soils would not be

highly susceptible to water erosion; however, all the soils that would be traversed by Alternative 1 would be susceptible to wind erosion, if exposed.

Potential impacts to exposed soils would continue to occur if soils were left bare or if revegetation was delayed following construction activities. However, as indicated in Section 3.4, the City would revegetate disturbed areas post-construction to minimize soil erosion. The City would implement additional mitigation activities (i.e., concurrence with existing USFS BMPs during construction activities) to minimize potential soil erosion, as indicated in Section 3.5.5.

This area is dominated by broad, shallow solution sinkholes in-filled with loose sand, where abruptly forming collapse features are uncommon. A subsidence incident database maintained by the FGS contains reported subsidence incidents, which includes reported sinkholes throughout the state (FGS 2011). No subsidence incidents have been documented within the Alternative 1 ROW.

Additionally, due to the direct hydraulic connection detailed above, the project has the potential to impact groundwater resources from leaks and/or spills of fuel, lubricants, and coolants during construction and maintenance activities. To minimize the potential for leaks or spills to occur and enable the rapid response to spilled or leaked materials, the City would develop and implement spill prevention and response procedures as detailed in Sections 3.6.5 and 3.11.5.

3.5.3 Alternative 3

3.5.3.1 Affected Environment

3.5.3.1.1 Topography and Geology

Similar to Alternative 1, Alternative 3 would be located within the Gulf Coastal Lowlands physiographic province known as the Woodville Karst Plain, as detailed above. Elevations along Alternative 3 would range from 22 feet to 36 feet above mean sea level.

3.5.3.1.2 Soils

Table 3.5-2 provides the predominant soil types within the Alternative 3 ROW and tap station footprint, as classified by the SSURGO database for Leon County, Florida and the erosion potential.

3.5.3.1.3 Groundwater Resources

Similar to Alternative 1, the Upper Floridan aquifer is the primary source of water for agricultural and domestic supply in the general area of Alternative 3 via private or public wells completed to depths ranging from 110 to 150 feet. The Upper Floridan aquifer in the area is unconfined and the top of the aquifer is at or near land surface. This direct hydraulic connection between the sand-filled solution features and the Upper Floridan aquifer makes groundwater in this area highly susceptible to surface contamination (Davis 1996).

3.5.3.2 Environmental Impacts

Implementation of Alternative 3 would result in impacts similar to Alternative 1; however, the impacts from Alternative 3 would be greater in magnitude due to the increased acreage of greenfield construction activities. As indicated in Section 3.1 and Tables 3.1-1, 3.4-3, and 3.6-5, upland and wetland forested vegetation clearing from the transmission line ROW and construction of the proposed tap station would impact approximately 90.04 acres (1 acre for the tap station and 89.04 acres for the ROW) of soil and geological resources. Ninety-nine percent (99%) of the soils that would be traversed by Alternative 3 are potentially erodible by wind, if exposed. Construction activities would include the implementation of the mitigation measures identified in Section 3.5.5.

Table 3.5-2
Soils Classifications and Erosion Potential within the Proposed Alternative 3 Right-of-Way and Tap Station Footprint

Soil Name	Description [(a)]	Wind Erodibility [(b)]	Acres Traversed
Blanton fine sand	Nearly level to gently sloping moderately well drained fine sand and sandy loam.	Extremely erodible	39.03
Alpin sand, 0-5% slopes	Nearly level to gently undulation excessively drained sand.	Extremely erodible	16.67
Lutterloh fine sand, 0-5% slopes	Nearly level to gently sloping somewhat poorly drained fine sand and sandy loam.	Extremely erodible	16.60
Plummer fine sand	Nearly level poorly drained fine sand and sandy loam.	Extremely erodible	10.25
Otela fine sand,0-5% slopes	Nearly level to gently sloping moderately well drained fine sand and sandy loam.	Extremely erodible	4.82
Albany loamy sand	Nearly level somewhat poorly drained loamy sand and sandy loam.	Very highly erodible	3.54
Kershaw sand,0-05% slopes	Nearly level to gently sloping excessively drained sand.	Extremely erodible	3.15
Ortega sand, 0-5% slopes	Nearly level to gently sloping moderately well drained sand.	Extremely erodible	2.28
Moriah-Pilgrims fine sands	Nearly level somewhat poorly drained fine sand, sandy loam and sandy clay.	Extremely erodible	2.08
Sapelo fine sand	Nearly level poorly drained fine sand, loamy fine sand and sandy loam.	Extremely erodible	2.79
Otela-Alpin fine sand, 0-5% slopes	Nearly level to gently undulating moderately well drained and excessively drained fine sand and sandy clay loam.	Extremely erodible	1.29
Surrency mucky fine sand	Nearly level very poorly drained mucky fine sand, fine sand and sandy clay loam.	Not erodible	1.05
Chaires fine sand	Nearly level poorly drained fine sand and sandy clay loam.	Extremely erodible	0.91
Tooles-Nutall fine sand, frequently flooded	Nearly level very poorly drained fine sand and sandy clay loam.	Extremely erodible	0.66
Pickney soils, occasionally flooded.	Nearly level very poorly drained loamy fine sand and fine sand.	Very highly erodible	0.50
Otela, limestone substratum-Ortega sands, 0-5% slopes	Nearly level to gently undulating moderately well drained sand and sandy clay loam.	Extremely erodible	0.47
		TOTAL	**106.09**

Notes:
(a) Soil descriptions from SSURGO Database (USDA 2011c).
(b) SSURGO wind erodibility group classification (USDA 2011c).

This area is dominated by broad, shallow solution sinkholes in-filled with loose sand, where abruptly forming collapse features are uncommon. The subsidence incident database maintained by the FGS identifies reported subsidence incidents including sinkholes throughout the state (FGS 2011). No subsidence incidents have been reported in the Alternative 3 ROW.

Additionally, due to the direct hydraulic connection between the sand-filled solution features and the Upper Floridan aquifer, groundwater in this area is highly susceptible to surface contamination. The potential impacts to groundwater resources from Alternative 3 would be similar to Alternative 1. As detailed in Section 3.6, construction and maintenance activities would include the development and

implementation of spill prevention and response procedures to minimize the potential for impacts to groundwater.

3.5.4 No Action Alternative

Under the No Action Alternative, there would be no groundwater, geologic, or soil-related impacts because soil would not be disturbed and no new construction activity would occur.

3.5.5 Mitigation Measures for Topography, Geology, Soils, and Groundwater

The following mitigation measures have been identified to avoid or reduce potential adverse soils impacts if the Proposed Action is implemented:

- Prepare and implement a Storm Water Pollution Prevention Plan (SWPPP).
- Follow all applicable soil and water conservation measures listed in the relevant Forest Service Handbook on USFS-managed land.
- Save topsoil removed for structure construction and use on site for restoration activities to promote regrowth from the native seed bank in the topsoil.
- Cover exposed piles of soil (or use other erosion control measures) to reduce erosion potential when there is a threat of rain.
- Limit grubbing to the area around structure sites to lessen the impact on the roots of low-growing vegetation, so they may sprout again.
- Install sediment barriers and other suitable erosion and runoff control devices prior to ground-disturbing activities at construction sites, as necessary, to minimize offsite sediment movement.
- Leave erosion and sediment control devices in place and monitor their effectiveness until all disturbed sites are revegetated and erosion potential has returned to pre-project conditions.
- Retain existing low-growing vegetation, where possible, to prevent sediment movement offsite.
- Revegetate or seed all disturbed areas as soon as possible after construction is completed to promote revegetation that would hold soil in place. All revegetation within USFS lands would be in compliance with the Operating Plan of the SUP.
- Break up compacted soils where necessary by ripping or scarifying down to 8 inches before reseeding.
- Monitor erosion control BMPs during construction to ensure proper function and nominal erosion levels.
- Monitor reseeding efforts for adequate growth. Implement contingency measures as necessary.
- Develop and implement spill prevention and response procedures.

3.6 WATER RESOURCES

This section describes the surface waters, floodplains, and wetlands in the vicinity of Alternatives 1 and 3, the potential impacts of the alternatives routes, as well as the No Action Alternative, on those resources, and potential mitigation measures to reduce or eliminate those potential impacts.

3.6.1 Inventory and Methodology

For the purpose of this analysis, waterbodies are defined as natural streams, rivers, creeks, canals, or drainages and other permanent waterbodies such as ponds and lakes. Waterbody crossings were identified through the review of the United States Geological Survey (USGS) 7.5-minute topographic quadrangle maps (1999), recent aerial photographs (Tallahassee-Leon County GIS 2009), City of Tallahassee GIS, and the FLUCCS maps (NWFWMD 2004). Floodplains in the vicinity of Alternatives 1 and 3 were identified by reviewing the Federal Emergency Management Agency's (FEMA) floodplain maps and the Leon County GIS floodplain mapping system. Wetlands were identified by reviewing the FLUCCS maps (NWFWMD 2004), National Wetland Inventory (NWI) maps, and recent aerial photographs (Tallahassee-Leon County GIS 2009). In addition, wetlands identified within the FGT ROW are based on the review of the Natural Features Inventory prepared for the FGT Project (Pope Environmental, Inc. 2009). The ROW widths and the acreages for the tap stations for both alternatives are listed in Tables 3.1-1 and 3.1-2 and are described in detail in Sections 2.5.2 (Alternative 1) and 2.5.3 (Alternative 3). The ROW widths detailed in Table 3.1-2 were used to calculate wetland impacts presented in Sections 3.6.2.1.3 and 3.6.3.1.3.

Wetland delineations within the Alternative 1 and 3 ROWs were not performed as part of this EIS.

3.6.2 Alternative 1 (Preferred Alternative)

3.6.2.1 Affected Environment

3.6.2.1.1 Surface Water

Table 3.6-1 provides a listing of the waterbodies that would be crossed by the Alternative 1 ROW including crossing width, state water quality classification, and proposed crossing method. The Alternative 1 tap station would not be located in the vicinity of any surface waters. Locations of these waterbodies are illustrated on Figure 3.6-1.

Table 3.6-1
Surface Waters Crossed by the Proposed Alternative 1 Right-of-Way

Waterbody	Approximate Milepost	Crossing Width	State Water Quality Classification [(a)]	Proposed Crossing Method	Comment
Munson Slough	3.79	113 feet	IIIF	Span	Traverses the proposed ROW. Classified as an impaired waterbody with respect to both dissolved oxygen and fecal coliform.
Unnamed Tributary to Munson Slough	3.79	10 feet	IIIF	Span	Traverses the proposed ROW. Classified as an impaired waterbody with respect to both dissolved oxygen and fecal coliform.

Note:
(a) Class IIIF = Freshwater suitable for "*Recreation, Propagation, and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife*" (Florida DEP, Surface Water Quality Standards, Classifications, and Designated Uses) – see following text describing recently documented impairments to water quality of Munson Slough.

Munson Slough (upstream of the Lake Munson) was verified as impaired for dissolved oxygen and fecal coliform while downstream of Lake Munson, this waterbody was verified as impaired for dissolved oxygen and un-ionized ammonia. Munson Slough is included on the Verified List of impaired waters adopted by Secretarial Order on June 3, 2008 (Gilbert et al. 2010).

3.6.2.1.2 Floodplains

As illustrated on Figure 3.6-1, the Alternative 1 ROW would encompass 6.53 acres of FEMA 100-year floodplains, consisting of three crossings. These crossings are summarized in Table 3.6-2.

Crossing 1-A (5.38 acres) would consist of five individual crossings (see Table 3.6-2, "Crossing Length" column) in the 100-year floodplain associated with Munson Slough. Crossing 1-B (0.74 acre) would abut the east side of Woodville Highway, while the third Crossing 1-C (0.41 acre) would abut both sides of the existing north-south 115kV transmission line corridor. The 3-acre Alternative 1 tap station would not be located within the 100-year floodplain (see Figures 2-5 and 3.6-1).

Table 3.6-2
100-Year Floodplains Crossed by the Proposed Alternative 1 Right-of-Way

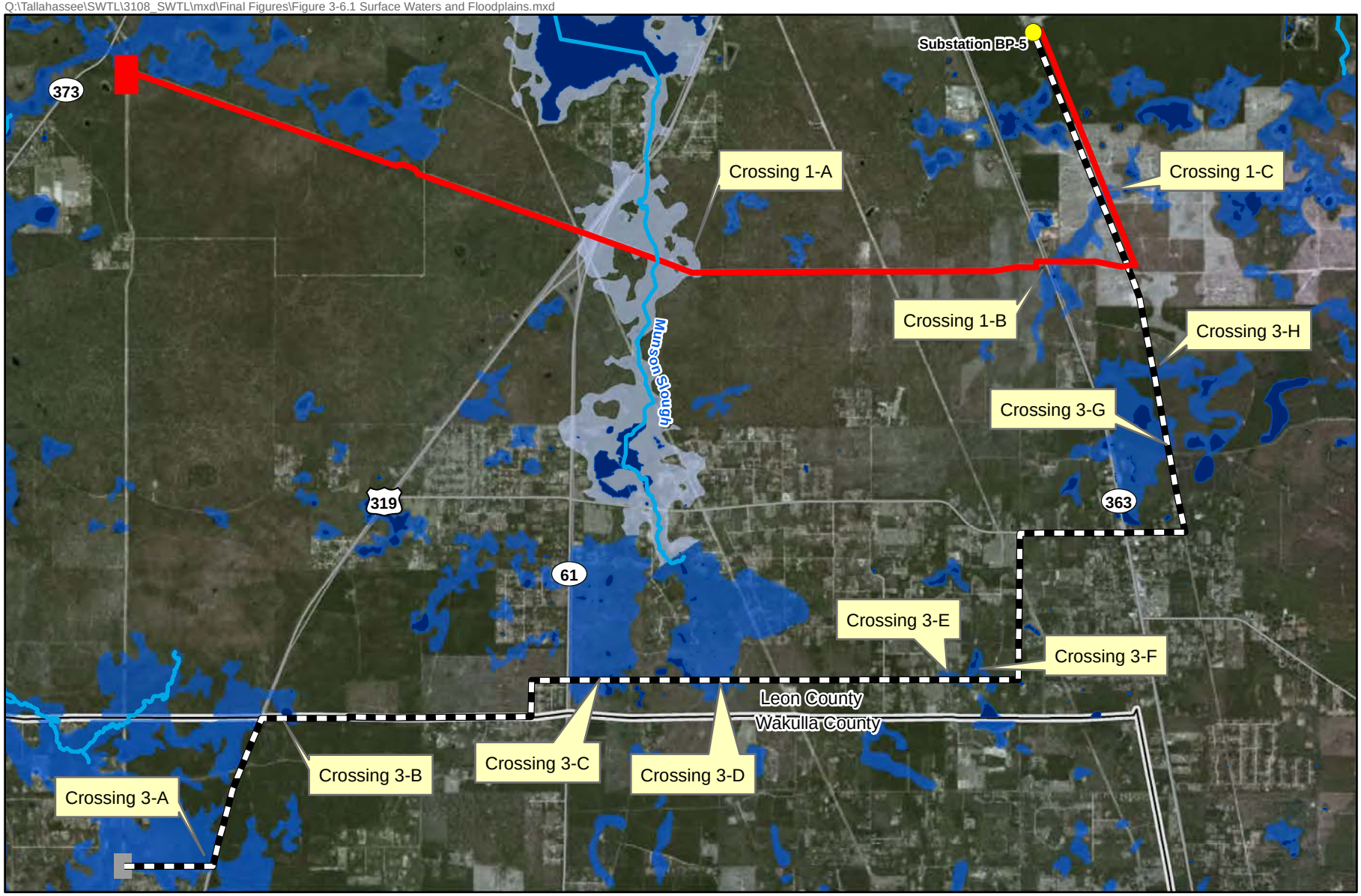
Crossing	Acres Within ROW	Crossing Length (feet) [(a)]	Will Crossing Require Structures (i.e., Poles) Within Floodplain
1-A [(b)]	5.38	1,237 44 499 1,067 846	Yes, for crossings greater than 700 to 800 feet
1-B	0.74	540	No
1-C	0.41	599	No
Total	**6.53**		

Note:
(a) Crossing length refers to approximate crossing length at centerline.
(b) Crossing 1-A would consist of five individual crossings as shown in the "Crossing Length" column.

3.6.2.1.3 Wetlands

Table 3.6-3 is a listing of the wetlands that would be crossed by the Alternative 1 ROW, including the approximate crossing length, the NWI classification, and the proposed crossing method. Locations of these wetlands are illustrated on Figure 3.6-2. The Alternative 1 tap station footprint would not encompass any wetlands. The FLUCCS description of the wetland community that would be traversed by Alternative 1 is provided below.

Q:\Tallahassee\SWTL\3108_SWTL\mxd\Final Figures\Figure 3-6.1 Surface Waters and Floodplains.mxd



Substation BP-5
Alternative 1 - Preferred Alternative
Alternative 3 - Off - Forest Alternative
Alternative 1 - Tap Station
Alternative 3 - Tap Station
County
A - Area within 100-year floodplain, no base flood elevation established
AE - Area within 100-year floodplain, base flood elevation established
Water Course
Surface Water

Figure 3.6-1
Surface Waters and Floodplains
Southwestern Transmission Line
City of Tallahassee Electric Utilities, Florida

N
0 0.5 1 Miles

Data Source: FEMA 1996, City of Tallahassee 2011
Microsoft Corporation, 2009

City of Tallahassee Your Own Utilities
AMPIRICAL SOLUTIONS LLC

Table 3.6-3
Wetlands Crossed by the Proposed Alternative 1 Right-of-Way

Crossing ID	Wetland Cover Type (FLUCCS)	NWI Classification [(a)]	Approximate Crossing Length (feet) [(b)]	Total Area of Crossing (acres)	Crossing Method
1-1	Wet Prairie	PEM	267	0.26	No clearing required because previously cleared by FGT Project; span
1-2	Wet Prairie	PEM	300	0.40	No clearing required because previously cleared by FGT Project; span
		Total:	**567**	**0.66**	

Notes
(a) NWI Classification System, USFWS (Cowardin et al. 1979).
(b) Approximate crossing length in feet at centerline of ROW.
Key:
FGT Project = Florida Gas Transmission Company, LLC, Phase VIII Expansion Project.
FLUCCS = Florida Land Use, Cover, and Forms Classification System.
NWI = National Wetlands Inventory.
PEM = Palustrine Emergent Wetland.

Wet Prairie

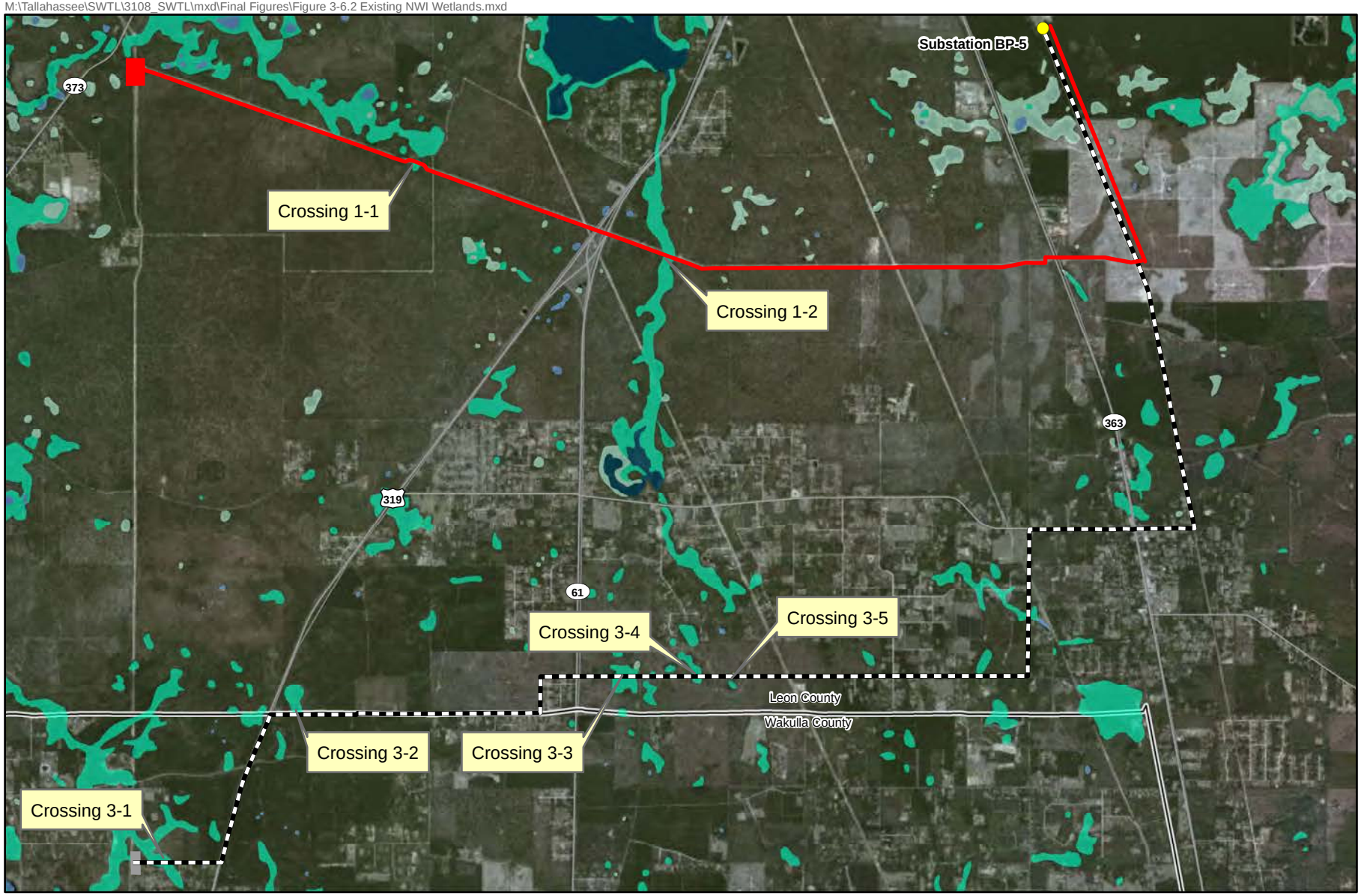
Wet Prairies are comprised of grassy vegetation on wet soils and are usually distinguished from marshes by having less water and shorter herbaceous vegetation. These communities typically occur in depressed areas and are dominated by one or more of the following species: sawgrass (*Cladium* spp.), maidencane (*Panicum hemitomon*), cordgrass (*Spartina* spp.), spikerushes (*Elocharis* spp.), St. Johnswort (*Hypericum* spp.), spiderlily (*Hymenocallis* sp.), swamplily (*Crinum* spp.), yellow-eyed grass (*Xyris* spp.), and whitetop sedge (*Rhynchospora colorata*) (NWFWMD 2004).

3.6.2.2 Environmental Impacts

The City has endeavored to locate the proposed transmission line through an existing utility corridor to minimize any potential impacts to surface waters, floodplains, and wetland systems.

As indicated in Table 3.6-1, the Alternative 1 ROW would traverse Munson Slough and an unnamed tributary to Munson Slough (both crossed at the same location). However, given the minimal width of this crossing, structures would be sited outside of the channel and associated wetland. Additionally, during construction activities, the City would not require a temporary travel lane across Munson Slough or its unnamed tributary for construction equipment to access this portion of the ROW. Rather, construction equipment would complete necessary work from both sides of these waterbodies using the existing travel lane on the FGT ROW. Therefore, no direct impacts to Munson Slough or its unnamed tributary would be anticipated during construction. Indirect impacts to these waterbodies could occur during construction if the existing nearby ground cover would be disturbed or removed, potentially resulting in erosion and sedimentation. In addition, through the use of mitigation measures as detailed in Section 3.6.5, the City would minimize any potential for fuel or petroleum spills from refueling operations or construction equipment maintenance activities to impact these surface waters.

M:\Tallahassee\SWTL\3108_SWTL\mxd\Final Figures\Figure 3-6.2 Existing NWI Wetlands.mxd



Substation BP-5
Alternative 1 - Preferred Alternative
Alternative 3 - Off-Forest Alternative
Alternative 1 - Tap Station
Alternative 3 - Tap Station
County

NWI Wetlands
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake

Figure 3.6-2
NWI Wetlands
Southwestern Transmission Line
City of Tallahassee Electric Utilities, Florida

N
0 0.5 1 Miles

Data Source: 2011 USFWS

City of Tallahassee Your Own Utilities
AMPIRICAL SOLUTIONS LLC

Over the long-term, the City would perform periodic vegetation maintenance activities, including tree trimming and annual mowing. Approved maintenance activities are specified in the City's *Procedures Manual for General Utility Permit* (City of Tallahassee 2007) which is issued in accordance to the City's Land Development Code and the City's TVMP. During maintenance activities, the City would not need to travel across Munson Slough or its unnamed tributary. However, impacts to these waterbodies could occur if fuel or petroleum spills from refueling operations or construction equipment maintenance activities are conducted near these waterbodies during vegetation maintenance.

To the extent practicable, Alternative 1 would be designed to span any floodplain crossings. However, in situations such as Crossing Area 1-A (see Table 3.6-2), spanning may not be possible. In these situations, only the footprint of the structures– and no other facilities – would be placed within the designated 100-year floodplains on the ROW and the impact to floodplains due to construction within the Alternative 1 ROW would be considered negligible. Any proposed development within the 100-year floodplain within Leon County will be reviewed by the County for compliance with Leon County's Land Development Regulations Chapter 10-4.503(d).

Alternative 1 would not require clearing of, nor would directly impact, woody wetlands. As demonstrated in Table 3.6-3, the Alternative 1 ROW would encompass 0.66 acre of herbaceous wetland habitat, consisting of two separate wetlands that were previously disturbed by the FGT Project. Due to the minimal total length of these habitats, structures would be sited outside the wetland boundaries and clearing of herbaceous wetland vegetation during construction of the Preferred Alternative would not be required. Staging areas (see Sections 2.2.2 and 2.5.2.1) also would be located outside of these wetlands within the Alternative 1 ROW. Disturbance within the two wetlands would be limited to construction vehicles using the designated travel lanes on the Alternative 1 ROW (and within the ANF these travel lanes currently exist). Construction of a new transmission ROW within a designated wetland would require authorization under an Environmental Management Permit from the Leon County Department of Development Support and Environmental Management and a Section 404 Permit/Environmental Resource Permit from the United States Army Corps of Engineers (USACE) and the FDEP, respectively.

The 0.66 acre of herbaceous wetland located within the Alternative 1 ROW was previously cleared for the FGT Project and would have regenerated over the long-term to forested wetland vegetation. The long-term maintenance of the Alternative 1 ROW would result in the removal of these 0.66 acre of wetland from forestry management within the ANF. As described in Section 3.4.2.1.2, the authorization of an SUP under Alternative 1 would result in the maintenance of 50.14 acres (including the 0.66 acre of herbaceous wetland discussed in this section) in a non-forested condition for the life of the SUP. As previously stated, to compensate for the long-term impact of removing forested land from the ANF, the City would acquire land to be added to the ANF. The land acquired would have a vegetative community similar to what is being placed under the SUP.

The ingress and egress of personal vehicles and construction equipment on the travel lane ROW during construction and post-construction maintenance activities could disturb or remove existing or restored herbaceous wetland vegetation cover, potentially resulting in erosion and sedimentation of wetlands. Additionally, as discussed in Section 3.11, fuel or petroleum spills from refueling operations or construction equipment maintenance activities conducted near or in wetlands either during construction or post-construction maintenance could potentially result in contamination of wetlands. Mitigation measures to minimize these potential impacts are discussed in Section 3.11.5.

3.6.3 Alternative 3

3.6.3.1 Affected Environment

3.6.3.1.1 Surface Water

Alternative 3 would not cross any streams, rivers, creeks, canals, ponds, or lakes.

3.6.3.1.2 Floodplains

As illustrated on Figure 3.6-1, the Alternative 3 ROW would encompass 21.95 acres of FEMA 100-year floodplain, consisting of nine crossings. These crossings are summarized in Table 3.6-4.

- Crossing 3-A (8.77 acres) would consist of two individual crossings (see Table 3.6-4, "Crossing Length" column) near the western end of the proposed ROW.
- Crossing 3-B (1.12 acres) would be located just east of Crawfordville Highway (State Route 319).
- Crossing 3-C (4.84 acres) would abut the east side of Wakulla Springs Road (State Route 61).
- Crossing 3-D (4.06 acres) would be between Wakulla Springs Road and Woodville Highway (State Route 363).
- Crossings 3-E (0.89 acre) and 3-F (0.57 acres) would be west of Ashley Hall Road.
- Crossings 3-G (0.92 acre), 3-H (0.37 acre), and 1-C (0.41 acre) would be adjacent to both sides of the existing north-south City 115 kV transmission line.

Table 3.6-4
100-Year Floodplains Crossed by the Proposed Alternative 3 Right-of-Way

Crossing	Acres Within ROW	Crossing Length (feet)[(a)]	Will Crossing Require Structures (i.e., Poles) Within Floodplain
3-A [(b)]	8.77	118 4,065	Yes, for crossing greater than 700 to 800 feet
3-B	1.12	470	No
3-C	4.84	2,106	Yes
3-D	4.06	1,766	Yes
3-E	0.89	706	No
3-F	0.57	494	No
3-G	0.92	1,337	Yes
3-H	0.37	554	No
1-C	0.41	599	No
Total:	**21.95**		

Notes:
(a) Crossing length refers to approximate crossing length at centerline.
(b) Crossing 3-A would consist of two individual crossings as shown in the crossing length column.

In addition to the nine floodplain crossings within the Alternative 3 ROW, the entire 1 acre of the proposed Alternative 3 tap station is underlain by 100-year floodplain (see Figure 2-6).

3.6.3.1.3 Wetlands

Table 3.6-5 provides a listing of the wetlands that would be crossed by the Alternative 3 ROW, including approximate crossing length, NWI classification, and proposed crossing method. Approximate locations of wetlands traversed by Alternative 3 are illustrated on Figure 3.6-2. The FLUCCS descriptions of the wetland communities that would be traversed by the Alternative 3 route are provided below.

Table 3.6-5
Wetlands Crossed by the Proposed Alternative 3 Right-of-Way

Crossing ID	Wetland Cover Type (FLUCCS)	NWI Classification [(a)]	Approximate Crossing Length (feet) [(b)]	Total Area of Crossing (acres)	Crossing Method
3-1	Cypress/Hydric Pine Flatwoods/Mixed Scrub-Shrub Wetland	PFO	437	1.07	Clear ROW; span
3-2	Cypress and Wetland Forested Mixed	PFO	636	1.62	Clear ROW; span
3-3	Cypress/Wetland Forested Mixed	PFO	883	2.09	Clear ROW; TBD
3-4	Cypress/Wetland Forested Mixed	PFO	660	1.49	Clear ROW; span
3-5	Cypress	PFO	142	0.35	Clear ROW; span
		Total:	**2,758**	**6.62**	

Notes:
The specific wetland crossings listed in this table were determined by analyzing the wetland vegetation types shown on the NWFWMD's 2004 FLUCCS Mapping. NWI mapping was not used to determine the specific crossing locations shown in this table or on Figure 3.6-2.
(a) NWI Classification System, USFWS (Cowardin et al. 1979).
(b) Approximate crossing length in feet at centerline of ROW.
Key:
FLUCCS = Florida Land Use, Cover, and Forms Classification System
NWI = National Wetlands Inventory.
PFO = Palustrine Forested Wetland.
ROW = right-of-way.
TBD = To be determined.

Cypress

Cypress swamps are commonly found in the interior portions of wetlands in such places as river floodplains, bogs, bayheads, and sloughs. Cypress swamps are dominated by tightly-packed, 90% stands of either pond cypress (*Taxodium ascendens*) or bald cypress (*Taxodium distichum*). Cypress stands are flooded annually for periods of long duration- (typically 4 to 8 months) in any given year. In the case of pond cypress, common tree associates are swamp tupelo (*Nyssa sylvatica*), slash pine, and black titi (*Cliftonia monophylla*). In the case of bald cypress, common associates are water tupelo(*Nyssa biflora*), swamp cottonwood (*Populus heterophylla*), red maple (*Acer rubrum*), American elm (*Ulmus Americana*), pumpkin ash (*Fraxinus profunda*), Carolina ash (*Fraxinus caroliniana*), overcup oak (*Quercus lyrata*), and water hickory (*Carya aquatica*). Bald cypress may also be associated with laurel oak (*Quercus laurifolia*), sweetgum (*Liquidambar styraciflua*), and sweetbay (*Magnolia virginiana*) trees on less moist sites. Note that some authorities do not distinguish between the two varieties of cypress (FDOT 1999).

Hydric Pine Flatwoods

Hydric pine flatwoods forest exhibits a sparse to moderate understory of slash pine. The understory species typically include grasses, wiregrass, forbs, and saw palmetto (FDOT 1999).

Wetland Forested Mixed

Wetland forested mixed cover type includes mixed wetland forest communities in which neither hardwoods nor conifers achieve a 66% dominance of the crown canopy composition. They typically feature a mixture of such deciduous tree species as black gum, red maple, water oak, cabbage palm, and bay trees plus conifers which have adapted to grow in wet environments (FDOT 1999).

Mixed Scrub-Shrub Wetland

Mixed scrub-shrub wetlands are often associated with areas of transitional hydrology or regenerating swamps with shorter heights than forested areas, typically 20 feet or less. Examples of this wetland community include:

- Shrub wetlands that are dominated by transitional shrubby vegetation at the upland margins of wetter community types or on clear cut hydric sites; and
- Wet prairie sites that have been protected from fire in which wax myrtle and groundsel bush are typical species (FDOT 1999).

3.6.3.2 Environmental Impacts

The Alternative 3 ROW would not traverse any surface waterbodies and would therefore result in no potential impacts to surface water resources during construction or long-term maintenance of the project.

To the extent practicable, construction within the Alternative 3 ROW would be designed to span floodplain crossings. However, in situations such as Crossing Areas 3-A, 3-C, 3-D, and 3-G (see Table 3.6-4), spanning may not be possible. In these situations, only the footprint of the structures – and no other facilities – would be placed within the designated 100-year floodplains and the impact to floodplains due to construction within the Alternative 3 ROW would be considered negligible. In addition, the entire 1-acre fence line of the proposed Alternative 3 tap station is underlain by 100-year floodplain. As shown on Figure 2-6, the proposed 1-acre Alternative 3 tap station equipment would impact approximately 0.80 acres (i.e., 35,000 square feet) of land underlain by the 100-year floodplain. Any proposed development within the 100-year floodplain in Wakulla County would be reviewed by the County under Part II of the Wakulla County Code of Ordinances, Chapter 11 – Drainage & Flood Prevention (Strickland 2011). Any proposed development within the 100-year floodplain within Leon County will be reviewed by the County for compliance with Leon County's Land Development Regulations Chapter 10-4.503(d).

Implementation of Alternative 3 would result in impacts to wetlands similar to Alternative 1; however, this route would result in the long-term conversion of approximately 6.62 total acres of forested/scrub-shrub wetland habitat to herbaceous wetland. As outlined in the City's *Procedures Manual for General Utility Permit* (City of Tallahassee 2007), stumps of trees removed in wetlands would be cut down to ground level. The use of clearing and stumping equipment in saturated areas could result in disturbance of wetland topsoil and subsoil layers, potentially adversely impacting post-construction revegetation success in these areas. In addition, in areas of uneven topography, grading may be necessary to create a level ROW. Grading within wetland areas could also result in the disturbance of wetland topsoil and subsoil layers, potentially adversely impacting post-construction revegetation success in these areas. Construction of a new transmission ROW within a designated wetland would require authorization

under an Environmental Management Permit from the Leon County Department of Development Support and Environmental Management and a joint Section 404 Permit/Environmental Resource Permit from the USACE and the FDEP, respectively.

3.6.4 No Action Alternative

Under the No Action Alternative, no waterbodies, wetlands, or floodplains would be crossed or disturbed. As a result, there would be no impacts to water resources from this alternative.

3.6.5 Mitigation Measures for Water Resources

If the Proposed Action is implemented, the City will implement the following mitigating measures to avoid or minimize potential adverse impacts on surface water and wetlands:

- Site the transmission ROW to the extent practicable to avoid waterbody and wetlands.
- Where it is not possible to avoid siting the ROW across wetlands, locate poles and ground disturbance outside of waterbodies and wetlands to the extent practicable.
- Minimize ground disturbance associated with the project to the extent possible.
- Site any necessary work space areas outside of, and a minimum of 100 feet from any waterbodies or wetlands.
- Designate 100-foot buffer zones on all sides of waterbodies and wetlands and install signage, fencing, tape, or other appropriate notification methods to clearly identify the locations and limits of buffer zones to construction crews prior to construction. Construction within buffer zones would be the minimum necessary to cut trees to ground level and remove downed vegetation from the construction ROW.
- Install and maintain appropriate erosion control barriers (e.g., silt fencing and/or straw bales) across the ROW if any ground-disturbing activity will occur near the 100-foot buffer zone of all wetlands and waterways. In addition, erosion control measures would be installed and maintained throughout construction, in sloped or disturbed areas or in any other circumstances where construction related activities have the potential to cause sedimentation of wetlands and/or waterbodies located adjacent to the proposed ROW. The use of hay for erosion control barriers is not allowed by the USFS on USFS property.
- Where use of access roads in upland areas cannot provide appropriate access to the construction ROW, all construction equipment may pass through the wetlands once. In areas of high soil saturation where rutting is likely to occur, use temporary matting on the travel lane within the wetland. Where matting is deemed necessary, all construction equipment would operate off the matting.
- Minimize grading activities to non-saturated wetland areas and only in those locations were a safe, stable ROW surface must be created. In areas where grading will be required, the wetland topsoil should be stripped and segregated from the underlying subsoil. Topsoil will be returned after grading activities have been completed promoting quick reestablishment of wetland species by preserving the vegetative propagules (e.g., seeds, tubers, rhizomes, bulbs) in the topsoil. In wetlands where grading is not required, disturbance to the topsoil will be minimized to ensure quick revegetation of wetlands after construction is completed.
- Seed all disturbed upland areas as soon as possible with appropriate certified noxious weed-free seed in accordance with USFS direction (as certified by the state) to stabilize

upland areas and avoid sedimentation and erosion into nearby wetlands and waterbodies.

- Monitor post-construction re-vegetation success in wetlands during periodic ground inspections. Contingency measures would be implemented as necessary.
- Specify in the bid documents that the storage of hazardous materials, chemicals, fuels, and lubricating oils is prohibited on the construction ROW. Specify in the bid documents that refueling of personal vehicles or construction equipment is prohibited on the construction ROW. Specify in the bid documents that overnight parking of personal vehicles or construction equipment within 100 feet of any waterbody or wetland is prohibited.
- Restore pre-construction contours as close to original grade as possible.
- Avoid any personal vehicle, or construction or maintenance equipment crossings of Munson Slough. The City would use an existing forest road (i.e., Rivers Road) to gain any required access to Munson Slough.
- Comply with the conditions of applicable authorizations relating to any work within wetlands including the Environmental Management Permit issued by the Leon County Department of Development Support and Environmental Management, USFS SUP, and Section 404 permit issued by the USACE and the FDEP.

3.7 CULTURAL RESOURCES

This section describes the cultural resources in the vicinity of Alternatives 1 and 3, the potential impacts of the alternative routes, as well as the No Action Alternative, on those resources, and potential mitigation measures to reduce or eliminate the potential impacts.

3.7.1 Inventory and Methodology

The 1966 National Historic Preservation Act (NHPA; Public Law 89-665, as amended by Public Law 96-515; 16 U.S.C. 470 et. seq.) provides for the establishment of the National Register of Historic Places (NRHP) to include districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, and culture. Section 106 of the Act requires that federal agencies with jurisdiction over a proposed federal project take into account the effect of the undertaking on cultural resources listed, or eligible for listing, on the NRHP, and afford the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation an opportunity to comment with regard to the undertaking. The NRHP eligibility criteria have been defined by the Secretary of the Interior's Standards for Evaluation (36 CFR 60).

Cultural resources are considered to be NRHP eligible if they display the quality of significance in American history, architecture, archaeology, engineering, and culture that is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, workmanship, feeling, and association, and:

- **Criterion A:** Are associated with the events that have made a significant contribution to the broad patterns of American history; or
- **Criterion B:** Are associated with the lives of persons significant in our past; or
- **Criterion C:** Embody the distinctive characteristic of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic value,

or that represent a significant or distinguishable entity whose components may lack individual distinction; or

- **Criterion D:** Have yielded or may likely yield information important in prehistory or history.

The process of agency reviews and assessment of the effect of an undertaking on cultural resources is set forth in the implementing regulations formulated by the Advisory Council on Historic Preservation (36 CFR 800, Protection of Historic Properties). Section 101(d)(6)(B) of the 1966 NHPA requires federal agencies to consult with Indian tribes that attach religious or cultural significance to historic properties. The compliance with 36 CFR 800.2 that implements the Native American consultation is conducted by federal agencies as part of a government-to-government undertaking. The NAGPRA implements the protection of Native American human remains, graves, and funerary items.

Cultural resources include significant archeological, historical, or religious sites and structures that are protected under local/state/federal law. Sites or structures may include Native American villages, historical homes, gravesites, sites where culturally important events occurred, and paleontological resources such as vertebrate and invertebrate fossils.

The construction of the Proposed Action has the potential to damage sites or structures through physical disturbance, as well as by facilitating erosion. For example, potential impacts could occur from soil disturbance at pole locations or where heavy equipment is used. In addition, adverse impacts may accrue from actions that foster increased public access to these resources and thereby may increase the potential for vandalism, theft, or damage from unregulated human activity.

3.7.2 Alternative 1 (Preferred Alternative)

3.7.2.1 Affected Environment

The area of potential effect for cultural resources analysis under Alternative 1 is the proposed 8.75-mile-long and 60-foot-wide ROW corridor and the 3-acre tap station location. As detailed in Section 3.1.1, the Alternative 1 route would be co-located entirely along existing utility corridors, thereby minimizing potential ground-disturbing activities. Additionally, Alternative 1 would require no new access roads or additional workspaces located outside of the ROW, except for the 3-acre tap station. Further, under Alternative 1, lands that would be crossed are under federal, state, and local jurisdiction and will be addressed under appropriate requirements as detailed above.

The Alternative 1 route would be co-located along the FGT Project ROW through the ANF for 6.48 miles of the proposed 8.75-mile route. This portion of the Alternative 1 ROW was previously surveyed for cultural resources by FGT for the FGT Project as documented in the FGT FEIS (FERC 2009). Within the ANF, FGT's cultural surveys resulted in the finding of an archaeological site and isolated archaeological finds (FERC 2009). After further examination, none of these findings were determined to be eligible for listing on the NRHP (FERC 2009). On January 8, 2008, the USFS requested revisions to the survey report pertaining to the ANF. FGT provided a revised report for USFS review (FERC 2009). Alternative 1 also would be co-located with the FGT pipeline ROW for an additional 0.5 mile outside of the ANF. This area also was previously surveyed for cultural resources by FGT for the FGT Project (FERC 2009). No cultural surveys have been completed for the 1.75 miles of the proposed Alternative 1 route along the City's existing 115kV line.

The USFS initiated tribal consultation activities through correspondence dated October 7, 2010. Letters were sent to the following tribal nations: Kialegee Tribal Town of the Muscogee (Creek) Nation, the Seminole Tribe of Florida, the Alabama-Quassarte Tribal Town, the Muscogee (Creek) Nation, Poarch Band of Creek Indians, and the Miccosukee Tribe of Indians.

The USFS also initiated Section 106 consultation with the SHPO through correspondence dated October 7, 2010. By response dated October 29, 2010 (this correspondence is on file in the project record and available for review on request),, the SHPO recommended that any segments of the Proposed Action corridor that have not been surveyed within the last 15 years be considered for potential survey prior to construction. In addition, per discussion with the SHPO, after review of the site file, no archaeological resources were determined to be near the Preferred Alternative route.

3.7.2.2 Environmental Impacts

Of the 8.75-mile Alternative 1 route, 7.0 miles were surveyed within the last 10 years as part of the FGT Project. No surveys have been completed along the City's existing 115kV line.

As indicated above, the USFS has initiated Section 106 consultation and will complete the archaeological surveys for the 3 acres for the proposed tap station. To assess environmental impacts to cultural resources for the 1.75 miles of the Alternative 1 ROW that is co-located with the existing City 115 kV line, further coordination with the SHPO regarding the need to conduct archaeological surveys along this segment is required.

3.7.3 Alternative 3

3.7.3.1 Affected Environment

The area of potential effect for Alternative 3 is the proposed 12.65-mile-long and 100-foot- wide ROW corridor and the 1-acre tap station. As detailed in Table 3.1-1, the Alternative 3 route would be co-located with roadways for approximately 27% of its length (3.40 miles), and within an existing 115kV line for approximately 28% of its length (3.55 miles).

By letter dated April 14, 2011 (this correspondence is on file in the project record and available for review on request), the SHPO recommended that any segments of the proposed corridor that have not been surveyed within the last 15 years be considered for potential survey prior to construction. Review of the site file for the Alternative 3 ROW also indicated that no archaeological resources were determined to be near the Alternative 3 ROW (Peterson 2011). In addition, per communication with the SHPO, no Phase I cultural resources assessments have been performed within the Alternative 3 ROW.

3.7.3.2 Environmental Impacts

Alternative 3 would result in the clearing of 90.04 acres (1 acre for the tap station and 89.04 acres for the ROW; see Tables 3.1-1, 3.4-3 and 3.6-5), therefore impacts to archaeological resources could occur. As detailed in Section 3.1.1, approximately 55% of the Alternative 3 route would be co-located with existing disturbed road and utility ROW. The Alternative 3 route, as detailed in Section 3.2, would not cross the ANF, but would be located entirely within lands under state and local jurisdiction. No cultural surveys have been conducted within the Alternative 3 ROW. Therefore, if Alternative 3 was selected as the preferred alternative, the City, in cooperation with a federal agency with nexus to the project, would consult with the SHPO and request their determination on the need for cultural resource surveys within the Alternative 3 ROW and the tap station. If required, surveys would be completed prior to the construction of this route.

3.7.4 No Action Alternative

Under the No Action Alternative, there would be no adverse impacts to cultural resources.

3.7.5 Mitigation Measures for Cultural Resources

Mitigation for cultural resources involves avoiding, reducing, or minimizing the impacts to historic properties, should they exist, and making up for the loss associated with historic properties. Although the probability for subsurface archaeological deposits is generally low in the proposed area of

the Proposed Action, it is possible that archaeological sites or other cultural resources may be inadvertently discovered during the course of project implementation and completion. Sites discovered during project construction would be considered eligible for the NRHP under Section 106 of the NHPA unless research and documentation prove otherwise. Any such discoveries would be documented and addressed through scientific data recovery or other appropriate measures that would be determined through consultation with the SHPO and affected tribes. The protocol for inadvertent discovery of cultural resources during project implementation is as follows:

- If cultural materials are encountered during project construction, immediately stop all construction activities in the vicinity until the resource can be evaluated by a qualified archaeologist. Prehistoric site indicators include, but are not limited to, chipped stone, obsidian tools and tool manufacture debitage (waste flakes), grinding implements such as mortars and pestles, ashy or charcoal lenses, compact use surfaces, and darkened soil that contains organic remains of food production, such as animal bone and shellfish remains. Historic site indicators include, but are not limited to, pottery, crockery, ceramic, glass, wood, bone, metal, and structural remains.
- If artifacts or other cultural materials are identified during project construction, immediately contact representatives of the affected tribes and the Florida SHPO.
- Immediately stop all construction activities in the vicinity should human remains or burials be encountered. Secure the area, placing it off limits for anyone but authorized personnel and immediately notify—in this order—County Sheriff or Medical Examiner, USFS archaeologists, the SHPO, and appropriate tribes.

Additionally, the City would complete archaeological surveys, if required, for any portions of the selected alternative that have not been surveyed for cultural resources within the last 15 years.

3.8 SOCIOECONOMICS

This section describes the socioeconomic resources in the study area defined in Section 3.8.1, the potential impacts of the alternative routes, as well as the No Action Alternative, on those resources, and potential mitigation measures to reduce or eliminate the potential impacts.

3.8.1 Inventory and Methodology

Alternative 1 would be constructed solely within Leon County, Florida, which includes the City of Tallahassee. A total of 1.76 miles of the Alternative 3 route would be located within Wakulla County, Florida. Therefore, the socioeconomic study area includes both Leon County (the City of Tallahassee) and Wakulla County. Given this, the environment potentially affected by Alternatives 1 and 3 is described first (Section 3.8.2), followed by separate analyses for the impacts of each alternative (Section 3.8.3).

3.8.2 Affected Environment

3.8.2.1 Population Characteristics

Information from the United States Bureau of the Census (U.S. Census Bureau) was analyzed to determine the existing conditions in the study area. The U.S. Census Bureau conducts a census every 10 years referred to as the Census of Population and Housing with 2010 being the most recent collection of data. Data from the 2010 census will be released gradually to the public over the next three years. The U.S. Census Bureau also completes an American Community Survey each year that is used to estimate demographic and housing statistics for periods of time not covered under the decennial Census of Population and Housing. Data from the American Community Survey are released as averages over

various time periods. Most recently, the American Community Survey released data from 2005 to 2009. For the purposes of this analysis, data from the 2010 Census of Population and Housing were used if the data were released by the time of writing (July 2011). All other data were collected from the 2005 to 2009 American Community Survey. The American Community Survey data are displayed as 2009 data.

The existing population characteristics of the study area are presented in Tables 3.8-1, 3.8-2, and 3.8-3. As demonstrated in Table 3.8-1, Leon County is an urbanized area that had a 2010 total population of 275,487 persons. In contrast, Wakulla County is a smaller rural community with a total population of 30,776 residents.

Table 3.8-1 also presents low, medium, and high population projections for all Florida counties, as prepared by the University of Florida, Bureau of Economic and Business Research (BEBR), Population Program. Per standard comprehensive planning practice in Florida, the medium projection is the one considered to provide the most accurate forecast of the future population and is provided in Table 3.8-1.

As demonstrated in Table 3.8-1, the medium range BEBR projections estimate a potential 20.3% population increase in Leon County and a potential 61.8% population increase in Wakulla County by 2035. The state of Florida is estimated to incur a 49% population increase by 2035.

In 2010, both Leon County and the City of Tallahassee had a larger minority population at 37% and 43%, respectively, than the state of Florida, whereas Wakulla County had a smaller minority population at 18%. Approximately 22.5% of Florida's population was considered to be minority in 2010 (see Table 3.8-2).

Each of the geographic areas identified within the study area have a lower Hispanic/Latino population than the state of Florida. Table 3.8-3 provides an overview of racial and ethnic characteristics within the study area.

3.8.2.2 Income Characteristics

The City of Tallahassee and Leon County have well-developed economies that are strongly tied to the Florida state government, whereas Wakulla County, although part of the Tallahassee Metropolitan Statistical Area (MSA), is a much more rural community. As provided in Table 3.8-4, 64,400 or 37.4% of workers in the Tallahassee MSA are employed by federal, state, or local government entities. Education and health services and retail trade were the next largest employment sectors in the MSA.

As indicated in Table 3.8-5, the City of Tallahassee, and Leon and Wakulla Counties each have an unemployment rate well below the state rate of 12%. In 2010, the City of Tallahassee had a seasonally adjusted annual average unemployment rate of 8.4%, while during that same period both Leon and Wakulla Counties' unemployment rates were 8.2%.

Table 3.8-6 provides income estimates for 2009 for the City of Tallahassee, Leon and Wakulla Counties, and the State of Florida. As provided in Table 3.8-6, Wakulla County had the smallest per capita income at $22,114 per person, but had the highest median household income at $48,022 per household. The City of Tallahassee had the lowest median household income at $35,174 per household and the largest percentage of population living at or below the poverty line. Leon County per capita and median household income levels are slightly below the state of Florida.

Table 3.8-1
Total Population (2010) and BEBR Medium Population Projections (2015-2035) for Leon County, Wakulla County, and the State of Florida

County/Year	2010 [a] (actual)	2015 [b]	2020 [b]	2025 [b]	2030 [b]	2035 [b]	% Change 2010 to 2035
Leon County	275,487	284,900	297,600	309,900	321,200	331,400	20.3 %
Wakulla County	30,776	35,000	38,800	42,600	46,300	49,800	61.8 %
State of Florida	18,801,310	19,881,000	21,246,900	22,573,600	23,821,300	28,012,200	49.0%

Sources:
(a) U.S. Census Bureau 2010.
(b) BEBR 2010.
Key: BEBR = University of Florida, Bureau of Economic and Business Research.

Table 3.8-2
Minority, Hispanic, and Household Size for Leon and Wakulla Counties, the City of Tallahassee, and the State of Florida (2010)

Geographic Area	2010 Population [1]	% Minority [1]	% Hispanic/ Latino [1,a]	Average Household Size [b,2]
Leon County	275,487	37.0 %	5.6 %	2.29
City of Tallahassee	181,376	42.6 %	6.3 %	2.15
Wakulla County	30,776	18.0 %	3.3 %	2.53
State of Florida	18,801,310	25.0 %	22.5 %	2.52

Sources:
(1) U.S. Census Bureau 2010.
(2) U.S. Census Bureau 2009a, 2009b, and 2009c.
Notes:
(a) Hispanic or Latino is defined as an individual whom self identifies himself/herself as a Hispanic or Latino on the *2010 Census of Population and Housing*.
(b) Average household size only includes data from owner occupied and renter occupied units.

Table 3.8-3
Racial and Ethnic Characteristics for Leon and Wakulla Counties, the City of Tallahassee, and the State of Florida

Geographic Area	2010 Population	White	Black	American Indian	Asian	Native Hawaiian	Other	Two or more races	Hispanic or Latino Origin
Leon County	275,487	173,480	83,520	775	8,053	140	3,397	6,122	15,361
City of Tallahassee	181,376	104,171	63,475	443	6,653	100	2,361	4,173	11,346
Wakulla County	30,776	25,224	4,464	191	172	18	148	559	1,013
State of Florida	18,801,310	14,109,162	2,999,862	71,458	454,821	12,286	681,144	472,577	4,223,806

Source: U.S. Census Bureau 2010.

Table 3.8-4
2011 Nonagricultural Employment by Industrial Sector for the Tallahassee Metropolitan Statistical Area

Industry	April 2011 Total Employment	April 2011 Percent of Total Employment (%)
Mining, Logging and Construction	6,400	3.7
Manufacturing	3,700	2.1
Transportation, Warehousing, and Utilities	1,900	1.1
Wholesale Trade	3,300	1.9
Retail Trade	17,600	10.2
Information	3,000	1.7
Financial Activities	7,000	4.1
Professional and Business Services	17,800	10.3
Education and Health Services	20,200	11.7
Leisure and Hospitality	16,800	9.8
Other Services	10,000	5.8
Government	64,400	37.4
Total	172,100	100.0

Source: Florida Department of Labor 2011.
Note: Percentages may not total 100.0% due to rounding.

Table 3.8-5
2010 (1) Labor Force Statistics for Leon and Wakulla Counties, the City of Tallahassee, and the State of Florida

Geographic Area	Labor Force	Employed	Unemployed	Unemployment Rate
City of Tallahassee	94,565	86,665	7,900	8.4
Leon County	148,389	136,204	12,185	8.2
Wakulla County	16,867	15,483	1,384	8.2
Florida	9,280,145	8,169,517	1,110,628	12.0

Source: U.S. Bureau of Labor Statistics 2011.
Note:
Data for the State of Florida are for December 2010; all others are annual averages for 2010.

Table 3.8-6
2009 Income Statistics for Leon and Wakulla Counties, the City of Tallahassee, and the State of Florida

Geographic Area	Per Capita Income	Median Household Income	Percent Below Poverty Line
City of Tallahassee	$22,877	$35,174	28.5%
Leon County	$25,467	$42,889	21.5%
Wakulla County	$22,114	$48,022	14.1%
Florida	$26,503	$44,755	15.0%

Source: U.S. Census Bureau 2009a, 2009b, and 2009c.

3.8.2.3 Housing Characteristics

The City of Tallahassee and Leon County have large, well-developed housing markets, while, in contrast, Wakulla County is much more rural. Table 3.8-7 provides various statistics on the housing market in the City of Tallahassee, Leon and Wakulla Counties, and the state of Florida.

As demonstrated in Table 3.8-7, both the City of Tallahassee and Leon County had comparable housing vacancy rates at 11% and 12%, respectively, while Wakulla County had a vacancy rate of 16.6%. By comparison, the state of Florida vacancy rate was 18.1%. While the state of Florida's housing market has been negatively affected by the recent recession, the City of Tallahassee and Leon County appear to have been impacted less than the rest of the state. As further demonstrated in Table 3.8-7, the median value of owner-occupied housing units ranged from $143,100 in Wakulla County to $192,300 in Leon County, while the median value of owner-occupied housing units in the state was $211,300.

Table 3.8-7
Selected Housing Statistics for Leon and Wakulla Counties, the City of Tallahassee, and the State of Florida

	City of Tallahassee	Leon County	Wakulla County	Florida
Total Housing Units	82,045	120,717	13,139	8,641,264
Occupied	73,007	108,592	10,956	7,076,539
Vacant	9,038	12,125	2,183	1,564,725
For Rent	3,674	4,547	166	259,738
Rented, not occupied	921	967	55	43,192
For sale only	973	1,341	303	187,351
Sold, not occupied	346	603	123	69,414
For seasonal, recreational, or occasional use	647	990	847	715,571
For migrant workers	0	0	0	5,711

Table 3.8-7
Selected Housing Statistics for Leon and Wakulla Counties, the City of Tallahassee, and the State of Florida

	City of Tallahassee	Leon County	Wakulla County	Florida
Other Vacant	2,477	3,677	689	283,748
Vacancy Rate	11.0%	10.0%	16.6%	18.1%
Median Value Owner-Occupied Housing Units	$189,000	$192,300	$143,100	$211,300

Source: U.S. Census Bureau 2009d, 2009e, 2009f, and 2009g.

3.8.3 Environmental Impacts

3.8.3.1 Alternative 1 (Preferred Alternative)

3.8.3.1.1 Population Characteristics

Overall, the construction of Alternative 1 would create approximately 30 temporary construction jobs with no job creation expected during the operations and maintenance of Alternative 1. The existing workforces in Leon and Wakulla Counties are expected to be sufficient in handling this number of jobs without creating any demand for labor outside the region. Therefore, it is highly unlikely that any in-migration to the region would occur as a result of the implementation of Alternative 1. Existing population and demographic characteristics of the study area would not be affected by the construction of the Preferred Alternative route.

3.8.3.1.2 Income Characteristics

Construction and operation of Alternative 1 would be expected to have a minor, positive impact on the regional economy by injecting approximately $11.3 million (see Table 3.1-1) into the regional economy through construction expenditures and the temporary employment of approximately 30 workers.

Although uncertain at this stage, it is expected that the City of Tallahassee, to the maximum extent possible, would hire locally for the project, including local workers and construction firms. As a result, these funds would act as a short-term stimulus to the local and regional economy, thereby directly impacting the regional economy by increasing employment and earnings in the construction industry. Additionally, these construction expenditures would have a positive indirect impact on the local economy. Further, as the new construction workers spend a portion of their payroll in the local area and construction companies purchase materials from local suppliers, the overall demand for local goods and services would expand.

In addition to the one-time costs associated with construction, any increase in operations and maintenance cost also would have a positive impact on the regional economy. Although existing personnel would be expected to handle the operations and maintenance activities, some additional operations and maintenance costs could occur. These recurring costs would serve as a long-term stimulus to the local and regional economy.

In addition, to the economic benefits described, it is the overall intent of this project to increase the reliability of the City of Tallahassee's electrical distribution system. As such, the number of power outages would likely decrease with the implementation of the proposed project, thereby minimizing the amount of lost economic activity that would otherwise occur during these power outages.

3.8.3.1.3 Housing Characteristics

The construction, operation, and maintenance of Alternative 1 would not be anticipated to result in a measurable impact on the local or regional population or housing market. As described in Section 3.1.1, no housing units are located within the proposed Alternative 1 ROW. Based upon the interpretation of aerial imagery and GIS analysis, no housing units and/or other residential structures are located within 100 feet of the ROW centerline. Under Alternative 1, there would be no increase in the overall population in the area; therefore, there would be no increase in housing needs in the area from implementation of the Preferred Alternative.

Jackson and Pitts (2010), following a review of literature studying economic impacts of electric transmission lines on adjacent property values, concluded that only minor impacts on property values near the proposed ROW would be anticipated. After the review of numerous survey-based studies, regression analyses studies, and less formal appraisal-based sales analyses, Jackson and Pitts (2010) found that, although survey-based studies tend to show a concern that overhead transmission lines would impact property values, more statistically accurate regression-based studies showed little or no impact on property prices. Whatever impacts that were found in these regression-based studies dissipated with time and distance. Price analyses based on less formal pair-sales and other techniques showed no effects on price (Jackson and Pitts 2010).

3.8.3.2 Alternative 3

3.8.3.2.1 Population Characteristics

Under Alternative 3, the demographic impacts would be identical to those described for Alternative 1. Approximately 40 to 45 temporary construction jobs and no new operations and maintenance jobs would be created under this alternative. No in-migration would be anticipated to occur as a result of Alternative 3 and no impacts to the existing population or demographic characteristics of the study would be expected.

3.8.3.2.2 Income Characteristics

Impacts from Alternative 3 on the regional economy would be similar to those described above for Alternative 1. The proposed transmission line route would be slightly longer under Alternative 3; therefore, total construction costs of $14.8 million (see Table 3.1-1) would be slightly greater than for Alternative 1. As a result, the total economic impact under Alternative 3 would be slightly greater than under Alternative 1. Similarly, Alternative 3 would indirectly impact the regional economy.

No additional personnel are expected to be required during the operations phase of Alternative 3; therefore, operational impacts are expected to be identical for as those described under Alternative 1.

In addition to the economic impacts associated with costs of construction and operation of the transmission lines, the regional economy would benefit from the improved electrical system's infrastructure under Alternative 3. The improved transmission lines would reduce the likelihood of power outages and, therefore, would reduce the potential for a loss of economic activity that could be caused by electrical supply issues.

Finally, no measurable impacts to the regional labor market are anticipated under this alternative. Construction of Alternative 3 would require approximately 40 to 45 workers to complete. When compared to the overall supply of construction labor in the regional economy, this alternative would not have an impact on the price or availability of construction labor in the area.

3.8.3.2.3 Housing Characteristics

Construction and implementation of Alternative 3 would not have a measurable impact on the local or regional housing market. Under this alternative, based on data collected from aerial photographs

and GIS analysis, three existing residential structures are within the proposed ROW, while 22 housing units and/or other residential structures are located within 100 feet of the centerline of the ROW. As described previously for Alternative 1, there would be no impact on housing needs. As similarly described for Alternative 1, minor impacts on property values located near the proposed ROW would be anticipated.

3.8.4 No Action Alternative

The No Action alternative would result in no construction, operation, or maintenance of the proposed line and would therefore have no impact on the population, economy, or housing in Leon or Wakulla Counties.

3.8.5 Mitigation Measures for Socioeconomics

Construction of the project would result in minimal short-term positive economic impacts through temporary employment for about 30 to 45 workers depending on the alternative selected. Additionally, communities and businesses within the study area would benefit from the increased transmission capacity and reliability. For these reasons, the project is not expected to have negative economic impacts on local and regional economies. As such, no mitigation measures are proposed to address the socioeconomic impacts.

3.9 ENVIRONMENTAL JUSTICE

This section provides an analysis of the proposed project and alternatives, as well as the No Action Alternative, in accordance with EO 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" to identify any disproportionately high and adverse health or environmental impacts from proposed federal actions on minority or low-income populations. Additionally, in accordance with EO 13045 "Protection of Children from Environmental Health Risks and Safety Risks" a similar analysis was conducted to analyze the potential for disproportionate impacts to children, while potential mitigation measures are offered for impacts on both populations.

3.9.1 Inventory and Methodology

In accordance with EO 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (February 11, 1994), as a federal agency, the USFS is required to identify and address any disproportionately high and adverse human health or environmental effects of its actions on minority and low-income populations. The EO stipulated that these impacts are to be avoided or minimized to the extent feasible.

The CEQ (1997) has issued guidance to federal agencies on the terms used in EO 12898, as follows:

- **Low-income population.** Low-income populations in an affected area should be identified using the annual statistical poverty thresholds from the U.S. Census Bureau's Current Population Reports, Series P-60, on Income and Poverty.
- **Minority.** Individual(s) who are members of the following population groups: American Indian or Alaska Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.
- **Minority Population.** Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50%, or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

- **Disproportionately High and Adverse Human Health Effects**. When determining whether human health effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable:
  - Whether the health effects, which may be measured in risks and rates, are significant (as defined by NEPA), or above generally accepted norms;
  - Whether the risk or rate of hazard exposure to a minority population, low income population, or Indian tribe to an environmental hazard is significant (as defined by NEPA) and appreciably exceeds or is likely to appreciably exceed the risk or rate to the general population or other appropriate comparison group; and
  - Whether health effects occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adviser exposure to environmental hazards.
- **Disproportionately High and Adverse Environmental Effects.** When determining whether environmental effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable:
  - Whether there is or will be an impact on the natural or physical environment that significantly (as defined by NEPA) and adversely affects a minority population, low-income population, or Indian tribe. Such effects may include ecological, cultural, human health, economic, or social impacts on minority communities, low-income communities, or Indian tribes when those impacts are interrelated to impacts on the natural or physical environment;
  - Whether environmental effects are significant (as defined by NEPA) and are or may be having and adverse impact on minority populations, low-income populations, or Indian tribes that appreciable exceed or are likely to appreciably exceed those on the general population or other appropriate comparison group; and
  - Whether the environmental effects occur or would occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.

EO 13045 (1997) "Protection of Children from Environmental Health Risks and Safety Risks (Protection of Children)" requires a similar analysis for children, where federal agencies must identify and address environmental health risks and safety risks of its actions that may disproportionally affect children. Children may suffer disproportionately more environmental health and safety risks than adults because: neurological, digestive, immunological, and other bodily systems are still developing; children eat more food, drink more fluids, and breathe more air in proportion to their body weight than adults; children's behavior patterns may make them more susceptible to pollution and accidents because they are less able to protect themselves; and children's size and weight may diminish their protection from standard safety features.

When conducting the Census of Population and Housing, the U.S. Census Bureau defines and names census geographies including Census Tracts, Block Groups, and Blocks. Each year, the American Community Survey utilizes these census geographies defined during the previous Census of Population and Housing. Therefore, the 2005-2009 American Community Survey utilized the 2000 census geographies for the 2000 Census of Population and Housing.

Census geographies between Census year 2000 and 2010 have changed, therefore, data from the 2005-2009 American Community Survey and the Census Tract IDs may appear to be different. For the purposes of this analysis, total population, and percent minority and Hispanic are analyzed using 2010 Census of Population and Housing data. Income and poverty data have not been released in relation to the 2010 U.S. Census, therefore for the purposes of this analysis, 2005-2009 American Community Survey data are used for analyzing per capita income and percent below the poverty level.

Due to these data being collected during different time periods, and presenting different geography size and shape, they should not be directly compared, but are intended to serve as an overview of the population characteristics under each alternative.

In accordance with EO 12898 and guidance from the CEQ (1997), the demographic assessment for the study area identifies the geographic areas of comparison as Leon and Wakulla Counties and the State of Florida. Comparison geographies are used for the purpose of determining if environmental justice communities exist within this study area. Thus, the environment potentially affected by Alternatives 1 and 3 is described first (Section 3.9.2), followed by separate analyses for the impacts of each alternative (Section 3.9.3).

3.9.2 Affected Environment

Table 3.9-1 provides the percentages of the population in the geographic areas of comparison that are minority, Hispanic/Latino, or low-income.

In accordance with EO 13045, the demographic assessment for the study area identifies the geographic areas of comparison as Leon and Wakulla Counties and the State of Florida. Table 3.9-2 provides the percentages of the populations that are below the age of 18 for the geographic areas of comparison.

Table 3.9-1
Minority, Hispanic, and Percent Below Poverty Level for Leon and Wakulla Counties and the State of Florida (2009, 2010)

Geographic Area	2010 Population [(1)]	% Minority [(1)]	% Hispanic/ Latino [(a,1)]	Percent Below Poverty [(b,2)]
Leon County	275,487	37.0 %	5.6 %	21.5%
City of Tallahassee	181,376	42.6 %	6.3 %	28.5%
Wakulla County	30,776	18.0 %	3.3 %	14.1%
State of Florida	18,801,310	25.0 %	22.5 %	15.0%

Sources: (1) U.S. Census Bureau 2010. (2) U.S. Census Bureau 2009d, 2009e, 2009f, and 2009g.
Notes:
(a) Hispanic or Latino is defined as an individual whom self identifies himself/herself as a Hispanic or Latino on the 2010 Census of Population and Housing.
(b) For the purposes of this analysis, the U.S. Census Bureau's definition and measure of poverty was used. The U.S. Census Bureau follows the Office of Management and Budget's (OMB) Statistical Policy Directive 14, whereby a set of money income thresholds that vary by family size and composition are used to determine who is in poverty. If the family's total income is less than the family's threshold, then that family—and each member of the family—is considered in poverty (U.S. Census Bureau 2011).

Table 3.9-2
Population of Children for Leon and Wakulla Counties and the State of Florida (2009, 2010)

		Leon County	Wakulla County	Florida
Total Population of Children		52,200	6,809	4,054,773
Under 3 years old	Number	9,161	1,096	684,564
	Percent of Total	17.5%	16.1%	16.9%
3 and 4 years old	Number	6,414	616	460,274
	Percent of Total	12.3%	9.0%	11.4%
5 years	Number	2,661	339	208,891
	Percent of Total	5.1%	5.0%	5.2%
6 to 8 years	Number	7,886	1,181	640,563
	Percent of Total	15.1%	17.4%	15.8%
9 to 11 years	Number	8,444	1,109	660,372
	Percent of Total	16.2%	16.3%	16.3%
12 to 14 years	Number	8,871	1,208	685,162
	Percent of Total	17.0%	17.7%	16.9%
15 to 17 years	Number	8,555	1,260	703,346
	Percent of Total	16.4%	18.5%	17.3%
Children in group quarters	Number	208	0	11,601
	Percent of Total	0.4%	0.0%	0.2%

Source: U.S. Census Bureau 2009h, 2009i, and 2009j.

3.9.3 Environmental Impacts

3.9.3.1 Alternative 1 (Preferred Alternative)

Tables 3.9-3 and 3.9-4 provide the environmental justice population characteristics (i.e., minority populations, poverty rates, etc.) for the census block groups potentially impacted by the implementation of Alternative 1. The census block groups selected for this analysis are defined as those census block groups that are transected by the proposed route. The distances that these block groups extend beyond the project ROW vary depending on the exact geography of the block group but an urban area census block group typically covers several city blocks. In suburban and rural areas, these census block groups encompass much larger geographical areas. Any expected environmental or human health impacts are anticipated to fall within the boundaries of these transected block groups.

Table 3.9-3
Population Characteristics for Census Block Groups Impacted Under Alternative 1

Geographic Area	Total Population	% Minority [(a)]	% Hispanic or Latino [(a)]
State of Florida	**18,801,310**	**25.0 %**	**22.5 %**
Leon County	275,487	37.0 %	5.6 %
Census Tract 26.03 Block Group 1	2,554	72.2%	2.1%
Census Tract 26.04 Block Group 1	1,204	14.9%	1.9%
Census Tract 27.01 Block Group 3	1,382	47.0%	13.3%

Source: Census Bureau 2010.
Notes:
Shaded areas represent those census block groups having a meaningfully higher percentage of minority populations than the county as a whole, or where the group exceeds 50% of the population.
(a) Percentages are found by dividing the total number of individuals in the selected group by the total population of the geographic area and multiplying by 100.

Table 3.9-4
Percent Below Poverty for Census Tracts Impacted under Alternative 1 [(a)]

Geographic Area	% Below Poverty Level [(b,c)]
State of Florida	**13.2 %**
Leon County	21.5 %
Census Tract 26.02	18.4%
Census Tract 27.00	21.0%

Source: Census Bureau 2009a.
Notes:
(a) Census geographies between Census year 2000 and 2010 have changed. Therefore data from the 2005-2009 American Community Survey the Census Tract IDs may appear to be different. Income and poverty data have yet to be released in relation to the 2010 Census, therefore for the purposes of this analysis, 2005-2009 American Community Survey data is used for analyzing per capita income and percent below the poverty level.
(b) For the purposes of this analysis, the Census Bureau's definition and measure of poverty was used. The Census Bureau follows the Office of Management and Budget's (OMB) Statistical Policy Directive 14, whereby a set of money income thresholds that vary by family size and composition are used to determine who is in poverty. If the family's total income is less than the family's threshold, then that family—and each member of the family—is considered in poverty (Census Bureau 2011).
(c) The 2005-2009 American Community Survey only estimates data down to the Census Tract level and therefore the % below poverty data is presented at that level.

Environmental justice issues could occur as a result of Alternative 1. Under Alternative 1, three Block Groups in Leon County would be impacted by the project's construction footprint. Of these groups, Census Block Group 1 within Tract 26.03 and Block Group 3 within Census Tract 27.01 have a higher percentage of minority population than Leon County and the state of Florida. Census Block Group 3 within Census Tract 27.01 also has a higher Hispanic/Latino population than the county as a whole. Census Block Group 3 within Census Tract 27.01, however, has a lower percentage of Hispanic/Latino population than the state of Florida. Therefore, under Alternative 1 there are two census block groups that are potential environmental justice areas based on the size of their minority and Hispanic populations. Any negative human health or environmental impacts could, therefore, create disproportionate impacts on these minority and/or Hispanic residents. Since the impacts associated with the construction and operation of the proposed transmission line would be mitigated, impacts on potential environmental justice areas would, therefore, be minor.

Poverty rates in the affected census tracts in Leon County under Alternative 1 are below the countywide averages. Therefore, none of the census tracts impacted by Alternative 1 are potential environmental justice communities based on income.

As shown in Table 3.9-5, Census Tracts 26.02 and 27.00 would be impacted by the project's construction footprint under Alternative 1 and there is a potential to disproportionately impact children in both census tracts. There are more children aged 6 to 11 in Census Tract 26.02 than in Leon County as a whole. There are also more children living in groups in the tract than in the county as a whole. In Census Tract 27.00 there are more children aged 9 to 11 and 15 to 17 than in the county as a whole. However, negative impacts associated with Alternative 1 would be limited in that the route would not be within close proximity to homes, schools, daycares, or other areas where children congregate.

Table 3.9-5
Population of Children for Census Tracts Impacted under Alternative 1 [(a)]

		Leon County	Census Tract 26.02 [(b)]	Census Tract 27.00 [(b)]	State of Florida
Total Population of Children		**52,200**	**2,046**	**2,071**	**4,054,773**
Under 3 years	Number	9,161	266	324	684,564
	Percent of Total	17.5%	13.0%	15.6%	16.9%
3 and 4 years	Number	6,414	85	250	460,274
	Percent of Total	12.3%	4.2%	12.1%	11.4%
5 years	Number	2,661	71	30	208,891
	Percent of Total	5.1%	3.5%	1.4%	5.2%
6 to 8 years	Number	7,886	415	327	640,563
	Percent of Total	15.1%	20.3%	15.8%	15.8%
9 to 11 years	Number	8,444	543	486	660,372
	Percent of Total	16.2%	26.5%	23.5%	16.3%
12 to 14 years	Number	8,871	286	239	685,162
	Percent of Total	17.0%	14.0%	11.4%	16.9%
15 to 17 years	Number	8,555	326	415	703,346
	Percent of Total	16.4%	15.9%	20.0%	17.3%
Children in group quarters	Number	208	54	0	11,601
	Percent of Total	0.4%	2.6%	0%	0.2%

Source: Census Bureau 2009h, 2009j, 2009k, and 2009l.
Notes:
Shaded areas represents those census block groups having a meaningfully higher percentage of minority populations than the county as a whole, or where the group exceeds 50% of the population.
(a) Census geographies between Census year 2000 and 2010 have changed. Therefore data from the 2005-2009 American Community Survey the Census Tract IDs may appear to be different. Population data by age has yet to be released in relation to the 2010 Census, therefore for the purposes of this analysis, 2005-2009 American Community Survey data is used for analyzing per capita income and percent below the poverty level.
(b) The 2005-2009 American Community Survey only estimates data down to the Census Tract level and therefore the % below poverty data is presented at that level.

3.9.3.2 Alternative 3

Tables 3.9-6 and 3.9-7 provide the population characteristics (i.e., minority populations, poverty rates, etc.) for the census block groups potentially impacted by the implementation of Alternative 3. Any census block group that was transected by the proposed route was identified as potentially impacted.

Four block groups in Leon County and two block groups in Wakulla County could be impacted under Alternative 3. Census Block Group 1 within Tract 26.03 has a higher percentage of minority population than Leon County and the state of Florida. Census Block Group 3 within Census Tract 27.01 also has a higher Hispanic/Latino population than the county, though lower than the state level. In addition, Census Tract 102.03 in Wakulla County has a higher percentage of the population under poverty than the county and the state. Therefore under Alternative 3, there is a potential for disproportionate impacts to minority populations when compared to the geographic areas of comparison. The environmental and human health impacts of Alternative 3 are similar to, though slightly larger than, those described for Alternative 1. Under this alternative, several residences would fall within 50feet of the proposed centerline, and 22 residential structures would fall within 100 feet of the proposed centerline possibly creating some disproportionate impacts on low-income or minority population groups.

Table 3.9-6
Population Characteristics for Census Block Groups Impacted Under Alternative 3

Geographic Area	Total Population	% Minority [(a)]	% Hispanic or Latino [(a)]
State of Florida	**18,801,310**	**25.0 %**	**22.5 %**
ALTERNATIVE 3			
Leon County	275,487	37.0 %	5.6 %
Census Tract 26.03 Block Group 1	2,554	72.2%	2.1%
Census Tract 26.03 Block Group 2	1,497	32.3%	3.0%
Census Tract 26.03 Block Group 3	940	33.3%	2.5%
Census Tract 26.04 Block Group 1	1,204	14.9%	13.3%
Wakulla County	30,776	18.0 %	3.3 %
Census Tract 102.03 Block Group 1	2,440	16.1%	2.6%
Census Tract 102.03 Block Group 2	1,543	8.7%	2.7%

Source: Census Bureau 2010.
Notes:
Shaded areas represent those census block groups having a meaningfully higher percentage of minority populations than the county as a whole, or where the group exceeds 50% of the population.
(a) Percentages are found by dividing the total number of individuals in the selected group by the total population of the geographic area and multiplying by 100.

Table 3.9-7
Percent Below Poverty for Census Block Groups Impacted Under Alternative 3 [(a)]

Geographic Area	% Below Poverty Level [(b),(c)]
State of Florida	**13.2 %**
ALTERNATIVE 3	
Leon County	21.5 %
Census Tract 26.02	18.4%
Wakulla County	13.1 %
Census Tract 102.03	14.7%

Source Census Bureau 2009b.
Notes:
Shaded areas represent those census block groups having a meaningfully higher percentage of minority populations than the county as a whole, or where the group exceeds 50% of the population.
(a) Census geographies between Census year 2000 and 2010 have changed. Therefore, data from the 2005-2009 American Community Survey the Census Tract IDs may appear to be different. Income and poverty data have yet to be released in relation to the 2010 Census, therefore for the purposes of this analysis, 2005-2009 American Community Survey data is used for analyzing per capita income and percent below the poverty level.
(b) For the purposes of this analysis, the Census Bureau's definition and measure of poverty was used. The Census Bureau follows the Office of Management and Budget's (OMB) Statistical Policy Directive 14, whereby a set of money income thresholds that vary by family size and composition are used to determine who is in poverty. If the family's total income is less than the family's threshold, then that family—and each member of the family—is considered in poverty (Census Bureau 2011).
(c) The 2005-2009 American Community Survey only estimates data down to the Census Tract level and therefore the % below poverty data is presented at that level.

As shown in Table 3.9-8, Census Tract 26.02 in Leon County and Census Tract 102.3 in Wakulla County would be impacted by the project's construction footprint under Alternative 3 and there is a potential to disproportionately impact children in both census tracts. There are more children aged 6 to 11 in Census Tract 26.02 than in Leon County as a whole. There are also more children living in groups in the tract than in the county as a whole. In Census Tract 102.3 in Wakulla County, there are more children aged 6 to 8 and 12 to 17 than as the county as a whole. However, negative impacts associated with Alternative 3 would be limited in that the route would not be within close proximity to schools, daycares, or other areas where children congregate.

Table 3.9-8
Population of Children for Census Tracts Impacted under Alternative 3 [(a)]

		Leon County	Census Tract 26.02 [(b)]	Wakulla County	Census Tract 102.3 [(b)]	State of Florida
Total Population of Children		**52,200**	**2,046**	**6,809**	**2,543**	**4,054,773**
Under 3 years	Number	9,161	266	1,096	341	684,564
	Percent of Total	17.5%	13.0%	16.1%	13.4%	16.9%
3 and 4 years	Number	6,414	85	616	197	460,274
	Percent of Total	12.3%	4.2%	9.0%	7.7%	11.4%
5 years	Number	2,661	71	339	142	208,891
	Percent of Total	5.1%	3.5%	5.0%	5.6%	5.2%
6 to 8 years	Number	7,886	415	1,181	500	640,563
	Percent of Total	15.1%	20.3%	17.4%	19.7%	15.8%
9 to 11 years	Number	8,444	543	1,109	389	660,372
	Percent of Total	16.2%	26.5%	16.3%	15.3%	16.3%
12 to 14 years	Number	8,871	286	1,208	471	685,162
	Percent of Total	17.0%	14.0%	17.7%	18.5%	16.9%
15 to 17 years	Number	8,555	326	1,260	503	703,346
	Percent of Total	16.4%	15.9%	18.5%	19.8%	17.3%
Children in Group Quarters	Number	208	54	0	0	11,601
	Percent of Total	0.4%	2.6%	0.0%	0.0%	0.2%

Source: Census Bureau 2009h, 2009i, 2009j, 2009k, and 2009m.
Notes:
Shaded areas represents those census block groups having a meaningfully higher percentage of minority populations than the county as a whole, or where the group exceeds 50% of the population.
(a) Census geographies between Census year 2000 and 2010 have changed. Therefore data from the 2005-2009 American Community Survey the Census Tract IDs may appear to be different. Population data by age has yet to be released in relation to the 2010 Census, therefore for the purposes of this analysis, 2005-2009 American Community Survey data is used for analyzing per capita income and percent below the poverty level.
(b) The 2005-2009 American Community Survey only estimates data down to the Census Tract level and therefore the % below poverty data is presented at that level.

3.9.4 No Action Alternative

Under the No Action Alternative, there would be no construction of a transmission line, or tap station; therefore, there would be no impact on the population, economy, or housing in Leon or Wakulla Counties. In addition, there would be no environmental justice concerns related to the No Action alternative.

3.9.5 Mitigation Measures for Environmental Justice

No specific environmental justice mitigation measures would be required as a result of this project. Any short-term or long-term adverse environmental or human health impacts that are expected to occur would be mitigated by the various measures described for other resource areas. Comprehensive

community outreach activities were conducted during the scoping and public comment phase of this analysis. Residents located within 0.25 mile of one of the proposed routes were contacted directly to solicit their input on the project. In addition, local media outlets, including local television news stations and the *Tallahassee Democrat*, reported on the project. Information was also made available to local residents via the City and USFS websites. See Section 1.4 for a most detailed discussion of these community outreach activities.

3.10 NOISE

This section describes the environmental setting, regulatory setting, and potential impacts associated with the construction, operation, and maintenance of the proposed project and alternatives, as well as the No Action Alternative, with respect to noise. Potential mitigation measures to reduce or eliminate the potential impacts also are described.

3.10.1 Inventory and Methodology

To describe environmental noise at the regional and local levels, and to assess impacts on areas sensitive to community noise, an understanding of noise fundamentals is necessary. Noise is defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. There are several ways to measure noise, depending on the source, the receiver, and the reason for the noise measurement. The most common metric is the overall A-weighted sound level measurement that has been adopted by regulatory bodies worldwide. The A-weighted network measures sound similarly to an individual perception of sound, thus achieving good correlation with acceptable and unacceptable sound levels. A-weighted sound levels are reported in units of A-weighted decibels and are denoted as dBA.

A-weighted sound levels are typically measured or presented as the equivalent sound pressure level (L_{eq}), which is the logarithmic average noise energy level due to all sources (for example, the ambient noise level in addition to construction and traffic noise) in a given area for a defined period of time (for example, 1 hour or 24 hours). The L_{eq} is commonly used to measure steady-state sound or noise that is usually dominant. The relative A-weighted noise levels of common sounds measured in the environment and industry for various qualitative sound levels are provided in Table 3.10-1.

Another metric used to determine the impact of environmental noise considers the differences in human responses to daytime and nighttime noise levels. During the evening and at night, exterior background noises are generally lower than during the day. However, most household noise decreases at night and exterior noise becomes more noticeable. Furthermore, most people sleep at night and are therefore more sensitive to intrusive noises. To account for human sensitivity to evening and nighttime noise levels, the daytime-nighttime noise level (DNL, also abbreviated as L_{dn}) metric was developed. The DNL accounts for the greater annoyance of noise during the night (10 p.m. to 7 a.m.).

The effects of noise on people can be listed in three general categories:

- Subjective effects of annoyance, nuisance, dissatisfaction;
- Interference with activities, such as speech, sleep, learning; and
- Physiological effects, such as startling and hearing loss.

Table 3.10-1
Typical Sound Levels Measured in the Environment and Industry

Noise Source at a Given Distance (feet)	A-Weighted Sound Level in Decibels (dBA)	Qualitative Description
Carrier deck jet3 operation Jet takeoff (200 feet)	140 130 120	Pain threshold
Auto horn (3 feet) Jet takeoff (1,000 feet) Shout (0.5 feet)	110 100	Maximum vocal effort
N.Y. subway station (50 feet) Heavy truck (50 feet)	90	Very annoying; hearing damage (8-hr, continuous exposure)
Pneumatic drill (50 feet) Freight train (50 feet) Freeway traffic (50 feet)	80 70 to 80 70	Annoying Intrusive (telephone use difficult)
Air conditioning unit (20 feet) Light auto traffic (50 feet) Living room/Bedroom	60 50 40	Quiet
Library/Soft whisper (5 feet) Broadcasting/Recording studio	30 20 10	Very quiet Just audible

Source: NYSDEC 2003 (Adapted from Table E).

In most cases, environmental noise may produce effects in the first two categories only. No completely satisfactory way exists to measure the subjective effects of noise or to measure the corresponding reactions of annoyance and dissatisfaction. This lack of a common standard is primarily due to the wide variation in individual thresholds of annoyance and habituation to noise. Thus, an important way of determining a person's subjective reaction to a new noise is to compare it to the existing or "ambient" environment to which that person has adapted. In general, the more the level or the tonal (frequency) variations of a noise exceed the previously existing ambient noise level or tonal quality, the less acceptable the new noise will be, as judged by the exposed individual.

The general human response to changes in noise levels that are similar in frequency content (for example, comparing increases in continuous [L_{eq}] traffic noise levels) is summarized as follows:

- A 3-dBA change in sound level is a barely noticeable difference.
- A 5-dBA change in sound level is typically noticeable.
- A 10-dBA change is perceived by the listener as a doubling in loudness.

3.10.1.1 Federal Laws and Regulations

No federal regulations limit overall environmental noise levels. The only energy facility-specific requirements are those of the FERC for interstate electrical transmission lines, natural gas pipelines, and petroleum pipelines. The FERC limits specifically address compressor facilities associated with pipelines under FERC jurisdiction. Under these regulations, the noise attributable to any new natural gas compressor station; added compression to an existing station; or any modification, upgrade, or update of an existing station must not exceed an L_{dn} of 55 dBA at any pre-existing noise sensitive area (14 CFR 23).

In 1974, the United States Environmental Protection Agency (USEPA) published *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (USEPA 1974). This publication evaluates the effects of environmental noise with respect to health and safety. The document provides information for state and local governments to use in

developing their own ambient noise standards. The USEPA has determined that in order to protect the public from activity interference and annoyance outdoors in residential areas, noise levels should not exceed an L_{dn} of 55 dBA (see Table 3.10-2). The USEPA considers an L_{dn} of 55 dBA to be the maximum sound level that will not adversely affect public health and welfare by interfering with speech or other activities in outdoor areas.

Table 3.10-2
Summary of Noise Levels Identified as Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety

Effect	Level	Area
Hearing Loss	Leq(24) =< 70 dB	All areas
Outdoor activity interference and annoyance	Ldn =< 55 dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use
	Leq(24) =< 55 dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	Ldn =< 45 dB	Indoor residential areas
	Leq(24) =< 45 dB	Other indoor areas with human activities such as schools, etc.

Source: USEPA 1974.

3.10.1.2 State and Local Regulations

Presently, the State of Florida does not have noise regulations. However, local ordinances have been established for Leon County. Article II, Section 12-56 of the Leon County Code of Ordinances, prohibits the construction, demolition, alteration, or repair of any building or the excavation of streets and highways other than between the hours of 7:00 a.m. and 8:00 p.m. on weekdays. The ordinance follows the reasonable person standards, meaning that the ordinance will be subjectively enforced through individual claims about increased noise levels. If the county receives a noise complaint, an investigation is conducted by the Sheriff's Department and a determination is made as to whether construction should be limited to the hours of 7:00 a.m. and 8:00 p.m. on weekdays.

According to the Wakulla County, Florida, Code of Ordinances, it is unlawful from 10:00 p.m. to 7:00 a.m. to use or operate, or to cause to be used or operated, any mechanical device, machine, vehicle, apparatus or instrument for intensification or amplification of the human voice or any sound or noise in any public or private place in such a manner that the peace and good order of the neighborhood is disturbed when other persons owning, using or occupying property in such neighborhoods are disturbed or annoyed.

3.10.2 Alternative 1 (Preferred Alternative)

3.10.2.1 Affected Environment

The Alternative 1 route would be completely co-located within existing utility ROW. Specifically, the route would follow the existing FGT ROW for 7.0 miles and then would follow an existing City 115kV transmission line for approximately 1.75 miles. The Alternative 1 route setting is primarily rural and undeveloped land. The closest residence to the route would be located along Woodville Highway at a distance of 240 feet. No hospitals, libraries, schools, places of worship, or other facilities are located in the vicinity of the Alternative 1 ROW and tap station location. Typical noise levels would be expected to range from 35 to 45 dBA.

Implementation of Alternative 1 would include the construction of a tap station. The closest residences to the proposed tap station are those along Springhill Road roughly 1,740 feet to the west.

3.10.2.2 Environmental Impacts

3.10.2.2.1 Construction Noise

To evaluate potential noise impacts resulting from the construction of the transmission line and tap station, reference noise levels were obtained from the Roadway Construction Noise Model User's Guide (Federal Highway Administration [FHWA] 2006), which provides a comprehensive assessment of noise levels from construction equipment. Based on the reference values in the guide and the list of construction equipment to be used on the project, the loudest equipment would generally emit noise in the range of 80 to 90 dBA at 50 feet, with usage factors of 40% to 50% that account for the fraction of time that the equipment is in use over the specified time period. Noise at any specific receptor is typically dominated by the closest and loudest equipment. For the project, the type of construction equipment and the number of equipment pieces near any specific receptor location would vary over time.

Construction of the project would take place over a six-month period. Construction equipment operation, use of heavy-duty vehicles, for grading, and foundation work activities, lines wire stringing, and structure transportation and erection would be the primary sources of noise associated with construction activities for the proposed project components.

Noise levels resulting from construction equipment are dependent on several factors including the number and type of equipment operating, the level of operation, and the distance between sources and receptors. The loudest equipment during construction would contribute to a composite average or equivalent site noise level. Projected noise levels based on the proposed project equipment list indicate that noise from the loudest equipment from the tap station construction, structure erection, and wire stringing operations would range between 55 to 96 dBA at 50 feet from the source, as shown in Tables 3.10-3 to 3.10-5. In addition, noise from trucks, commuter vehicles, and other on-road equipment, which would mainly be along streets and access roads, would produce peak levels of approximately 88 dBA at 50 feet from the source (Federal Transit Administration 2006). During a typical day, equipment would not be operated continuously at peak levels. While the average noise levels would represent a noticeable temporary increase in the ambient noise levels near the construction sites, the noise would attenuate with increasing distance, fading into the ambient noise background levels at distances over 0.5 mile from the loudest equipment. Generally, air borne noise decreases by 6 dBA with each doubling the distance. Table 3.10-6 shows the estimated project construction equipment noise levels at the closest receptors.

Construction of the project would result in temporary minor adverse noise impacts at residences located along the transmission line route due to project construction. The impacts would be localized and would be short-term, along the route.

Table 3.10-3
Estimated Transmission Line Structure Installation Noise Levels

Equipment Type	Emission Level (dBA)	Distance (feet)	Utilization Factor (dBA)	SPL 50 feet (dBA)
Pickup Truck	55	50	0.4	51
Crew Cab	55	50	0.4	51
Compressor Trailer	80	50	0.4	76
80 Ton Crane	85	50	0.16	77
Backhoe/Frontend loader	80	50	0.4	76
Auger Truck	85	50	0.2	78
Water Truck	84	50	0.4	80
Dump Truck	84	50	0.4	80
Concrete Truck	85	50	0.4	81
Fork Lift	86	50	0.4	82
All-Terrain Vehicle	88	50	0.4	84

Table 3.10-3
Estimated Transmission Line Structure Installation Noise Levels

Equipment Type	Emission Level (dBA)	Distance (feet)	Utilization Factor (dBA)	SPL 50 feet (dBA)
Air Compressor	80	50	0.4	76
Welder	82	50	0.5	79
Generator	82	50	0.5	79
Bucket Truck	84	50	0.4	80
			Estimated Noise Level	**91**

Sources: FHWA 2006; USEPA 1971.
Key:
dBA = A-weighted decibels.
SPL = sound pressure level.

Table 3.10-4
Transmission Line Wire Stringing Noise Levels at 50 Feet

Equipment Type	Emission Level (dBA)	Distance (feet)	Utilization Factor (dBA)	SPL 50 feet (dBA)
Pickup Truck	55	50	0.4	51
Crew Cab	55	50	0.4	51
Line Tensioner	82	50	0.25	76
Drum Puller	80	50	0.5	77
Splicing Rig	82	50	0.25	76
Splicing Lab	80	50	0.25	74
Mobile Crane	83	50	0.16	75
Backhoe/Front-end loader	80	50	0.4	76
Flatbed	84	50	0.4	80
Dump Truck	84	50	0.4	80
ATV	88	50	0.4	84
Air Compressor	80	50	0.4	76
Welder	82	50	0.5	79
Bucket Truck	84	50	0.4	80
			Estimated Total SPL	**90**

Sources: FHWA 2006; USEPA 1971.
Key:
dBA = A-weighted decibels.
SPL = sound pressure level.

Table 3.10-5
Estimated Construction Noise Levels at 50 Feet for the Southwestern Transmission Line Tap Station

Equipment Type	Emission Level (dBA)	Distance (feet)	Utilization Factor (dBA)	SPL 50 feet (dBA)
Clearing and Grading				
Tubgrinder	96	50	0.4	92
Dozer	85	50	0.4	81
Loader	80	50	0.4	76
Chainsaw	84	50	0.2	77
Truck	76	50	0.4	72
			Estimated Total SPL	**93**
Tap Station Construction				
Backhoe	80	50	0.4	76
Bulldozer	85	50	0.4	81
Dump Truck	84	50	0.4	80
Concrete Truck	85	50	0.4	81
Vibratory Compactor	80	50	0.2	73
Forklift	86	50	0.4	82
ATV	88	50	0.4	84
Welder	73	50	0.4	69
Bucket Truck	84	50	0.4	80
Compressor	80	50	0.4	76
Generator	82	50	0.5	79
			Estimated Total SPL	**90**

Sources: FHWA 2006; USEPA 1971.
Key:
dBA = A-weighted decibels.
SPL = sound pressure level.

Table 3.10-6
Estimated Construction Noise Levels at the Closest Sensitive Receptors Alternative 1

Project Component	Closest Sensitive Receptors	Distance (feet)	Predicted Construction Noise Levels (dBA)			
			Tap Station Clearing	Tap Station Construction	Tower Installation	Wire Stringing
Tap Station	6500 Springhill Road	1500	63	60	61	60
Transmission Line	7031 Woodville Highway	240	NA	NA	77	76

Key: dBA = A-weighted decibels.

3.10.2.2.2 Operational Noise

Corona is a partial electrical breakdown that results in the transformation of energy into very small amounts of light, sound, radio noise, chemical reaction, and heat. The audible noise generated by corona is generally characterized as a crackling, hissing, or humming noise accompanied by a 120-Hertz hum. Corona-generated audible noise is of concern primarily for transmission lines operating at voltages of 345kV and higher during foul weather. The proposed 230kV transmission line would be designed such that corona noise levels generated by the line would not be audible at the edge of the project ROW under fair or foul weather conditions, and therefore would not result in adverse noise impacts.

3.10.2.2.3 Maintenance Activities

Maintenance activities associated with the transmission line and tap station would typically result in noise levels below those associated with construction-related activities and are anticipated to involve fewer pieces of heavy equipment, occurring less frequently, and of shorter duration than construction activities. Maintenance activities are primarily inspection-related (for example, inspection of the transmission line from vehicles) and vegetation control and would result in negligible adverse noise impacts.

3.10.3 Alternative 3

3.10.3.1 Affected Environment

The Alternative 3 route would be 12.65 miles in length and would connect Line 31 with the existing Substation BP-5. This route proposes to connect to Line 31 in northern Wakulla County with a proposed tap point immediately north of the dead-end of Crestwood Lane adjacent to Line 31. The route would pass through several residential areas within 50 feet of some of the residences. The configuration and equipment of the proposed tap station for Alternative 3 would be similar to Alternative 1 and would cover approximately 1 acre.

3.10.3.2 Environmental Impacts

3.10.3.2.1 Construction Noise

Construction of Alternative 3 would take place over a nine-month period. Similar to Alternative 1, construction equipment operation, use of heavy-duty vehicles, for grading, and foundation work activities, lines wire stringing, and tower transportation and erection would be the primary sources of noise and vibration associated with construction activities for the proposed project components under Alternative 3. Noise levels resulting from construction equipment are dependent on several factors including the number and type of equipment operating, the level of operation, and the distance between sources and receptors. The loudest equipment during construction would contribute to a composite average or equivalent site noise level.

Heavy construction equipment typically generates noise levels up to approximately 96 dBA at 50 feet. Projected noise levels based on the proposed project equipment list indicate that noise from the loudest equipment from the tap station construction, tower erection, and wire stringing operations would range between 55 to 96 dBA at 50 feet from the source, as shown in Tables 3.10-3 to 3.10-5. In addition, noise from trucks, commuter vehicles, and other on-road equipment, which would mainly be along streets and access roads, would produce peak levels of approximately 88 dBA at 50 feet from the source (Federal Transit Administration 2006). During a typical day, equipment would not be operated continuously at peak levels. While the composite noise levels would represent a noticeable temporary increase in the ambient noise levels near the construction sites, the noise would attenuate with increasing distance, fading into the ambient noise background levels at distances over 0.5 miles from the loudest equipment. Generally, air borne noise decreases by 6 dBA with each doubling the distance. Table 3.10-7 shows the estimated project construction equipment noise levels at the closest receptors.

Table 3.10-7
Estimated Construction Noise Levels at the Closest Sensitive Receptors
Alternative 3

Project Component	Closest Sensitive Receptors	Distance (feet)	Predicted Construction Noise Levels (dBA)			
			Tap Station Clearing	Tap Station Construction	Tower Installation	Wire Stringing
Tap Station	Crestwood Lane	150	83	80	NA	NA
	Crestwood Lane	100	NA	NA	85	84
Transmission Line	Pinewood Street	100	NA	NA	85	84
	Heron Street	75	NA	NA	87	86
	Oak Ridge Road E.	54	NA	NA	90	89

3.10.3.2.2 Operational Noise

The transmission line design for Alternative 3 would be the same as the Preferred Alternative, so corona noise levels generated by the line would not be audible at the edge of the project ROW under fair or foul weather conditions and would not result in adverse noise impacts.

3.10.3.2.3 Maintenance Activities

Maintenance activities associated with the Alternative 3 transmission line and tap station would typically result in noise levels below those associated with construction-related activities and are anticipated to involve fewer pieces of heavy equipment, occur less frequently, and be of shorter duration than construction activities. Maintenance activities are primarily inspection-related (for example, annual inspection of the transmission line from vehicles) and vegetation control and would result in negligible adverse noise impacts.

3.10.4 No Action Alternative

Under the No Action Alternative, there would be no construction of a transmission line, or tap station; therefore, there would be no construction or operational noise impacts.

3.10.5 Mitigation Measures for Noise

If the Proposed Action is implemented, the following mitigation measures will serve to lessen the potential noise impacts due to construction:

- Keep construction equipment in good working order and maintained per manufacturer's recommendations;
- Keep construction equipment adequately muffled;
- Locate stationary construction equipment at a site location that is as far away from receptors as possible;
- Notify nearby residents in advance of construction work; and
- Minimize, to the extent practicable, idling of construction equipment and vehicles during the construction.

3.11 HEALTH AND SAFETY

This section identifies and describes potential safety and health impacts from the construction, operation, and maintenance of the proposed project, the potential impacts of the proposed alternative routes, as well as the No Action Alternative, on public health and safety, and potential mitigation measures to reduce or eliminate the potential impacts.

3.11.1 Inventory and Methodology

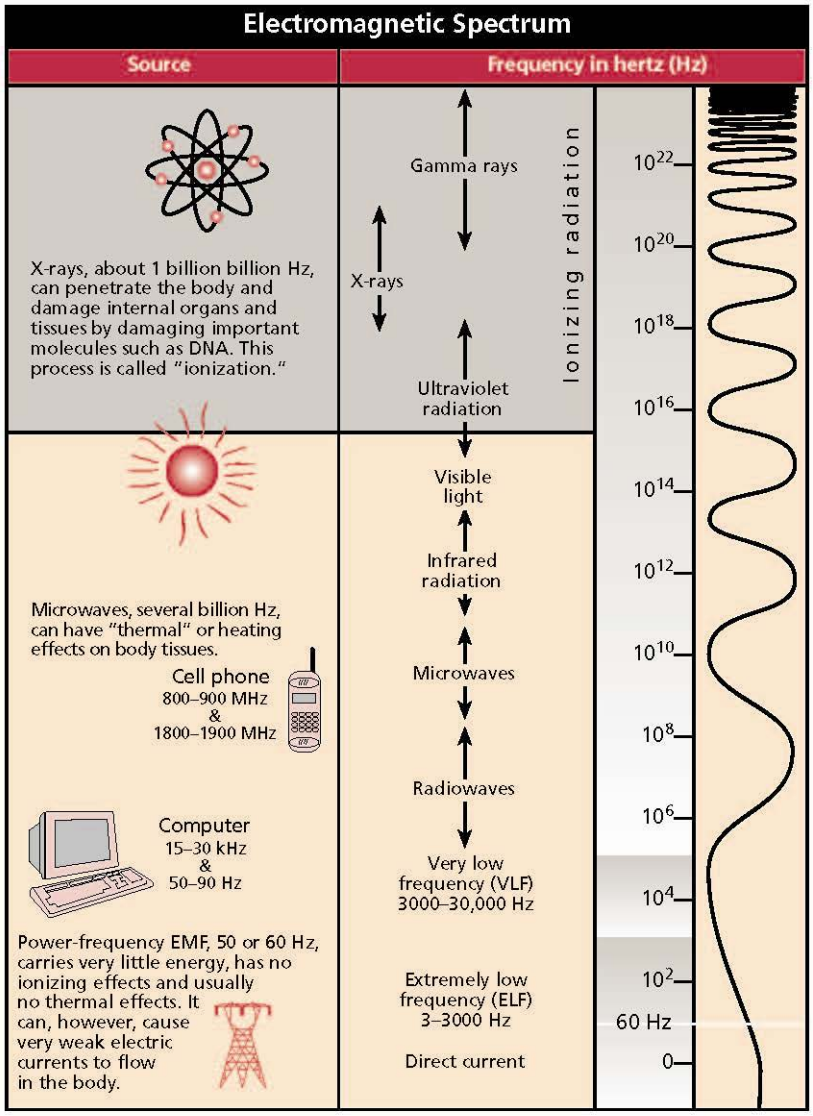
Health and safety issues may arise during the construction, operation, and maintenance of the project. As such, this discussion provides a summary of electromagnetic fields (EMFs), including an overview of health effects from EMFs. Additional safety and health issues may result during construction of the project, when construction workers could be subject to typical construction-related incidents and injuries. Further, as discussed in this section, construction workers would have the potential to encounter hazardous materials and/or waste associated with fueling and vehicle maintenance activities; transport and handling of hazardous materials; and potential inadvertent discovery of hazardous materials and wastes.

Information for this analysis was obtained primarily from health studies available from federal and state government agencies, including the National Institute of Environmental Health Sciences, the USEPA, and the World Health Organization. Additionally, hazardous materials were analyzed as part of the FGT FEIS. During this analysis, FGT conducted a computerized corridor search of federal and state environmental record databases to identify locations where known contaminants exist that could be encountered by the project. The computerized database search did not reveal any known occurrences of hazardous materials or contaminants within the FGT Project corridor (FERC 2009). No other computer modeling or database analyses were conducted in the preparation of this EIS.

3.11.1.1 Electromagnetic Fields

Wherever there is electricity, EMFs are present. EMFs are created not only by high-voltage transmission and distribution lines, but also by appliances, lights, and wiring in homes, businesses, and schools. As a result, people are exposed on a daily basis to a complex mix of EMFs at many different frequencies. EMFs are invisible just like radio, television, and cellular phone signals, all of which are part of the electromagnetic spectrum. Natural and human-made EMFs are, in fact, present everywhere in our environment. Natural electric fields, for example, are produced by the local buildup of electric charges in the atmosphere that are associated with thunderstorms. The natural static background electric field is approximately 120 volts per meter.

The Earth has a magnetic field that ranges from approximately 300 to 700 milliGauss. The Earth has a steady-state or static (zero hertz) magnetic field, but has similar characteristics to the magnetic fields emanating from human-made sources. EMFs created by humans include X-rays and magnetic resonance imaging (MRI) machines, electric and magnetic passenger trains, electric cars, and cellular telephones. The frequency of transmission line EMF in the United States is 60 hertz and falls in the extremely low frequency range of the electromagnetic spectrum (any frequency below 300 hertz). By comparison, cellular phone communications operate at frequencies almost 1 billion times greater than EMF resulting from electric power. The electromagnetic spectrum (Figure 3.11-1) is a range of frequencies that includes visible light, X-rays, MRI machines, radios, televisions, and cellular telephones.



The wavy line at the right illustrates the concept that the higher the frequency, the more rapidly the field varies. The fields do not vary at 0 Hz (direct current) and vary trillions of times per second near the top of the spectrum. Note that 10^4 means 10 x 10 x 10 x 10 or 10,000 Hz. 1 kilohertz (kHz) = 1,000 Hz. 1 megahertz (MHz) = 1,000,000 Hz.

Source: National Institute of Environmental Health Sciences. 2002.

Figure 3.11-1. Electromagnetic Spectrum

3.11.1.2 State Regulations

The Proposed Action would be designed to comply with Section 62-814.450, Florida Administrative Code (FAC), which regulates EMF standards for new transmission lines and substations in the state. The City would use the state-approved EMF modeling software to model EMF based on the final transmission line design. Important input parameters to the computer program include voltage, current, and geometric configuration of the line. Using the program, EMF strengths would be calculated along the transmission line ROW and at the edge of the ROW and would comply with the Florida standards in Table 3.11-1. Results of the modeling would be provided to the FDEP, and their concurrence must be obtained prior to the commencement of construction activities.

Table 3.11-1
New Transmission Line and
Substation Electromagnetic Field (EMF) Standards

Kilovolt Rating	Edge of Transmission Line Right-of-Way	On the Transmission Line Right-of-Way
<=230 kilovolts	2.00 kilovolt per meter and 150 milliGauss	8 kilovolts per meter

Source: Section 62-814.450, Florida Administrative Code (https://www.flrules.org/gateway/ruleno.asp?id=62-814.450).

3.11.1.3 Hazardous Materials and Waste

Existing and past land use activities are potential indicators of hazardous material storage and use. Past and current land uses that could have resulted in unknown contamination within the area to be disturbed by construction include: (1) rural residences and farms that could have old or inactive underground fuel tanks, (2) agricultural properties that could contain pesticide-polluted runoff from farming operations, and (3) commercial and industrial sites (historical and current) that could have soil or groundwater contamination from unreported hazardous substance spills. The primary reason to define potentially hazardous sites is to protect the health and safety of construction and operations personnel and to minimize public exposure to hazardous materials during construction and waste handling. If encountered, contaminated media would be handled and disposed of in accordance with local, state, and federal regulations.

The following are summary definitions of hazardous materials and hazardous waste:

- **Hazard:** Any naturally occurring or human-made physical condition in the surrounding environment that would pose a public safety risk.
- **Hazardous Material:** Hazardous materials can be in the form of explosives, flammable and combustible substances, poisons, radioactive materials, pesticides, and petroleum products. These substances are released most often as a result of motor vehicle or equipment accidents or because of chemical accidents during industrial use. These substances have the potential to leach into soils, surface water, and groundwater due to spills if not properly contained (FEMA n.d.).
- **Hazardous Waste:** A waste may be considered hazardous if it exhibits certain hazardous properties ("characteristics") or if it is included on a specific list of wastes that the USEPA has determined are hazardous ("listing" a waste as hazardous). The USEPA's regulations in the CFR define four hazardous waste characteristic properties: ignitability, corrosivity, reactivity, and toxicity (40 CFR 261.21-261.24).

Exposure to hazardous materials or wastes can occur during normal use, handling, storage, transportation, and disposal. Exposure may also occur due to hazardous compounds existing in the environment such as fuels in underground storage tanks, pipelines, or areas where chemicals have leached into the soil or groundwater.

3.11.1.4 Construction Equipment and Activities

Workers are subject to typical construction-related incidents including slips, trips, falls, wounds, and traumatic injuries. Additional safety issues relevant to this project may result from the construction of tall structures and working with energized equipment. These types of incidents are generally well understood.

These types of accidents are regulated by the Occupational Safety and Health Administration (OSHA). OSHA administers the Occupational Safety and Health Standards (29 CFR 1910 and 1926), which (1) provide regulations for health and safety in the workplace, (2) regulate construction safety, and (3) require a Hazard Communication Program. The Hazard Communication Program must include identification and inventorying of all hazardous chemicals used in the workplace, maintenance of easily accessible Material Safety Data Sheets for these materials, and must provide for employee training in safe handling of said chemicals.

Title 29 CFR 1910.302, Subpart S: Design Safety Standards for Electrical Systems, and 1910.331, Electrical Safety-Related Work Practices Standard (1990), describes concepts and principles associated with electrical hazards and basic electrical safety for individuals. OSHA's electrical standards for construction recommend general industry electrical standards whenever possible for hazards that are not addressed by industry-specific standards. The standards address concerns that relate to electrical hazards and exposures to dangers such as electrical shock, electrocution, burns, fires, and explosions. OSHA's electrical standards help minimize these potential hazards by specifying safety aspects in the design and use of electrical equipment and systems.

3.11.2 Alternative 1 (Preferred Alternative)

3.11.2.1 Affected Environment

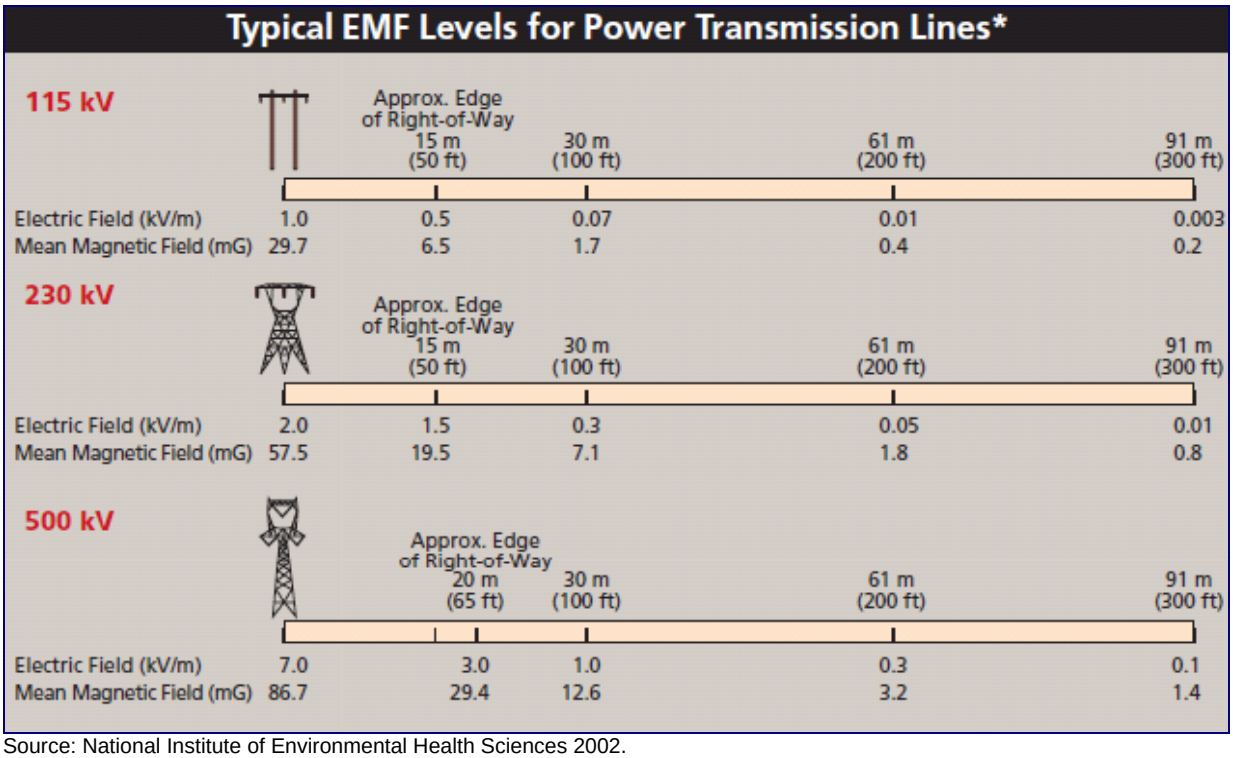
The proposed Alternative 1 route would be completely co-located with existing utility ROW. Specifically, the route would follow the existing FGT ROW for approximately 7.0 miles and then would turn north and follow an existing City 115kV transmission line for approximately 1.75 miles. Implementation of Alternative 1 also would include the construction of a tap station, which would require the clearing and grading of up to 3 acres. The Preferred Alternative setting is primarily rural and undeveloped land with the closest residence to Alternative 1 being located at a distance of 240 feet from the ROW. No hospitals, libraries, schools, places of worship, or other facilities are located in the vicinity of the Alternative 1 ROW or tap station.

As part of the FGT FEIS (FERC 2009), a computerized corridor search of federal and state environmental record databases was completed to identify locations where known contaminants exist that could be encountered by the project. The computerized database search did not reveal any known occurrences of hazardous materials or contaminants within the 7.0-mile portion of the FGT Project where the Alternative 1 route would be located. No further database searches have been conducted in association with this analysis.

3.11.2.2 Environmental Impacts

3.11.2.2.1 Electromagnetic Fields

Alternative 1 would be located within a primarily undeveloped and natural area. Within these areas, measurable EMFs are not present except in the vicinity of existing power line corridors. Public exposure to EMFs from power lines in undeveloped areas is limited, primarily due to the absence of the public; however, periodic and transient uses of these areas for activities such as recreation would result in public exposure to EMFs for anyone in the immediate vicinity of the proposed transmission line. Since EMF strength rapidly decreases with distance and the closest potential receptor would be located over 240 feet from the Alternative 1 ROW, no public health and safety impacts due to exposure to EMFs are anticipated to occur.



Source: National Institute of Environmental Health Sciences 2002.

Figure 3.11-2. Typical EMF Levels for Power Transmission Lines

3.11.2.2.2 Hazardous Materials and Waste

Hazardous materials such as vehicle fuels, oils, and other maintenance fluids would be used and stored during construction, operations, and maintenance. There would be a potential for incidental release of gasoline, diesel fuel, oil, hydraulic fluid, and lubricants from vehicles or other equipment, or the potential release of other materials from construction activities. In addition, improperly maintained equipment could leak fluids during construction activities and while parked. Spills and leaks of hazardous materials during construction activities could potentially result in soil or groundwater contamination as discussed in Section 3.5. To minimize the potential for the accidental release of hazardous materials, the BMPs and mitigation measures described in Section 3.11.5 would be implemented.

3.11.2.2.3 Construction Equipment and Activities

Heavy equipment is utilized to construct any project involving transmission lines and tap stations. This type of equipment presents certain physical dangers and often requires the use of oils and gas for fueling. Potential health and safety considerations associated with the implementation of Preferred Alternative would include the following:

- Construction activity hazards;
- Heavy equipment safety;
- Potential fuel spills; and
- Traffic entering and traveling along local roads and highways (Section 3.2).

The risk of fire and injury is associated with the use of heavy equipment, working near high-voltage lines, and hazardous materials such as fuels during the placement of structures and conductors. Fuel spills may occur where vehicles that are not highway-authorized are fueled.

As discussed in Section 3.2, there would be a potential safety issue with roadways in the general vicinity of the ROW during construction. Construction trucks and vehicles turning off local roads and highways could cause temporary safety hazards for vehicles and travelers.

3.11.3 Alternative 3

3.11.3.1 Affected Environment

The Alternative 3 route would be 12.65 miles in length and would connect to the Hopkins-Crawfordville line in northern Wakulla County with a proposed tap point immediately north of the dead-end of Crestwood Lane. The configuration and equipment of the proposed tap station for Alternative 3 would be similar to Alternative 1 and would cover approximately 1 acre. The route would pass through several residential areas within 50 feet of some residences. No database searches of federal and state environmental record databases to identify locations where known contaminants exist have been conducted in association with this analysis for Alternative 3.

3.11.3.2 Environmental Impacts

Alternative 3 would have similar types of health and safety potential impacts as the Preferred Alternative.

3.11.3.2.1 Electromagnetic Fields

Unlike Alternative 1, the Alternative 3 route would pass within 100 feet of 22 residential structures and also would pass in proximity to light commercial uses. No hospitals, libraries, schools, places of worship, or other facilities would be located in proximity to the proposed Alternative 3 ROW. As previously described, final project design would have to comply with Florida EMF regulations to ensure public health is protected; therefore no public health and safety impacts due to exposure to EMFs are anticipated to occur.

3.11.3.2.2 Hazardous Materials and Waste

For Alternative 3, a computerized database search was not conducted, however, should this route be selected, a full database search would be completed prior to construction. Similar to Alternative 1, the potential would exist for the incidental release of gasoline, diesel fuel, oil, hydraulic fluid, and lubricants from vehicles or other equipment or the potential release of other materials from construction activities. To minimize potential impacts, the BMPs and mitigation measures described in Section 3.11.5 would be implemented.

3.11.3.2.3 Construction Equipment and Activities

For Alternative 3, impacts similar to those for Alternative 1 would exist during construction, operation, and maintenance of the proposed transmission line. Due to the greater length of the Alternative 3 route, the lengths along which the route would be co-located with roadways, and the increased number of potential roadway crossings, the potential traffic safety impacts would be greater. As discussed in Section 3.2, there would be a potential safety issue with roadways in the general vicinity of the ROW during construction. Construction trucks and vehicles turning off local roads and highways could cause temporary safety hazards for vehicles and travelers.

3.11.4 No Action Alternative

Under the No Action alternative, there would be no construction, operation, or maintenance of the proposed line, or tap station; therefore, there would be no impacts to public health and safety.

3.11.5 Mitigation Measures for Health and Safety

To prevent work-related accidents and injuries, contractors would implement a Safety Management Program and a Worker Health and Safety Program. Under this program, a Site-specific Health and Safety Plan with site-specific information would be developed by the contractor. This plan could include training requirements, an analysis of construction health and safety hazards, incident/accident prevention measures, local emergency contact information, and designated emergency routes in the event of an industrial injury.

Prior to construction and operation of the project, all health and safety programs and plans and fire protection measures would be provided to the construction workers. The applicant/project owner would be required to designate and provide for a project site construction safety supervisor.

Several mitigation strategies would be required to reduce the potential for spills or leaks from the equipment during construction. Additionally, these types of incidents are expected to be minimal for the construction and operation of this transmission line. Development of spill prevention and response procedures and the use of BMPs in accordance with a SWPPP as required in the National Pollutant Discharge Elimination System (NPDES) general permit for construction activities will document procedures to minimize potential for and response to spills. Several mitigation strategies and BMPS are available to minimize the potential for spills or leaks from the equipment during construction. Typical BMPs detailed in the SWPPP may include:

- Frequently inspecting construction equipment to ensure hydraulic systems and oil pans are in good condition and free of leaks;
- Requiring portable spill containment kits for each piece of construction equipment with the potential to discharge oil to the environment;
- Allowing the storage of hazardous materials, chemicals, fuels, and lubricating oils and fueling of construction equipment only in designated areas. The City will specify in the bid documents that the storage of hazardous materials, chemicals, fuels, and lubricating oils and refueling of personal vehicles or construction equipment is prohibited on the construction ROW.

In the event of a spill, the source of the spill would be identified and contained immediately upon discovery. The spill and contaminated soils would be collected, treated, and disposed of in accordance with all applicable federal, state, and local requirements. If a spill to surface waters occurred, methods to contain and recover released material, such as floating booms and skimmer pumps, would be used. Cleanup and remediation activities, if required, would be conducted to state-specific standards developed and enforced by the FDEP.

Development of these programs and compliance with all laws, ordinances, regulations, and standards would reduce the risk of adverse impacts during construction and operation of the project.

3.12 AIR QUALITY

This section describes the air quality in the study area, the potential impacts on air quality associated with the construction and operation of the project under each of the alternatives, as well as the No Action Alternative, and potential mitigation measures to reduce or eliminate those potential impacts.

3.12.1 Inventory and Methodology

Air quality is dependent not only on the quantities of air pollutants emitted from manmade and natural sources, but also natural conditions, such as meteorological conditions. Located inland from the Gulf of Mexico, the study area has a mild, moist climate typical of the Gulf States. During the winter, topographic effects and cold air drainage into lower elevations produce a wide variation of low temperatures on cold, clear, and calm nights. Summer is the least pleasant time of the year, with thunderstorms occurring every other day, and high temperatures and high humidity. Prevailing winds average 6.5 miles per hour and are from a southerly direction in the spring and summer, then shift toward a more northerly direction later in the year. High winds are infrequent and of short duration, usually associated with strong cold fronts in the late winter and early spring months. Hurricane occurrence within the coastal area equals about once every 17 years with fringe effects felt about once every five years (Federal Climate Complex Asheville 1996).

3.12.1.1 Federal Laws and Regulations

The USEPA is the principal federal agency administrator responsible for air quality management in the United States. The Clean Air Act is the law that defines the USEPA's responsibilities for protecting and improving the nation's air quality.

The USEPA has set emission standards for the engines used in most construction, agricultural, and industrial equipment. It also has adopted non-road diesel fuel requirements to decrease the allowable levels of sulfur. The USEPA has adopted a comprehensive national program to reduce emissions from non-road diesel engines by integrating engine and fuel controls as a system to gain the greatest emission reductions. To meet these emission standards, engine manufacturers are required to produce engines with advanced emission-control technologies similar to those already expected for highway trucks and buses.

The General Conformity Rule is used to determine if federal actions meet the requirements of the Clean Air Act and the applicable state implementation plan by ensuring that air emissions related to the action do not cause or contribute to new violations of a National Ambient Air Quality Standard (NAAQS) or increase the frequency or severity of any existing violation of an NAAQS. The General Conformity Rule applies only to non-transportation-related federal actions in locations designated as nonattainment or maintenance areas for any criteria air pollutant NAAQS. Because the areas in the vicinity of Alternatives 1 and 3 are not designated as nonattainment or maintenance areas for any air pollutant, analysis under the General Conformity Rule is not required for this project.

3.12.1.2 State and Local Regulations

The FDEP administers air rules and regulations in Florida. The FDEP's Division of Air Resource Management is responsible for implementing the federal Clean Air Act and appropriate Florida Statutes, monitoring the state's air quality, administering Florida's air pollution control programs, promoting pollution prevention, and coordinating the efforts of other local, state, and federal air quality programs.

The State has air quality regulations for open burning. Chapter 62-256, FAC, "Open Burning and Frost Protection Fires" describes rules and requirements regarding burning, including burning related to land clearing.

3.12.1.3 Ambient Air Quality

The USEPA has set NAAQS for widespread pollutants from numerous and diverse sources considered harmful to public health and the environment. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against visibility impairment, damage to animals, crops, vegetation, and buildings. The USEPA periodically reviews the science upon which the standards are based and the standards themselves. The USEPA has set NAAQS for seven principal pollutants, which are called "criteria" pollutants: carbon monoxide (CO); lead (Pb); nitrogen dioxide (NO_2); ozone (O_3); particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}); particulate matter with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$); and sulfur dioxide (SO_2).

Ozone is not emitted directly from emission sources but is created near ground level by a chemical reaction between oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) in the presence of sunlight. As a result, NO_x and VOCs are referred to as "ozone precursors" and are regulated as a means to prevent ozone formation. NO_x is primarily composed of NO_2 and nitrogen oxide (NO).

The USEPA compares ambient air measurements of criteria pollutants to the NAAQS to assess the status of air quality in different regions of the United States. Based on these comparisons, the regions of the United States are designated as either "attainment," "nonattainment," or "unclassifiable" with respect to NAAQS. A region is designated as attainment if monitoring shows that ambient concentrations of a specific pollutant are less than or equal to NAAQS. If the NAAQS are exceeded for a pollutant, then the region is designated as nonattainment for that pollutant. NAAQS nonattainment areas are further classified based on the severity of the exceedance of the relevant standard. An area is designated as unclassifiable if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment. If an area is redesignated from NAAQS nonattainment to NAAQS attainment, it is classified as a "maintenance area" for a 10-year period to ensure that the air quality improvements are sustained. Federal designations of air quality are defined in 40 CFR 81.

Project activities would occur in Leon County and Wakulla County. The NAAQS designations of the area where project activities would occur are summarized in Table 3.12-1. The area in the vicinity of Alternatives 1 and 3 is designated as attainment and/or unclassifiable for all pollutant NAAQS.

Table 3.12-1
Attainment Status of Area of Proposed Project

Pollutant	NAAQS Attainment Status	
	Leon County	Wakulla County
Carbon Monoxide (CO)	Attainment/Unclassifiable	Attainment/Unclassifiable
Lead (Pb)	Attainment/Unclassifiable	Attainment/Unclassifiable
Nitrogen Dioxide (NO_2)	Attainment/Unclassifiable	Attainment/Unclassifiable
Ozone (O_3)	Attainment/Unclassifiable	Attainment/Unclassifiable
Particulate Matter-10 microns or less (PM_{10})	Attainment/Unclassifiable	Attainment/Unclassifiable
Particulate Matter-less than 2.5 microns ($PM_{2.5}$)	Attainment/Unclassifiable	Attainment/Unclassifiable
Sulfur Dioxide (SO_2)	Attainment	Attainment

3.12.1.4 Greenhouse Gases and Climate Change

The accumulation of greenhouse gases (GHGs) in the atmosphere contributes to the regulation of the earth's temperature. Natural processes and human activities emit GHGs. Many scientists believe that GHG emissions from human activities have elevated the concentration of GHGs in the atmosphere beyond the level of naturally occurring concentrations. GHGs include carbon dioxide (CO_2) and methane. Emissions of GHGs are typically expressed in terms of CO_2 equivalents (CO_2e), where the potential of each gas to increase heating in the atmosphere is expressed as a multiple of the heating potential of CO_2.

3.12.2 Alternative 1 (Preferred Alternative)

3.12.2.1 Affected Environment

The proposed Alternative 1 route would be completely co-located with existing utility ROW. Specifically, the route would follow the existing FGT ROW for 7.0 miles and then would follow an existing City 115kV transmission line for approximately 1.75 miles. The Preferred Alternative setting is primarily rural and undeveloped land. The closest residence to Alternative 1 would be located along Woodville Highway at a distance of 240 feet. No hospitals, libraries, schools, places of worship, or other facilities are located in the vicinity of the Alternative 1 ROW or tap station.

Implementation of Alternative 1 would include the construction of a tap station. Construction of the proposed tap station would begin with clearing (including biomass burning), and grading of the approximately 3-acre site. The closest residences to the proposed tap station would be those along Springhill Road roughly 1,740 feet to the west.

3.12.2.1.1 Construction

Approximately 7.0 miles of the Alternative 1 ROW would be located within the previously cleared temporary work space of the FGT ROW. Therefore, implementation of Alternative 1 and tap station would result in 80.82 fewer acres of new forest clearing than Alternative 3 ROW (see Table 3.1-1), resulting in lower construction air quality impacts. Construction of the project would take place over a six-month period.

Construction of the proposed transmission line and substation would utilize conventional construction techniques, following a set of sequential operations, common to the industry. Typically, during transmission line construction, the construction spread proceeds along the ROW in one continuous operation. Criteria pollutant and GHG combustion emissions would be generated from diesel and gasoline engines in the various vehicles and construction equipment used during construction activities (e.g., trucks, backhoes, cranes). Fugitive dust emissions also would be generated from vehicle traffic on unpaved roads and from equipment used during construction activities. Emissions also would be generated from the open burning of the biomass (i.e., trees, brush) related to forest clearing. Estimates of the air pollutant emissions from project construction for Alternative 1 are summarized in Table 3.12-2. Detailed supporting calculations associated with construction emission estimates are on file in the project record and available for review on request.

Table 3.12-2
Summary of Alternative 1 Construction Emissions

Air Pollutant	Alternative 1
Carbon Monoxide (CO)	19 tons
Nitrogen Oxides (NO_x)	3 tons
Volatile Organic Compounds (VOCs)	2 tons
Particulate Matter, 10 microns or less (PM_{10})	4 tons
Particulate Matter, less than 2.5 microns ($PM_{2.5}$)	2 tons
Sulfur Dioxide (SO_2)	0.01 tons
Carbon Dioxide (CO_2)	656 metric tons

The construction activity would have intermittent and short-term air pollutant emissions. The air quality impacts caused by construction activities would be expected, in some instances, to contribute to ambient air pollutant concentrations, but the impacts would be temporary and would cease at the end of the six-month construction period. Standard construction practices would be employed that include measures to control the generation of fugitive dust emissions during construction and to ensure routine maintenance of construction equipment.

Biomass burning would be conducted at locations that would minimize impacts on sensitive receptors and would be conducted in coordination with the USFS and the Florida Forest Service in accordance with the rules and regulations contained in Chapter 62-256, FAC. Under Alternative 1, the City would clear up to 9.2 acres of forest and would burn all cleared biomass in accordance with all applicable regulations. The cleared areas would be located within remote areas, with the nearest sensitive receptor (a residence) located more than 1,700 feet away, and therefore impacts on sensitive receptors from biomass burning would be considered negligible.

In February 2010, the CEQ issued *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions* (CEQ 2010). In this guidance, the CEQ recommends that if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of CO_2e GHG emissions on an annual basis, agencies should consider this an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public. Since the estimated GHG emissions from construction of Alternative 1 would be considerably less than 25,000 metric tons, no further discussion of GHG is warranted.

3.12.2.1.2 Operations

Impacts from the operation of the transmission line would result from GHG emissions due to the fugitive emissions of sulfur hexafluoride (SF_6) in power-switching equipment at the project substation, and from the periodic use of vehicles during normal operation and maintenance activities. SF_6 is a nearly inert gas that does not have health impacts, but when emitted to the atmosphere is a potent GHG. SF_6 will not be deliberately emitted by the project, but power-switching equipment has the potential to leak SF_6. Potential impacts from fugitive SF_6 are estimated to be less than 11 kilograms per year, which is equivalent to 264 metric tons per year of CO_2e emissions. Impacts from vehicle use for operation and maintenance activity would be minor.

3.12.3 Alternative 3

3.12.3.1 Affected Environment

The Alternative 3 route would be 12.65 miles in length and would connect Line 31 with the existing Substation BP-5. This route proposes to connect to Line 31 in northern Wakulla County with a proposed tap point immediately north of the dead-end of Crestwood Lane adjacent to Line 31. The route would pass through several residential areas within 100 feet of 22 residential structures (homes or

outbuildings; see Table 3.1-1). The configuration and equipment of the proposed tap station for Alternative 3 would be similar to Alternative 1 resulting in the disturbance of approximately 1 acre.

3.12.3.1.1 Construction

The construction of Alternative 3 would take place over a nine-month period. Alternative 3 construction impacts would originate from the same types of activities as Alternative 1, but construction activity would be more extensive and located closer to sensitive receptors. Air quality impacts from the construction of Alternative 3 are provided in Table 3.12-3.

Alternative 3 would require 90.04 acres of upland and wetland forest clearing (1 acre for the tap station and 89.04 acres of ROW; see Tables 3.1-1, 3.4.3, and 3.6-5) through an area that is mostly remote, but that includes sections where residences are close to the ROW and tap station. Because of the proximity of sensitive receptors to forest clearing and the resulting biomass burning, there is potential for short-term exceedance of NAAQS at the sensitive receptors, which could have adverse health impacts

Table 3.12-3
Summary of Alternative 3 Construction Emissions

Air Pollutant	Alternative 3
Carbon Monoxide (CO)	138 tons
Nitrogen Oxides (NO_x)	9 tons
Volatile Organic Compounds (VOCs)	22 tons
Particulate Matter, 10 microns or less (PM_{10})	18 tons
Particulate Matter, less than 2.5 microns ($PM_{2.5}$)	16 tons
Sulfur Dioxide (SO_2)	0.02 tons
Carbon Dioxide (CO_2)	3,593 metric tons

3.12.3.1.2 Operations

The operation phase impacts would be identical to Alternative 1 and would be minor.

3.12.4 No Action Alternative

Under the No Action alternative, there would be no construction, operation, or maintenance of a proposed transmission line, or tap station; therefore, there would be no impacts on air quality.

3.12.5 Mitigation Measures for Air Quality

If the Proposed Action is implemented, the following mitigation measures will serve to lessen the potential air impacts due to construction:

- Keep construction equipment in good working order and maintained per manufacturer's recommendations;
- Locate burn areas to minimize impacts on sensitive receptors; and
- Unpaved road watering will be conducted daily to mitigate fugitive dust emissions.

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4 MITIGATION MEASURES AND OTHER NEPA CONSIDERATIONS

4.1 SUMMARY OF MITIGATION MEASURES

Construction of the SWTL Project would require certain mitigation measures to prevent or minimize both short- and long-term impacts on resources from the construction, operation, and maintenance of the project. Mitigation measures for each resource area are detailed in Section 3 and summarized below in Table 4.1-1.

Table 4.1-1
Summary of Mitigation Measures

Resource	Mitigation Measures
Land Use, Utilities, Transportation, and Recreation	· Locate the utility line parallel and adjacent to existing easements, where feasible. · Utilize previously disturbed lands to support construction and maintenance of the transmission line, to the maximum extent possible. · Use vertical framing during construction where necessary to ensure conductors remain a safe distance from the tree line during operation. · Maintain ROW restriction measures such as fences and gates, where appropriate. · Temporarily close/detour roadways or trails in the interest of public safety. · Disseminate public information. · Restore disturbed land to pre-construction conditions, to the extent practicable.
Aesthetics and Visual Quality	· Span water bodies where possible. · Place structures at the maximum possible distance from trails, water bodies, and highways. · Parallel existing transmission line and pipeline easement to the extent possible.
Biological Resources	The following mitigation measures will be implemented by the City to avoid or minimize potential adverse impacts on upland vegetation: · Ensure that ROW boundaries are clearly located and marked prior to construction to minimize the potential for inadvertent off-ROW impacts by clearing or grading crews. · Educate all construction personnel on the methodology used (i.e., colored flags or stakes) for identifying the boundaries of all work areas and the ROW boundary. · Fell all timber requiring clearing onto the ROW to minimize damaging adjacent trees and to avoid off-ROW impacts. · Comply with the upland clearing, erosion control, restoration, and maintenance methods approved in the City's General Environmental Management Utility Permit except as restricted by the SUP; USFS regulations; and local, state, and federal regulations and permit requirements. · Appropriately dispose of cut or downed vegetation. If burning is selected as the proposed vegetation disposal method, burning will occur only after the appropriate burn permit or authorizations are obtained from local or state agencies and the Florida Forest Service. In addition, all burning activities will be conducted in conformance with all appropriate regulations and in accordance with obtained authorizations. Burning will be contained to the permitted ROW width. Burn piles will also be located at appropriate distances from live vegetation so as not to

Table 4.1-1
Summary of Mitigation Measures

Resource	Mitigation Measures
	cause damage to off-ROW vegetation. · To further minimize inadvertent fires caused by construction-related activities from occurring, the City will ensure that all lit materials are properly disposed of, and that fire hazard and weather patterns are monitored and considered in determining what acceptable activities may occur during specific construction periods. When conditions indicate a high fire hazard, construction activities may be temporarily suspended until conditions are deemed suitable and safe to continue. · Minimize grading activities to only those locations where a safe, stable ROW surface must be created. · Install and maintain erosion control barriers (e.g., silt fencing and/or straw bales) where exposed soils have the potential to contribute to sedimentation of wetland and waterbodies or other sensitive features within or adjacent to the ROW. The use of hay for erosion control barriers is not allowed by the USFS on USFS property. · Restore pre-construction contours to the extent practicable. · Break up compacted upland soils, if necessary, by ripping, tilling, or scarifying before reseeding. · Consult with the USFS to develop a Wiregrass Restoration Plan for the 3.66 acres of upland acres of the ANF that would be disturbed by the project. Within the ANF, the USFS will maintain the responsibility for monitoring the long-term success of the Wiregrass Restoration Plan. · In areas outside the ANF, seed all disturbed areas as soon as possible with certified noxious-weed-free seed (as certified by the state) to stabilize the disturbed ROW. · Observe the ROW post-construction in areas outside of the ANF for revegetation success during periodic ground inspections and implement contingency measures as necessary to avoid long-term erosion and sedimentation problems associated with exposed soils in unvegetated areas. · Acquire lands, with a vegetative community similar to what is placed under the SUP, to be added to the ANF to compensate for the long-term impact of removing 50.14 acres of forested land from the ANF. <u>To minimize the abundance, introduction, or distribution of invasive, non-native species within the permanent ROW, the City will utilize the following BMPs:</u> · Prepare and implement a Noxious Weed Management Plan for the project. This document will be developed to take into consideration and complement the City's *Procedures Manual for General Utility Permit* (City of Tallahassee 2007), which is issued in accordance with the City's Land Development Code and the City's TVMP. · Identify the extent and location of existing noxious weed populations prior to construction. If noxious weeds are identified and need to be removed during construction, they will not be burned or disposed of on-site. They will be removed and disposed of at a regulated landfill. · On off-forest properties, visually inspect construction equipment and personal vehicles, if necessary, prior to entering the construction ROW or before leaving known infested areas. Equipment will be considered free of soil, seeds, vegetative matter, and other debris when a visual inspection does not disclose such material. If necessary, equipment will be manually brushed or wiped free of indicated material. Neither disassembly of equipment components nor specialized cleaning methods are anticipated to be necessary on off-forest property. Within the ANF, construction equipment will be pressure washed before entering USFS property. · Use weed-free materials such as weed-free straw bales for erosion control practices. The use of hay for erosion control barriers is not allowed by the USFS

Table 4.1-1
Summary of Mitigation Measures

Resource	Mitigation Measures
	on USFS property. · Consult with the USFS to develop a Wiregrass Restoration Plan for the 3.66 acres of upland acres of the ANF that are disturbed by the project. Within the ANF, the USFS will maintain the responsibility for monitoring the long-term success of the Wiregrass Restoration Plan, including noxious weed issues associated with that revegetation effort. · Seed all disturbed areas outside the ANF as soon as possible with certified noxious-weed-free seed (as certified by the state) to stabilize the disturbed ROW. · Observe the ROW post-construction in areas outside of the ANF for revegetation success during periodic ground inspections and implement contingency measures as necessary to eradicate noxious weed problems as necessary. <u>The following mitigation measures will be implemented by the City to avoid or minimize potential adverse impacts on common wildlife species/populations:</u> · Provide "avian-safe" transmission structures, which are defined as structures that provide adequate clearances between energized and grounded parts to accommodate large birds. · Reseed any temporarily disturbed areas with a native seed mix acclimated to the project elevation and climate to avoid habitat alterations that could adversely affect prey availability. · Avoid intentional harm to and professionally removing (using experienced biological personnel) individual wildlife species that are encountered during construction, if necessary. If required for a particular species, the project biologist will possess the required handling permits or authorizations to handle said species. · Implement a "no-kill" policy, especially with regard to snakes, to avoid the inadvertent take of the eastern indigo snake and Florida pine snake (see further discussion of threatened and endangered species in Section 3.4.4). · Provide funding for monitoring within the ANF to determine if the increased width of the utility corridors is creating a barrier to movement in amphibian populations. · Acquire lands, with a vegetative community similar to what is placed under the SUP, to be added to the ANF to compensate for the long-term impact of removing 50.14 acres of forested land from the ANF which could be by general wildlife species requiring woody habitats. <u>The following mitigation measures will be implemented by the City to avoid or minimize potential adverse impacts to T&E and Forest Service sensitive species</u>: · To educate contractors of the presence of protected species in the vicinity of the selected alternative, so that inadvertent impacts to these species caused by personnel, vehicles or construction activities can be minimized, the City will provide a brief, summary of said species in the bid documents. This summary will include the protective status, required habitat, illustrative picture, and other pertinent information of the protected species that may be encountered on the project; all mitigation measures approved by the USFWS, FWC, USFS, or other regulatory agencies and a summary of species-specific permit conditions (if obtained by the City as a requirement for construction); and an overview of the federal, state, and local laws and regulations protecting said species. This summary will also clearly state that the contractor and construction personnel shall not harm, handle, kill, maim, or harass said species. · Prior to construction, complete any required listed species consultations with the USFWS, the USFS, and the FWC and file the results of these consultations, including —if needed—revised plans, with the appropriate agencies.

Table 4.1-1
Summary of Mitigation Measures

Resource	Mitigation Measures
	To avoid, minimize, and compensate for potential project-related impacts on the red-cockaded woodpecker, the City has committed to the following mitigating measures: · Use existing access roads that are outside of identified RCW clusters. · Schedule work outside of the RCW's primary nesting season (May 1 to July 31) for areas within the 200-foot Alternative 1 ROW buffer which overlaps with the two RCW cluster boundaries. The City also may choose to employ a USFS biologist to perform cluster monitoring to ascertain if a breeding pair is present in these two colonies. If a breeding pair is present, work would discontinue from May 1 until fledging has occurred (which could occur before July 31), allowing operations to continue within the buffer zone(s). If it is determined that the cluster(s) in question is(are) occupied by a single male, and there is no breeding potential, operations could again continue before July 31 after the concurrence from the USFS biologist to proceed. · Prior to construction, complete consultation with the USFWS and the ANF regarding any further mitigating measures that may be required to avoid/minimize impacts to RCWs. To avoid/minimize potential impacts to eastern indigo snakes, the City will: · Conduct pre-construction surveys for gopher tortoise burrows to identify the potential location of commensal burrow species, including the eastern indigo snake. · Avoid disturbing, wherever possible, active gopher tortoise burrows. · Report any capture, handling, or displacement of eastern indigo snakes from the construction corridor to the USFS and USFWS. · Identify and report any large snake skins discovered within the construction footprint. · Provide a one-page flyer to project personnel prior to construction that describes the species and summarizes the required habitat, commensal association with gopher tortoise burrows, visual representation of gopher tortoise burrows, and protective status of the eastern indigo snake and inform them that under no circumstances should any snake found within the construction corridor be harmed or killed. · Specify in the bid documents that equipment refueling and fuel storage is prohibited on the construction ROW. To avoid/minimize potential impacts to the gopher tortoise and its habitat, the City would implement the following mitigating measures: · Conduct gopher tortoise surveys prior to the start of construction to identify all gopher tortoise burrows that may be impacted by the project. Survey methodology will be in accordance with the FWC's Gopher Tortoise Permitting Guidelines (June 2011) and conducted by an Authorized Agent. · Wherever possible, avoid construction-related activity within 25 feet of the mouth of active gopher tortoise burrows. · Where avoidance of gopher tortoise burrows is not possible, obtain the appropriate gopher tortoise permits from the FWC prior to the start of construction. Follow FWC's guidelines for excavating and relocating gopher tortoise individuals – and vertebrate commensal species - that may be impacted during construction to suitable adjacent habitat. This work will be completed using an FWC-approved Authorized Agent. Excavated burrows will be collapsed and/or filled subsequent to the capture of individuals. Gopher tortoises relocated to adjacent areas shall be precluded from returning to the ROW during construction by the use of temporary fencing in the relocation area which will be removed upon the completion of construction and after the SWTL ROW has been restored. · Record all mortality of gopher tortoises during construction and relocation activities and submit monthly reports to the appropriate FWC and/or USFS offices

Table 4.1-1
Summary of Mitigation Measures

Resource	Mitigation Measures
	during the relocation and construction period. · Prepare and submit a final project report to the USFS and the FWC after all gopher tortoise activities during the construction period are complete. · Use only existing roadways so that the potential of direct mortality of gopher tortoises from vehicular traffic will be minimal. · Specify in the bid documents that equipment refueling and fuel storage is prohibited on the construction ROW. <u>To avoid/minimize potential impacts to habitat for the striped newt (i.e., ephemeral ponds), the City will implement the following mitigating measures:</u> · Install and maintain erosion-control barriers during construction in the vicinity of any proximal ephemeral ponds. · Provide funding for monitoring to determine if the increased width of the utility corridor is creating a barrier to movement in populations. · Fund habitat improvement activities surrounding 33 potential and confirmed striped newt ponds within 0.5 mile of the utility corridor. These activities include the removal of undesirable woody vegetation using chainsaws, herbicide applications, and prescribed burning to improve striped newt habitat. <u>To minimize potential encounters between construction crews and Florida black bears potentially crossing the existing ROW during construction, the City will implement FWC-recommended specific precautions when constructing through black bear habitat to avoid/minimize impacts on this species:</u> · Adjust vehicular activities by mandating slower speeds in wooded zones at dawn and dusk and during the June/July breeding season (if construction occurs during this timeframe). · Ensure construction crews maintain clean construction sites; storing food and other wildlife-attractant refuse in bear-resistant garbage containers or dumpsters. · Conduct frequent unannounced site inspections by construction foreman to ensure site managers keep a bear-smart (i.e., clean) worksite. <u>To avoid/minimize potential impacts to Sherman's fox squirrel and its habitat, the City will implement the following mitigating measures:</u> · Adjust vehicular activities by mandating slower speeds in wooded zones during the December to February and May to June nesting seasons (if construction occurs during these timeframes). · Report any capture, handling, and/or displacing of Sherman's fox squirrels from the construction corridor to the USFS and the FWC. · Record any mortality of Sherman's fox squirrels during construction to the appropriate FWC and/or USFS offices. <u>As described in the BA, an active bald eagle nest (i.e., nest LN009) has been identified within the 660-foot buffer zone of the proposed Alternative 1 ROW. Because the bald eagle is protected by the federal Migratory Bird Treaty Act, no "take" can be issued for this species. Accordingly, the City has committed to the following bald eagle minimization/avoidance measures:</u> · Make every attempt to schedule construction outside the primary nesting season which occurs from October 1 to May 15. If construction must occur during this timeframe, the City will apply for, and obtain, a Bald Eagle Disturbance Permit from the FWC prior to the start of any construction activities. · Work from the outer edge of the 660-foot buffer of an active nest, first on the approach side, and continue inward toward the closer areas and then out the other side of the buffer. · Conduct no work within the 330-foot buffer of an active nest during the nesting

Table 4.1-1
Summary of Mitigation Measures

Resource	Mitigation Measures
	season, although equipment may travel through (without stopping) this buffer to reach the other side of the proposed linear corridor and resume work outside the 330-foot buffer. · Minimize, to the extent possible, equipment resident time within the 660-foot buffer zone of an active nest. · Limit personnel on the ground outside vehicles within the 660-foot buffer zone of an active nest to those personnel and activities that require work outside a vehicle. · Report nest abandonment to the USFWS and/or FWC Regional Biologist in a timely manner to allow rescue/salvage of eggs or eaglets for use in captive/release programs, as appropriate. · Use only existing roadways so that the potential of direct mortality of bald eagles from vehicular traffic will be minimal. <u>The City will employ the following mitigating measures to avoid/minimize potential impacts to the Florida pine snake:</u> · Conduct pre-construction surveys for gopher tortoise burrows to identify the potential location of commensal burrow species, including the Florida pine snake. · Wherever possible, avoid disturbing active gopher tortoise burrows. · Specify in the bid documents that equipment refueling and fuel storage is prohibited on the construction ROW. · Identify and report any large snake skins discovered within the construction footprint. · Report any capture, handling, and/or displacing of Florida pine snakes from the construction corridor to the USFS and FWC. <u>The City will employ the following mitigating measures to avoid/minimize potential impacts to the Florida gopher frog:</u> · Conduct pre-construction surveys for gopher tortoise burrows to identify the potential location of commensal burrow species, including the Florida gopher frog. · Wherever possible, avoid disturbing active gopher tortoise burrows. · Specify in the bid documents that equipment refueling and fuel storage is prohibited on the construction ROW.
Topography, Geology, Soils and Groundwater	· Prepare and implement a SWPPP. · Follow all applicable soil and water conservation measures listed in the relevant Forest Service Handbook on USFS-managed land. · Save topsoil removed for structure construction and use on site for restoration activities to promote regrowth from the native seed bank in the topsoil. · Cover exposed piles of soil (or use other erosion control measures) to reduce erosion potential when there is a threat of rain. · Limit grubbing to the area around structure sites to lessen the impact on the roots of low-growing vegetation, so they may sprout again. · Install sediment barriers and other suitable erosion and runoff control devices prior to ground-disturbing activities at construction sites, as necessary, to minimize offsite sediment movement. · Leave erosion and sediment control devices in place and monitor their effectiveness until all disturbed sites are revegetated and erosion potential has returned to pre-project conditions. · Retain existing low-growing vegetation, where possible, to prevent sediment movement offsite. · Revegetate or seed all disturbed areas as soon as possible after construction is completed to promote revegetation that would hold soil in place. All revegetation

Table 4.1-1
Summary of Mitigation Measures

Resource	Mitigation Measures
	within USFS lands would be in compliance with the Operating Plan of the SUP. · Break up compacted soils where necessary by ripping or scarifying down to 8 inches before reseeding. · Monitor erosion control BMPs during construction to ensure proper function and nominal erosion levels. · Monitor reseeding efforts for adequate growth. Implement contingency measures as necessary. · Develop and implement spill prevention and response procedures.
Water Resources	· Site the transmission ROW to the extent practicable to avoid waterbody and wetlands. · Where it is not possible to avoid siting the ROW across wetlands, locate poles and ground disturbance outside of waterbodies and wetlands to the extent practicable. · Minimize ground disturbance associated with the project to the extent possible. · Site any necessary work space areas outside of, and a minimum of 100 feet from any waterbodies or wetlands. · Designate 100-foot buffer zones on all sides of waterbodies and wetlands and install signage, fencing, tape, or other appropriate notification methods to clearly identify the locations and limits of buffer zones to construction crews prior to construction. Construction within buffer zones would be the minimum necessary to cut trees to ground level and remove downed vegetation from the construction ROW. · Install and maintain appropriate erosion control barriers (e.g., silt fencing and/or straw bales) across the ROW if any ground-disturbing activity will occur near the 100-foot buffer zone of all wetlands and waterways. In addition, erosion control measures would be installed and maintained throughout construction, in sloped or disturbed areas or in any other circumstances where construction related activities have the potential to cause sedimentation of wetlands and/or waterbodies located adjacent to the proposed ROW. The use of hay for erosion control barriers is not allowed by the USFS on USFS property. · Where use of access roads in upland areas cannot provide appropriate access to the construction ROW, all construction equipment may pass through the wetlands once. In areas of high soil saturation where rutting is likely to occur, use temporary matting on the travel lane within the wetland. Where matting is deemed necessary, all construction equipment would operate off the matting. · Minimize grading activities to non-saturated wetland areas and only in those locations were a safe, stable ROW surface must be created. In areas where grading will be required, the wetland topsoil should be stripped and segregated from the underlying subsoil. Topsoil will be returned after grading activities have been completed promoting quick reestablishment of wetland species by preserving the vegetative propagules (e.g., seeds, tubers, rhizomes, bulbs) in the topsoil. In wetlands where grading is not required, disturbance to the topsoil will be minimized to ensure quick revegetation of wetlands after construction is completed. · Seed all disturbed upland areas as soon as possible with appropriate certified noxious weed-free seed in accordance with USFS direction (as certified by the state) to stabilize upland areas and avoid sedimentation and erosion into nearby wetlands and waterbodies. · Monitor post-construction re-vegetation success in wetlands during periodic ground inspections. Contingency measures would be implemented as necessary. · Specify in the bid documents that the storage of hazardous materials, chemicals, fuels, and lubricating oils is prohibited on the construction ROW. Specify in the bid documents that refueling of personal vehicles or construction equipment is prohibited on the construction ROW. Specify in the bid documents that overnight

Table 4.1-1
Summary of Mitigation Measures

Resource	Mitigation Measures
	parking of personal vehicles or construction equipment within 100 feet of any waterbody or wetland is prohibited. · Restore pre-construction contours as close to original grade as possible. · Avoid any personal vehicle, or construction or maintenance equipment crossings of Munson Slough. The City would use an existing forest road (i.e., Rivers Road) to gain any required access to Munson Slough. · Comply with the conditions of applicable authorizations relating to any work within wetlands including the Environmental Management Permit issued by the Leon County Department of Development Support and Environmental Management, USFS SUP, and Section 404 permit issued by the USACE and FDEP.
Cultural Resources	· If cultural materials are encountered during project construction, immediately stop all construction activities in the vicinity until the resource can be evaluated by a qualified archaeologist. Prehistoric site indicators include, but are not limited to, chipped stone, obsidian tools and tool manufacture debitage (waste flakes), grinding implements such as mortars and pestles, ashy or charcoal lenses, compact use surfaces, and darkened soil that contains organic remains of food production, such as animal bone and shellfish remains. Historic site indicators include, but are not limited to, pottery, crockery, ceramic, glass, wood, bone, metal, and structural remains. · If artifacts or other cultural materials are identified during project construction, immediately contact representatives of the affected tribes and the Florida SHPO. · Immediately stop all construction activities in the vicinity should human remains or burials be encountered. Secure the area, placing it off limits for anyone but authorized personnel and immediately notify—in this order—County Sheriff or Medical Examiner, USFS archaeologists, the SHPO, and appropriate tribes. · Complete archaeological surveys, if required, for any portions of the selected alternative that have not been surveyed for cultural resources within the last 15 years.
Socioeconomics	· Construction of the project would result in short-term positive economic impacts through temporary employment for about 30 to 45 workers depending on the alternative selected. Additionally, communities and businesses within the study areas would benefit from the increase transmission capacity and reliability. For these reasons, the project is not expected to have negative economic impacts on local and regional economies. As such, no mitigation measures are proposed to address the socioeconomic impacts.
Environmental Justice	· No specific environmental justice mitigation measures would be required as a result of this project. Any short-term or long-term adverse environmental or human health impacts that are expected to occur would be mitigated by the various measures described for other resource areas.
Noise	· Keep construction equipment in good working order and maintained per manufacturer's recommendations. · Keep construction equipment adequately muffled. · Locate stationary construction equipment at a site location that is as far away from receptors as possible. · Notify nearby residents in advance of construction work. · Minimize, to the extent practicable, idling of construction equipment and vehicles during the construction.

Table 4.1-1
Summary of Mitigation Measures

Resource	Mitigation Measures
Health and Safety	· Implement a Safety Management Program and a Worker Health and Safety Program. · Develop a Site-specific Health and Safety Plan to include training requirements, an analysis of construction health and safety hazards, incident/accident prevention measures, local emergency contact information, and designated emergency routes in the event of an industrial injury. · Provide all health and safety programs and plans and fire protection measures to the construction workers prior to construction. · Designate a project site construction safety supervisor. · Develop spill prevention and response procedures and the use of BMPs in accordance with SWPPP as required in the NPDES general permit for construction activities will document procedures to minimize potential for and response to spills. · Conduct frequent inspection of construction equipment to ensure hydraulic systems and oil pans were in good condition and free of leaks. · Require portable spill containment kits for each piece of construction equipment. · Allowing the storage of hazardous materials, chemicals, fuels, and lubricating oils and fueling of construction equipment only in designated areas. The City will specify in the bid documents that the storage of hazardous materials, chemicals, fuels, and lubricating oils and refueling of personal vehicles or construction equipment is prohibited on the construction ROW.
Air Quality	· Keep construction equipment in good working order and maintained per manufacturer's recommendations. · Locate burn areas to minimize impacts on sensitive receptors. · Unpaved road watering will be conducted daily to mitigate fugitive dust emissions.

4.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible and irretrievable resources commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations. Irreversible commitments of resources are those that cannot be regained, such as the extinction of a species or the removal of mined ore. The project construction would require the irretrievable commitment of non-recyclable building materials and fuel consumed by construction equipment.

Irretrievable commitments are those that are lost for a period of time such as the temporary loss of timber productivity in forested areas that are kept clear for use as a power line ROWs or road. Under each route alternative, as identified in applicable sections of this Final EIS, the project would require the irretrievable commitment of some vegetation communities. Specifically, under Alternative 1, 9.22 acres of forested vegetation would be cleared, while under Alternative 3, 90.04 acres of forested upland and wetland vegetation would be cleared and maintained in a non-forested condition (see Tables 3.1-1, 3.4-1 through 3.4-3, 3.6-3, and 3.6-5). Within the ANF, the long-term maintenance of the Alternative 1 ROW and tap station would remove 50.14 acres of forested vegetation from forestry management for the life of the SUP. Following the termination of the SUP (in the ANF) or decommissioning of the project (outside the ANF), the area would be allowed to revert to forested cover.

4.3 RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

NEPA requires consideration of "the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity" (40 CFR 1502.16). As declared by Congress, this includes using all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans (NEPA Section 101).

Construction of the project would have short-term impacts on environmental resources, primarily associated with installation of poles and conductors and the clearing of the ROW. Temporary impacts from construction activities are detailed in Section 3. The SUP would require the City of Tallahassee to restore the ROW and other lands affected by project construction within the ANF. During the restoration process, the City would be required to work with the USFS to ensure that the restored ROW would provide useful and functional habitat for vegetation and wildlife.

The short-term use of environmental resources would result in increased electrical reliability for the region in which the project would be located. The project and associated facilities (i.e., tap station) would remain operational for over 50 years. The long-term impacts would include maintaining the 60-foot wide corridor in a non-forested condition for the life of the SUP (in the ANF) and the project (outside the ANF). Following the termination of the permit, the area would be allowed to revert to a forested cover.

4.4 UNAVOIDABLE ADVERSE EFFECTS

Unavoidable adverse effects include the short-term disturbances associated with the construction phase. For this project, these include traffic delays and visual effects of bare ground until vegetation is re-established.

5 CUMULATIVE IMPACTS

This section identifies existing and proposed projects in the vicinity of the proposed project that, along with the project alternatives, may result in cumulative effects on existing resources. Projects identified and discussed herein were identified through information requested from the FDOT and the USFS.

The CEQ defines cumulative effects as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). In 1997, the CEQ published *Considering Cumulative Effects under the NEPA* as a comprehensive guidance document for cumulative analyses. Therefore, the 1997 CEQ guidance document was used in this EIS to assess the potential cumulative effects of the project in combination with other past, present, and reasonably foreseeable future actions in the vicinity of the study area. This section is intended to provide an overall, synergistic analysis of the system-level cumulative effects resulting from the combined influence of the resource-specific effects to the study area.

5.1 CUMULATIVE IMPACTS METHODOLOGY

The cumulative impacts analysis presented in this document is based on the potential effects of the SWTL Project when added to impacts from other past, present, and reasonably foreseeable future actions in the region of influence (ROI). The potential effects are evaluated both for the period of project construction (anticipated to be up to six months for Alternative 1 and up to nine months for Alternative 3), and for the post-construction (operation) period of the project.

The ROI varies for each resource area, depending on the distance a potential effect can travel or be experienced. For example, cumulative effects to visual resources are typically limited to other projects that occupy the same field of view as the alternative corridors. The ROI for socioeconomics is relatively large and includes Leon and Wakulla Counties. In comparison, since impacts to geology and soils are limited to the existing onsite resources, the ROI for cumulative effects is the alternative corridors' ROWs. The ROI for the remaining resource areas is as follows: for biological resources, land use, recreation, and cultural resources, the ROI is southwestern Leon County and northeastern Wakulla County; for water resources, the ROI is the alternative corridors' ROWs; for transportation and traffic the ROI includes Woodville Highway, Wakulla Springs Road, and Crawfordville Highway, specifically, the segments between Wakulla and Leon Counties; and for air quality, the ROI is the air quality control region.

5.2 CUMULATIVE IMPACTS

Past projects, including the FGT Project and other linear utility projects (i.e., the City's existing 115kV transmission line), created cleared corridors with which to co-locate future linear projects. As a result, this reduces the clearing required for implementation of the project but widens the corridor resulting from the combined projects. Reasonably foreseeable future actions that could occur in the study area are identified in Table 5.1-1.

Table 5.1-1
Reasonable Forseeable Future Actions within the Region of Influence (2011-2016)

Description	Location	Status
Crawfordville Rd. widen to 4 lanes	South of SR 61 to L.L. Wallace Rd.	Right-of-way acquisition underway; no further phases funded at this time.
Crawfordville Rd. widen to 4 lanes	Wakulla County Line to L.L. Wallace Rd	Design underway; no further phases funded at this time.
Crawfordville Rd. widen to 4 lanes	L.L. Wallace Rd. to Buck Miller Rd.	Right-of-way acquisition underway; no further phases funded at this time.
SR 369 (US 319) Resurfacing	Wakulla/Arran Road to Leon County Line	Fully funded for Fiscal Years 2011 and 2012.
Woodville Hwy (SR 363)	Capital Circle SE to Natural Bridge Rd	Preliminary Design & Engineering Phase; no further phases funded at this time.
Capital Circle SE widen to 7 lanes	Woodville Hwy to Crawfordville Rd	Design/build procurement complete; project to be completed in early 2012.
Gopher Tortoise Habitat Improvement	Munson Sandhills	On-going habitat improvement projects using herbicides, hand tools and chainsaws.
ANF Prescribed Burning	Forest-wide	On-going prescribed burning for habitat improvement and fuels reduction
ANF Motorized Route Designation	Forest-wide	On-going restricted use of motorized vehicles to designated roads and trails only. Eliminated unauthorized use of motor vehicles which was resulting in wide-spread habitat destruction in the ANF.

5.3 CUMULATIVE IMPACTS ANALYSIS

The cumulative impacts analyses presented in the following sections encompass the direct and indirect impacts associated with both the SWTL Project, and the potential impacting factors for each of the reasonably foreseeable future actions described in Section 5.2. The cumulative impact analysis considers the period of construction for the SWTL Project and the post-construction period of operation.

5.3.1 Land Use, Utilities, Transportation, and Recreation

5.3.1.1 Land Use

As detailed in Section 2.5.2, 7.0 miles of the proposed transmission line under the Preferred Alternative would be located within the 60-foot wide FGT temporary corridor adjacent to the existing 80-foot wide FGT corridor. Of these 7.0 miles, 6.48 miles are within the ANF. While this reduces the amount of new land clearing, this would result in a 140-foot-wide utility corridor maintained in a non-forested condition for the duration of both projects. Within the ANF, the combined SUPs for FGT and the City would result in a 140-foot-wide utility corridor encompassing 112.96 acres (this includes 50.14 acres for the Alternative 1 ROW and tap station). Lands adjacent to the Alternative 1 would continue to be managed and used in a similar manner and would not require any land use changes. Alternative 3 would result in 90.04 acres of forested upland and wetland vegetation maintained in a non-forested condition (see Tables 3.1-1, 3.4-3, and 3.6-5).

5.3.1.2 Utilities

The cumulative impacts to utilities under either alternative would occur in those areas where the ROW is shared. These impacts generally would be administrative in nature, such as shared maintenance responsibility.

5.3.1.3 Transportation

The Proposed Action, under either alternative, would result in temporary negative impacts to transportation/traffic during construction activities. Specifically, these crossings could interfere with use of the roads during project construction, sometimes resulting in the need to reroute or delay traffic. However, these impacts would be temporary in nature and would last only as long as construction activities occurred in the area. If other reasonably foreseeable projects are constructed at the same time and location as the SWTL Project, or immediately before or after this project, then there could be a cumulative effect on traffic volumes on local roads, which would be mitigated by traffic controls required by both county and federal regulations.

5.3.1.4 Recreation

The Proposed Action would primarily create temporary disruption to recreation activities such as bicycle riding during the project's construction phase. Construction of the proposed project would not result in any change in recreational opportunities; however, the presence of the transmission line would potentially affect recreational visitors to forest lands in the long term from an aesthetic perspective. Alternative 3 is not anticipated to result in any cumulative recreation impacts to lands outside the ANF in Leon County or to lands outside Edward Ball Wakulla Springs State Park in Wakulla County.

5.3.2 Visual and Aesthetics

As indicated in Section 3.3, visual resources in the project vicinity remain primarily rural in nature and undeveloped. This trend is expected to continue. Along the Preferred Alternative route, structures would be visible by travelers of the three major roadways (i.e. US 319, SR 61, and SR 363) and other local roads the line would cross. The aesthetic nature of the Preferred Alternative route is already dominated by the FGT pipeline and the existing City 115kV transmission line, portions of which would be restricted to public access. Therefore, the majority of the proposed line and structures would not be visible by any individuals on a regular basis. Given the limited nature of these visual changes, the contribution of the Proposed Action to cumulative impacts on visual resources would be minor.

With regard to Alternative 3, the potential for cumulative visual impacts is increased by the clearing of woody vegetation that would be required along roadways, particularly Crawfordville Highway, and along areas of Oak Ridge Road already associated with light industrial uses in the community of Woodville.

5.3.3 Topography, Geology, Soils, and Groundwater

Either alternative would create a potential for erosion due to construction grading and disturbance, and during long-term maintenance activities. However, since both alternatives would be located in gently sloping topography and BMPs would be implemented during construction and operation, no cumulative impacts related to erosion are anticipated.

5.3.4 Water Resources

Proposed Alternatives 1 and 3 are located within the St. Marks River Watershed which extends from the red hills of southern Georgia to the Gulf of Mexico, covering approximately 1,170 square miles (748,800 acres). Approximately 91% of the watershed (1,060 square miles or 678,400 acres) lies within Jefferson, Leon, and Wakulla Counties in Florida, while the remainder is in Thomas County, Georgia. Surface water features within this watershed include the St. Marks River; its major tributary, the Wakulla River; and Wakulla Springs, the headwaters of the Wakulla River. Other major surface water features within the watershed are lakes Miccosukee, Lafayette, and Munson, and the coastal receiving waters of Apalachee Bay.

Surface waters in the vicinity of Alternatives 1 and 3 are relatively limited, consisting primarily of Lake Munson and Munson Slough located southwest of Tallahassee. Lake Munson is a cypress-lined impoundment of Munson Slough covering 255 acres. Lake Munson drains south through Munson Slough for several miles to Ames Sink. As described in Section 3.6.2, Munson Slough (upstream of Lake Munson) is impaired for dissolved oxygen and fecal coliform. Downstream of Lake Munson, Munson Slough is impaired for dissolved oxygen and un-ionized ammonia.

As described in Section 3.6.2, the Alternative 1 ROW would avoid all direct impacts to surface water bodies (including Munson Slough and the unnamed tributary to Munson Slough), as in-stream work would not be necessary and these crossings would be spanned. Impacts to wetlands also would be avoided as the two existing wetlands have been cleared previously by the FGT Project and each crossing is small enough that siting structures within these wetlands is not anticipated. Due to span distance limitations, Alternative 1 would involve the placement of structures within in the ROW in designated 100-year FEMA floodplains. However, since the proposed activities in 100-year floodplains would not involve any placement of fill, Alternative 1 would not result in any loss of flood storage or associated flood volumes. No surface water bodies, wetlands, or 100-year floodplains are located within the Alternative 1 tap station. For these reasons, Alternative 1 would not have any measurable cumulative impacts on water resources (water bodies, 100-year floodplains, and wetlands) associated with past, present, or reasonably foreseeable future actions.

As described in Section 3.6.3, Alternative 3 would avoid all direct impacts to surface water bodies as no surface water features are located within the ROW or tap station. For these reasons, Alternative 3 would have no cumulative impacts on surface water bodies associated with past, present, or reasonably foreseeable future actions.

Due to span distance limitations, Alternative 3 would involve the placement of utility structures in designated 100-year FEMA floodplains, but since the proposed activities in these floodplains would not involve placement of fill, construction within the Alternative 3 ROW would not result in any loss of flood storage or associated flood volumes. The entire Alternative 3 tap station is located within the 100-year floodplain; therefore, Alternative 3 could have cumulative impacts on 100-year floodplains associated with past and present actions that also involve(d) the placement of fill and/or facilities in 100-year floodplains, plus the reasonably foreseeable future actions identified in Table 5.1-1 that could potentially involve filling in 100-year floodplains. Although the Alternative 3 tap station does not contain wetlands, construction within the Alternative 3 ROW would result in the permanent conversion of approximately 6.62 total acres of forested/shrub wetland habitat to herbaceous wetland. Because of this, Alternative 3 could have cumulative impacts on wetlands associated with past and present actions, plus the reasonably foreseeable future actions identified in Table 5.1.1.

5.3.5 Biological Resources

5.3.5.1 Vegetation

Since Alternative 1 would be located within the temporary work space adjacent to the existing 80-foot wide FGT pipeline, Alternative 1 would result in a cumulative corridor width of 140 feet. The long-term maintenance of the Alternative 1 ROW and tap station would result in the removal of 50.14 acres of land (including 0.66 acre of wetlands) from forestry management from the ANF and the authorization of an SUP under Alternative 1 would result in the maintenance of these 50.14 acres in a non-forested condition for the life of the permit.

The east-west component of the Alternative 1 ROW would be co-located primarily within the existing FGT FEIS utility corridor in protected lands of the ANF. Of the future transportation improvement projects listed in Table 5.1-1, two would intersect the proposed Alternative 1 ROW; one where the Alternative 1 ROW would cross Crawfordville Road (US 319, SR 369) just south of the intersection of the Crawfordville Road and Wakulla Springs Road (SR 61) and the second on the

Woodville Highway (SR 363) approximately 1.5 miles north of Oak Ridge Road. Perpendicular intersections would limit the amount of disturbed area/upland vegetation compared to parallel construction.

The north-south component of the Alternative 1 ROW lies partially within the existing 115-kV electric utility ROW owned by the City. The land on either side of this ROW is owned by the St. Joe Company, is presently being used as a coniferous tree plantation. (i.e., for planting, growing, and harvesting pulpwood), would likely be cleared of woody vegetation for silvicultural purposes in the future, and is not for sale for any other type of land use. For these reasons, the north-south component of the Alternative 1 ROW has no known future cumulative impacts on upland vegetation. None of the future transportation improvement projects described in Table 5.1-1 would intersect the north-south component of Alternative 1.

The ongoing prescribed burn program and the gopher tortoise habitat improvement projects approved in January 2010 (see Table 5.1-1) would maintain or enhance the habitat within the ROI. In addition, the implementation of the 2007 Apalachicola Route Designation project (see Table 5.1-1) has resulted in documented improvement of both terrestrial and aquatic habitat within the Munson Sandhills area by limiting unmanaged motorized recreation in the area

Alternative 3 would result in a total of 90.04 acres of forested upland and wetland vegetation being cleared and maintained in a non-forested condition for the ROW and tap station (see Tables 3.1-1, 3.4-3, and 3.6-5). This acreage, in addition to the undisclosed acres of vegetation removed for the expansion of the following existing roads/utility corridors within the project area, would have negligible cumulative impacts to vegetative cover in the ROI:

- Crawfordville Road (U.S 319, SR 369) = 6,052 linear feet (LF) (1.15 miles);
- Royal Oaks Court = 1,564 LF (0.30 mile);
- Sunflower Road = 6,188 LF (1.17 miles);
- Charlie Ash Lane = 1,020 LF (0.19 mile);
- Oak Ridge Road = 6.052 LF (1.15 miles); and
- City 115 kV electric transmission line corridor = 21,590 LF (4.09 miles).

5.3.5.2 Wildlife (General)

Alternative 1 would result in permanently cleared corridor widths of 140 feet for 7.0 miles (i.e., where co-located with the FGT project) and 130 feet for 1.75 miles (i.e., where co-located with the existing 115 kV line). Construction of Alternative 1 would transform 60 feet of this FGT ROW from temporarily cleared work space (i.e., allowed to revert to native forests over the long term) to permanently cleared ROW (i.e., maintained in a non-woody, non-forested condition for the long term). Because the entire 140 feet of the east-west component of the Alternative 1 ROW was previously cleared, construction of Alternative 1 would not have any measurable cumulative impacts on the general wildlife community existing in the vicinity of the proposed project.

Much of the north-south component of the Alternative 1 ROW would be co-located within a previously cleared electric utility ROW owned by the City. The rest of the north-south component of the Alternative 1 ROW would be located on land owned by the St. Joe Company and actively managed for silviculture. The pine plantations on the St. Joe Company land are regularly being cut down, harvested, and replanted on annual rotational basis. Because the forest land along the north-south component of Alternative 1 previously has been cleared (i.e., for City-owned ROW) or will be cleared in the future for

timber harvest, construction of the north-south component of Alternative 1 would not have any measurable cumulative impacts on the general wildlife community residing in the vicinity of the ROW.

Construction of the ROW for Alternative 3 would result in an estimated total of 90.04 acres of new forest upland and wetland vegetation/wildlife habitat clearing (see Tables 3.1-1, 3.4-3, and 3.6-5). This cleared land would be maintained in a permanently altered, non-forested condition for the operation and maintenance of the ROW and tap station. However, because of the generally rural setting of the Alternative 3 ROW and the abundance of similar habitat adjacent to the ROW, most of the wildlife displaced by Alternative 3 construction would be able to successfully relocate in adjacent habitat. As a result, construction, operation, and maintenance of Alternative 3 would not have any measurable cumulative impacts on the general wildlife community residing in the vicinity of the proposed project.

5.3.5.3 Threatened, Endangered, and Forest Service Sensitive Species

Construction of the east-west component of Alternative 1 would result in a permanent 140-foot wide ROW through the ANF. Although this entire ROW was previously cleared by construction of the FGT gas pipeline, Alternative 1 would convert a 60-foot wide portion of this ROW from temporary workspace, which would have been allowed to revert to native forests, to permanently cleared, non-forested operational work space. Because of this, construction of Alternative 1 may result in cumulative impacts by creating a barrier that could potentially block the migratory movements of protected or Forest Service sensitive amphibians such as striped newts and Florida gopher frogs between their upland habitat and their ephemeral breeding ponds. No other measurable cumulative impacts on threatened, endangered, or Forest Service sensitive species are anticipated from construction of Alternative 1.

The ongoing ANF prescribed burn and herbicidal treatment programs, and the Gopher Tortoise Habitat Improvement Project approved in January 2010 by the USFS (USDA 2009) would provide beneficial cumulative impacts by maintaining and/or enhancing habitat for some listed species, such as the gopher tortoise and eastern indigo snake within the ANF. In addition, the implementation of the 2007 Apalachicola Route Designation Project (USDA 2007a) has resulted in documented improvement of both terrestrial and aquatic habitat within the Munson Sandhills area by limiting unmanaged motorized recreation in the area thereby providing a beneficial cumulative impact to species utilizing this type of habitat.

The Alternative 3 ROW would not traverse any portion of the ANF or any other federal land. In addition, the ROW for Alternative 3 would be less than 100 feet in total width and would not result in a cumulative long-term increase in the contiguous width of any other existing ROW. For these reasons, Alternative 3 has less potential to create a barrier to amphibian movement than Alternative 1. As a result, no measurable cumulative impacts on threatened, endangered, or Forest Service sensitive species are anticipated from construction of Alternative 3.

5.3.6 Cultural Resources

Typically, cultural resources are identified as part of the permitting process for individual undertakings, and often are discovered only during ground-disturbing activities. Applicable laws and regulations afford specific protections to discovered resources. The majority of the Preferred Alternative route has been surveyed and nothing has been discovered. No tribal resources were indicated during tribal consultation conducted by the USFS. As discussed in Section 3.7, with the implementation of Applicant proposed measures, the construction of the SWTL Project is not likely to impact cultural resources. Therefore, the SWTL Project's contribution to cumulative impacts to cultural resources would be minor.

5.3.7 Socioeconomics

The projects considered in this analysis would cumulatively contribute to an increase in overall employment in the construction sector. During construction of the proposed SWTL Project, employment

would increase temporarily; however, no new long-term jobs would be created to operate the transmission lines. Therefore, the project would not contribute to cumulative long-term in-migration or population impacts in the region. Further, although the projects in this analysis would cumulatively generate government revenues through tax revenue, wage and salary expenditures, and material procurement, the socioeconomic impacts resulting from the SWTL Project would be temporary and would not contribute measurably to beneficial or adverse cumulative impacts.

5.3.8 Environmental Justice

Data compiled by the U.S. Census at the block group level indicate the presence of minority and low income communities in the vicinity of the SWTL Project. The project is not expected to generate high or adverse human health or environmental effects on nearby communities. However, under Alternative 3, the off-Forest Service property route, the project would have long-term visual impacts in some locations where the structures and overhead conductors would be visible from private residences, including parts of the Census block groups that have potential minority and low income residences. While the potential for these impacts exists, overall, the proposed project does not appear to exhibit systematic bias toward the placement of the project in minority or low income communities. Cumulative effects on visual resources are discussed in Section 5.3.2 and cumulative socioeconomic effects are discussed in Section 5.3.7.

5.3.9 Noise

The geographic scope for the analysis of the project's contribution to cumulative impacts in terms of noise impacts includes all projects that would generate noise within 0.5 mile of the project. Cumulative noise impacts could occur if construction of the project would occur concurrently with construction or operations of other noise-generating activities within 0.5 mile of the project.

Ongoing and foreseeable development throughout the cumulative effects area is limited to roadway and transportation infrastructure projects and a natural gas line. However none of these projects overlap the construction timeframe for the proposed SWTL Project. Therefore, no reasonably foreseeable projects considered in the cumulative impact scenario would contribute to cumulative noise impacts. Although the alternative would follow a different route, the timeframe for construction would be the same. Therefore, cumulative effects would be the same for the alternative, which would result in no cumulative effects.

5.3.10 Health and Safety

During construction of the SWTL Project, hazardous materials would be handled in accordance with all applicable regulations. Further, construction of any project has the risk of uncovering previously unknown environmental contamination. Methods to remediate past environmental contamination would be applied to any that are found and would minimize the risk that the contamination would spread. Under either alternative, any potentially contaminated soil encountered during construction would be containerized and disposed of in accordance with applicable regulations to ensure that no cumulative impacts would be caused by such discoveries.

In addition to hazardous substances, as discussed in Section 3.11, transmission lines contribute EMF to the environment. Under either alternative, the line would be co-located for a distance along an existing 115kV line. The proposed transmission line combined with existing line could additively increase EMF in the study corridor. However, given that this line is only accessible by City employees and the designs, clearance requirements, and distance separations for adjacent transmission lines, the potential for cumulative impacts would be limited. Therefore, construction of the proposed project would not contribute to any cumulative health and safety issues.

5.3.11 Air Quality

As stated in Section 3.12, existing air quality within the area for each alternative is generally good to excellent. Because the SWTL Project would not have a measurable impact on air quality for the study area, it would not be expected to contribute to the cumulative impact of other projects on air quality. Under each alternative, pollutant emissions would primarily occur during construction, would be temporary in duration, would be relatively minor, and would be emitted in remote areas. CO is the only pollutant that would be emitted at a level that warrants discussion of cumulative impacts. CO impacts are primarily a concern for localized impacts. Because the construction emissions would be distributed across the ROW and would not occur near highways or other stationary sources, and because the impacts would be temporary, no measurable cumulative impacts are anticipated.

6 REGULATORY AND PERMIT REQUIREMENTS

As indicated in Section 1.3.2., the construction of the Proposed Action would not require a permit under Florida's TLSA, given that the proposed project does not meet the necessary criteria. However, since the Preferred Route would cross the ANF, an SUP from the USFS would be required. Additional permits and approvals potentially required for construction and operation of the Proposed Action are listed in Table 6.1-1. The table also includes applicable EOs and federal and state regulations and departmental policies on land use management, which may not require an explicit permit but may guide regulating agencies in the permit or approval process.

Table 6.1-1
Executive Orders, and Federal, State and Local Regulations and Potentially Required Permits and Approvals

Regulation/Policy	Citation	Description
Executive Orders		
EO 11988, Floodplain Management	EO 11988	The Executive Order directs federal agencies to establish procedures to ensure that they consider potential effects of flood hazards and floodplain management for any action undertaken. Agencies are to avoid impacts to floodplains to the extent practical.
EO 11990, Protection of Wetlands	EO 11990	The Executive Order directs federal agencies to avoid short- and long-term impacts to wetlands if a practical alternative exists.
EO 12898, Environmental Justice	EO 12898	The Executive Order directs federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.
EO 13007, Indian Sacred Sites	EO 13007	The Executive Order directs federal agencies, to the extent permitted by law and consistent with agency missions, to avoid adverse effects to sacred sites and to provide access to those sites to Native Americans for religious practices.
EO 13112, Invasive Species	EO 13112	The Executive Order directs federal agencies to prevent the introduction of or to monitor and control invasive nonnative species and provide for restoration of native species.
EO 13175, Consultation and Coordination with Indian Tribal Governments	EO 13175	The Executive Order directs federal agencies to establish meaningful consultation and collaboration with tribal governments to strengthen United States government-to-government relationships with Native American tribes.
EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds	EO 13186	The Executive Order directs federal agencies to avoid or minimize the negative impacts of their actions on migratory birds, and to take active steps to protect birds and their habitats.
Guiding Federal Regulations/Policies and/or Permits		
National Environmental Policy Act (NEPA) of 1969	42 United States Code (U.S.C.) 4321-4347	NEPA requires federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions through the NEPA process. NEPA needs to be satisfied prior to impacts to land managed by a federal agency or the issuance of any federal permits and/or approvals. The United States Forest Service (USFS) has determined that the Proposed Action requires the preparation of this Environmental Impact Statement (EIS) under NEPA.
Revised Land and Resource Management Plans for National Forests in Florida, 1999		A Special Use Permit (SUP) grants rights or privileges of occupancy and use on National Forest System land. SUPs contain specific terms and conditions that the holder must follow and is granted for a specific period of time. SUP requests must be consistent with the Forest Plan that establishes standards and guidelines for management of the land where the activity will take place. Before SUPs are issued, the USFS must determine that the proposed use complies with all management plans and laws, that there is a demonstrated need for the activity, and that the use is appropriate on National Forest System lands. Selection of Alternative 1 as the Preferred Alternative would require approval of an SUP from the USFS to construct, operate, and maintain the electric transmission utility within the Apalachicola National Forest (ANF).

Table 6.1-1
Executive Orders, and Federal, State and Local Regulations and Potentially Required Permits and Approvals

Regulation/Policy	Citation	Description
National Historic Preservation Act (NHPA)	16 U.S.C. 470 et seq.	The Florida Division of Historical Resources, State Historic Preservation Office (SHPO) is mandated by the NHPA to represent the interests of the State of Florida when consulting with federal agencies under Section 106 of the NHPA and to maintain a database of historic properties. The NHPA also created the Advisory Council on Historic Preservation (ACHP), an independent federal agency in the Executive Branch that oversees the Section 106 review process. In addition to reviews by the SHPO and the ACHP, input from the general public and Native American tribes also is required under the NHPA. A federal action (or federal permitting such as permits issued under Section 404 of the Clean Water Act) triggers a required consultation with the SHPO under Section 106 of the NHPA. Section 106 consultation for the Preferred Alternative will be completed by the USFS.
Native American Graves Protection and Repatriation Act	25 U.S.C. 3001	The Act requires the Secretary of the Interior to guide the repatriation of federal archaeological collections and collections that are culturally affiliated with Native American tribes and held by museums that receive federal funding.
American Indian Religious Freedom Act of 1978	42 U.S.C. 1996	The Act ensures the protection of sacred locations and access of Native Americans to those sacred locations and traditional resources that are integral to the practice of their religions.
Archaeological Resources Protection Act	16 U.S.C. 470	The Act requires a permit for the excavation or removal of archaeological resources from publicly held or Native American lands. Permitted excavations must further archaeological knowledge and the resources removed are to remain the property of the United States. Tribal consent must be issued if the resource is found on land owned by a Native American Tribe.
Clean Air Act	42 U.S.C. 7401	The Act establishes National Ambient Air Quality Standards (NAAQS) for certain pervasive pollutants. The Act establishes limitations on sulfur dioxide (SO_2) and nitrogen oxide (NO_X) emissions and sets permitting requirements. Authority for implementation of the permitting program is delegated to the Florida Department of Environmental Protection (FDEP). A General Conformity Analysis is typically required for construction and operation emissions to determine if the project would be a major or minor source of pollution. The General Conformity Rule applies only to non-transportation-related federal actions in locations designated as nonattainment or maintenance areas for any criteria air pollutant NAAQS. Because the project area status is not designated as a nonattainment or maintenance areas for any air pollutant, analysis under the General Conformity Rule is not required for this project.
Section 404 of the Clean Water Act (CWA), as amended in 1972	32 U.S.C. 1251	Section 404 of the CWA enables the United States Army Corps of Engineers (USACE) to grant permits for certain activities within waterways and wetlands. Discharge of dredged, excavated, or fill material in wetlands, streams, rivers, and other U.S. waters require a Section 404 Permit from the USACE. There are two types of Section 404 permits including Individual and general permits. Activities in wetlands that involve more than minimal impacts require Individual permits. There are two types of Section 404 general permits including regional permits and nationwide permits. General permits are issued when the proposed construction activities are minor in scope with minimal impacts. Projects with less than 0.5 acre of wetland impact can be permitted under the USACE Nationwide Permit program (NWP). NWP 12 applies to activities required for the construction, maintenance, and repair of utility lines and associated facilities, including substations and access roads. The applicable Section 404 Permit required for the project will be determined following completion of wetland delineation of the selected alternative.

Table 6.1-1
Executive Orders, and Federal, State and Local Regulations and Potentially Required Permits and Approvals

Regulation/Policy	Citation	Description
Emergency Planning and Community Right-to-Know Act of 1986	42 U.S.C. 11001 et seq.	The Act requires that the Applicant maintain an inventory of specific chemicals used or stored on site and annually report quantities present or used over applicable threshold.
Section 7 Consultation, Endangered Species Act (ESA) of 1973 and Amendments of 1982	16 U.S.C. 1531 et seq.	The United States Fish and Wildlife Service (USFWS) is required to assist other federal agencies to ensure that any action they authorize, implement, or fund, will not jeopardize the continued existence of any federally endangered or threatened species. Section 7 requires consultation with USFWS regarding the proposed project when there is a federal nexus. For the Preferred Alternative (Alternative 1), a federal nexus exists as the ROW is located on National Forest land managed by the USFS. The USFS has prepared a Biological Assessment (BA) for Alternative 1 to evaluate and summarize the likely effects of the Preferred Alternative on protected species. In a letter dated March 1, 2012, the USFWS concurred with the findings of the BA (USFWS 2012).
Fish and Wildlife Conservation Act of 1980	16 U.S.C. 2901 et seq.	The Act encourages federal agencies to conserve and promote conservation of non-game fish and wildlife species and their habitats.
Fish and Wildlife Coordination Act	16 U.S.C. 661 et seq.	The Act requires federal agencies to consult with the USFWS and the state agency responsible for fish and wildlife resources if the project affects water resources.
Migratory Bird Treaty Act (MBTA)	16 U.S.C. 703 et seq.	The USFWS is required to assist other federal agencies to ensure that any action they authorize, implement, or fund, will not result in a 'take' of migratory bird species listed in the MBTA. Take is defined in the MBTA to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing, or transporting any migratory bird, nest, egg, or part thereof. Impacts are typically mitigated by clearing of vegetation outside of nesting seasons. The USFS has prepared a BA for Alternative 1 to evaluate and summarize the likely effects of the Preferred Alternative on protected species including applicable MBTA species. In a letter dated March 1, 2012, the USFWS concurred with the findings of the BA (USFWS 2012).
Bald and Golden Eagle Protection Act of 1940, as amended	16 U.S.C. 668-668d	The Act prohibits, without a permit issued by the Secretary of the Interior, the 'taking' of bald and golden eagles, including their parts, nests, or eggs. The Act defines 'take' as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." The term 'disturb' means "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. " The Alternative 1 right-of-way (ROW) is located between 330 and 660 feet of a known active bald eagle nest. A permit is required for all activities within 660 feet of any active bald eagle nest during the nesting season (1 October to 15 May).
Noise Control Act	42 U.S.C. 4901-4918	The Act directs federal agencies to carry out programs in their jurisdictions "to the fullest extent within their authority" and in a manner that furthers a national policy of promoting an environment free from noise that jeopardizes health and welfare.
Occupational Safety and Health Act (OSHA) of 1970	29 U.S.C. 651 et seq.	The Act establishes regulations for the protection of worker health and safety. The City and their construction contractors are subject to OSHA general industry standards and OSHA construction standards.
Pollution Prevention Act of 1990	42 U.S.C. 13101 et seq.	The Act establishes a national policy for waste management and pollution control.

Table 6.1-1
Executive Orders, and Federal, State and Local Regulations and Potentially Required Permits and Approvals

Regulation/Policy	Citation	Description
Resource Conservation and Recovery Act (RCRA)	42 U.S.C. 6901	The Act regulates the treatment, storage, and disposal of hazardous wastes. The City and their construction contractors would be required to manage hazardous wastes generated during construction or operation of the project in accordance with RCRA.
Guiding State and Local Regulations/Policies and/or Permits		
Environmental Resource Permit (ERP): Authorization for Disturbance/Activity in Wetlands	Florida Administrative Code Chapter 62-312	The State of Florida has enacted laws, regulations, and rules to protect wetlands, These rules have been established to define the state's role in the CWA Section 404 permit/Section 401 certification process. The FDEP regulates wetlands under its ERP Program. Typically, the FDEP application is processed by the applicable Water Management District where the project is located. However, ERP applications associated with transmission lines are processed by the FDEP. A joint permit application is used for both the USACE and the FDEP (i.e., ERP applications are initially received by the FDEP who then forwards the joint application to the USACE). While the ERP application is issued, withdrawn, or denied in accordance with state statutory and rule criteria, agency action on the ERP application also constitutes any needed water quality certification (WQC, or waiver thereto) under Section 401 of the CWA and Coastal Zone Consistency Concurrence with Florida's federally approved Coastal Zone Management program under Section 307 (Coastal Zone Management Act), which then enables the USACE to take separate action to issue or deny any needed federal permit under Section 404 of the CWA and/or Section 10 of the Rivers and Harbors Act. Following completion of wetland delineation of the selected alternative to determine wetland impacts, the joint USACE/ERP permit application will be submitted to the FDEP. Activities determined to have only a minimal impact on water resources are exempt. A request to qualify for this exemption must be submitted in writing to the FDEP.
Section 401 of the Clean Water Act; Water Quality Certification		The joint ERP Application submitted to the FDEP and issued permit also constitutes the Section 401 Water Quality Certification in the State of Florida (see ERP above).
Section 306 of the Federal Coastal Zone Management Act; Consistency Determination		The FDEP, Office of Intergovernmental Affairs, reviews actions that require federal permits or have a federal nexus (such as permits issued under Section 404 of the CWA) for consistency with the Florida Coastal Management Program (FCMP). If the FDEP determines that the proposed activity complies with the FCMP, the FDEP issues a consistency determination. The entire State of Florida is within the Coastal Zone therefore, the proposed project would be required to obtain a consistency determination which would be processed as part of the joint ERP application submitted to the FDEP (see ERP above).
State Endangered Species Act Consultation	Florida Statutes Chapter 379.2291	The project could potentially impact state protected species. Therefore, consultation with the Florida Fish and Wildlife Conservation Commission (FWC) is required to ensure there are no impacts to state protected species or that impacts are mitigated appropriately. This consultation must be completed prior to receiving an ERP (see above).
Utility Permit		The project traverses state highways/roads. All new installations of utilities on highway rights-of-way require a Utility Permit Application to the Florida Department of Transportation.

Table 6.1-1
Executive Orders, and Federal, State and Local Regulations and Potentially Required Permits and Approvals

Regulation/Policy	Citation	Description
National Pollutant Discharge Elimination System (NPDES) Generic Permit for Stormwater Discharge from Large and Small Construction Activities	Florida Administrative Code Rule 62-621.300(4)	An NPDES stormwater permit is required from the FDEP for new construction projects if the clearing, grading, or excavation work disturbs one or more acre of land and discharges to a surface water of the state. The permit specifies appropriate pollution prevention techniques to minimize erosion and sedimentation and properly manage stormwater. This permit requires submission of a Notice of Intent (NOI) (DEP Form 62-621.300(4)(b)); completion of a Stormwater Pollution Prevention Plan (SWPPP); and submission of a Notice of Termination (NOT) (DEP Form 62-621.300(6)).
Gopher Tortoise Temporary Exclusion Permit for Major Linear Utility Corridors	FWC Gopher Tortoise Management Plan	The proposed project may potentially impact gopher tortoises. In accordance with the FWC's Gopher Tortoise Permitting Guidelines (June 2011), the City will conduct gopher tortoise surveys and obtain the appropriate gopher tortoise permit prior to construction.
Bald Eagle Disturbance Permit	FWC Bald Eagle Management Plan	The Alternative 1 ROW is located between 330 and 660 feet of an active bald eagle nest. If Category A (includes construction of transmission lines) construction activities occur within this buffer zone during the nesting season (1 October to 15 May) the City must either conduct nest monitoring (as specified in the USFWS 2007 Bald Eagle Monitoring Guidelines) or obtain a Bald Eagle Disturbance Permit from the FWC.
Authorization for Operations, Activities and Recreation on Lands Under the Management of the Office of Greenways and Trails	Florida Administrative Code 62S-3.002	Public utilities traversing property under the management of the FDEP Office of Greenways and Trails (OGT) must obtain written authorization from the OGT prior to the start of construction. The Preferred Alternative (Alternative 1 ROW) traverses the Tallahassee-St. Marks Historic Railroad Trail State Park managed by the FDEP OGT.
Open Burning of Land Clearing Debris	Florida Administrative Code 62-256.700	Open burning of land clearing debris is allowed under the current State of Florida regulations, but will require the City to coordinate with the Florida Forest Service regarding the planned burning activity prior to the start of construction and to follow burn requirements specified in under FAC 62-256.700 (3).
Leon County Environmental Management Ordinance	Leon County land Development Code Section 10-4.202	Would require a Natural Features Inventory (NFI) and/or Environment Impact Analysis (EIA). The NFI is the preliminary document presented to Leon County to document the presence of environmentally sensitive features in and around a proposed project. An EIA addresses specific impacts resulting to the natural features identified in the NFI. In addition, the EIA addresses issues that will be fully addressed in the Environmental Management Permit. These include but are not limited to tree protection, sedimentation control, flood mapping, and stormwater compliance.
Leon County Public Sector Linear Infrastructure Variance	Leon County Land Development Code Section 10-4.503(d)	The Linear Infrastructure Variance will identify all conservation and preservation features impacted by the Project as identified by the Tallahassee-Leon County Comprehensive Plan
Leon County Driveway Connection Permit	Leon County Code of Ordinances Section 16-60	Required for any new connection or modifications to an existing connection to any public road or street from any abutting parcel of property.
Right-of-way placement permit	Leon County Land Development Code Section 10-4.201	Utility work or other construction of improvements undertaken in an existing public ROW.

Table 6.1-1
Executive Orders, and Federal, State and Local Regulations and Potentially Required Permits and Approvals

Regulation/Policy	Citation	Description
Environmental Management Permit (EMP): Authorization for Disturbance/Activity in Wetlands		Leon County Department of Development Support and Environmental Management: Permit required for any dredge or fill activity within boundaries of delineated jurisdictional wetlands.

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7 CONSULTATION, COORDINATION, AND DISTRIBUTION

7.1 ORGANIZATIONS AND PERSONS CONSULTED

Table 7.1-1
Organizations and Persons Consulted

Name	Title	Organization/Agency
Laura Kammerer	Deputy SHPO for Review and Compliance	Florida Department of State, Division of Historical Resources
Nawfal Ezzagaghi, P.E.	Environmental Review Supervisor	Leon County Growth and Environmental Management
Traci Adkison	District 3 Area Utility Manager	Atkins Global, for Florida Department of Transportation
Laura Haddock	District 3, District Scenic Highways Coordinator (NFS/FDOT Liaison	Florida Department of Transportation
Natalie Furman, FDOT	District 3, District Noise Specialist/Environmental Specialist	Florida Department of Transportation
Robin Turner	Regional Coordinator, Office of Greenways and Trails	Florida Department of Environmental Protection
Harold Mitchell	Ecologist	United States Fish and Wildlife Service, Panama City Field Office

7.2 SWTL PROJECT TEAM

Table 7.2-1
Southwestern Transmission Line Project Team

Name	Title	Agency
David A. Harris	Region 8 NEPA Coordinator	USFS
Harold G. Shenk	Deputy District Ranger, Apalachicola National Forest	USFS
Gary Hegg	NEPA Coordinator, Apalachicola National Forest	USFS
Sherry Provo	Special Use Specialist, Apalachicola National Forest	USFS
Micah Thorning	Forest Biologist	USFS
Charles Hess	Wildlife Biologist	USFS
Andrea Repp	Archaeologist	USFS
Ken Jurden, PMP	Project Manager	Ampirical Solutions, LLC
Lee Lowe	Senior Engineer	Ampirical Solutions, LLC
Paul A. DeFrank	Managing Engineer	City of Tallahassee Electric Utility
Brian Fisher, P.E., CPM	Manager, Power Engineering	City of Tallahassee Electric Utility
Mark Beaudoin	Real Estate Administrator	City of Tallahassee, Public Works, Real Estate Division
Echo Kidd Gates, P.E., LEED-AP	Project Engineer	Genesis Group
Judith Hayden, P.E.	Geotechnical Engineer	Environmental and Geotechnical Specialists, Inc.

7.3 PREPARERS AND CONTRIBUTORS

Table 7.3-1
List of Preparers

Name	Title (Years of Experience) Degrees/Expertise	Section Authored/Role
Brenda Powell	Ecologist (16 years) MS, Environmental Biology BS, Biology	Project Manager; Biological Resources; Water Resources
Gene Stillman	Environmental Planner (17 years) MS, Urban and Regional Planning BS, Social Science	Former Project Manager
Richard Stephens	Chemist (22 years) Post- graduate Certificate in Education), Biology/ General Science BS, Zoology	Contract Manager; Hazardous Waste
Doug Heatwole	Environmental Scientist (30 years) MS, Marine Science BS, Biology	EIS Principal Review; QA/QC
Laurie Weaver	Environmental Scientist (11 years) BA, Biology	EIS Chief Review; QA/QC
Kelly Duggar	Environmental Planner (6 years) MS, Urban and Regional Planning MS, Public Administration BS, Political Science	Former Deputy Project Manager; Description of the Proposed Action and Alternatives; Aesthetic and Visual Resources
Samuel Olson	GIS Analyst (4 years) MA, Geography/GIS BA, Geography, GIS, and Cartography	GIS Mapping and Figures
Jonathan Oravetz	GIS Analyst (5 years) MS, Environmental Science BS, Geography/Environmental Studies	GIS Mapping and Figures
Mark Moore	GIS Analyst (5 years) BA, Geography	GIS and Figures
Sarah Ramberg	Biologist (12 years) BS, Marine Biology	Biological Resources
Franklin (Budd) Titlow	Ecologist (37 years) MS, Wildlife Management BS, Biological Science	Biological Resources; Water Resources
Tom Siener	Certified Industrial Hygienist (38 years) BS, Biology	Noise, Health and Safety
Kirsten Shelley	Economist (22 years) MS, Environmental/-Resource Economics BA, Economics	Socioeconomics; Environmental Justice
Tegan Gifford	Environmental Scientist (3 years) BS, Environmental Studies	Socioeconomics; Environmental Justice
Leonid Shmookler	Archaeologist (39 years) MA, Anthropology BA, Anthropology	Cultural Resources
Michael Robertson	Environmental Planner (8 years) MA, Planning and Architecture BS, Crop/Soil Environmental Science	Land Use, Utilities, Transportation, and Recreation; Cultural Resources
William Huber	Biologist (8 years) BS, Biology	Land Use, Utilities, Transportation, and Recreation
Dan Foss, PG	Geologist (23 years) MS, Geology BS, Geology	Topography, Geology, Soils, and Ground Water

Table 7.3-1
List of Preparers

Name	Title (Years of Experience) Degrees/Expertise	Section Authored/Role
Perry Kelso	Geologist (23 years) BS, Geology	Topography, Geology, Soils, and Ground Water
Josh Wilson	Air Quality Specialist (12 years) BA, Biology/Chemistry	Air Quality
Bruce Wattle	Air Quality Specialist (31 years) BA, Atmospheric Science	Air Quality
Gina Edwards	Technical Editor (28 years) BS, Communications	Technical Editor

7.4 DISTRIBUTION

Table 7.4-1 lists the agencies and individuals who were provided a copy of the Draft and/or Final EIS via provision of a paper hardcopy of the document, electronic copy on CD, or a letter stating availability and providing a link to the appropriate website where the document(s) could be viewed or downloaded. In addition, a NOA of the Draft EIS was published in the *Federal Register* on Friday, December 23, 2011 (see Appendix A), and the document was available on the City website at http://www.talgov.com/you/learn/utilities/electric/swtline.cfm A NOA of the Final EIS has been published in the *Federal Register* and the document is available on the City website at http://www.talgov.com/you/learn/utilities/electric/swtline.cfm.

Table 7.4-1
EIS Distribution List

Federal Agencies
USDA, USFS
USEPA Headquarters, Washington, D.C.
USEPA, Region 4 (EIS Review Coordinator)
USFWS-Panama City Field Office (Mr. Harold Mitchell)
National Agricultural Library
Director of Office of Environmental Policy and Compliance
USACE, South Atlantic Division
FAA
Federal Highway Administration
National Oceanic and Atmospheric Administration, Fisheries Service, Habitat Conservation Division, Southeast Region
Advisory Council on Historic Preservation
Animal and Plant Health Inspection Service, Policy and Program Development, Deputy Director
Natural Resources Conservation Service, National Environmental Coordinator
Department of Energy, Director of NEPA Policy and Compliance
State Agencies
Florida State Clearinghouse
Local Agencies
Tallahassee-Leon County Planning Department (Mr. Wayne Tedder, Director)
Leon County Growth and Environmental Management (Mr. Nawfal Ezzagaghi, P.E., Environmental Review Supervisor)
Wakulla County Planning and Zoning (Ms. Lindsey Stevens, Director)
Tribes
Kialegee Tribal Town of the Muscogee (Creek) Nation (Tiger Hobia, Town King)
Seminole Tribe of Florida (James Billie, Chairman and Mr. Willard Steele, Tribal Historic Preservation Officer)
Alabama-Quassarte Tribal Town (Tarpie Yargee, Chief)

Table 7.4-1 EIS Distribution List
Muscogee (Creek) Nation (A.D. Ellis, Principal Chief)
Poarch Band of Creek Indians (Buford Roland, Chairman)
Miccosukee Tribe of Indians (Coley Billie, Chairman)
Utility Providers
City of Tallahassee, Electric Utilities
Talquin Electric Cooperative, Inc. (Mr. Jeremy Nelms, E.I., Manager of Engineering)
Citizen Groups
WildLaw (Mr. Brett Pabin, Senior Staff Attorney)
Florida State Dog Hunters Association (Mr. Rusty McKeithen, President)
Southern Trailriders Association (Mr. Jud Curtis)
Friends of Apalachicola National Forest
Other Interested Parties (Landowners, Citizens, Other Companies)
Karen Cribb
Brett M. Paben
Jeff A. Blair
Paula Blair
Victor Beane
Peggy Goodman
Patricia Wright
Ruth Chapman on behalf of Ruby N. Anderson
Jean Public
Paul Brewer
W.V. “Mac” McConnell
Leroy Johnson
TD and Kathi Giddings
Susan Harp
Dan Jackman
Ted Bennett
Ampirical Solutions, LLC (Mr. Ken Jurden)

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Appendix A

Federal Register Notices

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Notices

Federal Register

Vol. 75, No. 198

Thursday, October 14, 2010

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Forest Service

Information Collection; Research Data Archive Use Tracking

AGENCY: Forest Service, USDA.

ACTION: Notice; request for comment.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, the Forest Service is seeking comments from all interested individuals and organizations on the currently approved information collection, Research Data Archive Use Tracking.

DATES: Comments must be received in writing on or before December 13, 2010 to be assured of consideration. Comments received after that date will be considered to the extent practicable.

ADDRESSES: Comments concerning this notice should be addressed to USDA Forest Service, Dave Rugg, 1 Gifford Pinchot Drive, Madison, WI 53726–2366. Comments also may be submitted via e-mail to: *drugg@fs.fed.us.*

The public may inspect comments received at Forest Service—Forest Products Laboratory, 1 Gifford Pinchot Drive, Madison, WI, during normal business hours. Visitors are encouraged to call ahead to 608–231–9234 to facilitate entry to the building.

FOR FURTHER INFORMATION CONTACT: Dave Rugg, Forest Service, Northern Research Station, 608–231–9234. Individuals who use telecommunication devices for the deaf (TDD) may call the Federal Relay Service (FRS) at 1–800–877–8339 between 8 a.m. and 8 p.m., Eastern Standard Time, Monday through Friday.

SUPPLEMENTARY INFORMATION:

Title: Research Data Archive Use Tracking.

OMB Number: 0596–0210.

Expiration Date of Approval: 04/30/2011.

Type of Request: Extension with no Revision.

Abstract: The Forest Service Research and Development (FS R&D) group has created a data archive to store and disseminate data collected in the course of its scientific research. Preparing data sets for the archive requires significant effort from researchers. The Forest Service has an obligation to encourage ethical use of archived FS R&D data sets and needs to know how others are using the archived data sets. This information assists FS R&D personnel in evaluating the research program. Information about the use of the products of a scientist's research is of significant importance in scientist performance evaluations.

When a member of the public requests a copy of a data set, FS R&D will collect the following information: Name; affiliation; contact information (including e-mail address); Statement of Intended Use; and Data Use Agreement. The Data Use Agreement and associated information collection closely follow the data access structure used by the National Science Foundation's Long Term Ecological Research network. FS R&D managers believe that this structure provides a sound balance between meeting obligations to its scientific staff and ease-of-access by the research community. The Statement of Intended Use will not determine access to a particular data set. A form at the archive web site will collect the information and the data set author will use the Data Use Agreements to describe the impact of research accomplishments prior to performance appraisals.

The collection of Data Use Agreements will be evaluated by the data archiving program to identify opportunities for improving the archive's function and offerings. The FS R&D communications office will use the agreements to assist in assessing the effectiveness of FS R&D research and technology transfer.

The FS R&D data archive is a new activity and participation is voluntary. This information collection is a critical component in the campaign to encourage Forest Service scientists to deposit their research data in the archive system. Sharing research data is very useful to the broader research community and sharing of well documented FS R&D data sets via the archive will be impossible without this information collection.

Estimate of Annual Burden: 10–15 minutes per respondent.

Type of Respondents: Scientists, particularly in fields studying natural resources; resource specialists in nonprofits and other government agencies.

Estimated Annual Number of Respondents: 200.

Estimated Annual Number of Responses per Respondent: 1.

Estimated Total Annual Burden on Respondents: 50 hours.

Comment Is Invited: Comment is invited on: (1) Whether this collection of information is necessary for the stated purposes and the proper performance of the functions of the Agency, including whether the information will have practical or scientific utility; (2) the accuracy of the Agency's estimate of the burden of the collection of information, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on respondents, including the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

All comments received in response to this notice, including names and addresses when provided, will be a matter of public record. Comments will be summarized and included in the submission request toward Office of Management and Budget approval.

Dated: October 7, 2010.

Carlos Rodriguez-Franco,

Acting Deputy Chief, Research and Development.

[FR Doc. 2010–25861 Filed 10–13–10; 8:45 am]

BILLING CODE 3410–11–P

DEPARTMENT OF AGRICULTURE

Forest Service

Apalachicola National Forest; Florida; City of Tallahassee 230kV Southwestern Transmission Line

AGENCY: Forest Service, USDA.

ACTION: Notice of intent to prepare an environmental impact statement.

SUMMARY: The U.S. Forest Service, Apalachicola National Forest intends to prepare an environmental impact statement under a 3rd party agreement with the City of Tallahassee, Florida to

issue a special use authorization for the construction, occupancy and use of national forest system land for a 230kV electric transmission line. The addition of an east-west 230kV transmission line would connect the Hopkins—Crawfordville 230kV transmission line south of the Tallahassee Regional Airport (near the intersection of Springhill and Bice Roads), with the existing Substation BP–5 (southeast of the Capital Circle S.W./Woodville Highway intersection). The proposed transmission line would be approximately 8 miles long with approximately 6.4 miles located within the Apalachicola National Forest. The transmission line would parallel the existing Florida Gas Transmission Company's natural gas lines from the Hopkins—Crawfordville line until the forest boundary south of Substation BP–5. Once off the forest it would parallel an existing 115kV electric transmission line to its terminus at Substation BP–5.

DATES: Comments concerning the scope of the analysis must be received by November 19, 2010 in order to be considered in the Draft Environmental Impact Statement. A Draft Environmental Impact Statement is expected in April 2011. A Final Environmental Impact Statement is expected in October 2011. A Public Workshop will be held in Tallahassee, Florida on October 28, 2010.

ADDRESSES: Send written comments to Susan Jeheber-Matthews, Forest Supervisor, National Forests in Florida, 325 John Knox Road Suite F–100, Tallahassee, FL 32303. Comments may also be sent via e-mail to *comments-southern-florida@fs.fed.us.*, or via facsimile to (850) 523–8505.

FOR FURTHER INFORMATION CONTACT: Harold Shenk, U.S. Forest Service, 57 Taff Drive, Crawfordville, FL 32327. Telephone; (850) 926–3561.

Individuals who use telecommunication devices for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 between 8 a.m. and 8 p.m., Eastern Time, Monday through Friday.

SUPPLEMENTARY INFORMATION:

Purpose and Need for Action

The North American Electric Reliability Corporation (NERC) is the electric reliability organization certified by the Federal Energy Regulatory Commission (FERC) to develop and enforce Reliability Standards for the bulk power system. NERC Transmission Planning Standards (TPL Standards 001–004) identify the mandatory planning standards that electric utilities must follow to ensure that reliable systems are developed that meet specified performance requirements.

The City conducts annual studies to evaluate the reliability of the bulk transmission system under a variety of contingencies that ensure the system meets the NERC standards. Recent studies have identified that the existing electric transmission network needs to be modified to ensure continued compliance with the NERC reliability planning standards.

Absent system improvements, the reliable delivery of power from the City's generating facilities and imported power via ties with other utilities to all customers cannot be ensured in the future under certain contingencies. The loss of multiple transmission lines due to a single event on a common right of way would cause other lines on the system to be overloaded. An additional electric transmission delivery path from east to west was identified as the means by which the City can maintain the ability to supply projected customer demands and wholesale transmission services into the future as required by the NERC Standards.

The proposed 230kV Transmission Line would provide enhanced system benefits that will meet the NERC mandated requirements and will improve system performance to the general public. These benefits include: (1) Improved system reliability over a broader range of contingencies & longer duration as a result of providing an additional delivery path from generation sources and interconnections with other utilities to customers; (2) improved power transfer (east to west) as a result of the reduced losses associated with higher voltage transmission lines; and (3) address reliability concerns regarding the ability to supply future customer demands should one or more of the current east to west delivery paths become unavailable due to an equipment fault or failure.

Proposed Action

The Proposed Action is to issue a special use authorization for the construction, occupancy and use of a 230kV electric transmission line on approximately 6.4 miles of national forest system lands on the Apalachicola National Forest. The proposed electric transmission line would connect the Hopkins-Crawfordville 230kV line south of the Tallahassee Regional Airport (near the intersection of Springhill and Bice Roads), with the existing Substation BP–5 (southeast of the Capital Circle SW. and Woodville Highway intersection). The proposed transmission line would be approximately 8 miles long with approximately 6.4 miles located within the Apalachicola National Forest.

The proposed transmission line would be located adjacent to an existing utility corridor currently under a U.S. Forest Service Special Use Permit with the Florida Gas Transmission Company. The proposed transmission line would increase the existing 80 foot-wide Florida Gas corridor by an additional 60 feet. The additional corridor would occur within the temporary work space previously created by the Florida Gas Transmission Company and documented in the January 11, 2010 Record of Decision, Special Use Permit, Florida Gas Transmission Company, Phase VIII Expansion Project. The Proposed Action would also include the development of a new tap point on the Hopkins-Crawfordville line.

Possible Alternatives

Two additional routes were evaluated during development of the proposed transmission line. The first alternative route follows Springhill Road, passes through a smaller undisturbed area of the Apalachicola National Forest, and then parallels Capital Circle SW. The second route, consisting of a minor deviation of the first route, would follow Springhill Road all the way to Capital Circle SW., reducing impact to the national forest, but would not meet FAA safety regulations (FAR Part 77) for structure height near the runway at the Tallahassee Regional Airport.

Responsible Official

Susan Jeheber-Matthews, Forest Supervisor, 325 John Knox Road, Suite F–100, Tallahassee, FL 32303.

Nature of Decision To Be Made

The Forest Service will decide whether or not to issue a special use authorization for the construction, occupancy and use of a 230kV electric transmission line on approximately 6.4 miles of national forest system lands on the Apalachicola National Forest and conditions there of.

Permits or Licenses Required

Leon County Environmental Management Permit.

Florida Department of Environmental Protection, National Discharge Elimination permit.

Scoping Process

This notice of intent initiates the scoping process, which will guide the development of the environmental impact statement. A Public Workshop will be held in Tallahassee, Florida on October 28, 2010 (Woodville Elementary

School Cafeteria, 9373 Woodville Highway, 5–7 p.m.) to provide citizens an opportunity to learn about the project and to provide comments. Letters requesting comments on the proposed action will be mailed to the public involvement mailing list for the Apalachicola National Forest and local citizens that may be affected by the project.

It is important that reviewers provide their comments at such times and in such manner that they are useful to the agency's preparation of the environmental impact statement. Therefore, comments should be provided prior to the close of the comment period and should clearly articulate the reviewer's concerns and contentions.

Comments received in response to this solicitation, including names and addresses of those who comment, will be part of the public record for this proposed action. Comments submitted anonymously will be accepted and considered; however, anonymous comments will not provide the Agency with the ability to provide the respondent with subsequent environmental documents.

Dated: October 7, 2010.

Susan Jeheber-Matthews,

Forest Supervisor.

[FR Doc. 2010–25825 Filed 10–13–10; 8:45 am]

BILLING CODE 3410–11–P

DEPARTMENT OF AGRICULTURE

Forest Service

Yavapai County Resource Advisory Committee

AGENCY: Forest Service, USDA.

ACTION: Notice of meeting.

SUMMARY: The Yavapai County Resource Advisory Committee (RAC) will meet in Prescott, Arizona. The committee is meeting as authorized under the Secure Rural Schools and Community Self-Determination Act (Pub. L. 110–343) and in compliance with the Federal Advisory Committee Act. The purpose of the meeting is to discuss RAC Timeline, Grants and Agreements Workshop, Discuss Financial Status, and Project Evaluation Criteria.

DATES: The meeting will be held October 29, 2010; 9 a.m. to 4 p.m.

ADDRESSES: The meeting will be held at the Prescott Fire Center, 2400 Melville Dr., Prescott, AZ 86301.

FOR FURTHER INFORMATION CONTACT: Debbie Maneely, RAC Coordinator, Prescott National Forest, 344 S. Cortez, Prescott, AZ 86301; (928) 443–8130 or *dmaneely@fs.fed.us.*

SUPPLEMENTARY INFORMATION: The meeting is open to the public. The following business will be conducted: (1) Approve September meeting minutes; (2) discuss possible Grants and Agreements workshops; (3) financial reporting; (4) RAC timeline; (5) create project evaluation criteria; (6) followup on bin items from last meeting; (7) next meeting agenda, location, and date.

Dated: October 7, 2010.

Alan Quan,

Forest Supervisor.

[FR Doc. 2010–25822 Filed 10–13–10; 8:45 am]

BILLING CODE 3410–11–P

DEPARTMENT OF AGRICULTURE

National Institute of Food and Agriculture

RIN 0524–AA43

Solicitation of Input From Stakeholders Regarding Administration of the Veterinary Medicine Loan Repayment Program (VMLRP)

AGENCY: National Institute of Food and Agriculture, USDA.

ACTION: Notice of public meeting and request for stakeholder input.

SUMMARY: The National Institute of Food and Agriculture (NIFA) is soliciting stakeholder input on the recent implementation of the Veterinary Medicine Loan Repayment Program (VMLRP) authorized under section 1415A of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3151a). The purpose of this program is for the U.S. Department of Agriculture (USDA) to enter into agreements with veterinarians under which the veterinarians agree to provide, for a specific period of time as identified in the agreement, veterinary services in veterinarian shortage situations. As part of the stakeholder input process, NIFA is conducting a public meeting to solicit comments regarding the processes developed and implemented for the first application cycle that concluded with the first group of awards under this program in September 2010. Input collected will be used to modify and improve processes for subsequent calls of shortage situation nominations and request for applications.

DATES: The meeting will be held on Monday, November 8, 2010, from 9 a.m. to 3:30 p.m. All comments must be received by close of business Monday, November 15, 2010, to be considered.

ADDRESSES: The meeting will be held in room 1410 A–B–C–D of the Waterfront Centre Building, National Institute of Food and Agriculture, United States Department of Agriculture, 800 9th St., SW., Washington, DC 20024. Meeting participants will need to provide photo identification to be admitted to the building. Please allow sufficient time to go through security. You may submit comments, identified by NIFA–2011–0001, by any of the following methods:

Federal eRulemaking Portal: http://www.regulations.gov. Follow the instructions for submitting comments.

E-mail: vmlrp@nifa.usda.gov. Include NIFA–2011–0001 in the subject line of the message.

Fax: 202–720–6486.

Mail: Paper, disk or CD–ROM submissions should be submitted to VMLRP, Plant and Animal Systems (PAS) Unit, National Institute of Food and Agriculture, U.S. Department of Agriculture; STOP 2220, 1400 Independence Avenue, SW., Washington, DC 20250–2220.

Hand Delivery/Courier: VMLRP; Plant and Animal Systems (PAS) Unit, National Institute of Food and Agriculture, U.S. Department of Agriculture, Room 3153, Waterfront Centre, 800 9th Street, SW., Washington, DC 20024.

Instructions: All submissions received must include the agency name and NIFA–2011–0001. All comments received will be posted to *http://www.regulations.gov,* including any personal information provided.

FOR FURTHER INFORMATION CONTACT: Ms. Lisa Stephens, (202) 401–6438, or *lstephens@nifa.usda.gov.*

SUPPLEMENTARY INFORMATION:

Additional Meeting and Comment Procedures

Because of the diversity of subjects, and to aid participants in scheduling their attendance, the following schedule is anticipated for the November 8, 2010, meeting:

9–9:30 a.m.— Introduction and Background of VMLRP.

9:30–12 p.m.—Identification and prioritization of veterinarian shortage situations.

1–3:30 p.m.—Administration of the VMLRP, including application forms; timing and length of VMLRP application period; application prioritization and review; execution of VMLRP agreements; agreement terms and conditions; and monitoring and oversight of VMLRP agreements.

Persons wishing to present oral comments at this meeting are requested

you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

FOR FURTHER INFORMATION CONTACT: Jessica Trice, NEPA Compliance Division, Office of Federal Activities, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue NW., Mail Code: 2252A, Washington, DC 20460. Telephone: (202) 564–6646.

SUPPLEMENTARY INFORMATION: EPA is seeking public comment regarding its preliminary Finding of No Significant Impact (FONSI) to document its determination that no significant environmental impacts are anticipated from the issuance of the 2012 Construction General Permit. EPA invites the public to submit comments through Regulations.gov or by mail to the address cited in the **ADDRESSES** section during the 30-day comment period following the publication of this notice in the **Federal Register**.

Since 1992, EPA has issued a series of NPDES Construction General Permits (CGP) that cover areas where EPA is the permitting authority. At present, EPA is the permitting authority in four states (Idaho, Massachusetts, New Hampshire, and New Mexico), the District of Columbia, Puerto Rico, all U.S. territories with the exception of the Virgin Islands, federal facilities in four states (Colorado, Delaware, Vermont, and Washington), most Indian lands and other specifically designated activities in specific states (e.g., oil and gas activities in Texas and Oklahoma). EPA's current CGP became effective on June 30, 2008 (see 74 FR 40338) and will expire on February 15, 2012. The proposed action, would replace the 2008 CGP, as well as the 2003 CGP for construction sites still covered under that administratively continued permit. EPA proposes to issue the construction general permit for five (5) years, and to provide permit coverage to eligible existing and new construction projects in all areas of the country where EPA is the NPDES permitting authority. On April 25, 2011, EPA proposed for public comment the draft National Pollutant Discharge Elimination System general permit for stormwater discharges from large and small construction activities and initiated scoping for the development of the environmental issues and reasonable alternatives to be addressed in the EA. 76 FR 22882.

The environmental review process, which is documented by the Environmental Assessment (EA), indicates that no potential significant adverse environmental impacts are anticipated from the proposed action. The EA, which analyzed the potential environmental impacts of issuing the new CGP, considered the potential environmental impacts from the discharge of pollutants in stormwater discharges associated with construction activity where EPA is the permitting authority.

Based on the environmental impact analysis in the EA, EPA has determined that no significant environmental impacts are anticipated from the issuance of the 2012 Construction General Permit and the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment, making the preparation of an Environmental Impact Statement (EIS) unnecessary. Therefore, EPA is issuing a preliminary Finding of No Significant Impact (FONSI).

Dated: December 20, 2011.

Aimee S. Hessert,

Deputy Division Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. 2011–32945 Filed 12–22–11; 8:45 am]

BILLING CODE P

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–9000–6]

Environmental Impacts Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564–1399 or *http://www.epa.gov/compliance/nepa/.*

Weekly receipt of Environmental Impact Statements

Filed 12/12/2011 Through 12/16/2011 Pursuant to 40 CFR 1506.9

Notice: Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EIS are available at: *http://www.epa.gov/compliance/nepa/eisdata.html.*

EIS No. 20110423, Draft EIS, NRC, SC, William States Lee III Nuclear Station Units 1 and 2 Combined Licenses (COLs) Application, Constructing and Operating Two New Nuclear Units at the Lee Nuclear Station Site, NUREG–2111, Cherokee County, SC, Comment Period Ends: 02/06/2012, Contact: Sarah Lopas (301) 415–1147.

EIS No. 20110424, Final EIS, NOAA, IL, Illinois Coastal Management Program, To Preserve, Protect, Restore, and Where Possible, Enhance Coastal Resources in Illinois, Review Period Ends: 01/23/2012, Contact: Diana Olinger (301) 563–1149.

EIS No. 20110425, Final EIS, FHWA, CT, North Hillside Road Extension on the University of Connecticut Storrs Campus, Hunting Lodge Road, US Army COE Section 404 Permit, in the town Mansfield, CT, Review Period Ends: 01/23/2012, Contact: Amy Jackson-Grove (860) 659–6703 Ext. 3009.

EIS No. 20110426, Draft EIS, USFS, FL, City of Tallahassee Southwestern Transmission Line Project, Proposes to Construct, Operate and Maintain a New Overhead 230- kilovolt (kV), Electric Transmission Line, Special-Use-Permit (SUP), Apalachicola National Forest (ANF), Leon County, FL, Comment Period Ends: 02/06/2012, Contact: David Harris (404) 347–5292.

EIS No. 20110427, Final EIS, AFS/BLM, UT, Greens Hollow Coal Lease Tract Project, Proposed Federal Coal Leasing and Subsequent Underground Coal Mining, Funding and Lease Application, Fishlake and Manti-La Sal National Forest, Sanpete and Sevier Counties, UT, Review Period Ends: 01/23/2012, Contact: Tom Lloyd (435) 636–3596 (AFS) and Steve Rigby (435) 636–3604 (BLM). This is a Joint Lead document between AFS and BLM.

EIS No. 20110428, Draft EIS, USACE, CA, Berths 302–306 American Presidents Line (APL) Container Terminal Project, Construction and Operation, US Army COE Section 10 and Section 103 of the Marine Protection Research and Sanctuaries Act, Los Angeles County, CA, Comment Period Ends: 02/17/2012, Contact: Theresa Stevens (805) 585–2146.

EIS No. 20110429, Draft EIS, FTA, NJ, Northern Branch Corridor Project, Restoration of Passenger Rail Service in Northeastern Hudson and Southern Bergen Counties, NJ, Comment Period Ends: 02/06/2012, Contact: Anthony Lee (212) 668–2170.

Amended Notices

EIS No. 20110371, Draft EIS, BLM, UT, Alton Coal Tract Lease by Application Project, the Exploration and Development of Mineral Resource, Kane County, UT, Comment Period Ends: 01/27/2012, Contact: Keith Rigtrup (435) 865–3063 Revision to FR Notice Published 11/04/2011: Extending Comment Period from 01/06/2012 to 01/27/2012.

Dated: December 20, 2011.

Aimee S. Hessert,

Deputy Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. 2011–32944 Filed 12–22–11; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–9610–8]

Notification of a Public Meeting of the Science Advisory Board Libby Amphibole Asbestos Review Panel

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The Environmental Protection Agency (EPA or Agency) Science Advisory Board (SAB) Staff Office announces a public face-to-face meeting of an SAB Panel to review EPA's draft Toxicological Review of Libby Amphibole Asbestos (August 2011).

DATES: The meeting will be held on February 6, 2012 from 9 a.m. to 5:30 p.m., February 7, 2012 from 8:30 a.m. to 5:30 p.m. and on February 8, 2012 from 8:30 a.m. to 2:30 p.m. (Eastern Time).

ADDRESSES: The meeting will be held at the Westin Alexandria Hotel at 400 Courthouse Square, Alexandria, VA 22314.

FOR FURTHER INFORMATION CONTACT: Any member of the public wishing further information regarding this meeting may contact Dr. Diana Wong, Designated Federal Officer (DFO), SAB Staff Office, by telephone/voice mail at (202) 564–2049 or via email at *wong.diana-M@epa.gov.* General information concerning the EPA Science Advisory Board can be found at the EPA SAB Web site at *http://www.epa.gov/sab.*

SUPPLEMENTARY INFORMATION:

Background: The SAB was established pursuant to the Environmental Research, Development, and Demonstration Authorization Act (ERDAA) codified at 42 U.S.C. 4365, to provide independent scientific and technical peer review, advice, consultation, and recommendations to the EPA Administrator on the technical basis for EPA actions. As a Federal Advisory Committee, the SAB conducts business in accordance with the Federal Advisory Committee Act (FACA) (5 U.S.C. App. 2) and related regulations. Pursuant to FACA and EPA policy, notice is hereby given that an SAB Panel will hold a public meeting to review EPA's draft Toxicological Review of Libby Amphibole Asbestos (August 2011). The SAB panel will comply with the provisions of FACA and all appropriate SAB Staff Office procedural policies.

The EPA's National Center for Environmental Assessment (NCEA) within the Office of Research and Development (ORD) has requested SAB to review EPA's Draft Toxicological Review of Libby Amphibole Asbestos in Support of Summary Information on the Integrated Risk Information System (IRIS) (August, 2011). The SAB Staff Office previously requested public nominations of experts to serve on a SAB review panel on May 27, 2011 (76 FR 30939–30940). Information about the formation of the Libby Amphibole Asbestos Review Panel can be found on the SAB Web site at *http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/Libby%20Cancer%20Assessment?OpenDocument.*

Availability of the review materials: The agenda and materials in support of this meeting will be available at the URL above. For technical questions and information concerning EPA's review document, please contact Dr. Danielle DeVoney, of EPA's National Center for Environmental Assessment (NCEA), by phone (703) 347–8558, or via email at *devoney.daniel@epa.gov;* or Dr. Bob Benson, of EPA Region 8, by phone (303) 312–7070, or via email at *benson.bob@epa.gov.*

Procedures for Providing Public Input: Public comment for consideration by EPA's federal advisory committees and panels has a different purpose from public comment provided to EPA program offices. Therefore, the process for submitting comments to a federal advisory committee is different from the process used to submit comments to an EPA program office. Federal advisory committees and panels, including scientific advisory committees, provide independent advice to EPA. Members of the public can submit relevant comments pertaining EPA's charge or meeting materials. Input from the public to the SAB will have the most impact if it consists of comments that provide specific scientific or technical information or analysis for the SAB panel to consider or if it relates to the clarity or accuracy of the technical information.

Members of the public wishing to provide comment should contact the Designated Federal Officer for the relevant advisory committee directly. *Oral Statements:* In general, individuals or groups requesting an oral presentation at this public meeting will be limited to five minutes per speaker. Interested parties should contact Dr. Diana Wong, DFO, in writing (preferably via email), at the contact information noted above, by January 27, 2012 to be placed on the list of public speakers for the meeting. *Written Statements:* Written statements should be received in the SAB Staff Office by January 27, 2012 so that the information may be made available to the SAB Panel for their consideration. Written statements should be supplied to the DFO in electronic format via email (acceptable file formats: Adobe Acrobat PDF, WordPerfect, MS Word, MS PowerPoint, or Rich Text files in IBM–PC/Windows 98/2000/XP format). It is the SAB Staff Office general policy to post written comments on the web page for the advisory meeting or teleconference. Submitters are requested to provide an unsigned version of each document because the SAB Staff Office does not publish documents with signatures on its Web sites. Members of the public should be aware that their personal contact information, if included in any written comments, may be posted to the SAB Web site. Copyrighted material will not be posted without explicit permission of the copyright holder.

Accessibility: For information on access or services for individuals with disabilities, please contact Dr. Diana Wong at the phone number or email address noted above, preferably at least ten days prior to the meeting, to give EPA as much time as possible to process your request.

Dated: December 16, 2011.

Vanessa T. Vu,

Director, EPA Science Advisory Board Staff Office.

[FR Doc. 2011–33000 Filed 12–22–11; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–9610–7]

Notification of Teleconferences of the Science Advisory Board Biogenic Carbon Emissions Panel

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The Environmental Protection Agency (EPA or Agency) Science Advisory Board (SAB) Staff Office announces two teleconferences of the SAB Biogenic Carbon Emissions Panel to review EPA's draft *Accounting Framework for Biogenic CO^2 Emissions from Stationary Sources* (September 2011).

DATES: The teleconferences will be held on January 27, 2012 from 2 p.m. to 5

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Appendix B

Comments on Draft Environmental Impact Assessment

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COMMENT AND RESPONSE MATRIX

For Comments Received on the December 2011 Draft Environmental Impact Statement
City of Tallahassee Southwestern Transmission Line, Leon County, Florida

Comment # / ID #	Commentor Name/	Date	DEIS Page #	DEIS Line #	Comment	Response
Tribes						
1	Seminole Tribe of Florida (STOF)/Tribal Historic Preservation Office (THPO)	1-4-12	NA	NA	The STOF-THPO has no objection to the project proposal at this time. However, the STOF-THPO would like to be informed if cultural resources that are potentially ancestral or historically relevant to the STOF are discovered at any point during the construction process.	Comments noted. No changes to the Draft EIS required. The STOF will be notified immediately if ancestral or historically relevant artifacts are discovered during construction.
2	Choctaw Nation of Oklahoma	1-18-12	NA	NA	The Choctaw Nation of Oklahoma requested that the USFS provide two items from the FGT Phase VIII Expansion Project before commenting on the SWTL Project. The Choctaw Nation of Oklahoma also requested that four additional items for the SWTL project be provided including: • A copy of the cultural survey that was performed for Alternative 1 that would be co-located with the FGT ROW for the 0.5 miles outside of the ANF; • A listing, map and status (i.e., eligible, not eligible or not determined) of sites that are within 1 mile of Alternative 1; • An indication of which sites within 1 mile of Alternative 1 have been vandalized, looted or damaged within the past 10 years; and, • A request to follow NAGPRA regulations should an inadvertent discovery of human remains be identified during construction.	Comments noted. No changes to the Draft EIS required due to explanation provided below. As a result of this letter, the USFS provided the requested information and/or coordinated further with the Choctaw Nation of Oklahoma. This additional coordination resulted in a subsequent electronic mail being forwarded to the USFS from the Choctaw Nation of Oklahoma, dated February 16, 2012 (see next row).
3	Choctaw Nation of Oklahoma	2-16-12	NA	NA	After reviewing the materials provided by the USFS in response to the information requested in the letter prepared by the Choctaw Nation of Oklahoma on January 18, 2012 (see previous row), the Choctaw Nation of Oklahoma concurs with	Comments noted. No changes to the Draft EIS required. The Choctaw Nation of Oklahoma will be notified immediately if buried archaeological or building materials or evidence of buried historic building

Comment # / ID #	Commentor Name/	Date	DEIS Page #	DEIS Line #	Comment	Response
					the SWTL project as described in the Draft EIS. However, should construction expose buried archaeological or building materials such as chipped stone, tools, pottery, bone, historic crockery, glass or metal items, or should it uncover evidence of buried historic building materials such as rock foundations, brick, or hand poured concrete, the Choctaw Nation of Oklahoma requested they be contacted immediately.	materials are discovered during construction.
Federal Agencies						
4	USEPA	2-6-12	NA	NA	The USEPA stated that mitigation measures to minimize impacts to wetlands should be expanded and included in the final EIS. The USEPA suggested five mitigation measures to minimize wetland impacts including: 1. Avoiding placing transmission lines through wetlands; 2. Adjusting pole placements to span wetlands or limit the number of poles located in wetlands, wherever possible; 3. Using mats and wide-track vehicles to spread the distribution of equipment weight when crossing wetlands during the growing season; 4. Using alternative construction equipment such as helicopters or marsh buggies for construction within wetlands; and, 5. Cleaning construction equipment after working in areas infested by purple loosestrife or other known invasive, exotic species.	Comments noted. No changes to the Draft EIS required as requested mitigation measures are either not applicable to the project or already stipulated in the Draft EIS. In response to the five wetland mitigation measures proposed by the USEPA: 1. The City has co-located the Alternative 1 ROW for 100% of the total distance with existing utility corridors to minimize potential impacts to wetlands. As a result, and as discussed in Sections 3.6.2.1.3 and 3.6.2.2 of the EIS, the Alternative 1 ROW would encompass two herbaceous wetlands, totaling 0.66 acre of wetland habitat (see Table 3.6-3). These two wetlands were previously cleared and disturbed by the FGT Phase VIII Expansion Project. 2. Due to the minimal total length of the two wetlands crossings located within the Preferred Alternative ROW (i.e., Wetland 1-1 crossing is 267 feet and Wetland 1-2 is 300 feet; see Table 3.6-3 of the EIS), no transmission structures will be required to be sited within the wetlands (see discussion in Section 3.6.2.2. of the EIS). 3. Because Wetlands 1-1 and 1-2 were previously cleared during the FGT Phase VIII Expansion Project, and the minimal length of the two wetlands within the Alternative 1 ROW will allow for a span of the wetlands (i.e., no transmission structures will be required to be sited within the wetlands), disturbance within the two wetlands during construction will be limited to construction vehicles traveling through the wetlands using the designated travel lanes within the Alternative 1 ROW. Within the ANF these travel lanes currently exist (see Section 3.1.2 of the EIS). As stated in Section 3.6.5 of the EIS, construction traffic through wetlands will be limited to the extent practical. Where

Comment # / ID #	Commentor Name/	Date	DEIS Page #	DEIS Line #	Comment	Response
						the use of access roads in upland areas cannot provide appropriate access to the construction ROW and around either of the wetlands, all construction equipment may pass through the wetlands only once. Should the wetland soils be highly saturated during the period of construction (and therefore, heavy equipment is likely to cause rutting or disturbance to wetland soils), temporary matting will be placed on the travel lane within the wetland. Where matting is deemed necessary, all construction equipment would operate off the matting. 4. The presence of relatively flat terrain in the project area, and the small size, absence of standing water, and proximity of upland areas and access roads in the vicinity of Wetlands 1-1 and 1-2 would preclude the need for the use of helicopters or marsh buggies during construction of the SWTL Project. 5. Section 3.4.2.4 of the EIS outlines BMPs and other mitigation measures proposed to minimize the abundance, introduction, or distribution of invasive, non-native species caused by the SWTL Project. This includes the cleaning of construction equipment after working infestation areas. In addition, within the ANF, all construction equipment will be pressure washed before entering USFS property. In addition, a summary of wetland mitigation measures for the project are presented in Table 4.1-1 of the EIS.
5	USEPA	2-6-12	NA	NA	The USEPA stated that construction of the proposed project may result in measurable impacts to the diversity and abundance of amphibian populations or the general wildlife community in the vicinity of the alternatives and that mitigating measures for avoiding/minimizing potential impacts to wildlife populations should be included in the final EIS.	Comments noted. No changes to the Draft EIS required as requested information was provided in the Draft EIS. Mitigating measures for avoiding/minimizing impacts to general wildlife and amphibian populations are provided in the following sections of the EIS: • Section 3.4.3.4 (Mitigation Measures for Common Wildlife). • Section 3.4.4.4.2 (Species-Specific Mitigation Measures for Federally Listed Species and Forest Service Sensitive Species; see specifically those mitigation measures listed for the Striped Newt).
6	USEPA	2-6-12	3-82	Section 3.9	EPA recommends that an Environmental Justice (EJ) evaluation be conducted for all communities within a reasonable radius of the study area. The EJ study should include more than just demographics and should include	Comments noted. The Draft EIS was modified to include a clarification of the justification for the use of census blocks in evaluating EJ impacts and additional language

Comment # / ID #	Commentor Name/	Date	DEIS Page #	DEIS Line #	Comment	Response
					interviews with potentially affected communities.	regarding EJ impacts and mitigation (including comprehensive scoping and public involvement opportunities for the project) for Alternatives 1 and 3 (see revised Sections 3.9.3.1, 3.9.3.2, and 3.9.5 of the Final EIS).At this time, no potential EJ impacts from this project have been identified that would indicate a need to conduct additional interviews.
7	USDOI	2-6-12	3-19	30	The USDOI suggested the Final EIS include information on local bird species and likely impacts relative to the trends in the status of avian species.	Comments noted. The Draft EIS was modified to include additional analysis and language discussing population trends of birds within the ANF and potential impacts to breeding bird population trends due to the proposed action (see revised Sections 3.4.1 and 3.4.3.1.2 of the Final EIS).
Local Agencies						
8	Tallahassee-Leon County Planning Department	2-6-12	NA	NA	The Tallahassee-Leon County Planning Department reviewed the Draft EIS and stated via electronic mail that they had no comments at this time.	Comment noted. No changes to the Draft EIS required.

SEMINOLE TRIBE OF FLORIDA
TRIBAL HISTORIC PRESERVATION OFFICE

TRIBAL HISTORIC
PRESERVATION OFFICE

SEMINOLE TRIBE OF FLORIDA
AH-TAH-THI-KI MUSEUM

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SECRETARY
PRISCILLA D. SAYEN
TREASURER
MICHAEL D. TIGER

Rhonda Kimbrough
U.S. Forest Service
Apalachicola National Forest
325 John Knox Road, Suite F-100
Tallahassee, FL 32303

THPO#: 009261

January 4, 2012

Subject: Assessment of Effects for the Proposed City of Tallahassee 230kV Southwest Transmission Line through the Apalachicola National Forest, Leon County, Florida

Dear Ms. Kimbrough,

The Seminole Tribe of Florida's Tribal Historic Preservation Office (STOF-THPO) has received the Forest Service correspondence concerning the aforementioned project. The STOF-THPO has no objection to your proposal at this time. However, the STOF-THPO would like to be informed if cultural resources that are potentially ancestral or historically relevant to the Seminole Tribe of Florida are discovered at any point during the construction process. We thank you for the opportunity to review the information that has been sent to date regarding this project. Please reference ***THPO-009261*** for any related issues.

We look forward to working with you in the future.

Sincerely,

Direct routine inquiries to:

Willard Steele
Tribal Historic Preservation Officer
Seminole Tribe of Florida

Anne Mullins
Compliance Review Supervisor
annemullins@semtribe.com

ETY:am:ws

-----Original Message-----
From: Johnnie L. Jacobs [mailto:jjacobs@choctawnation.com]
Sent: Thursday, February 16, 2012 2:24 PM
To: Kimbrough, Rhonda -FS
Subject: City of Tallahassee - Construction of 230 kV transmission line, Leon County, FL, Apalachicola National Forest

Hi Rhonda,

Thank you for sending the clarification regarding the National Forests in Florida consultation with Tribes as well as the explanation concerning the FL SHPO expedited process, and the other documentation you provided via email and hard copy.

After review of the materials provided, the Choctaw Nation of Oklahoma concurs with the project as described. However, should construction expose buried archaeological or building materials such as chipped stone, tools, pottery, bone, historic crockery, glass or metal items, or should it uncover evidence of buried historic building materials such as rock foundations, brick, or hand poured concrete, this office should be contacted immediately @ 1-800-522-6170 ext. 2216. Please feel free to contact me with any other questions or concerns.

Thank you,

Ms. Johnnie Jacobs
Section 106 Coordinator
Choctaw Nation of Oklahoma
P.O. Drawer 1210
Durant, OK 74701
jjacobs@choctawnation.com
choctawnationculture.com
1-800-522-6170 Ext. 2559
580-924-8280 Ext. 2559

Choctaw Nation of Oklahoma will be hosting the 11th Annual "To Bridge A Gap" Conference, April 2-5th, 2012 in Durant, Oklahoma at the Choctaw Casino & Resort. For more information please go to our website at
http://www.choctawnationculture.com/TBAG2012

We hope to see you there!

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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February 6, 2012

Susan Jeheber-Matthews
Forest Supervisor
Apalachicola National Forest
325 John Knox Road,
Tallahassee, Florida 32303

RE: Draft Environmental Impact Statement, City of Tallahassee Southwestern Transmission Line Project
CEQ Number: 20110426

Dear Ms. Jeheber-Matthews:

Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the subject Draft Environmental Impact Statement, City of Tallahassee Southwestern Transmission Line Project. The USDA Forest Service is the lead federal agency for the proposed action.

This Draft Environmental Impact Statement (DEIS) is being prepared by the United States Department of Agriculture, Forest Service (USFS) to evaluate the potential environmental impacts associated with the Southwestern Transmission Line project proposed by the City of Tallahassee (The City). The City proposes to traverse a previously disturbed portion of the Apalachicola National Forest (ANF), which would require the ANF to issue the City a Special Use Permit (SUP). The project would provide enhanced system benefits that would meet the North American Electric Reliability Corporation's mandated requirements and would improve overall system performance and reliability of service to City utility customers.

Specifically, the City proposes to construct, operate, and maintain a new overhead 230-kilovolt (kV) electric transmission line in southwestern Leon County, Florida. The proposed line would connect the existing Hopkins-Crawfordville 230kV transmission line with the existing Substation BP-5, southeast of the intersection of Capital Circle SE and Woodville Highway. This action would include the development of a new tap station.

PLAN ALTERNATIVES

The **No Action Alternative, Alternative 1 (the Preferred Alternative)**, and **Alternative 3** (the off-Forest Service property alternative route) are carried forward through the EIS.

The No Action Alternative considers the environmental impacts if the proposed project or its alternatives were not built. Evaluation of the No Action Alternative is a requirement of NEPA and its associated implementing regulations (40 CFR 1502.14[d]) to allow federal decision-makers (in this case, the USFS) to compare the impacts of the proposed project and its alternatives with the impacts of not approving the project. The Forest Service only has authority to authorize an SUP for the construction and maintenance of the proposed transmission line on National Forest System Lands. Not authorizing the SUP would not prohibit the City from constructing the transmission line off of National Forest System Lands. Consideration of the No Action Alternative in this EIS compares the impacts should the City of Tallahassee decide not to construct a transmission line off of National Forest System Lands.

Under the No Action Alternative, the electrical transmission system proposed to connect Line 31 to the existing Substation BP-5 would not be constructed. Proposed improvements to the City's 31 transmission system are necessary in order for the City to continue its operation within applicable limits consistent with the requirements of NERC Reliability Standards. Without the proposed system improvements, City planning assessments indicate that the existing lines forming the southern delivery path could exceed their applicable limits (thermal, voltage, IROLs, and/or SOLs) as a result of contingencies impacting the northern delivery path. Further, a USFS decision approving the No Action Alternative would result in the City being in non-compliance with NERC Reliability Standards, resulting in potential fines and penalties.

Alternative 1 (the Preferred Alternative) proposed transmission line under would be approximately 8.75 miles long and would require a 60-foot-wide permanent ROW. The entire 8.75-mile ROW would be co-located with existing utilities, allowing for overlap in the ROW. Seven of the 8.75 miles would be located within the 60-foot-wide temporary work space which was previously cleared of forested vegetation during improvement work on the existing 80-foot-wide FGT ROW in 2010. Of the 7 miles of the Alternative 1ROW co-located with the FGT ROW, 6.48 miles is located within the ANF.

The Alternative 1 route would begin at a tap point along the existing Line 31 utilizing a new tap station near Bice Road (Forest Road 317), in the vicinity of the intersection of Springhill Road (County Road 2203) and Bice Road (Figure 2-4). From the proposed tap station, the Alternative 1 route would 11 continue east, primarily co-located along the south side of the existing FGT natural gas pipeline corridor through the ANF for approximately 6.48 miles.

Approximately 3 miles east of the proposed tap station, the Alternative 1 route would cross an existing City 115kV transmission line. The proposed line would proceed east crossing Crawfordville Highway (US 319) and Wakulla Springs Road (State Road [SR] 61). Almost immediately to the east of Wakulla Springs Road, the Alternative 1 route would cross Munson Slough.

Continuing along the co-located corridor approximately 5 miles east of the proposed tap station, the Alternative 1 route would cross another existing City 115kV transmission line and would continue east, crossing the Tallahassee-St. Marks Historic Railroad State Trail and Woodville Highway (SR 363). Approximately 0.5 mile east of Woodville Highway, after

crossing a third existing City 115kV transmission line, the route would turn northwest and would continue north co-located along the east side of this existing transmission corridor for approximately 1.75 miles before terminating at the existing Substation BP-5 south of Capital Circle SE.

Approximately 7 miles of the east-west portion of the Alternative 1 route would be co-located along the existing FGT pipeline corridor; 6.48 miles of which would be within the ANF. As documented in the FGT FEIS (FERC 2009), FGT added a new pipeline to this corridor, resulting in the co-location of three pipelines. Due to the proposed co-location with an existing linear corridor, this alternative would be in compliance with the LRMP and would not require an amendment to the plan. Standard LA-9 governs the granting of SUPs and states that the USFS shall "designate existing transportation and utility routes, and rights-of-way capable of accommodating these facilities [facilities for which SUPs are sought] as right-of-way corridors. Subsequent right-of-way grants would, to the extent practicable, be confined to designated corridors."

Under Alternative 1, no new access roads would be necessary for construction and maintenance of the Proposed Action. The Alternative 1 route would utilize access roads previously utilized by FGT for their pipeline construction efforts and existing City access roads on the existing City 115kV transmission line easement. An extensive network of existing Forest Roads and existing publicly maintained roadways also would be utilized by construction and maintenance equipment. Two staging or laydown areas would be required for Alternative 1. These staging areas would be located within the existing FGT temporary construction ROW. One staging area would be located west of Munson Slough near the proposed Alternative 1 tap station. The second lay down area would be located east of Munson Slough, outside the ANF. Therefore, no additional workspace outside the ROW footprint or existing roads would be needed for the transmission line.

Under **Alternative 1, the proposed tap station** would be located within the ANF. The design for the tap station would have two breakers west of Bice Road and one breaker east of Bice Road. The proposed design would require an additional 100-foot-wide ROW (9,000 square feet) to connect the tap station to power line structures. The proposed tap station equipment would occupy approximately 0.33 acre and would require approximately 3 acres for construction. Construction of the proposed tap station would begin with clearing and grading of approximately 3 acres. A fence would be installed around the perimeter of the tap station to provide for public safety and security. Access to the tap station for construction activities would be via Bice Road. Construction of Alternative 1 and the tap station would occur over an approximately six-month timeframe and would require a temporary workforce of approximately 30 personnel.

Alternative 3 is being analyzed in compliance with the USFS's 1999 LRMP Standards LA-8 and LA-9 which govern the issuance of SUPs. Standard LA-8 states that proposals for an SUP should "not be undertaken on national forest land if they can be reasonably accommodated on private land." Further, Standard LA-9 states that "alternative locations off national forests [which can accommodate the proposal will be reviewed in detail." Selection of this alternative is not within the authority of the USFS. If issuance of an SUP is denied by the USFS, the City may

pursue this or other alternatives outside of the ANF following applicable local and state procedures without involvement from the USFS. However, it will be analyzed herein to comply with the LRMP Standards described above.

EPA COMMENTS and RECOMMENDATIONS

General Comments

The impact from the construction of a transmission line can be measured in several different ways. Useful measurements of impacts may be area (acreage), distance (miles or feet), or the number of transmission structures. The effect of a new transmission line on an area may depend on the topography, land cover, and existing land uses. In forested areas the entire right-of-way (ROW) width is cleared and maintained free of tall-growing trees for the life of the transmission line. The result is a permanent change to the ROW land cover. In general the degree of impact of a proposed transmission line is determined by the quality or uniqueness of the existing environment along the proposed route. The quality of the existing environment is influenced by several factors:

The degree of disturbance that already exists

The significance of prior disturbance can be evaluated by determining how close the place resembles pre-settlement conditions. Many areas have been substantially altered by logging, the installation of drain tiles, residential and commercial developments, or conversion to cropland.

The uniqueness of the resources

Proposed transmission routes are reviewed for species or community types that are uncommon or in decline in the region or state. The environmental review evaluates whether the resource possesses a feature that would make it unique, such as its size, species diversity, or whether the resource plays a special role in the surrounding landscape.

The threat of future disturbance

The resource is compared to surrounding land uses which may affect the quality of the resource over time. Whether the current and likely future land uses may threaten some aspect of the resource. Whether the resource is valued by the adjacent community and therefore, likely to be preserved.

The construction of a transmission line involves both long-term and temporary impacts. Long-term impacts can exist as long as the line is in place and include land use restrictions and aesthetic impacts. Temporary impacts occur during construction or at infrequent intervals such as during line repair or ROW maintenance. Temporary impacts during construction can include noise and crop damage. Short-term impacts can become long-term impacts if not properly managed or mitigated.

Types of Impacts Associated with Transmission Lines

Aesthetics

Potential Aesthetic Impacts

The overall aesthetic effect of a transmission line is likely to be negative to most people, especially where proposed lines would cross natural landscapes and private properties. The tall steel or wide H-frame structures may seem out of proportion and not compatible with agricultural landscapes or residential neighborhoods. Landowners who have chosen to bury their electric distribution lines on their property may find transmission lines bordering their property particularly disruptive to scenic views.

Mitigation of Aesthetic Impacts

Electric transmission lines may be routed to avoid areas considered scenic. Routes can be chosen that pass through commercial/industrial areas or along land use boundaries. The form, color, or texture of a line can be modified to somewhat minimize aesthetic impacts. There are some choices available in transmission structure color and/or construction material. Structures constructed of wood or of rust brown oxidized steel may blend better with wooded landscapes. Stronger conductors can minimize line sag and provide a sleeker profile. ROW management can also mitigate visual impacts of transmission lines. Some of these techniques include planting vegetative screens to block views of the line, leaving the ROW in a natural state at road crossings, and placing or piling brush from the cleared ROW so that it provides wildlife habitat. In the end, aesthetics are to great extent based on individual perceptions. Siting, design construction materials, and ROW management can mitigate some of the adverse aesthetic effects of a line. It is in the interest of the applicant and the affected landowners to discuss these measures early in the planning and design process.

Electric and Magnetic Fields (EMF)

Potential Impacts of EMF

Health concerns over exposure to EMF are often raised when a new transmission line is proposed. Exposure to electric and magnetic fields caused by transmission lines has been studied since the late 1970s. These fields occur whenever electricity is used. A magnetic field is created when electric current flows through any device including the electric wiring in a home. Every day we are exposed to many sources of EMF from vacuum cleaners, microwaves, computers, and fluorescent lights. The research to date has uncovered only weak and inconsistent associations between exposures and human health. To date the research has not been able to establish a cause and effect relationship between exposure to magnetic fields and human disease, nor a plausible biological mechanism by which exposure to EMF could cause disease. The magnetic fields produced by electricity do not have the energy necessary to break chemical bonds and cause DNA mutations.

Reducing EMF Levels of Transmission Lines

Magnetic fields can be measured with a gauss meter. The magnitude of the magnetic field is related to current flow, not line voltage. A 69 kV line can have a higher magnetic field than a 345 kV line. Magnetic fields quickly dissipate with distance from the transmission line. A common method to reduce EMF is to bring the lines closer together. This causes the fields created by each of the three conductors to interfere with each other and produce a reduced total magnetic field. Magnetic fields generated by double-circuit lines are less than those generated by single-circuit lines because the magnetic fields interact and produce a lower total magnetic field. In addition, double circuit poles are often taller resulting in less of a magnetic field at ground level.

Endangered/Threatened and Protected Species

Potential Impacts to Protected Species

Endangered species are species whose continued existence is in jeopardy. Threatened species are likely to become endangered. Species of special concern have some problems related to their abundance or distribution, although more study is required. Construction and maintenance of transmission lines might destroy individual plants and animals or might alter their habitat so that it becomes unsuitable for them. For example, trees used by rare birds for nesting might be cut down or soil erosion may degrade rivers and wetlands that provide required habitat.

Construction of the east-west component of Alternative 1 would result in a permanent 140-foot wide ROW through the ANF. Although this entire ROW was previously cleared by construction of the FGT gas pipeline, Alternative 1 would convert a 60-foot wide portion of this ROW from temporary workspace, which would have been allowed to revert to native forests, to permanently cleared, non-forested operational work space. Because of this, construction of Alternative 1 may result in cumulative impacts by creating a barrier that could potentially block the migratory movements of protected or Forest Service sensitive amphibians such as striped newts and Florida gopher frogs between their upland habitat and their ephemeral breeding ponds. No other measurable cumulative impacts on threatened, endangered, or Forest Service sensitive species are anticipated from construction of Alternative 1

Mitigation of Impacts to Protected Species

If preliminary research and field assessments indicate that rare species or natural communities may be present in the project area, the utility should conduct US Fish and Wildlife Service (USFWS)-approved surveys prior to construction. If a state-listed species is likely to be in the project area, impacts can usually be avoided or minimized by redesigning or relocating the transmission line, special construction techniques, or limiting the time of construction to specific seasons. In some limited cases, transmission line ROWs can be managed to provide habitat for endangered/threatened resources. An example includes osprey nesting platforms built on top of transmission poles. Close cooperation between the transmission provider, ROW maintenance staff, and the USFWS is needed to develop an effective management plan.

Invasive Species

Potential Impacts by Invasive Species

Non-native plants, animals, and microorganisms found outside of their natural range can become invasive. The majority of non-native species are harmless because they do not reproduce or spread abundantly in their new surroundings. Some non-native species have been introduced intentionally, however, a small percentage of non-native species are able to become quickly established, are highly tolerant of a wide range of conditions, and are easily dispersed. The diseases, predators, and parasites that kept their populations in check in their native range may not be present in their new locations. Over time, non-native, invasive species can overwhelm and eliminate native species, reducing biodiversity and negatively affecting both ecological communities and wildlife habitats. Human actions are the primary means of invasive species introductions. Transmission line construction causes disturbance of ROW soils and vegetation through the movement of people and vehicles along the ROW, access roads, and laydown areas. These activities can contribute to the spread of invasive species. Parts of plants, seeds, and root stocks can contaminate construction equipment and essentially "seed" invasive species wherever the vehicle travels. Invasive species' infestations can also occur during periodic transmission ROW maintenance activities especially if these activities include mowing and clearing of vegetation. Once introduced, invasive species will likely spread and impact adjacent properties with the appropriate habitat.

Best Management Practices

To establishes preventive measures to help minimize their spread Best Management Practices (BMP) will assist utilities in complying with "reasonable precaution" requirements. BMPs identifies many methods that can be used to limit the introduction and spread of invasives species during and post-construction. These measures include marking and avoidance of invasives, timing construction activities during periods that would minimize their spread, proper cleaning of equipment, and proper disposal of woody material removed from the ROW. Because construction measures may not be completely effective in controlling the introduction and spread of invasives, post-construction activities are required. Sensitive areas such as wetlands and high quality forests should be surveyed for invasive species following restoration of the construction site. If new infestations are discovered, then measures should be taken to control the infestation. Each exotic or invasive species requires its own protocol for control or elimination. Techniques to control exotic/invasive species include the use of pesticides, biological agents, hand pulling, controlled burning, and cutting or mowing.

Water Resources

Potential Impacts to Surface Waters

Surface waters in the form of creeks, streams, rivers, and lakes are abundant throughout Florida. Many of these waters have been designated as special resources that have state, regional, or national significance. Construction and operation of a transmission line across these resources may have both short-term and long-term effects. Water quality can be impacted not only by work within a lake or river but also by nearby clearing and construction activities. The removal of adjacent vegetation can negatively affect aquatic habitats. It can also increase erosion of

adjacent soils causing sediment to be deposited into the waterbody, especially during rain events. Construction often requires the building of temporary bridges across small channels, which if improperly installed may damage banks and cause erosion. Overhead transmission lines across major rivers, streams, or lakes may have a visual impact on the users and pose a potential collision hazard for waterfowl and other large birds, especially when located in a migratory corridor.

Surface waters in the vicinity of Alternatives 1 and 3 are relatively limited, consisting primarily of Lake Munson and Munson Slough located southwest of Tallahassee. Lake Munson is a cypress-lined impoundment of Munson Slough covering 255 acres. Lake Munson drains south through Munson Slough for several miles to Ames Sink. Munson Slough (upstream of Lake Munson) is impaired for dissolved oxygen and fecal coliform. Downstream of Lake Munson, Munson Slough is impaired for dissolved oxygen and un-ionized ammonia. Alternative 1 ROW would avoid all direct impacts to surface water bodies (including Munson Slough and the unnamed tributary to Munson Slough), as in-stream work would not be necessary and these crossings would be spanned.

Alternative 3 would not cross any streams, rivers, creeks, canals, ponds, or lakes. The Alternative 3 ROW would not traverse any surface waterbodies and would therefore result in no potential impacts to surface water resources during construction or long-term maintenance of the project.

Mitigation of Impacts to Surface Waters

Techniques for minimizing adverse effects of constructing transmission lines in river and stream environments include avoiding impacts, minimizing impacts, and/or effective remediation of the impacts. Impacts to surface waters can be avoided by rerouting the line away from the waterbody, adjusting pole placements to span the resource overhead, boring the line under the resource, or constructing temporary bridge structures across the resource. Methods to minimize impacts include avoiding pole placements adjacent to the resource, erosion control methods, using alternative construction methods such as helicopter construction, landscaping to screen the poles from the view of river users, and maintaining shaded stream cover. After construction, some impacts can be remediated. There are several methods and cable types for constructing a transmission line under a resource. Lower voltage and distribution lines are commonly directionally bored under the waterway. High voltage lines are rarely constructed underground due to the substantial engineering, costs, and operational hurdles that would need to be overcome for it to be a feasible alternative to overhead construction. Constructing a line underground will minimize construction and esthetic impacts to the resource. However, it does require potentially large construction entrance and exit pits on either side of the resource. There are also concerns about the potential for frac-outs which can release drilling fluids into the waterbody and subsurface environment.

Proper erosion control is necessary for all construction activities, especially those that may affect water resources. BMPs should be employed before, during, and immediately after construction of the project to reduce the risk of excess siltation into streams. Erosion controls must be regularly inspected and maintained throughout the construction phase of a project until exposed soil has been stabilized. Woodlands and shrub/scrub areas along streams are a valuable buffer between adjacent farm fields and corridors of natural habitats. The vegetation maintains

soil moisture levels in stream banks, helps stabilize the banks, and encourages a diversity of vegetation and wildlife habitats. Existing vegetative buffers should be left undisturbed or minimally disturbed, whenever possible. For areas where construction impacts cannot be avoided, low-growing native tree and shrub buffers along these streams should be allowed to regrow and/or should be replanted so as to maintain the preconstruction water quality in the streams.

Wetlands

Potential Impacts to Wetlands

Wetlands occur in many different forms and serve vital functions including storing runoff, regenerating groundwater, filtering sediments and pollutants, and providing habitat for aquatic species and wildlife. The construction and maintenance of transmission lines can damage wetlands in the following ways:

* Heavy machinery can crush wetland vegetation and wetland soils.
* Wetland soils, especially very peaty soils can be easily compacted, increasing runoff, blocking flows, and greatly reducing the wetland's water holding capacity.
* The construction of access roads can change the quantity or direction of water flow, causing permanent damage to wetland soils and vegetation.
* Construction and maintenance equipment that crosses wetlands can stir up sediments, endangering fish and other aquatic life.
* Clearing forested wetlands can expose the wetland to invasive and shrubby plants, thus removing habitat for species in the forest interior.
* Vehicles and construction equipment can introduce exotic plant species. With few natural controls, these species may out-compete high-quality native vegetation, destroying valuable wildlife habitat.

Any of these activities can impair or limit wetland functions. Organic soils consist of layers of decomposed plant material that formed very slowly. Disturbed wetland soils are not easily repaired.

Impacts to wetlands would be avoided as the two existing wetlands have been cleared previously by the FGT Project and each crossing is small enough that siting structures within these wetlands is not anticipated. Due to span distance limitations, Alternative 1 would involve the placement of structures within in the ROW in designated 100-year FEMA floodplains. However, since the proposed activities in 100-year floodplains would not involve any placement of fill, Alternative 1 would not result in any loss of flood storage or associated flood volumes.

Two wetlands would be crossed by the Alternative 1 ROW and they are both classified as Wet Prairies. Wet Prairies are comprised of grassy vegetation on wet soils and are usually distinguished from marshes by having less water and shorter herbaceous vegetation. These communities typically occur in depressed areas and are dominated by one or more of the following species: sawgrass (*Cladium* spp.), maidencane (*Panicum hemitomon*), cordgrass (*Spartina* spp.), spikerushes (*Elocharis* spp.), St. Johnswort (*Hypericum* spp.), spiderlily (*Hymenocallis* sp.), swamplily (*Crinum* spp.), yellow-eyed grass (*Xyris* spp.), and whitetop sedge

(*Rhynchospora colorata*). No clearing will be required because previously cleared by a Florida Gas Transmission Company Project. Disturbance within the two wetlands would involve construction vehicles using the designated travel lanes on the Alternative 1 ROW (and within the ANF these travel lanes currently exist). Construction of a new transmission ROW within a designated wetland would require authorization under an Environmental Management Permit from the Leon County Department of Development Support and Environmental Management and a Section 404 Permit/Environmental Resource Permit from the United States Army Corps of Engineers (USACE) and the FDEP, respectively.

The ingress and egress of personal vehicles and construction equipment on the travel lane ROW during construction and post-construction maintenance activities could disturb or remove existing or restored herbaceous wetland vegetation cover, potentially resulting in erosion and sedimentation of wetlands. Additionally fuel or petroleum spills from refueling operations or construction equipment maintenance activities conducted near or in wetlands either during construction or post-construction maintenance could potentially result in contamination of wetlands.

Five wetlands that would be crossed by the Alternative 3 ROW. To the extent practicable, construction within the Alternative 3 ROW would be designed to span 24 floodplain crossings. However, in some situations, only the footprint of the structures – and no other facilities – would be placed within the designated 100-year floodplains and the impact to floodplains due to construction within the Alternative 3 ROW would be considered negligible. In addition, the entire 1-acre fence line of the proposed Alternative 3 tap station is underlain by 100-year floodplain. The proposed 1-acre Alternative 3 tap station equipment would impact approximately 0.80 acres (i.e., 35,000 square feet) of land underlain by the 100-year floodplain. Any proposed development within the 100-year floodplain in Wakulla County would be reviewed by the County under Part II of the Wakulla County Code of Ordinances, Chapter 11 – Drainage & Flood Prevention (Strickland 2011). Any proposed development within the 100-year floodplain within Leon County will be reviewed by the County for compliance with Leon County's Land Development Regulations Chapter 10-4.503(d).

Mitigation measures to minimize these potential impacts should be expanded and included in the final EIS.

Mitigation of Impacts to Wetlands

To minimize the potential impacts to wetlands, the utility can:

* Avoid placing transmission lines through wetlands.
*Adjust pole placements to span wetlands or limit the number of poles located in wetlands, wherever possible.
* Use mats and wide-track vehicles to spread the distribution of equipment weight when crossing wetlands during the growing season.
* Use alternative construction equipment such as helicopters or marsh buggies for construction within wetlands.
* Clean construction equipment after working in areas infested by purple loosestrife or other known invasive, exotic species.

Forests

Potential Impacts to Forests

Forests provide recreational opportunities, wildlife and plant habitats, and timber. Building a transmission line through woodlands requires that all trees and brush be cleared from the ROW. One mile of 100-foot ROW through a forest results in the loss of approximately 12 acres of trees. Transmission construction impacts can include forest fragmentation and the loss and degradation of wooded habitat, aesthetic enjoyment of the resource, and/or the loss of income. Different machines and techniques are used to remove trees from the transmission ROW depending on whether woodlands consist of mature trees, have large quantities of understory trees, or are in sensitive environments such as a wooded wetland. These can range from large whole tree processors which can cause rutting and compaction of the forest floor to hand clearing with chainsaws in more sensitive environments. Smaller diameter limbs and branches are often chipped or burned. According to the landowner's wishes, wood chips may be spread on the ROW, piled to allow transport by the landowner to specific locations, or chipped directly into a truck and hauled off the ROW.

Forest Fragmentation

A transmission line ROW can fragment a larger forest block into smaller tracts. Fragmentation makes interior forest species more vulnerable to predators, parasites, competition from edge species, and catastrophic events. The continued fragmentation of a forest can cause a permanent reduction in species diversity and suitable habitat. This loss of forested habitat increases the number of common (edge) plants and animals that can encroach into what were the forest interiors. This encroachment can have impacts on the number, health, and survival of interior forest species, many of which are rare.

In general, forest fragmentation has a negative impact on the existing quality of wildlife habitat by creating potential barriers to movement for some species and potentially increasing predation rates. In particular, fragmentation potentially can effect local populations of salamanders, toads, and frogs. Many of these amphibian species require forested migratory access to breeding ponds to maintain viable populations. The conversion of forested habitat to maintained (i.e., non-forested) linear utility lines could be a barrier to amphibian populations reaching their historic breeding ponds. For example, a population of salamanders occupying upland habitat on the north side of a proposed utility line ROW may be cut off from their breeding ponds on the south side of the ROW after utility line construction has been completed. This potential impact is dependent upon the width of the non-forested portion of the newly constructed ROW and the species of amphibians that live along the proposed ROW; that is, different species of amphibians have different tolerances as to the width of non-forested habitat that they will cross to reach their historic breeding ponds.

The implementation of Alternative 1 would increase the permanent non-forested width of the ROW through the ANF from the present 80 feet to 140 feet. Construction of the proposed project may result in measurable impacts to the diversity and abundance of the amphibian populations or the general wildlife community in the vicinity of either alternative. Mitigating measures for avoiding/minimizing potential impacts to wildlife populations should be included in the final EIS.

Due to greenfield construction and less co-location opportunities, the Alternative 3 ROW and tap station would require more clearing of forested vegetation than the Alternative 1 ROW (90.04 acres 12 versus 9.22 acres), thereby displacing general wildlife species requiring forested habitat to a greater extent than Alternative 1. However, this impact is expected to be negligible given that these species would likely move to adjacent undisturbed habitat.

Because Alternative 3 is co-located with existing linear features and would require widening of said corridors, forest fragmentation impacts could affect amphibian populations or the general wildlife community in the vicinity of Alternative 3. However, because Alternative 3 is located entirely outside of the ANF, it is not surrounded by contiguous forest to the extent of Alternative 1, therefore, forest fragmentation effects would likely be less for Alternative 3 when compared to Alternative 1.

Environmental Justice (EJ)

EPA recommends that an EJ evaluation be conducted for all communities within a reasonable radius of the study area. The EJ study should include more than just demographics and should include interviews with the potentially affected communities.

We rate this document EC-2 Environmental Concerns. We have concerns that the proposed action identifies the potential for impacts to the environment that should be further avoided/minimized. The draft EIS does not contain sufficient information to fully assess environmental impacts that should be avoided in order to fully protect the environment, which could reduce the environmental impacts of the proposal. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Based on the DEIS, Alternative 1 (the Preferred Alternative), with consideration of additional Best Practices, would appear to be the best approach.

We appreciate the opportunity to review the proposed action. Please contact Ken Clark at (404) 562-8282, clark.ken@epa.gov if you have any questions or want to discuss our comments.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

United States Department of the Interior

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February 6, 2012

Harold Shenk
57 Taff Drive
Crawfordville, FL, 32327

Re: Comments and Recommendations for the Draft Environmental Impact Statement (DEIS) for USDA, US Forest Service City of Tallahassee 230kV Southwestern Transmission Line Project, Apalachicola National Forest

Dear Mr. Shenk:

The United States Department of the Interior (Department) has reviewed the DEIS for the City of Tallahassee 230vK Southwestern Transmission Line Project and offers the following comments.

Section 3.4.1 Inventories and Methodology

Pg. 3-19, line 30: The document provides general wildlife information; however, the information provided on local bird species is limited. We suggest the Final EIS include information on local bird species available from the USGS Breeding Bird Survey site at:

1) http://www.pwrc.usgs.gov/BBS/results/routermaps/routeMapStatic.html, and

2) http://www/pwrc.usgs.gov/BBS/results/routemaps/routeAssignMap.cfm.

In addition, population impacts depend on the status of the species. We suggest the Final EIS include a list of area birds and likely impacts relative to the trends in the status of avian species. Information on the trends in bird populations is available at:

1) http://www.mbr-pwr.usgs.gov/bbs/bbs.html, and

2) Sauer, J.R., J. E. Hines, J. E. Fallon, K.L. Pardieck, D. J. Ziolkowksi, Jr., and W. A. Link. (2011). *The North American Breeding Bird Survey, Results and Analysis 1966 – 2009. Version 3.23.2011* *USGS Patuxent Wildlife Research Center, Laurel MD.*

Thank you for the opportunity to review and comment on the DEIS. If you have questions concerning our comments, please contact Gary LeCain on (303) 236-1475 or via email at

gdlecain@usgs.gov. I can be reached on (404) 331-4524 or via email at joyce_stanley@ios.doi.gov.

Sincerely,

Joyce Stanley, MPA
Regional Environmental Protection Assistant

for

Gregory Hogue
Regional Environmental Officer

cc: Jerry Ziewitz – FWS
Brenda Johnson - USGS
Anita Barnett – NPS
Chester McGhee – BIA
OEPC – WASH

From: Hodges, Steven M [mailto:Steven.Hodges@talgov.com]
Sent: Monday, February 06, 2012 3:19 PM
To: FS-comments-southern-florida
Cc: Bryant, Cherie (Planning)
Subject: Draft EIS/Proposed City of Tallahassee Southwestern Transmission Line

Susan Jeheber-Mathews
Forest Supervisor
325 John Knox Road, Suite F-100
Tallahassee, FL 32303

Dear Ms. Jeheber-Mathews,

We have reviewed the Draft Environmental Impact Statement for the Proposed City of Tallahassee Southwestern Transmission Line, Leon County, Florida. Our department has no comments at this time. Thank you for the opportunity to review this document.

Steve
Stephen M. Hodges, AICP
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TALLAHASSEE-LEON COUNTY PLANNING DEPARTMENT
PLACE - PLANNING, LAND MANAGEMENT AND COMMUNITY ENHANCEMENT

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Choctaw Nation of Oklahoma

P.O. Box 1210 • Durant, OK 74702-1210 • (580) 924-8280

Gregory E. Pyle
Chief

Gary Batton
Assistant Chief

January 18, 2012

Susan Jeheber-Matthews
Forest Supervisor
National Forests in Florida
325 John Knox Road, Suite F-100
Tallahassee, Florida 32303

RE: City of Tallahassee - Construction of 230kV transmission line, Leon County, FL, Apalachicola National Forest.

Dear Ms. Jeheber-Matthews,

Thank you for your request for comment regarding the City of Tallahassee - Construction of 230kV transmission line in the Apalachicola National Forest. We received your request on December 22, 2011. This project does lie within the Choctaw Nation of Oklahoma areas of interest. Before we can comment on the likelihood of this project affecting Choctaw historic or sacred sites, we request that for the above-referenced project, ANF send our office:

1. A copy of the cultural survey that was completed in 2009 for the FGT Project that noted an archaeological site and isolated finds. We would also like a copy of the SHPO letter that concurs that none of these sites are eligible for listing on the NRHP.
2. A copy of the revised survey report that the USFS requested from FGT on Jan 8, 2008.
3. A copy of the Cultural survey that was performed for Alternative 1 that would be co-located with the FGT pipeline ROW for the .5 miles outside of ANF.

We concur with the SHPO that any segments of the Proposed Action corridor that have not been surveyed in the last 15 years be surveyed prior to construction. You have noted that per discussions with the SHPO, no archaeological resources were determined near the Preferred Alternative route. We are uncertain how the ANF and SHPO have defined near and would like a listing of sites that are within 1 mile of the proposed Alternative 1, along with a note for each as to whether those sites have been determined eligible, not eligible or have not been determined as of yet. Also, we would like a map that indicates the location of these sites in reference to the Alternative 1 route. Since the route could open more public access to this area we are concerned of the impact it may have on current archaeological sites and possible vandalism due to increased access. Of the sites listed within 1 mile of Alternative 1, could you please indicate if any of those sites have had any type of vandalism, looting or damage in the past 10 years. This could be noted as either a warning that was given, or a ticket for vandalism, etc, or an actual ARPA case that went to court.

Choctaws...growing with pride, hope and success!

The protocols you have mentioned for inadvertent discovery of human remains are very limited and unacceptable. We would ask that you reference NAGPRA regulations here to be followed. We look forward to working with you in the future.

Sincerely,

Ian Thompson PhD, RPA
Director, Historic Preservation Department
Tribal Archaeologist, NAGPRA Specialist
Choctaw Nation of Oklahoma
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By: _____
Johnnie Jacobs
Section 106 Coordinator