North Central Florida Regional Planning Council

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# MEETING NOTICE

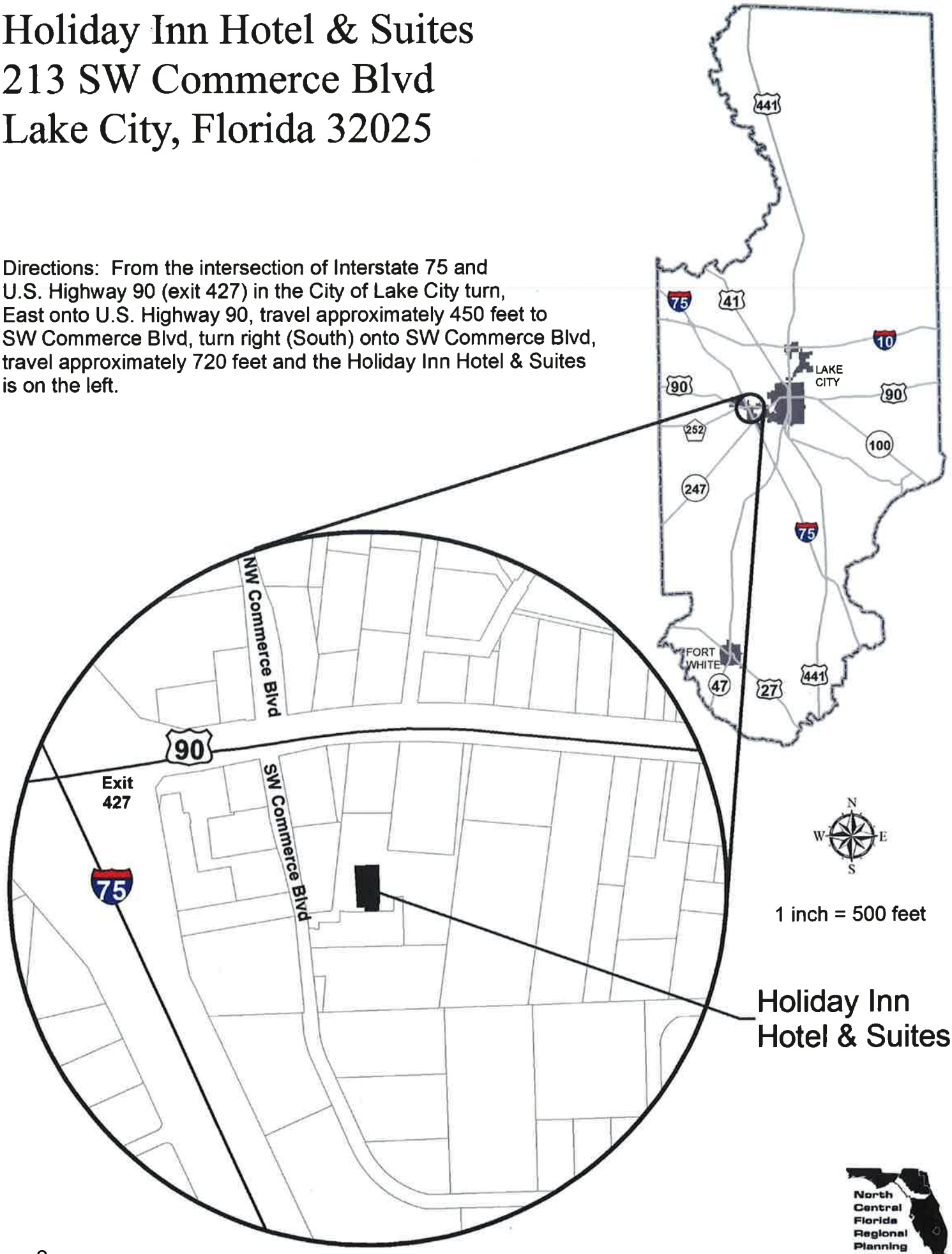
# CLEARINGHOUSE COMMITTEE

There will be a meeting of the Clearinghouse Committee of the North Central Florida Regional Planning Council on **September 24, 2015**. The meeting will be held at the **Holiday Inn Hotel & Suites, 213 SW Commerce Boulevard, Lake City**, beginning at **6:00 p.m.**

(Location Map on Back)

# Holiday Inn Hotel & Suites
# 213 SW Commerce Blvd
# Lake City, Florida 32025

Directions: From the intersection of Interstate 75 and U.S. Highway 90 (exit 427) in the City of Lake City turn, East onto U.S. Highway 90, travel approximately 450 feet to SW Commerce Blvd, turn right (South) onto SW Commerce Blvd, travel approximately 720 feet and the Holiday Inn Hotel & Suites is on the left.

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# AGENDA

# CLEARINGHOUSE COMMITTEE

Holiday Inn Hotel & Suites
Lake City, Florida

September 24, 2015
6:00 p.m.



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NORTH CENTRAL FLORIDA REGIONAL PLANNING COUNCIL
CLEARINGHOUSE COMMITTEE
MINUTES

Holiday Inn Hotel and Suites
Lake City, Florida

August 27, 2015
6:00 p.m.

MEMBERS PRESENT

Jim Catron
Donnie Hamlin
James Montgomery, Vice-Chair
Patricia Patterson
Randy Wells
Stephen Witt

MEMBERS ABSENT

Beth Burnam
Mike Williams

STAFF PRESENT

Steven Dopp

The meeting was called to order by Vice-Chair Montgomery at 6:10 p.m.

I. APPROVAL OF THE JULY 23, 2015 MEETING MINUTES

**ACTION:** **It was moved by Mayor Witt and seconded by Commissioner Catron to approve the July 23, 2015 meeting minutes as circulated. The motion carried unanimously.**

II. COMMITTEE-LEVEL REVIEW ITEMS

#73 - Suwannee County Comprehensive Plan Adopted Amendment (DEO No. 15-1ESR)

Mr. Dopp stated that the staff report finds the local government comprehensive plan, as amended, is not anticipated to result in significant adverse impacts to Natural Resources of Regional Significance, regional facilities or adjoining local governments

**ACTION:** **It was moved by Commissioner Catron and seconded by Commissioner Patterson to approve the staff report as circulated. The motion carried unanimously.**

#77 - City of Fanning Springs Comprehensive Plan Draft Amendment (DEO No. 15-1ESR)

Mr. Dopp stated that the staff report finds the local government comprehensive plan, as amended, is not anticipated to result in significant adverse impacts to Natural Resources of Regional Significance, regional facilities or adjoining local governments.

**ACTION:** **It was moved by Commissioner Wells and seconded by Commissioner Hamlin to approve the staff report as circulated. The motion carried unanimously.**

The meeting adjourned at 6:25 p.m.

9/24/15

James Montgomery, Vice-Chair

## COMMITTEE-LEVEL ITEMS

**FLORIDA REGIONAL COUNCILS ASSOCIATION**
**LOCAL GOVERNMENT COMPREHENSIVE PLAN AMENDMENT REVIEW FORM 01**

Regional Planning Council: North Central Fl
Review Date: 9/24/15
Amendment Type: Draft Amendment

Regional Planning Council Item No.: 74
Local Government: City of Lake City
Local Government Item No.: CPA 15-02
State Land Planning Agency Item No.: 15-1ESR

Date Mailed to Local Government and State Land Planning Agency: 9/25/15 (estimated)

Pursuant to Section 163.3184, Florida Statutes, Council review of local government comprehensive plan amendments is limited to adverse effects on regional resources and facilities identified in the strategic regional policy plan and extrajurisdictional impacts that would be inconsistent with the comprehensive plan of any affected local government within the region. A written report containing an evaluation of these impacts, pursuant to Section 163.3184, Florida Statutes, is to be provided to the local government and the state land planning agency within 30 calendar days of receipt of the amendment.

**DESCRIPTION OF AMENDMENT**

The City is amending the text and the Future Land Use Plan Map of the City Comprehensive Plan based on an evaluation completed by the City to reflect changes in state requirements pursuant to Section 163.3191, Florida Statues. More specifically, the amends the text of the Land Use Element; the Traffic Circulation Element; the Housing Element; the Sanitary Sewer, Solid Waste, Drainage, Potable Water and Natural Groundwater Aquifer Recharge Element; the Conservation Element; the Recreation and Open Space Element; the Intergovernmental Coordination Element; the Capital Improvements Element; and the Public School Facilities Element; and the Future Land Use Plan Map Series of the City Comprehensive Plan (see attached excerpts).

**1. ADVERSE EFFECTS TO SIGNIFICANT REGIONAL RESOURCES AND FACILITIES IDENTIFIED IN THE STRATEGIC REGIONAL POLICY PLAN**

The City is bisected by the following roads which are identified and mapped in the North Central Florida Strategic Regional Policy Plan as part of the Regional Road Network: Interstate Highway 10, Interstate Highway 75, U.S. Highway 41, U.S. Highway 90, U.S. Highway 441, State Road 10A, State Road 47 and State Road 247. Nevertheless, significant adverse impacts are not anticipated to occur to the regional road network as a result of the amendment since it retains Minimum Level of Service Standards for these regional facilities. Additionally, the amendment does do not result in any change in intensity or density of use. Finally, the amendment adds policies to the City Traffic Circulation Element which implement Transportation Planning Best Practices contained in the regional plan (see attached).

Significant adverse impacts are not anticipated to occur to Natural Resources of Regional Significance as identified and mapped in the regional plan. The City is not located within a Natural Resource of Regional Significance as identified and mapped in the regional plan. Additionally, the amendment does not result in any change in intensity or density of use. Finally, the amendment retains an objective and associated policies to protect Natural Resources of Regional Significance in a manner consistent with the goals and policies of the regional plan. The amendment also includes updated maps of Natural Resources of Regional Significance which are consistent with the mapped Natural Resources of Regional Significance contained in the regional plan (see attached).

## 2. EXTRAJURISDICTIONAL IMPACTS INCONSISTENT WITH THE COMPREHENSIVE PLANS OF LOCAL GOVERNMENTS WITHIN THE REGION

The City Comprehensive Plan, as amended, is not anticipated to create significant adverse impacts to adjoining local governments.

**Request a copy of the adopted version of the amendment?**

Yes ___X___ No _____

Not Applicable _____

It is recommended that these findings be forwarded to the City and the Florida Department of Economic Opportunity.

# EXCERPTS FROM THE CITY COMPREHENSIVE PLAN AMENDMENT

Words **bolded and underlined** have been added.
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# II

# TRAFFIC ELEMENT

## INTRODUCTION

A ~~**traffic circulation**~~ **transportation** system which provides for the safe and efficient movement of people and goods is needed to support existing and future development. The purpose of this plan element is to identify the types, locations and extent of existing and proposed major thoroughfares and transportation routes in the City and establish a framework for making policy decisions in planning for future transportation needs. The data collected for this plan element and analysis of this data, contained in the Data and Analysis document, are not part of this plan element, but serve to provide a foundation and basis for this portion of the Comprehensive Plan.

The ~~**Traffic Circulation**~~ **Transportation** Element is closely related to the Future Land Use Element. This is due to the inherent two-way relationship between land use and transportation. Land use patterns directly affect the demand for transportation facilities, with more intensive land uses generating more traffic and requiring greater degrees of accessibility. Conversely, the transportation network affects land use in that access provided by transportation facilities (existing or proposed) influences the use of land located adjacent to these facilities.

In addition to the Future Land Use Element, the ~~**Traffic Circulation**~~ **Transportation** Element is coordinated and consistent with the remaining plan elements as required by the ~~**Local Government Comprehensive Planning and Land Development Regulation Act**~~ **Community Planning Act** ~~**and accompanying Chapter 9J-5, Florida Administrative Code**~~. Further, the City's ~~**traffic circulation**~~ **transportation** system does not stop at political boundaries. Therefore, coordination between other local governments is a necessary prerequisite to a functional ~~**traffic circulation**~~ **transportation** system. The goal, objectives and policies of the Intergovernmental Coordination Element establish guidelines to be followed which provide for coordination between various governmental entities.

The following goal, objectives and policies of this plan element are intended to serve as the plan for ~~**traffic circulation**~~ **transportation** needs. The objectives and policies herein provide a basis for addressing transportation needs within the City.

## GOAL, OBJECTIVES AND POLICIES

GOAL II - PROVIDE FOR A ~~**TRAFFIC CIRCULATION**~~ **TRANSPORTATION** SYSTEM WHICH SERVES EXISTING AND FUTURE LAND USES.

OBJECTIVE II.1 — The City shall establish a safe, convenient and efficient level of service standard which shall be maintained for all roadways.

Policy II.1.1 — Establish the Service Standards as noted below at peak hour for the following roadway segments within the City as defined within the **most recent version of the** Florida Department of Transportation ~~**2002**~~ Quality/Level of Service Handbook.

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| ROADWAY SEGMENT NUMBER | ROADWAY SEGMENT | NUMBER OF LANES | FUNCTIONAL CLASSIFICATION | AREA TYPE | SEGMENT DISTANCE (IN MILES) | LEVEL OF SERVICE |
|---|---|---|---|---|---|---|
| 1 | U.S. 90 / S.R. 10<br>From ~~**City West limits**~~ **Turner Road** to ~~**I-75**~~ **Lake City Avenue**. | ~~**4-D**~~<br>**2-D** | ~~**Principal**~~<br>Arterial I | ~~**Urban**~~<br>**Transition** | ~~**0.27**~~<br>**0.54** | D |
| 2 | U.S. 90 / S.R. 10<br>From ~~**I-75**~~ **Lake City Avenue** to ~~**S.R. 247**~~ **C.R. 252**. | ~~**6-D**~~<br>**4-D** | ~~**Principal**~~<br>Arterial I | ~~**Urban**~~<br>**Transition** | ~~**1.33**~~<br>**0.28** | D |
| 3 | U.S. 90 / Duval St.<br>From ~~**S.R. 247**~~ **C.R. 252** to ~~**S.R. 10A / Baya Ave**~~ **I-75**. | ~~**6-D**~~<br>**4-D** | ~~**Principal**~~<br>Arterial I | ~~**Urban**~~<br>**Transition** | ~~**1.17**~~<br>**0.50** | D |
| 4 | U.S. 90 / Duval St.<br>From ~~**S.R. 10A / Baya Ave**~~ **I-75** to ~~**U.S. 441/ Marion St.**~~ **SW Bascom** | ~~**4-D**~~<br>**6-D** | ~~**Principal**~~<br>Arterial I | ~~**Urban**~~<br>**Transition** | ~~**0.90**~~<br>**0.80** | D |
| 5 | U.S. 90 / Duval St.<br>From ~~**U.S. 441/ Marion St.**~~ **SW Bascom** to ~~**City east limits**~~ **S.R. 247**. | ~~**4-D**~~<br>**6-D** | ~~**Principal**~~<br>Arterial I | ~~**Urban**~~<br>**Transition** | ~~**0.96**~~<br>**0.53** | D |
| **6** | **U.S. 90 / Duval St. From S.R. 247 to Baya Avenue** | **6-D** | **Arterial I** | **Transition** | **1.13** | **D** |
| **7** | **U.S. 90 / Duval St. From Baya Avenue to U.S. 41** | **4-D** | **Arterial I** | **Transition** | **0.75** | **D** |
| **8** | **U.S. 90 / Duval St. From U.S. 41 to U.S. 441** | **4-D** | **Arterial I** | **Transition** | **0.14** | **D** |
| **9** | **U.S. 90 / Duval St. From U.S. 441 to Colburn Avenue** | **4-D** | **Arterial I** | **Transition** | **1.03** | |

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| ROADWAY SEGMENT NUMBER | ROADWAY SEGMENT | NUMBER OF LANES | FUNCTIONAL CLASSIFICATION | AREA TYPE | SEGMENT DISTANCE (IN MILES) | LEVEL OF SERVICE |
|---|---|---|---|---|---|---|
| ~~6~~ **10** | U.S. 41 / 1st St. From City south limits to U.S. 90 / Duval St. | 4-D | Principal Arterial | Urban | 1.94 | D |
| ~~7~~**11** | U.S. 41 / 1st St. From U.S. 90 / Duval St. to City north limits. | 4-D | Principal Arterial | Urban | 1.20 | D |
| ~~8~~ **12** | U.S. 441 / Marion St. From City south limits to S.R. 10A / Baya Ave. | 2-D | Principal Arterial | Urban | 1.51 | D |
| ~~9~~ **13** | U.S. 441 / Marion St. From S.R. 10A / Baya Ave. to U.S. 90 / Duval St. | 2-U | Principal Arterial | Urban | 0.43 | D |
| ~~10~~ **14** | U.S. 441 / Marion St. From U.S. 90 / Duval St. to City north limits. | 2-U | Principal Arterial | Urban | 1.06 | D |
| ~~11~~ **15** | I-75 From S.R. 247 to U.S. 90. | 6-D | Intrastate Highway System | Urban | 1.14 | C |
| ~~12~~ **16** | I-75 From U.S. 90 to CSX Railroad. | 6-D | Intrastate Highway System | Urban | 1.88 | C |
| ~~13~~ **17** | S.R. 10A / Baya Ave. From U.S. 90 / Duval St. to U.S. 41 / 1st St. | 4-D | Principal Arterial | Urban | 0.84 | D |
| ~~14~~ **18** | S.R. 10A / Baya Ave. From U.S. 41 / 1st St. to City east limits. | 4-D | Principal Arterial | Urban | 1.17 | D |
| ~~15~~ **19** | S.R. 47 From City to U.S. 41 / 1st St. | 4-D | Minor Arterial | Urban | 0.68 | D |

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| ROADWAY SEGMENT NUMBER | ROADWAY SEGMENT | NUMBER OF LANES | FUNCTIONAL CLASSIFICATION | AREA TYPE | SEGMENT DISTANCE (IN MILES) | LEVEL OF SERVICE |
|---|---|---|---|---|---|---|
| ~~16~~ **20** | S.R. 247 From City west limits to U.S. 90 /S.R. 10. | 2-U | Minor Arterial | Urban | 0.42 | D |
| ~~17~~ **21** | C.R. 250 / N.W. Lake Jeffery Rd. From City west limits to U.S. 90 / Duval St. | 2-U | Urban Collector | Urban | 0.98 | D |
| ~~18~~ **22** | C.R. 100A / N.W. Bascom Norris Dr. From U.S. 41 / 1st St. to U.S. 441 / S.R. 47. | 2-U | Urban Collector | Urban | 0.36 | D |
| ~~19~~ **23** | C.R. 100 A / N.E. Bascom Norris Dr. From U.S. 441 / S.R. 47 to U.S. 90 / Duval St. | 2-U | Urban Collector | Urban | 2.61 | D |
| ~~20~~ **24** | Washington St. From N.W. Lake Jeffery Rd. to Patterson St. | 2-U | Urban Collector | Urban | 1.40 | D |
| ~~21~~ **25** | Washington St. From Patterson St. to C.R. 100A. | 2-U | Urban Collector | Urban | 1.26 | D |
| ~~22~~ **26** | Patterson St. From Washington St. to U.S. 90 / Duval St. | 2-U | Urban Collector | Urban | 0.38 | D |
| ~~23~~ **27** | Ermine St. From U.S. 90 / Duval St. to S.R. 10A / Baya Ave. | 2-U | Urban Collector | Urban | 0.40 | D |
| ~~24~~ **28** | McFarlane Ave. / Malone St. From S.R. 10A / Baya Ave. to U.S. 41 / 1st St. | 2-U | Urban Collector | Urban | 1.90 | D |
| ~~25~~ **29** | Long St. From C.R. 250 to U.S. 441. | 2-U | Urban Collector | Urban | 0.70 | D |

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| ROADWAY SEGMENT NUMBER | ROADWAY SEGMENT | NUMBER OF LANES | FUNCTIONAL CLASSIFICATION | AREA TYPE | SEGMENT DISTANCE (IN MILES) | LEVEL OF SERVICE |
|---|---|---|---|---|---|---|
| ~~26~~ **30** | C.R. 341 / Sisters Welcome Road From City south limits to U.S. 90 / S.R. 10. | 2-U | Urban Collector | Urban | 0.90 | D |
| ~~27~~ **31** | Gwen Lake Blvd. From U.S. 90 / Duval St. to end of pavement. | 2-U | Urban Collector | Urban | 1.06 | D |

D - Divided roadway.

U - Undivided roadway.

Policy II.1.2. The City shall control the number and frequency of connections and access points of driveways and roads to arterials and collectors by requiring access points for state roads to be in conformance with Chapter 14-96 and 14-97, Florida Administrative Code, ~~**in effect on January 1, 2006**~~ and the following requirements for non-state roads:

1. Permitting 1 access point for ingress and egress purposes to a single property or development;
2. Permitting 2 access points if the minimum distance between the two access points exceeds 20 feet;
3. Permitting 3 access points if the minimum distance between each access point is at least 100 feet; or
4. Permitting more than 3 access points where a minimum distance of 1,000 feet is maintained between each access point.

Policy II.1.3. The City shall continue to require development to provide safe and convenient on-site traffic flow, which includes the provision for vehicle parking.

Policy II.1.4. The City shall continue to require any development which is required to provide a site plan or any development requiring platting, include requirements for additional right-of-way width for bicycle and pedestrian ways to be provided for all proposed collector and arterial roadways, as integrated or parallel transportation facilities.

**Policy II.1.5** **In accordance with Section 163.3180(5)(h)1.c. and 163.3180(5)(h)2. Florida Statutes, the City shall provide a means by which the landowner will be assessed a proportionate share of the cost of providing the transportation facilities necessary to serve the proposed development. However, the landowner shall not be held responsible for contributing to deficient transportation facilities.**

OBJECTIVE II.2 The City shall require that all traffic circulation system improvements be consistent with the land uses shown on the future land use plan map, limiting higher density and higher intensity land use locations to be adjacent to collector or arterial roads, as identified on the Future Traffic Circulation Map.

| | |
|---|---|
| Policy II.2.1 | The City shall, as part of the capital improvement scheduling of roadway improvements, review all proposed roadway improvements to determine if such improvement will further the direction of the Future Land Use Plan Element. Where the roadway is operated and maintained by another jurisdictional authority, the City shall notify such jurisdiction, in writing, if any identified roadway improvement plan is not consistent with the provisions of the Future Land Use Plan Element. |
| OBJECTIVE II.3 | The City shall coordinate its traffic circulation planning efforts with the Florida Department of Transportation for consistency with the Department's 5-Year Transportation Plan. |
| Policy II.3.1 | The City shall, during the capital improvements planning process, review all proposed roadway improvements for consistency with the Florida Department of Transportation's 5-Year Transportation Plan. |
| OBJECTIVE II.4 | The City shall provide for the protection of existing and future right-of-ways from building encroachment by establishing right-of-way setback requirements for all structures along new or realigned collector and arterial roadways to be provided for by the developer or purchased as right-of-way. |
| Policy II.4.1 | The City shall maintain provisions which require all structures along new or realigned collector or arterial roadways to provide additional setbacks for the future need of additional right-of-way. Such right-of-way shall be provided by the developer of the land as part of the development review process or shall be purchased by the agency improving the road. |
| **Policy II.4.2** | **Properties under the same ownership or those consolidated for development shall be treated as one property for the purposes of access management and shall not receive the maximum potential number of access points for that frontage indicated under minimum access spacing standards.** |
| **Policy II.4.3** | **Large commercial developments shall be required to provide and/or extend nearby local and collector streets and provide street connections with surrounding residential areas so residents may access the development without traveling on arterial streets.** |
| **Policy II.4.4** | **Shopping centers shall be required to provide a unified access and circulation plan and require any out parcels to obtain access from the unified access and circulation system.** |
| **Policy II.4.5** | **Existing lots unable to meet the access spacing standards for arterials shall obtain access from platted side streets, parallel streets, service roads, joint and cross-access or the provision of easements;** |
| **Policy II.4.6** | **Adequate corner clearance shall be maintained at crossroad intersections with arterials.** |
| **Policy II.4.7** | **The City shall encourage cross-access connections easements and joint driveways, where available and economically feasible.** |

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# V

# CONSERVATION ELEMENT

## INTRODUCTION

The following goal, objectives and policies constitute the Conservation Element providing for the promotion of the conservation, use and protection of the City's natural resources. The data collected for this plan element and analysis of this data, contained in the Data and Analysis document of the City, are not part of this plan element, but serve to provide a foundation and basis for the formulation of this portion of the Comprehensive Plan.

Conservation uses are defined as activities within land areas designated for the purpose of conserving or protecting natural resources or environmental quality and within this plan includes areas which are publicly owned and designated for such purposes as flood control, protection of quality or quantity of groundwater or surface water, floodplain management, or protection of vegetative communities or wildlife habitats.

The Future Land Use Plan map addresses conservation future land use as defined above. The conservation future land use category shown on the Future Land Use Plan map identifies public lands which have been designated "conservation" for the purpose of protecting natural resources or environmental quality. At present, there are no conservation uses within the City. Therefore, until such time as there are publicly owned areas which are designated for the protection of a natural resource, this category, although listed, will not be shown on the Future Land Use Plan Map.

The Future Land Use Plan map series includes the identification of flood prone areas, wetlands, existing and planned waterwells, rivers, bays, lakes, minerals and soils, which are land cover features, but are not land uses. Therefore, although these natural resources are identified within the Future Land Use Plan map series, they are not designated on the Future Land Use Plan map as conservation areas. However, the constraints on future land uses of these natural resources are addressed in the following goal, objective and policy statements.

## GOAL, OBJECTIVES AND POLICIES

GOAL V - CONSERVE, THROUGH APPROPRIATE USE AND PROTECTION, THE RESOURCES OF THE CITY TO MAINTAIN THE INTEGRITY OF NATURAL FUNCTIONS.

OBJECTIVE V.1 The City shall continue to enforce provisions within the site plan review process to protect air quality through the appropriate siting of development and associated public facilities.

Policy V.1.1 The City shall require that all appropriate air quality permits are obtained prior to the issuance of development orders, so that minimum air quality levels established by the Florida Department of Environmental Protection are maintained in the City.

OBJECTIVE V.2 The City in order to protect the quality and quantity of current and projected water sources, hereby establishes a 500 foot wellfield protection area around community water system wells. In addition, the City in order to protect high ground water recharge areas shall limit development in these areas as specified in the high groundwater aquifer recharge protection policy of the Sanitary Sewer, Solid Waste, Drainage, Potable Water and Natural Groundwater Aquifer Recharge Element of this Comprehensive Plan.

OBJECTIVE V.4 The City shall continue to include within the site and development plan approval process, provisions for the location and use of screens and buffers to preserve wildlife and wildlife habitats, the identification and protection of native wildlife and their habitats, including state and federally protected plant and animal species (endangered, threatened and species of special concern), within proposed development sites these natural resources from impacts of development by the use of the Florida Fish and Wildlife Conservation Commission Critical Wildlife Conservation Areas, Florida Natural Areas Inventory, and North Central Florida Strategic Regional Policy Plan Regionally Significant Natural Resources map series to identify habitats which potentially contain endangered, threatened or species of special concern, and rare or unique vegetative communities prior to granting development approval.

Policy V.4.1 The City shall cooperate with the Florida Fish and Wildlife Conservation Commission in the monitoring and inventorying of wildlife and wildlife habitats within the City.

Policy V.4.2 The City shall assist in the application and compliance with all Federal and state regulations which pertain to endangered and rare species in coordination with the Florida Fish and Wildlife Conservation Commission and the Florida Natural Areas Inventory.

Policy V.4.3 The City shall consult with the Florida Fish and Wildlife Commission prior to the issuance of a development order where there is an indication that such issuance would result in an adverse impact to any endangered or rare species.

Policy V.4.4 The City shall cooperate with the Florida Department of Environmental Protection in the inventorying and monitoring aquaculture activities within the City.

Policy V.4.5 The City shall address, during the development review process, the mitigation of development activities within environmentally sensitive areas, which include but are not limited to those areas identified as environmentally sensitive areas, on the Future Land Use Plan Map of this Comprehensive Plan to ensure that the possible impacts created by the proposed development activity will not significantly alter the natural functions of these significant natural resources. All new development will maintain the natural functions of environmentally sensitive areas, including but not limited to wetlands and 100-year floodplains so that the long term environmental integrity and economic impact and recreation value of these areas is maintained.

OBJECTIVE V.5 The City shall support the Water Management District in their conducting of water conservation programs by assisting with public information programs for water use restrictions in the case of a water shortage.

Policy V.5.1 The City shall support the Water Management District in their conducting of water conservation programs by assisting with public information programs for water use restrictions in the case of a water shortage.

Policy V.5.2 In an effort to conserve potable water, that at least 50 percent of the following required landscaped areas be comprised of vegetation native or indigenous to the north Florida area:

1. 10 percent of offstreet parking areas;
2. 10 foot buffer between residential and commercial uses;

3. 15 foot buffer between single family uses and multi-family uses or mobile home parks; and

4. 25 foot buffer between residential and industrial uses.

Policy V.5.3 The City shall require that faucets for private lavatories shall be designed, manufactured and installed to deliver water flow rate not to exceed 3.0 gallons per minute and further, that water closets, either flush tank or flushometer operated, shall be designed, manufactured and installed to be operable and adequately flushed with no more than 4.0 gallons per flushing cycle.

OBJECTIVE V.6 The City shall coordinate with the Water Management District to assess projected water needs and resources in order to project water needs and sources for a minimum 10-year period.

Policy V.6.1 The City shall ensure sufficient capacity of safe water to serve the projected demands through the year ~~**2016**~~ **2025** and beyond by establishing standards for ongoing plant analysis.

Policy V.6.2 The City shall coordinate with the Water Management District through the implementation of the District's Regional Water Supply Plan to ensure adequate water supplies for the City Service area through and beyond the year 2016.

OBJECTIVE V.7 The City shall coordinate with the Water Management District to balance the needs of reasonable and beneficial water use with the needs and protection of natural systems.

Policy V.7.1 The City shall coordinate with the Water Management District and other appropriate agencies to protect the natural systems from the impacts of groundwater contamination.

OBJECTIVE V.8 The City, in order to protect significant natural resources in a manner which is in conformance with and furthers the North Central Florida Strategic Regional Policy Plan, as amended ~~**February 27, 2003**~~ **October 27, 2011**, hereby adopts the following maps as they apply to the City as part of the Future Land Use Map Series of this Comprehensive Plan;

1. Regionally Significant Natural Resources - Ground Water Resources, dated ~~**July 17, 2001**~~ **October 27, 2011**;

2. Regionally Significant Natural Resources - Natural Systems, dated ~~**July 17, 2001**~~ **October 27, 2011**;

3. Regionally Significant Natural Resources - Planning and Resource Management Areas, dated ~~**July 17, 2001**~~ **October 27, 2011**;

4. Regionally Significant Natural Resources - Planning and Resource Management Areas (Surface Water Improvement Management Water Bodies), ~~**July 17, 2001**~~ **October 27, 2011**; and

5. Regionally Significant Natural Areas - Surface Water Resources, dated ~~**July 17, 2001**~~ **October 27, 2011**.

The following policies provide direction for the use of these maps in applying the referenced policies of this Comprehensive Plan.

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Policy V.8.1 The map entitled Regionally Significant Natural Resources - Ground Water Resources, dated ~~**July 17, 2001**~~ **October 27, 2011**1, included within the Future Land Use Map Series, identifies groundwater resources for the application of the provisions of the high groundwater aquifer protection policy of the Sanitary Sewer, Solid Waste, Drainage, Potable Water and Natural Groundwater Aquifer Recharge Element of this Comprehensive Plan.

Policy V.8.2 The map entitled Regionally Significant Natural Resources - Natural Systems, dated ~~**July 17, 2001**~~ **October 27, 2011**, included within the Future Land Use Map Series, identifies listed species for the application of the provisions the critical wildlife habitat policy of this element.

Policy V.8.3 The maps entitled Regionally Significant Natural Resources - Planning and Resource Management Areas, dated ~~**July 17, 2001**~~ **October 27, 2011**, included within the Future Land Use Map Series, identifies publicly owned regionally significant lands for application of the provisions of the conservation land use policy of the Future Land Use Element of this Comprehensive Plan.

Policy V.8.4 The maps entitled Regionally Significant Natural Resources - Planning and Resource Management Areas (Surface Water Improvement Management Water Bodies), dated ~~**July 17, 2001**~~ **October 27, 2011**, included within the Future Land Use Map Series, identifies surface water management improvement water bodies for the application of the provisions of the surface water runoff policy of this element.

Policy V.8.5 The map entitled Regionally Significant Natural Areas - Surface Water Resources, dated ~~**July 17, 2001**~~ **October 27, 2011**, included within the Future Land Use Map Series, identifies surface water resources for the application of the provisions of the surface water protection policy of this element.

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ILLUSTRATION A-XI a

## REGIONALLY SIGNIFICANT NATURAL RESOURCES
## GROUNDWATER RESOURCES

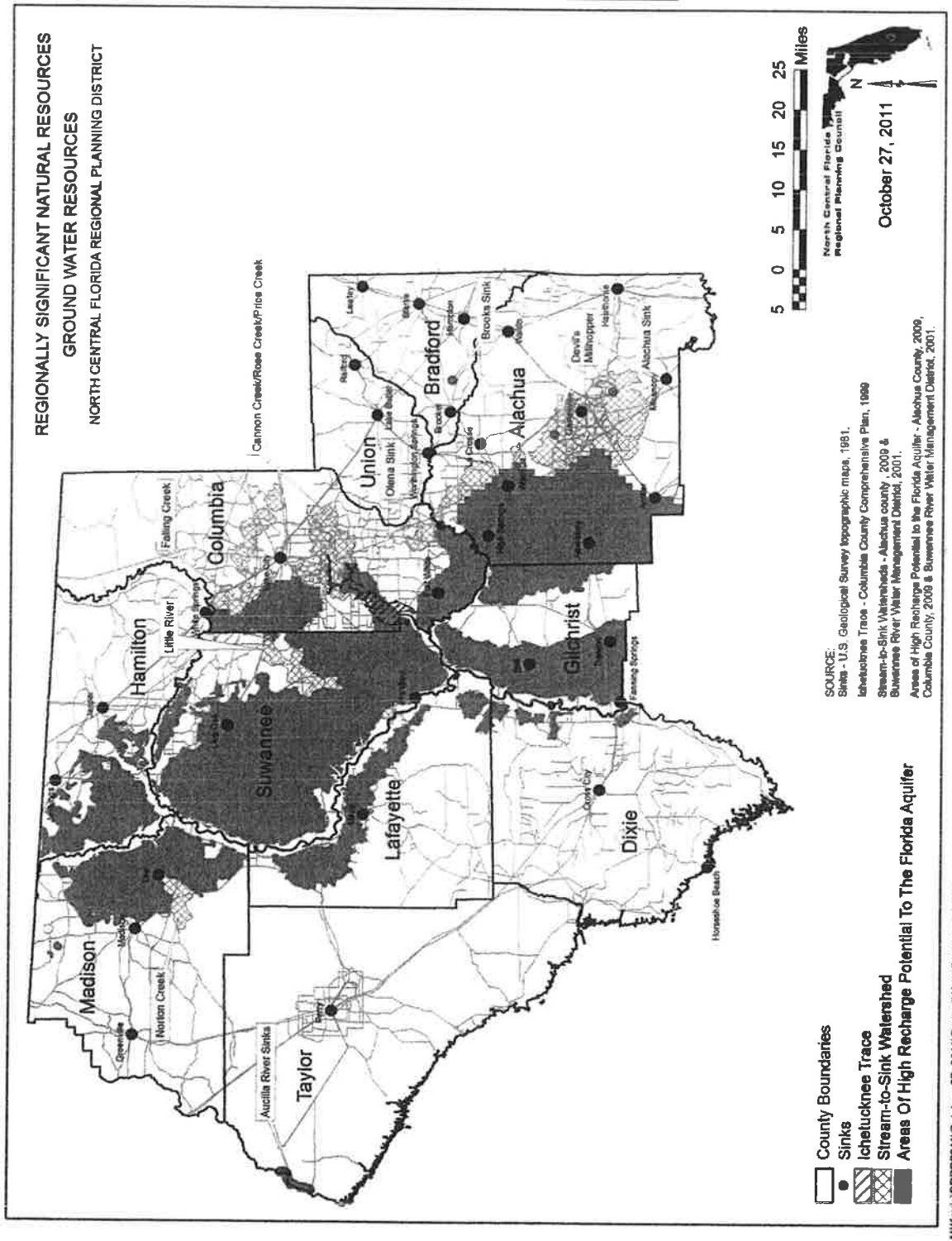

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ILLUSTRATION A-XI b

## REGIONALLY SIGNIFICANT NATURAL RESOURCES NATURAL SYSTEM

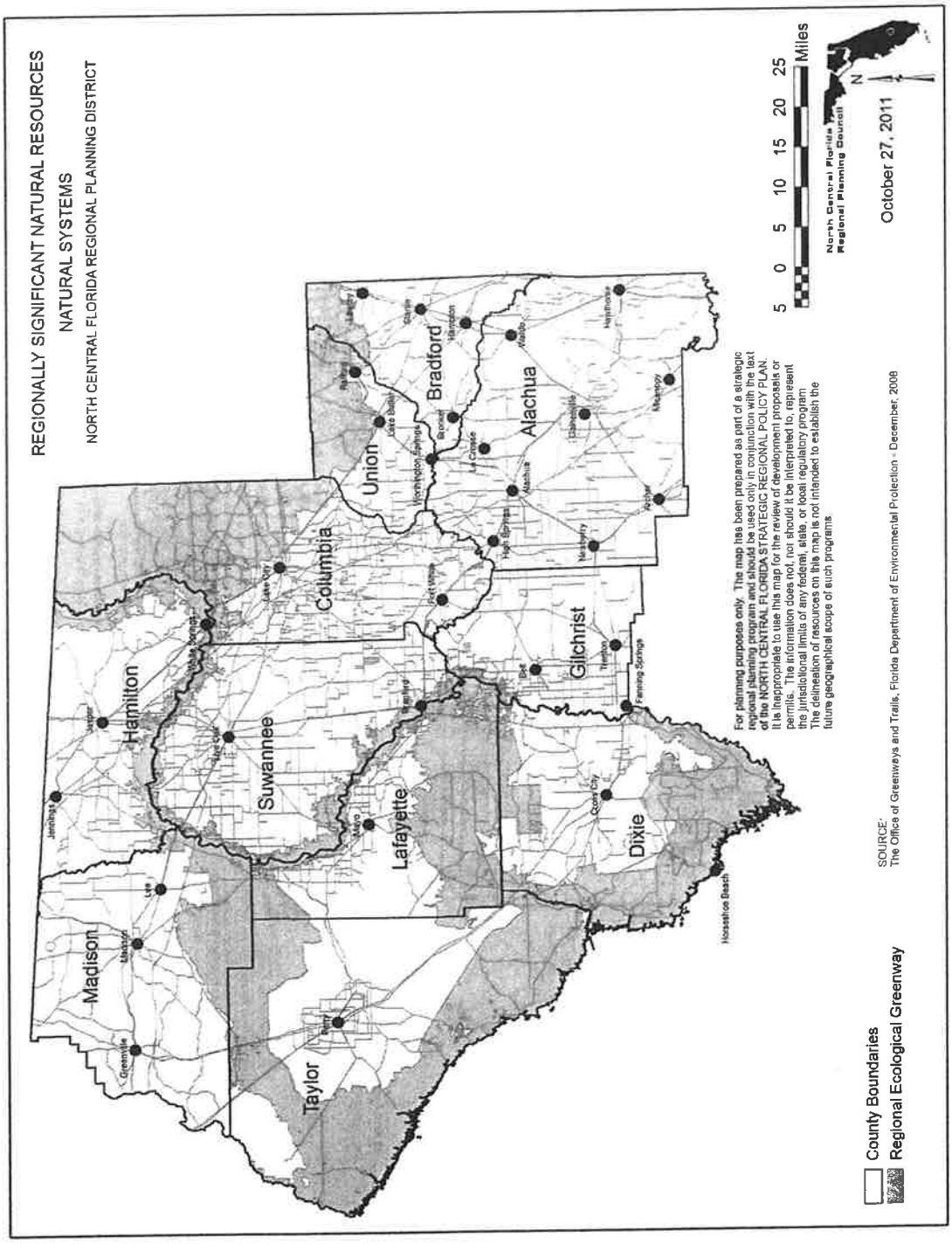

ILLUSTRATION A-XI c

## REGIONALLY SIGNIFICANT NATURAL RESOURCES PLANNING AND RESOURCE MANAGEMENT AREAS 1

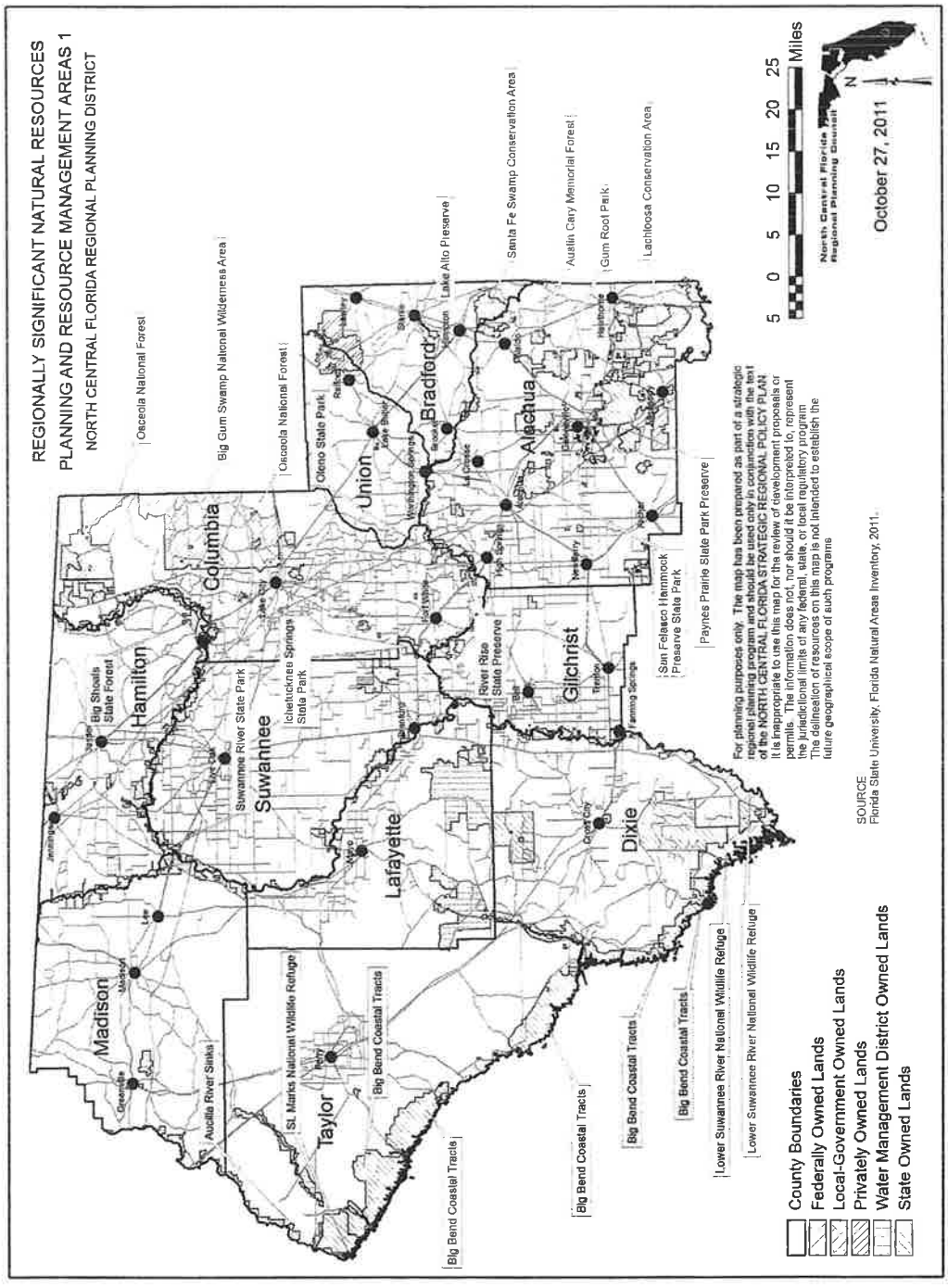

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ILLUSTRATION A-XI d

## REGIONALLY SIGNIFICANT NATURAL RESOURCES PLANNING AND RESOURCE MANAGEMENT AREAS 2

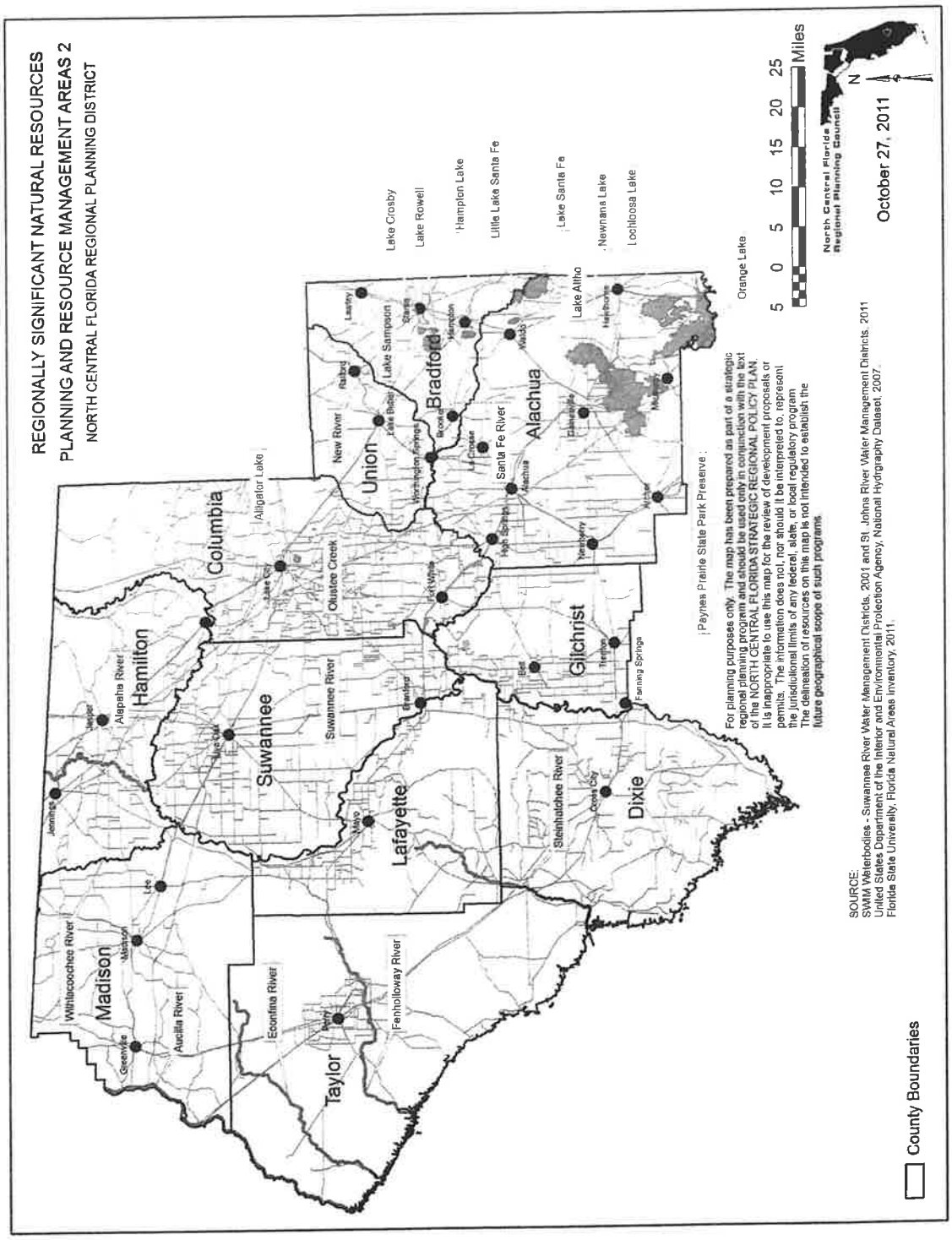

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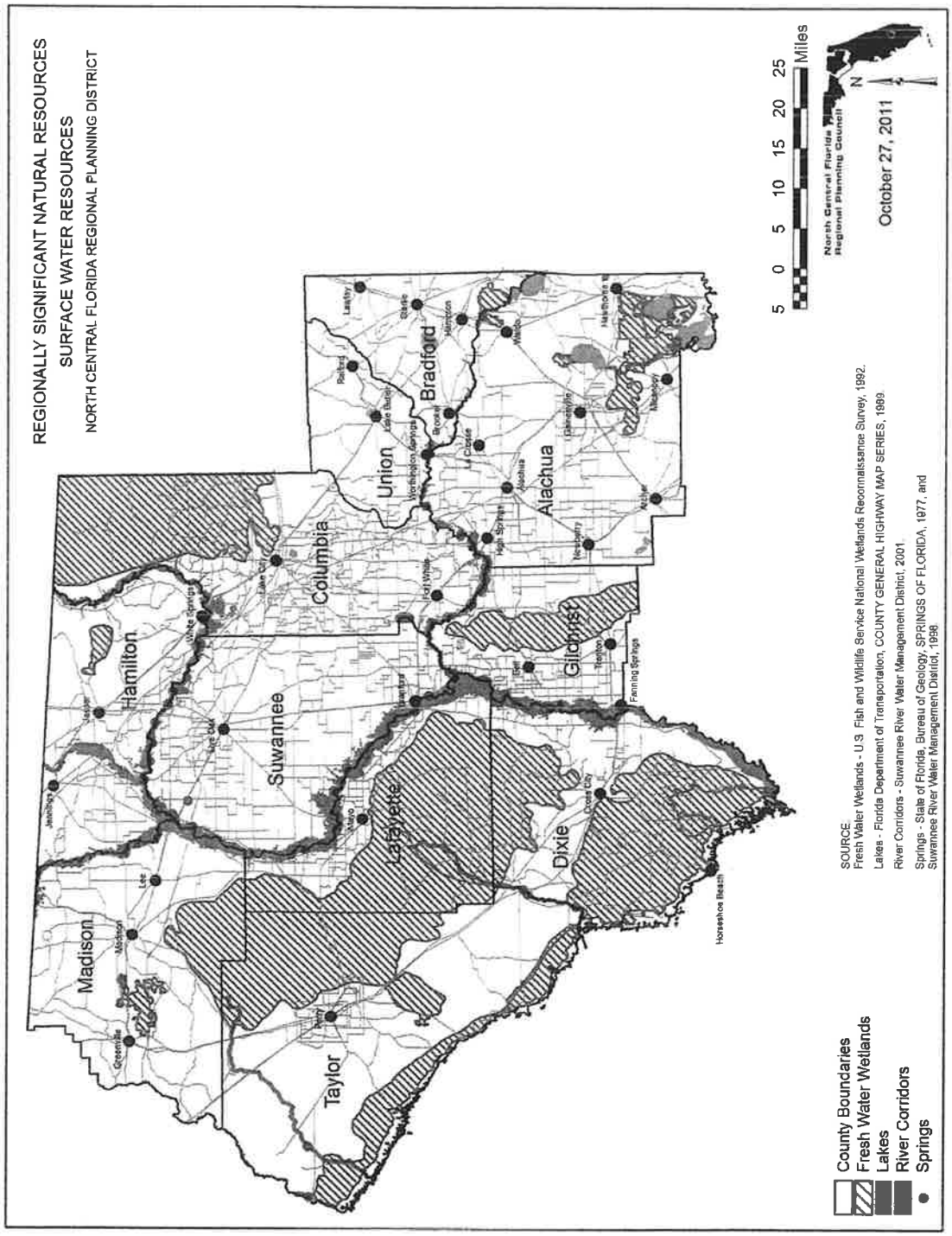
ILLUSTRATION A-XI e

## REGIONALLY SIGNIFICANT NATURAL RESOURCES
## SURFACE WATER RESOURCES



# EXCERPTS FROM THE
# NORTH CENTRAL FLORIDA STRATEGIC REGIONAL POLICY PLAN

# North Central Florida
# Strategic Regional Policy Plan

October 2011

This document has been prepared with financial assistance from the Florida Department of Community Affairs

North Central Florida Regional Planning Council
2009 NW 67th Place
Gainesville, Florida 32653-1603
352.955.2200

Adopted May 23, 1996
Amended August 28, 1997, February 27, 2003 and October 27, 2011


# Chapter V
# Regional Transportation

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003 and October 27, 2011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# Chapter V: Regional Transportation

## A. Conditions and Trends

### 1. Introduction

The region is served by four public transit system service providers, two major and three shuttle/commuter air carriers, one passenger and three freight rail systems, one bus line, and the regional road network. Due to its rural nature, north central Florida is heavily dependent upon automobile and truck transportation. Generally, the existing motor vehicle ground transportation and rail freight transportation systems are adequate.

### 2. Public Transit

Public transit is lightly utilized in north central Florida. The Gainesville Regional Transit System is the region's only community with a fixed-route public transit system. Paratransit services are available throughout the region provided by Big Bend Transit, Inc., the Suwannee River Economic Council, A & A Transport, MV Transportation, and Suwannee Valley Transit Authority. The Gainesville Regional Transit System also provides paratransit services in Alachua County. Intercity bus transportation is provided by Greyhound Bus Lines. The carrier stops in the following north central Florida municipalities: Gainesville, Hawthorne (bus stop), Waldo ( bus stop), Starke, Lake City, and Perry.[1]

The region's rural character and low population density does not easily lend itself to the provision of public transit systems. Correspondingly, only a small percentage of the region's population use public transit. As indicated in Table 5.1 only 1.5 percent of year 2000 north central Florida workers age 16 and over reported using public transportation as their means of transportation to work. Alachua County, which includes Gainesville's fixed-route bus system, had the highest percentage of workers using public transit at 2.4 percent. Lafayette County reported the lowest usage at 0.0 percent. The table also reveals a decline in public transit usage between 1990 and 2000.

[1]Greyhound Bus Lines, Inc., July 8, 2009, http://www.greyhound.com/home/TicketCenter/en/locations.asp?state=fl

proportion of the trips on the failing road network are attributable to the project. The percentage is multiplied by the costs of the transportation projects needed to restore level of service for the failing facilities to determine an amount of money, which is the developer's proportionate-fair share payment.

## e. Transportation Planning Best Practices

While north central Florida local governments are financially unable to fund traditional transportation concurrency, adverse impacts to the regional road network can be minimized through sound transportation planning. Transportation Planning Best Practices for north central Florida local governments could include enhancing road network connectivity, providing parallel local routes to the Regional Road Network, incorporating access management strategies, and developing multimodal transportation systems. By relying on transportation planning best practices, urban development can still be directed to incorporated municipalities, urban service areas, and urban development areas while minimizing transportation infrastructure costs and declines in level of service. Examples of policy areas which could be addressed in local government comprehensive plans to implement these transportation planning best practices include the following.

Enhance Road Network Connectivity by

Establishing a comprehensive system of street hierarchies with appropriate maximum spacing for local, collector, and arterial street intersection and arterial spacing, including maximum intersection spacing distances for local, collector, and arterial streets;

Establishing a thoroughfare plan and right-of-way preservation requirements to advance the development of arterial and collector streets throughout the jurisdiction;

Limiting or discouraging the use of cul-de-sacs and dead-end streets, limiting the maximum length of cul-de-sacs and dead end streets, and encouraging the use of traffic calming devices and strategies as an alternative to dead end streets and cul-de-sacs;

Encouraging street stubs for connections to future development requiring connections to existing street stubs/dead end streets when adjacent parcels are subdivided/developed in the future, and requiring developments to connect through to side streets at appropriate locations;

Encouraging the creation of paths that provide shortcuts for walking and cycling where dead-end streets exist, mid-block bike paths and pedestrian shortcuts, and limiting the maximum spacing between pedestrian/bicycle connections as well as; or

Limiting or discouraging gated communities and other restricted-access roads.

Provide Parallel Local Routes and Other Alternative Local Routes to the Regional Road Network.

Planning and mapping parallel roadway and cross street networks to provide a clear framework for implementing alternative routes to the Regional Road Network;


Adding segments of the parallel roadway and cross street networks to the capital improvements program;

Encouraging developer participation in implementing the system through fair share agreements as a condition of development approval for Regional Road Network concurrency mitigation; or

Encouraging the establishment of a long-term concurrency management system plan for accomplishing the parallel local routes and interparcel cross-access in selected areas.

Promote Access Management Strategies by

Requiring large commercial developments to provide and/or extend existing nearby local and collector streets and provide street connections with surrounding residential areas so residents may access the development without traveling on the Regional Road Network;

Requiring shopping centers and mixed-use developments to provide a unified access and circulation plan and require any outparcels to obtain access from the unified access and circulation system;

Properties under the same ownership or those consolidated for development will be treated as one property for the purposes of access management and will not received the maximum potential number of access points for that frontage indicated under minimum access spacing standards;

Existing lots unable to meet the access spacing standards for the Regional Road Network must obtain access from platted side streets, parallel streets, service roads, joint and cross-access or the provision of easements;

Establishing minimum access spacing standards for locally maintained thoroughfares and use these to also guide corner clearance;

Maintaining adequate corner clearance at crossroad intersections with the Regional Road Network;

Encouraging sidewalk connections from the development to existing and planned public sidewalk along the development frontage;

Encouraging cross-access connections easements and joint driveways, where available and economically feasible;

Encouraging closure of existing excessive, duplicative, unsafe curb cuts or narrowing of overly wide curb cuts at the development site;

Encouraging safe and convenient on-site pedestrian circulation such as sidewalks and crosswalks connecting buildings and parking areas at the development site;


Encouraging intersection and/or signalization modifications to improve roadway operation and safety;

Encouraging the addition of dedicated turn lanes into and out of development;

Encouraging the construction of public sidewalks along all street frontages, where they do not currently exist;

Encouraging the widening of existing public sidewalks to increase pedestrian mobility and safety;

Encouraging the deeding of land for the addition and construction of bicycle lanes;

Encouraging the provision of shading through awnings or canopies over public sidewalk areas to promote pedestrian traffic and provide protection from inclement weather to encourage walking;

Encouraging the construction of new road facilities which provide alternate routes to reduce congestion; or

Encouraging the addition of lanes on existing road facilities, especially where it can be demonstrated that the road will lessen impacts to the Regional Road Network.

Develop Multimodal Transportation Systems by

Encouraging development at densities within urban areas which support public transit;

Providing one or more park-and-ride lots to encourage carpooling and ridesharing, and the use of public transit among inter-city commuters;

Providing a system of sidewalks and/or bike paths connecting residential areas to schools, shopping, and recreation facilities;

Establishing an interlocal agreement with an existing public mass transit system provider to provide regular daily inter-city transit service for inter-city commuters; or

Establishing a local public mass transit system.

# C. Regional Goals and Policies

## 1. Regional Road Network

**REGIONAL GOAL 5.1.** Mitigate the impacts of development to the Regional Road Network as well as adverse extrajurisdictional impacts while encouraging development within urban areas.

**Regional Indicators**

1. In 2009, 33.9 miles, or 2.7 percent, of the north central Florida Regional Road Network did not meet the minimum operating level of service standard contained in local government comprehensive plans.

2. In 2009, 23.4 miles, or 5.4 percent, of Strategic Intermodal System roadways within north central Florida did not meet the minimum operating level of service standard established by the Florida Department of Transportation.

3. In 2009, 10.5 miles, or 1.3 percent, of State Highway System roads which were not part of the Strategic Intermodal System within north central Florida did not meet the minimum operating level of service standard established by the Florida Department of Transportation.

4. In 2009, 9 of the 44 local governments in the region had within their jurisdiction have at least 10 percent or more of the Regional Road Network located within their jurisdictions operating below the minimum level of service standard contained in local government comprehensive plans.

5. In 2009, 17 of the 44 local governments in the region are projected to have at least 10 percent or more of the Regional Road Network located within their jurisdictions operating below the minimum level of service standard contained in local government comprehensive plans by the year 2025.

### a. Local Government Comprehensive Plans

Table 5.17 below summarizes Regional Policies 5.1.1 through 5.1.4.

**TABLE 5.17**

**SUMMARY OF REGIONAL PLAN POLICIES 5.1.1 THROUGH 5.1.4
LOCAL GOVERNMENT COMPREHENSIVE PLANS**

| Area | Local Government Comprehensive Plans Containing Transportation Planning Best Practices | Regional Plan Determination of Impacts |
|---|---|---|
| Municipalities, Urban Service Areas, Urban Development Areas | Yes | Adequately Mitigated |
| Municipalities, Urban Service Areas, Urban Development Areas | No | Florida Department of Transportation Level of Service E |
| Rural Areas | Yes | Florida Department of Transportation Level of Service E |
| Rural Areas | No | Florida Department of Transportation Level of Service D |

Source: North Central Florida Regional Planning Council, 2011.

**Policy 5.1.1.** Within municipalities, urban service areas, or urban development areas where local government comprehensive plans include goals and policies which implement Transportation Planning Best Practices, adverse impacts to the Regional Road Network are adequately. Such local government comprehensive plans and plan amendments within municipalities, urban service areas, or urban development areas shall not be subject to a regional planning council determination of Regional Road Network or extrajurisdictional impacts.

**Policy 5.1.2.** Within municipalities, urban service areas, and urban development areas where local government comprehensive plans do not include goals and policies implementing Transportation Planning Best Practices, local government comprehensive plans and plan amendments shall be subject to a regional planning council determination of Regional Road Network and extrajurisdictional impacts based on the minimum level of service standard of E as determined by the Florida Department of Transportation Quality/Level of Service Handbook.

**Policy 5.1.3.** Outside municipalities, urban service areas, and urban development areas where local government comprehensive plans include goals and policies implementing Transportation Planning Best Practices, local government comprehensive plans and plan amendments shall be subject to a regional planning council determination of Regional Road Network and extrajurisdictional impacts based on the minimum level of service standard of E as determined by the Florida Department of Transportation Quality/Level of Service Handbook.

**Policy 5.1.4.** Outside municipalities, urban service areas, and urban development areas where local government comprehensive plans do not include goals and policies implementing Transportation Planning Best Practices, local government comprehensive plans and plan amendments shall be subject to a regional planning council determination of Regional Road Network and extrajurisdictional impacts based on the minimum level of service standard of D as determined by the Florida Department of Transportation Quality/Level of Service Handbook.

## b. Developments of Regional Impact

Table 5.18 below summarizes Regional Policies 5.1.5 and 5.1.6.

**TABLE 5.18**
**SUMMARY OF REGIONAL PLAN POLICIES 5.1.5 THROUGH 5.1.6**
**DEVELOPMENTS OF REGIONAL IMPACT**

| Area | Local Government Comprehensive Plans Containing Transportation Planning Best Practices | Regional Plan Determination of Impacts |
|---|---|---|
| **Municipalities, Urban Service Areas, Urban Development Areas** | Yes | Local Comprehensive Plan Level of Service Standard |
| **Municipalities, Urban Service Areas, Urban Development Areas** | No | Local Comprehensive Plan Level of Service Standard |
| **Rural Areas** | Yes | Local Comprehensive Plan Level of Service Standard |
| **Rural Areas** | No | Local Comprehensive Plan Level of Service Standard |

Source: North Central Florida Regional Planning Council, 2011.

**Policy 5.1.5.** The significant and adverse transportation impacts to the Regional Road Network created by a Development of Regional Impact shall be considered adequately mitigated where the local government development order contains conditions which either maintain the minimum level of service standard established in local government comprehensive plans for all significantly and adversely impacted portions of the Regional Road Network consistent with Section 380.06, Florida Statutes, or where the local government development order mitigates impacts to the Regional Road Network through the use of proportionate share consistent with Section 163.3184, Florida Statutes, and Rule 9J-2.045, Florida Administrative Code.

**Policy 5.1.6.** For purposes of Policy 5.1.5, the minimum level of service standard for the Regional Road Network shall be as established in local government comprehensive plans.

**Policy 5.1.7.** All proportionate share funds generated by anticipated significant and adverse impacts to the Regional Road Network as a result of Developments of Regional Impact shall be used to make transportation modifications identified in the local government development order which benefit the Regional Road Network.

# 2. Coordination and Assistance

**REGIONAL GOAL 5.2.** Coordinate with and assist state agencies, transportation planning organizations and local governments to implement an energy-efficient, interagency coordinated transportation system.

**FLORIDA REGIONAL COUNCILS ASSOCIATION**
**LOCAL GOVERNMENT COMPREHENSIVE PLAN AMENDMENT REVIEW FORM 01**

Regional Planning Council: North Central Fl
Review Date: 9/24/15
Amendment Type: Adopted Amendment

Regional Planning Council Item No.: 76
Local Government: City of High Springs
Local Government Item No.: CPA 15-02
State Land Planning Agency Item No.: 15-1ESR

Date Mailed to Local Government and State Land Planning Agency: 9/25/15 (estimated)

Pursuant to Section 163.3184, Florida Statutes, Council review of local government comprehensive plan amendments is limited to adverse effects on regional resources and facilities identified in the strategic regional policy plan and extrajurisdictional impacts that would be inconsistent with the comprehensive plan of any affected local government within the region. A written report containing an evaluation of these impacts, pursuant to Section 163.3184, Florida Statutes, is to be provided to the local government and the state land planning agency within 30 calendar days of receipt of the amendment.

**DESCRIPTION OF AMENDMENT**

The amendment reclassifies 15.16 acres from Conservation to Residential Mixed (up to 4 dwelling units per acre (see attached).

**1. ADVERSE EFFECTS TO SIGNIFICANT REGIONAL RESOURCES AND FACILITIES IDENTIFIED IN THE STRATEGIC REGIONAL POLICY PLAN**

The subject property is located within one-half mile of U.S. Highways 27, 41 and 441. Nevertheless, significant adverse impacts are not anticipated to occur to the regional road network as a result of the amendment since the local government data and analysis report indicates that the nearest segment of the regional road network is anticipated to operate within the transportation minimum level of service standard established by the City Comprehensive Plan.

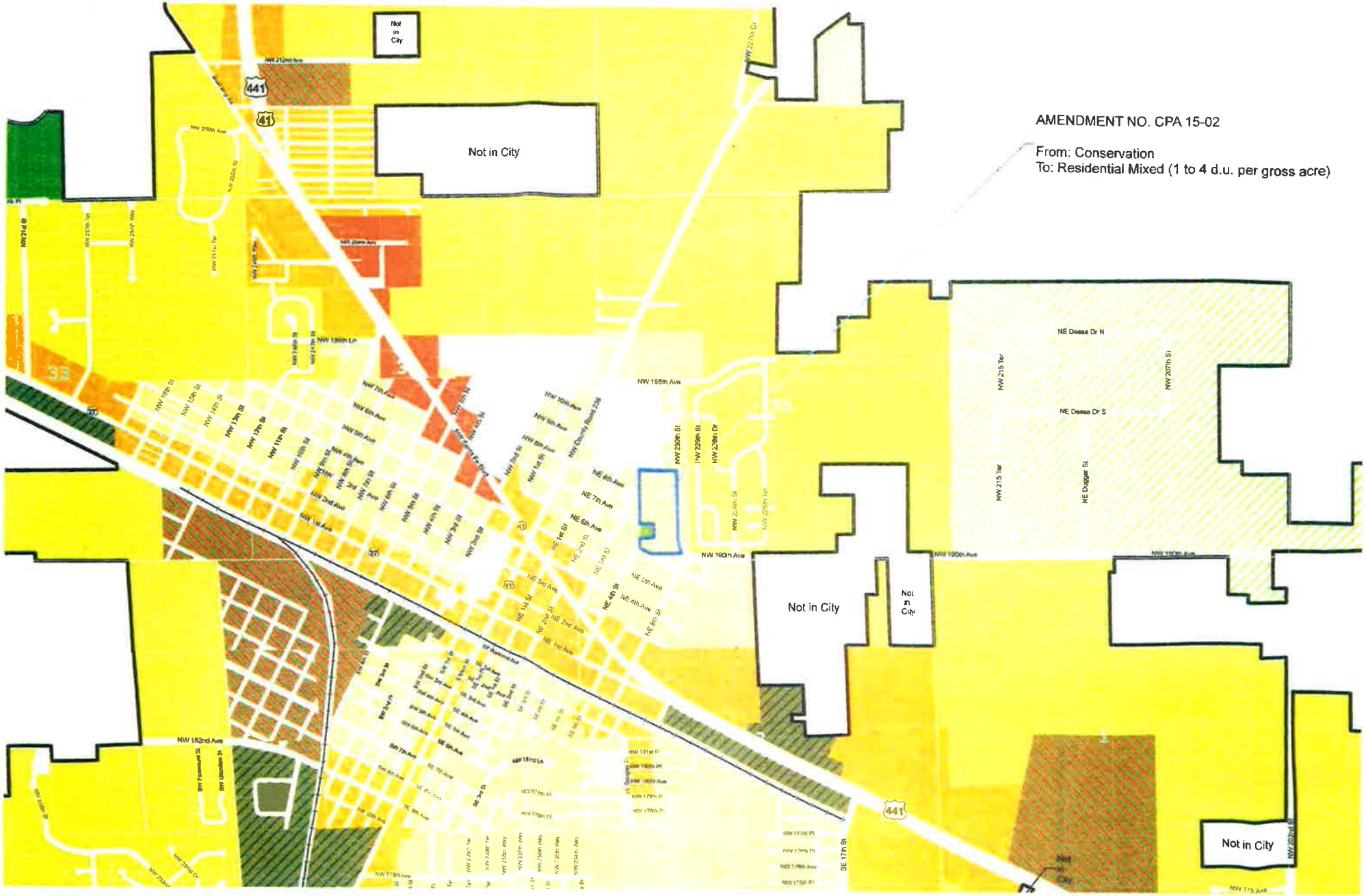
The City is located within an Area of High Recharge Potential to the Floridan Aquifer a Natural Resource of Regional Significance as identified and mapped in the regional plan. Nevertheless, significant adverse impacts are not anticipated to occur to this Natural Resources of Regional Significance as recently-adopted City item CPA 15-01 contains an objective and associated policies to protect Natural Resources of Regional Significance in a manner consistent with the regional plan (see attached).

**2. EXTRAJURISDICTIONAL IMPACTS INCONSISTENT WITH THE COMPREHENSIVE PLANS OF LOCAL GOVERNMENTS WITHIN THE REGION**

The City Comprehensive Plan, as amended, is not anticipated to create significant adverse impacts to adjoining local governments.

| | |
|---|---|
| **Request a copy of the adopted version of the amendment?** | Yes _____ No _____<br>Not Applicable ____X____ |

It is recommended that these findings be forwarded to the City and the Florida Department of Economic Opportunity.


AMENDMENT NO. CPA 15-02
From: Conservation
To: Residential Mixed (1 to 4 d.u. per gross acre)
Not in City
Not in City
Not in City
Not in City
441
NW 212nd Ave
NW 210th Ave
NW 205th St
NW 195th Ave
NW 190th Ave
NW 182nd Ave
NW 175 Ave
NE 6th Ave
NE 7th Ave
NE 1st St
NE 4th St
NE Dossa Dr N
NE Dossa Dr S
NW 215 Ter
NW 207th St
NE Duggar St
SE 17th St

# EXCERPTS FROM
# CITY ITEM CPA 15-01

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# CONSERVATION ELEMENT

## GOALS, OBJECTIVES AND POLICIES

### CON GOAL 1 - THE CITY WILL GUIDE URBAN AND RURAL DEVELOPMENT IN SUCH A WAY AS NOT TO ADVERSELY AFFECT THE COMMUNITY'S NATURAL RESOURCES, AND THUS, ENSURE THE HIGHEST ENVIRONMENTAL QUALITY.

CON OBJECTIVE 1.1 - The City shall meet or exceed the minimum air quality standards established by the FDEP.

CON Policy 1.1.1 - The City's ~~l~~**L**and ~~d~~**D**evelopment ~~**regulations**~~ **Code** will continue to require that all appropriate air quality permits be obtained prior to the issuance of final development orders so that minimum air quality levels established by the FDEP are maintained in the City.

CON Policy 1.1.2 - All new development must meet State and Federal guidelines for air emissions.

CON Policy 1.1.3 - Owners of facilities that become sources of emissions in non-compliance will be required to correct the problem.

CON Policy 1.1.4 - The City shall reduce the impact of automobile emissions and noise by requiring vegetative buffer strips along arterial roadways.

CON Policy 1.1.5 - The City will assign priority to paving high-use, unpaved roads due to their effect on the air quality and develop and implement a plan for paving those roads that are considered a problem.

CON OBJECTIVE 1.2 - The City shall maintain a high quality potable water supply within the City.

CON Policy 1.2.1 - The City shall, as part of the development review process, require the coordination and approval of development plans with the FDEP and the SRWMD to assist the City in ensuring protection of its current and projected water sources.

CON Policy 1.2.2 - The City shall prohibit uses within or adjacent to the water resources of the City which would violate water quality anti-degradation rules established by the FDEP.

CON Policy 1.2.3 - The City shall identify and make recommendations for the purchase of environmentally sensitive lands under available conservation programs such as those administered by the FDEP and the SRWMD.

CON Policy 1.2.4 - The City will adopt and adhere to the SRWMD stormwater regulations contained in Rule 40B-4 and 40B-400, FAC.

CON Policy 1.2.5 - The City shall require all new developments to manage stormwater runoff in accordance with the SRWMD regulations listed in CON Policy 1.2.4.

CON Policy 1.2.6 - The City shall require management practices, as determined by state and federal regulations, for agriculture, commercial, and domestic Future Land Uses to reduce runoff and soil erosion.

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CON Policy 1.2.7 - The City will review all development and road construction for proper consideration and routing of stormwater runoff.

CON OBJECTIVE 1.3 - The City shall protect the natural functions of the 100-year floodplain so that the flood carrying and flood storage capacities are maintained. These functions will be maintained in accordance with the established policies and regulations of the SRWMD contained in Rule 40B-4 and 40B-400, FAC.

CON Policy 1.3.1 - The City's **l**Land **d**Development ~~**regulations**~~ **Code** shall **continue to** regulate development within the 100 year to 25-year riverine floodplain. The following standards shall apply for the protection of this area.

1. Residential Future Land Uses may be considered up to a maximum density of one dwelling unit per acre. Inhabited floors shall be elevated above the level of the 100-year floodplain;
2. Development within the floodplain shall not result in the loss of flood storage capacity. Development within the 25 to 100-year floodplain shall not negatively impact adjoining properties;
3. Parking areas in commercial and industrial areas shall not be filled to the 100-year flood elevation;
4. The following specific uses will not be allowed in the 25 to 100 year floodplain: placing, depositing, or dumping of solid waste, commercial processing, storing, or disposal of pesticides, herbicides, domestic waste, (except for residential on-site sewage disposal systems), industrial waste, toxic, bio-hazardous, or hazardous materials or radioactive materials; and
5. Industrial uses shall not be permitted.

CON Policy 1.3.2 - The City's **l**Land **d**Development ~~**regulations**~~ **Code** shall regulate development within the 10 to 25-year floodplain. The following standards shall apply:

1. Residential densities may be considered at a maximum density of one dwelling unit per 2.5 acres. Inhabited floors shall be elevated above the level of the 100-year floodplain;
2. Industrial uses shall not be permitted;
3. Commercial uses other than recreation oriented business shall not be allowed; and
4. The uses not allowed in Policy 1.3.1 (D) and (E) of this plan will not be allowed in the 25 to 10 year floodplain.

CON Policy 1.3.3 - The City's **l**Land **d**Development ~~**regulations**~~ **Code** shall **continue to** contain regulations for protection of the area below the 10-year floodplain. The following standards shall apply below the 10-year floodplain:

1. The annual floodplain shall be left in its natural state;
2. Permitted uses include passive recreation (with no impervious surfaces except existing boat ramps), forestry and non-animal agricultural pursuits, open space, and other low intensity uses which maintain the function of the floodplain; and
3. Commercial and industrial uses shall not be permitted.

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CON Policy 1.3.4 - In accordance with the SRWMD regulations contained in Rule 40B-4, FAC, the City's Land Development R~~**egulations**~~ **Code** shall **continue to** address development setbacks from the ordinary high water line.

CON Policy 1.3.5 - The City shall prohibit the location of any structure, other than permitted docks, piers, or walkways within a wetland.

CON OBJECTIVE 1.4 - The quality and quantity of the City's groundwater resources shall not be degraded. The City will continue to protect Development Constraint Areas as shown on the map in the Future Land Use section of this Comprehensive Plan.

CON OBJECTIVE 1.5 - Protect and conserve the quality and quantity of groundwater resources to ensure long term public health and safety, potable water supplies from surficial, intermediate, and Floridian aquifers, and the ecological integrity of natural resources.

CON Policy 1.5.1 - The City will use data provided by the SRWMD to identify areas of high aquifer recharge potential within the City limits and within the Urban Reserve Area. The SRWMD's current mapping shows the entire City as an area of high aquifer recharge potential. These areas shall be designated on the City's future Land Use maps.

CON Policy 1.5.2 - The City will work with the County and the SRWMD to achieve regional aquifer recharge protection Objective. The City will follow guidelines consistent with accepted engineering practices that require:

1. Stormwater retention/detention basin depth consistent with SRWMD requirements for Karst sensitive areas where applicable; and
2. The use of swales and drainage easements.

CON Policy 1.5.3 - Once these Objectives are established the City will revise their regulations accordingly to ensure that the aquifer is protected from degradation from stormwater runoff.

CON Policy 1.5.4 - The City will maintain a wellhead protection ordinance for existing and future public water wells in accordance with the Future Land Use Element of this Comprehensive Plan.

CON Policy 1.5.5 - Proposed development around sinkholes and/or ponds will be subject to special review procedures in order to protect their function as recharge areas. Direct stormwater runoff into sinkholes will not be allowed. No clearing or filling of sinkholes will be allowed without review and approval by the City Commission.

CON Policy 1.5.6 - The City will mandate that all abandoned wells and all wells to be abandoned must be plugged in accordance with FDEP regulations.

CON Policy 1.5.7 - The stormwater drainage regulations will be in accordance with the SRWMD policies and require retention of stormwater runoff to maximize groundwater recharge while protecting areas of high aquifer recharge potential.

CON Policy 1.5.8 - The City shall maintain a street-cleaning program to reduce the pollution from stormwater runoff.

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CON OBJECTIVE 1.6 - The City will protect and maintain significant natural geologic features such as special Karst features- springs, caves and sinkholes in their natural condition.

CON Policy 1.6.1 - Significant geologic features, such as springs, caves, sinkholes, and other karst features shall be identified and evaluated for their importance to the overall natural resource system of the City, County, and Region.

CON Policy 1.6.2 - Outstanding geologic features such as certain springs, sinkholes, and caves shall be considered for acquisition, provided appropriate protective management can be assured.

CON Policy 1.6.3 - In instances where geologic features function as habitats for listed species, special protection will be provided commensurate with the character of the habitat.

CON Policy 1.6.4 - Significant geologic features shall be accurately identified on development proposals. The Development Review Committee shall require strategies for protecting these features during construction and after development.

These strategies shall address:

1. Inclusion of significant geologic features as part of common open space;
2. Utilization of principles of good landscape design to incorporate features as aesthetic elements;
3. Pretreatment of stormwater run-off, in accordance with County and water management district rules and regulations, prior to discharging to karst geology features; and
4. The identification of the appropriate level of treatment of wastewater effluent prior to discharge to any karst geology features; and perimeter edge buffering around features to maintain natural context, edge vegetation, and structural protection. The **l**Land **d**Development ~~**regulations**~~ **Code** shall include standards and procedures consistent with this policy.

CON Policy 1.6.5 - The City shall cooperate with the County and neighboring municipalities on the protection of groundwater within any watershed having the Florida aquifer exposed in sinks or open pits to potentially harmful deposition of atmospheric and other non-point source surface pollution where citizens of the County may be affected.

CON Policy 1.6.6 - The City shall cooperate with the County and neighboring municipalities to establish management strategies for sinkholes and sinkhole prone areas that protect water quality, hydrologic integrity, and ecological value.

CON Policy 1.6.7 - The City will cooperate with the County and regional and state agencies to acquire, in fee simple or less-than-fee simple title, lands within the City and its Urban Reserve for the preservation of natural resources and ecological integrity.
CON Policy 1.6.8 - The City will take steps to acquire the site identified as the "High Springs Reservoir". If acquired, the City will implement a management plan giving priority to the restoration and conservation of natural communities and the preservation of threatened or endangered animal species that may exist on the site.

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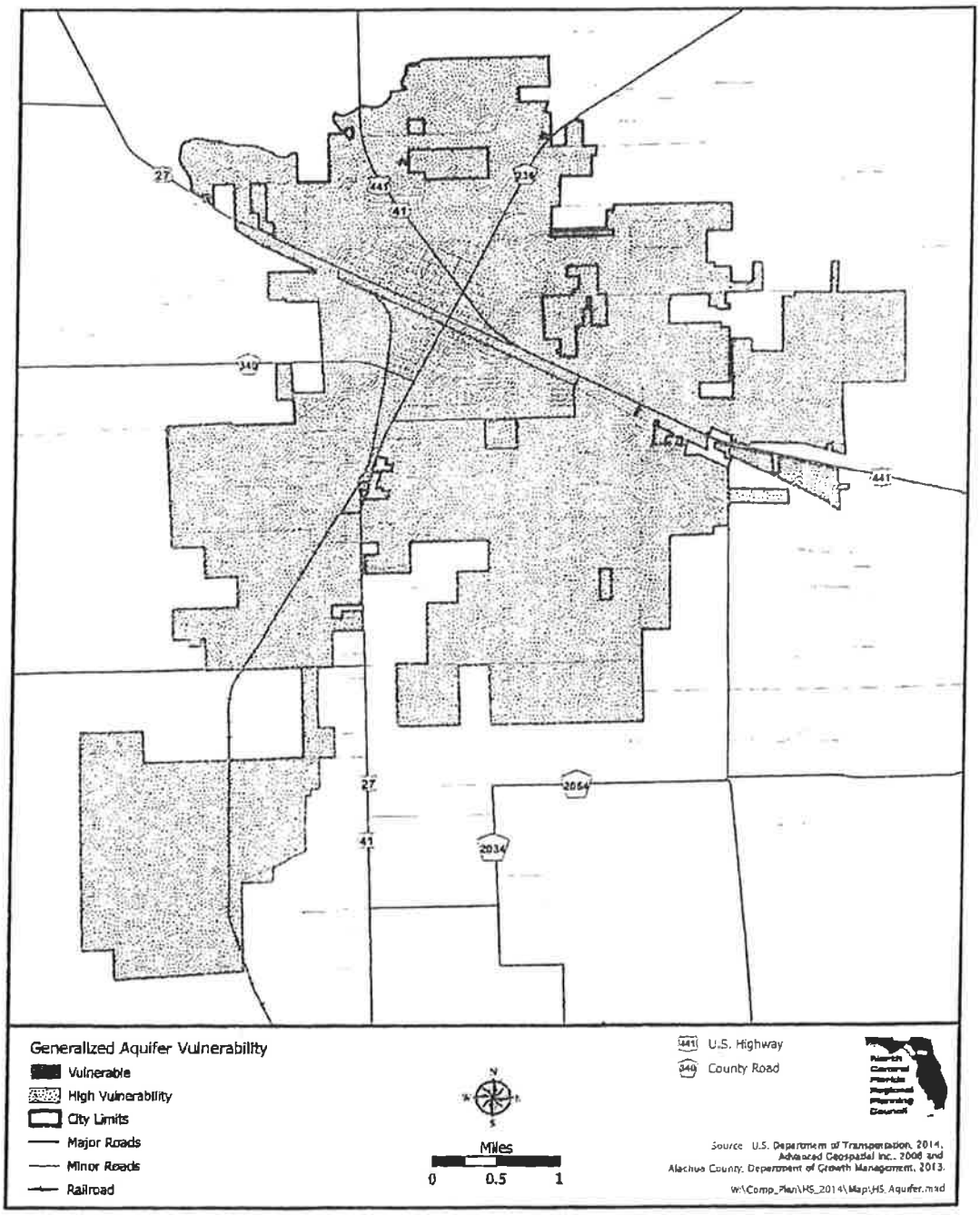
## Illustration A - X
## High Groundwater Aquifer Recharge Areas



Words **bolded and underlined** have been added.
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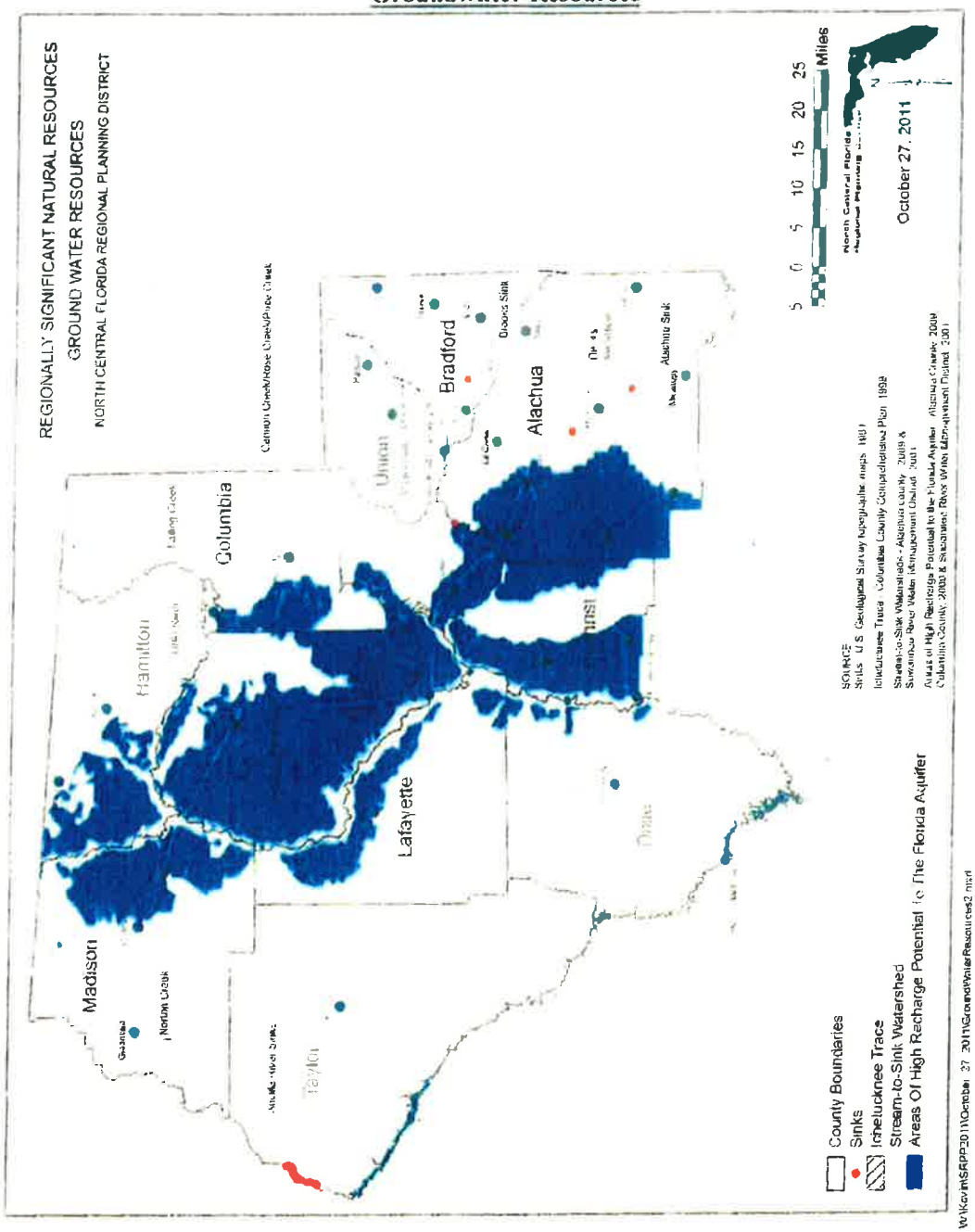
## Illustration A - XII-a
## Regionally Significant Natural Resources
## Groundwater Resources



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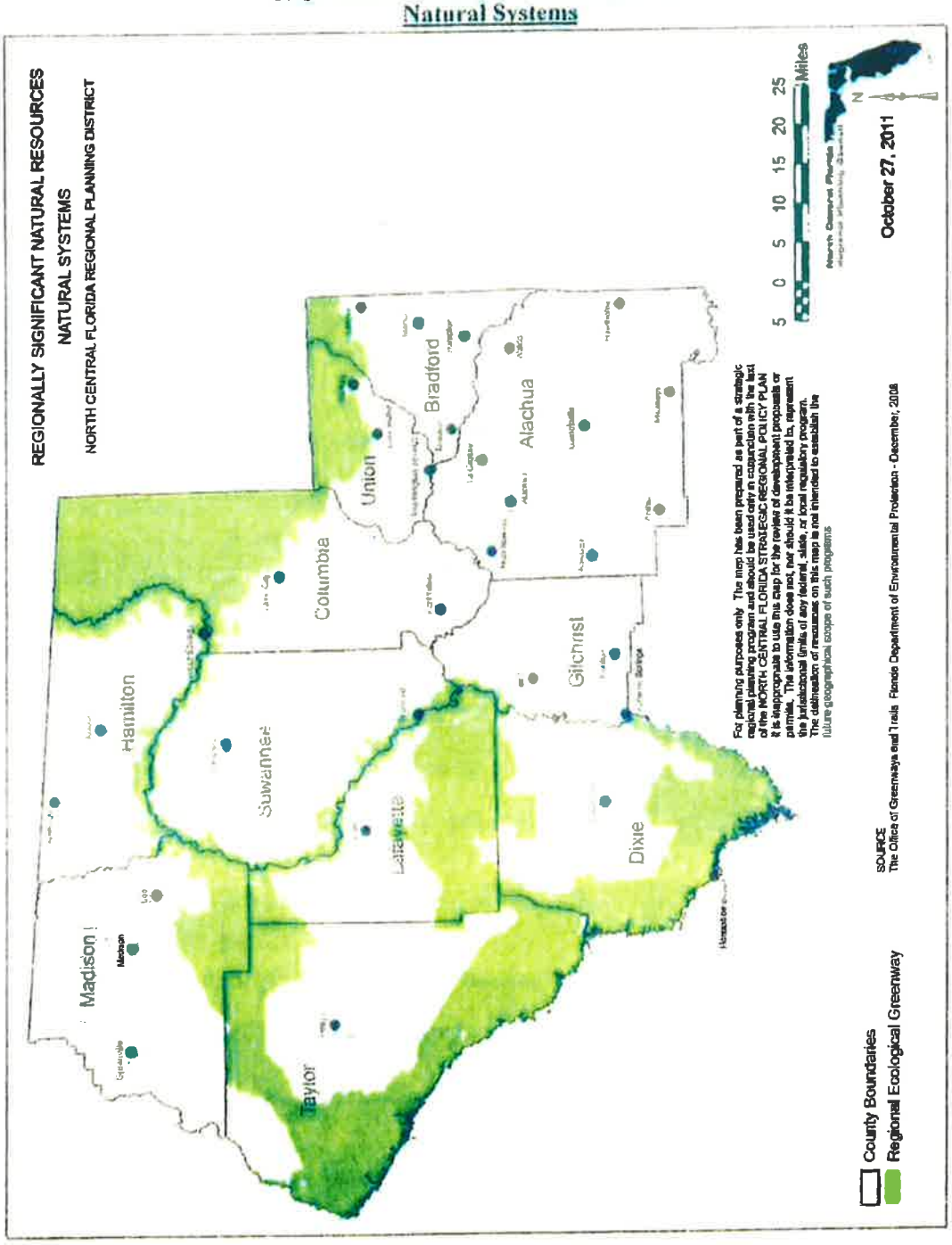
## Illustration A - XII-b
## Regionally Significant Natural Resources
### Natural Systems



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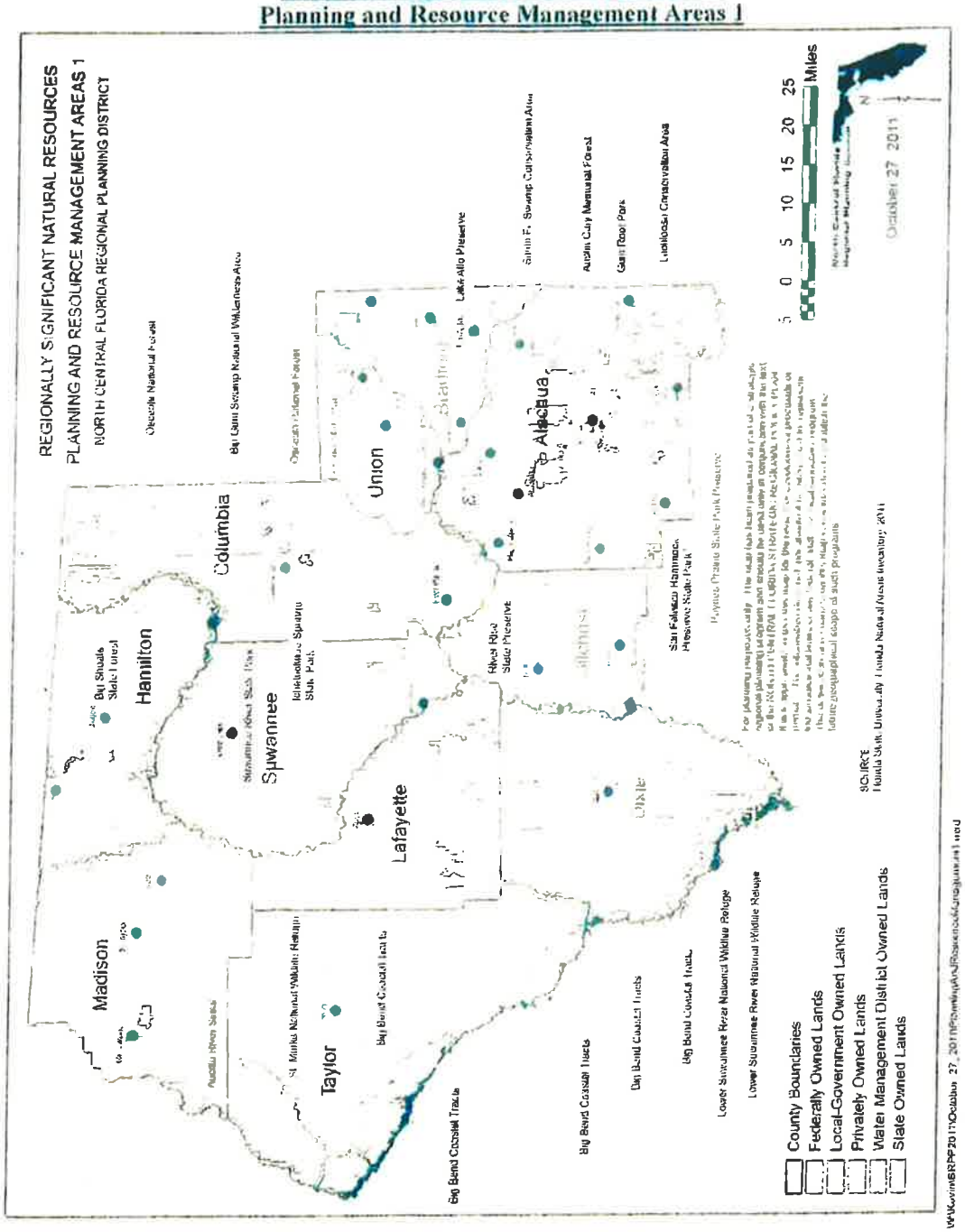
## Illustration A - XII-c
## Regionally Significant Natural Resources
## Planning and Resource Management Areas 1



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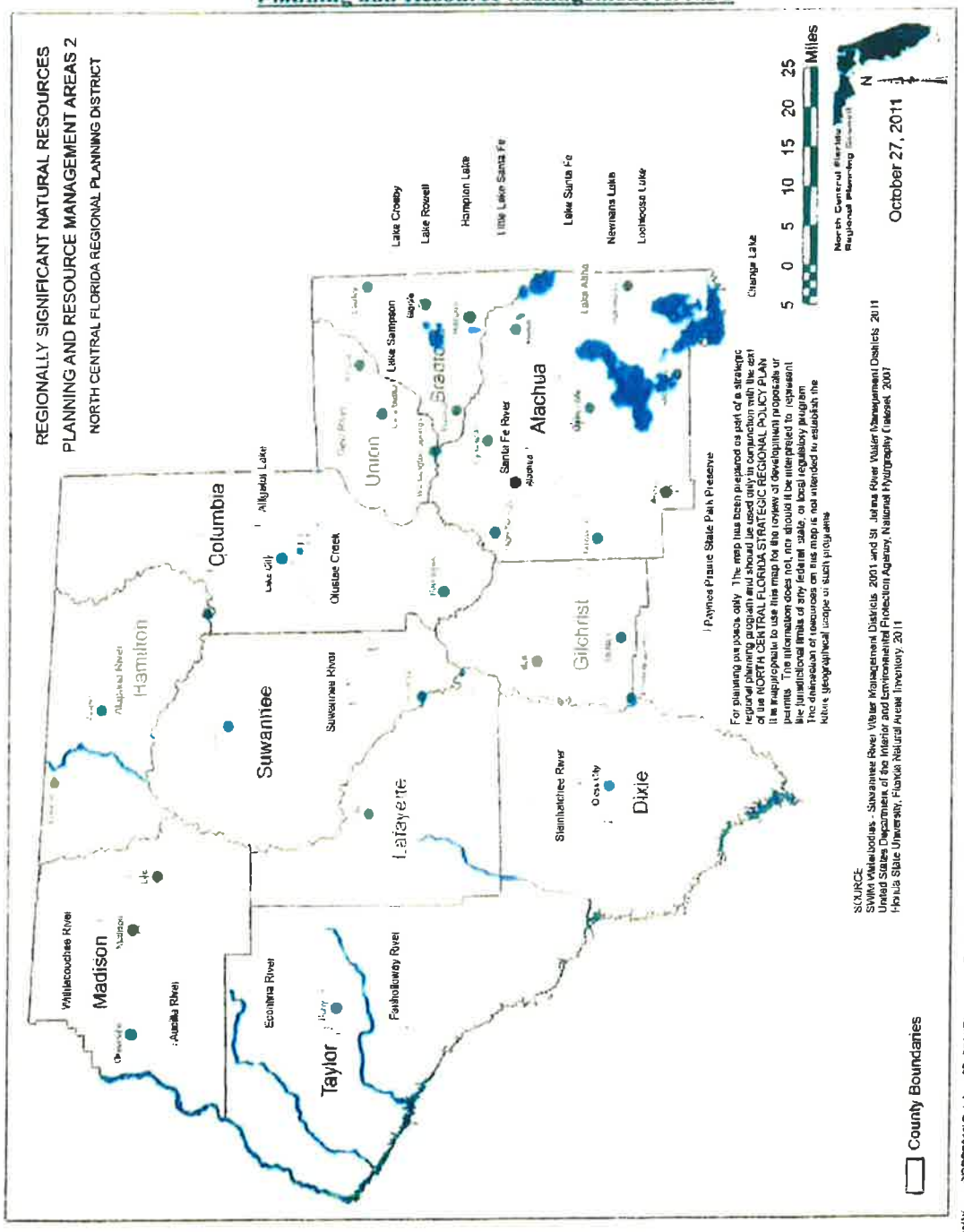
## Illustration A - XII-d
## Regionally Significant Natural Resources
## Planning and Resource Management Areas 2



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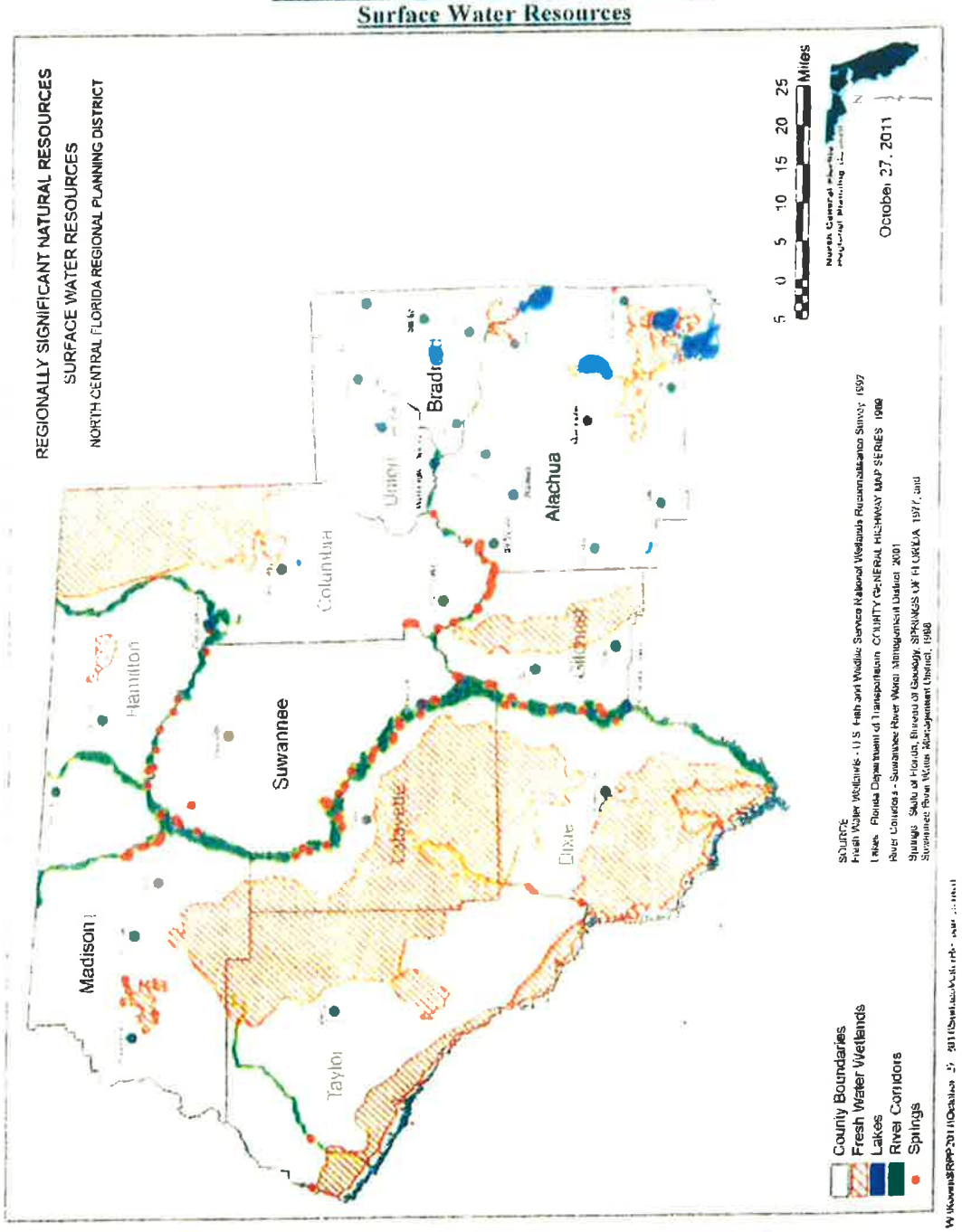
## Illustration A - XII-e
## Regionally Significant Natural Resources
## Surface Water Resources



**FLORIDA REGIONAL COUNCILS ASSOCIATION**
**LOCAL GOVERNMENT COMPREHENSIVE PLAN AMENDMENT REVIEW FORM 01**

Regional Planning Council: North Central Fl
Review Date: 9/24/15
Amendment Type: Draft Amendment

Regional Planning Council Item No.: 78
Local Government: City of Madison
Local Government Item No.: CPA 15-02
State Land Planning Agency Item No.: 15-1ER

Date Mailed to Local Government and State Land Planning Agency: 9/25/15 (estimated)

Pursuant to Section 163.3184, Florida Statutes, Council review of local government comprehensive plan amendments is limited to adverse effects on regional resources and facilities identified in the strategic regional policy plan and extrajurisdictional impacts that would be inconsistent with the comprehensive plan of any affected local government within the region. A written report containing an evaluation of these impacts, pursuant to Section 163.3184, Florida Statutes, is to be provided to the local government and the state land planning agency within 30 calendar days of receipt of the amendment.

**DESCRIPTION OF AMENDMENT**

The City is amending the text and the Future Land Use Plan Map of the City Comprehensive Plan based on an evaluation completed by the City to reflect changes in state requirements pursuant to Section 163.3191, Florida Statues. More specifically, the City is amending the text of the Land Use Element; the Transportation Element; the Housing Element; the Sanitary Sewer, Solid Waste, Drainage, Potable Water and Natural Groundwater Aquifer Recharge Element; the Conservation Element; the Recreation and Open Space Element; the Intergovernmental Coordination Element; the Capital Improvements Element; and the Public School Facilities Element; and the Future Land Use Plan Map Series of the City Comprehensive Plan (see attached excerpts).

**1. ADVERSE EFFECTS TO SIGNIFICANT REGIONAL RESOURCES AND FACILITIES IDENTIFIED IN THE STRATEGIC REGIONAL POLICY PLAN**

The City is bisected by the following roads which are identified and mapped in the North Central Florida Strategic Regional Policy Plan as part of the Regional Road Network: U.S. Highway 90; State Road 53 and State Road 145. Nevertheless, significant adverse impacts are not anticipated to occur to the regional road network as a result of the amendment since it retains Minimum Level of Service Standards for these regional facilities. Additionally, the amendment does do not result in any change in intensity or density of use. Finally, the amendment adds policies to the City Transportation Element which implement Transportation Planning Best Practices contained in the regional plan (see attached).

Significant adverse impacts are not anticipated to occur to Natural Resources of Regional Significance as identified and mapped in the regional plan as the amendment does not result in any change in intensity or density of use. The amendment also includes maps of Natural Resources of Regional Significance which are consistent with the mapped Natural Resources of Regional Significance contained in the regional plan (see attached).

## 2. EXTRAJURISDICTIONAL IMPACTS INCONSISTENT WITH THE COMPREHENSIVE PLANS OF LOCAL GOVERNMENTS WITHIN THE REGION

The City Comprehensive Plan, as amended, is not anticipated to create significant adverse impacts to adjoining local governments.

**Request a copy of the adopted version of the amendment?**

Yes ___X___ No _____

Not Applicable _____

It is recommended that these findings be forwarded to the City and the Florida Department of Economic Opportunity.

# EXCERPTS FROM THE CITY COMPREHENSIVE PLAN AMENDMENT

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II

# ~~**TRAFFIC CIRCULATION**~~ **TRANSPORTATION** ELEMENT

## INTRODUCTION

A traffic circulation system which provides for the safe and efficient movement of people and goods is needed to support existing and future development. The purpose of this plan element is to identify the types, locations and extent of existing and proposed major thoroughfares and transportation routes in the City and establish a framework for making policy decisions in planning for future transportation needs. The data collected for this plan element and its analysis, contained in the Data and Analysis document, are not part of this plan element, but provide a basis for its formulation.

The ~~**Traffic Circulation**~~ **Transportation** Element is closely related to the Future Land Use Element. This is due to the inherent two-way relationship between land use and transportation. Land use patterns directly affect the demand for transportation facilities, with more intensive land uses generating more traffic and requiring greater degrees of accessibility. Conversely, the transportation network affects land use in that access provided by transportation facilities (existing or proposed) influences the use of land located adjacent to these facilities.

In addition to the Future Land Use Element, the ~~**Traffic Circulation**~~ **Transportation** Element is coordinated and consistent with the remaining plan elements as required by the ~~**Local Government Comprehensive Planning and Land Development Regulation Act**~~ **Community Planning Act** ~~**and accompanying Chapter 9J-5, Florida Administrative Code**~~. Further, the City's traffic circulation system does not stop at political boundaries. Therefore, coordination between other local governments is a necessary prerequisite to a functional traffic circulation system. The goals, objectives and policies of the Intergovernmental Coordination Element establish guidelines to be followed which provide for coordination between various governmental entities.

The following goals, objectives and policies of this plan element are intended to serve as the plan for traffic circulation needs. The objectives and policies herein provide a basis for addressing transportation needs within the City.

## ~~**TRAFFIC CIRCULATION**~~ **TRANSPORTATION** GOAL, OBJECTIVES AND POLICIES

GOAL II - PROVIDE FOR A ~~**TRAFFIC CIRCULATION**~~ **TRANSPORTATION** SYSTEM WHICH SERVES EXISTING AND FUTURE LAND USES.

OBJECTIVE II.1 The City shall maintain a safe, convenient and efficient Level of Service Standard which shall be maintained for all motorized and non-motorized transportation systems.

Policy II.1.1 Establish level of service standard at peak hour as defined within the **most recent version of the** Florida Department of Transportation ~~**2002**~~ Quality/ Level of Service Handbook for the following roadway segments within the City:

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| ROADWAY SEGMENT NUMBER | ROADWAY SEGMENT DESCRIPTION | NUMBER OF LANES | FUNCTIONAL CLASSIFICATION | AREA TYPE | LEVEL OF SERVICE |
|---|---|---|---|---|---|
| 1 | U.S. 90/S.R. 10 (from west city limits to S.R. 53~~/S.R. 145~~) | 4 U | Principal Arterial | Rural | D |
| **2** | **U.S. 90/S.R. 10 (from S.R. 53 W to S.R. 53 E/S.R. 145)** | **4 U** | **Principal Arterial** | **Rural** | **D** |
| ~~2~~**3** | U.S. 90\S.R. 10 (from S.R. 53/S.R. 145 to east city limits) | 4 D | Principal Arterial | Rural | D |
| ~~3~~**4** | S.R. 53 (from U.S. 90 to north city limits) | 2 U | Minor Arterial | Rural | D |
| **45** | S.R. 145 (from U.S. 90 to north**east** city limits) | 2 U | Minor Arterial | Rural | D |
| ~~5~~**6** | S.R. 53 (from south city limits to U.S. 90\ S.R. 10) | 2 U | Minor Arterial | Rural | D |
| ~~6~~**7** | S.R. 14 (from south city limits to S.R. 53) | 2 U | Minor Arterial | Rural | D |
| ~~7~~**8** | C.R. 591 (from north city limits to S.R. 145) | 2 U | Minor Collector | Rural | D |
| ~~8~~**9** | C.R. 360A (from south city limits to U.S. 90\ S.R. 10) | 2 U | Minor Collector | Rural | D |

D - Divided Roadway

U - Undivided Roadway

Policy II.1.2 The City shall continue to control the number and frequency of connections and access points of driveways and roads to arterial and collector roads by requiring access points for state roads to be in conformance with Chapter 14-96 and 14-97, Florida Administrative Code~~, in effect on January 1, 2006~~ and the following requirements for City roads:

1. Permitting one access point for ingress and egress purposes to a single property or development;

2. Permitting two access points if the minimum distance between the two access points exceeds 20 feet;

3. Permitting three access points if the minimum distance between each access point is at least 100 feet; or

4. Permitting more than three access points where a minimum distance of 1,000 feet is maintained between each access point.

Policy II.1.3 The City shall continue to require the provision of safe and convenient off-street parking and loading standards, which includes the provision for non-motorized vehicle parking, which shall be located on the same lot or parcel of land the parking is intended to serve. Each off-street parking space, with the exception of handicapped parking spaces, shall be a minimum of 10 feet by 20 feet in size. Each handicapped parking space shall be a minimum of 12 feet by 20 feet in size. The City may allow the establishment of such off-street parking facilities within 300 feet of the premises they are intended to service when the practical difficulties prevent the placing of the facilities on the same lot as the premises they are designed to serve.

Policy II.1.4 The City shall continue to require any development which is required to provide a site plan or any development requiring platting, include requirements for an additional 10-foot right-of-way width for bicycle and pedestrian ways to be provided for all proposed collector and arterial roadways, as integrated or parallel transportation facilities.

**Policy II.1.5** **In accordance with Section 163.3180(5)(h)1.c. and 163.3180(5)(h)2. Florida Statutes, the City shall provide a means by which the landowner will be assessed a proportionate share of the cost of providing the transportation facilities necessary to serve the proposed development. However, the landowner shall not be held responsible for contributing to deficient transportation facilities.**

OBJECTIVE II.2 The City shall continue to require that all traffic circulation improvements be consistent with and complement the future land uses on the Future Land Use Plan Map of the Comprehensive Plan.

Policy II.2.1 The City shall, as part of the capital improvement scheduling of roadway improvements, review all proposed roadway improvements to determine if such improvement will further the direction of the Future Land Use Plan Element.

OBJECTIVE II.3 The City shall continue to coordinate its traffic circulation planning efforts with the Florida Department of Transportation for consistency with the Department's 5-Year Transportation Plan.

Policy II.3.1 The City shall review all comprehensive plans and land development activity for consistency with the Florida Department of Transportation's 5-Year Transportation Plan.

OBJECTIVE II.4 The City shall continue to provide for the protection of future right-of-ways from building encroachment by establishing right-of-way setback requirements, as provided in the rights-of-way policy of this element, for all structures along new or realigned collector and arterial roadways to be provided by either the developer or purchased as additional right-of-way.

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Policy II.4.1 The City shall maintain provisions which require all structures to provide additional setbacks for the future need of additional right-of-way. Such additional right-of-way shall be provided by the developer of the land as part of the development review process or shall be purchased by the agency improving the road.

**Policy II.4.2** **Properties under the same ownership or those consolidated for development shall be treated as one property for the purposes of access management and shall not receive the maximum potential number of access points for that frontage indicated under minimum access spacing standards.**

**Policy II.4.3** **Large commercial developments shall be required to provide and/or extend nearby local and collector streets and provide street connections with surrounding residential areas so residents may access the development without traveling on arterial streets.**

**Policy II.4.4** **Shopping centers shall be required to provide a unified access and circulation plan and require any out parcels to obtain access from the unified access and circulation system.**

**Policy II.4.5** **Existing lots unable to meet the access spacing standards for arterials shall obtain access from platted side streets, parallel streets, service roads, joint and cross-access or the provision of easements;**

**Policy II.4.6** **Adequate corner clearance shall be maintained at crossroad intersections with arterials.**

**Policy II.4.7** **The City shall encourage cross-access connections easements and joint driveways, where available and economically feasible.**

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# V

# CONSERVATION ELEMENT

## INTRODUCTION

The following goals, objectives and policies comprise the Conservation Element providing for the conservation, use and protection of the City's natural resources. The data collected for this plan element and its analysis contained in the City's Data and Analysis document, are not part of this plan element but provide a basis for its formulation.

Conservation uses are defined as activities within land areas designated for the purpose of conserving or protecting natural resources or environmental quality and within this Plan includes areas designated for such purposes as flood control, protection of quality or quantity of ground water or surface water, flood plain management, or protection of vegetative communities or wildlife habitats.

The Future Land Use Plan Map addresses Conservation Future Land Use as defined above. The Conservation Future Land Use category, shown on the Future Land Use Plan Map, identifies lands which have been designated "conservation" for the purpose of protecting natural resources or environmental quality. At present, there are no conservation uses within the City. Therefore, until such time as there are areas designated for the protection of a natural resource, this category, although listed, will not be shown on the Future Land Use Plan Map.

The Future Land Use Plan Map series includes the identification of flood prone areas, wetlands, existing and planned water wells, rivers, bays, lakes, minerals and soils, which are land cover features, but are not land uses. Therefore, although these natural resources are identified within the Future Land Use Plan Map series, they are not designated on the Future Land Use Plan Map as "conservation" areas. However, the constraints on future land uses of these natural resources are addressed in the following goals, objectives and policy statements.

## CONSERVATION GOAL, OBJECTIVES AND POLICIES

### GOAL V - CONSERVE, THROUGH APPROPRIATE USE AND PROTECTION, THE RESOURCES OF THE CITY TO MAINTAIN THE INTEGRITY OF NATURAL FUNCTIONS.

OBJECTIVE V.1 The City shall continue to enforce provisions within the site plan review process to protect air quality through the appropriate siting of development and associated public facilities.

Policy V.1.1 The City shall continue to require that all appropriate air quality permits are obtained prior to the issuance of development orders, so that minimum air quality levels established by the Florida Department of Environmental ~~**Regulation**~~ **Protection** are maintained in the City.

OBJECTIVE V.2 The City, in order to protect the quality and quantity of current and projected water sources, hereby establishes a 500-foot wellfield protection area around community water system wells. In addition, the City, in order to protect high groundwater aquifer recharge areas, shall limit development in these areas as specified in the high groundwater aquifer recharge protection policy of the Sanitary Sewer, Solid Waste, Drainage, Potable Water and Natural Groundwater Aquifer Recharge Element of this Comprehensive Plan.

concern and rare or unique vegetative communities; provided, however, if competent and substantial scientific evidence demonstrating that an endangered, threatened or species of special concern, wildlife habitat or rare and unique vegetative community is located within the area of any proposed development which is equal to or greater than 20 acres is presented to the City at the time of a preliminary plat or site and development plan is reviewed by the City, the developer shall evaluate the impacts on such habitats or communities. As a condition of permit approval of any proposed development within these areas, such evaluation shall consist of a survey of the development site conducted by the developer to identify the presence of any state and federally protected plant and animal species.

If protected species are found on the development site or would be affected by the development, a management plan shall be required from the developer, including necessary modifications to the proposed development, to ensure the preservation of the protected species and their habitat. The City shall require the use of best management practices for the conservation, appropriate use and protection of fisheries, wildlife and wildlife habitats, identify and protect native wildlife and their habitats, including state and federally protected plant and animal species (endangered, threatened and species of special concern), within proposed development sites and protect these natural resources from the impacts of development by the use of the Florida Fish and Wildlife Conservation Commission Strategic Habitat Conservation Areas maps, Florida Natural Areas Inventory, and North Central Florida Strategic Regional Policy Plan Regionally Significant Natural Resources map series to identify habitats which potentially contain endangered, threatened or species of special concern, and rare or unique vegetative communities prior to granting development approval. Both the survey and the management plan shall be done in consultation with the Florida Fish and Wildlife Conservation Commission, but the final approval of the management plan shall be by the City.

OBJECTIVE V.5 The City, in order to protect significant natural resources in a manner which is in conformance with and furthers the North Central Florida Strategic Regional Policy Plan, as amended ~~**February 27, 2003**~~ **October 27, 2011**, hereby adopts the following maps as they apply to the City as part of the Future Land Use Map Series of this Comprehensive Plan;

1. Regionally Significant Natural Resources - Ground Water Resources, dated ~~**July 17, 2001**~~ **October 27, 2011**;
2. Regionally Significant Natural Resources - Natural Systems, dated ~~**July 17, 2001**~~ **October 27, 2011**;
3. Regionally Significant Natural Resources - Planning and Resource Management Areas, dated ~~**July 17, 2001**~~ **October 27, 2011**;
4. Regionally Significant Natural Resources - Planning and Resource Management Areas (Surface Water Improvement Management Water Bodies), dated ~~**July 17, 2001**~~ **October 27, 2011**; and
5. Regionally Significant Natural Areas - Surface Water Resources, dated ~~**July 17, 2001**~~ **October 27, 2011**.

The following policies provide direction for the use of these maps in applying the referenced policies of this Comprehensive Plan.

Policy V.5.1 The map entitled Regionally Significant Natural Resources - Ground Water Resources, dated ~~**July 17, 2001**~~ **October 27, 2011**, included within the Future Land Use Map Series, identifies groundwater resources for the application of the provisions of the high groundwater aquifer protection policy of the Sanitary Sewer, Solid Waste, Drainage, Potable Water and Natural Groundwater Aquifer Recharge Element of this Comprehensive Plan.

Policy V.5.2 The map entitled Regionally Significant Natural Resources - Natural Systems, dated ~~**July 17, 2001**~~ **October 27, 2011**, included within the Future Land Use Map Series, identifies listed species for the application of the provisions the critical wildlife habitat policy of this element.

Policy V.5.3 The maps entitled Regionally Significant Natural Resources - Planning and Resource Management Areas, dated ~~**July 17, 2001**~~ **October 27, 2011**, included within the Future Land Use Map Series, identifies publicly owned regionally significant lands for application of the provisions of the conservation land use policy of the Future Land Use Element of this Comprehensive Plan.

Policy V.5.4 The maps entitled Regionally Significant Natural Resources - Planning and Resource Management Areas (Surface Water Improvement Management Water Bodies), dated ~~**July 17, 2001**~~ **October 27, 2011**1, included within the Future Land Use Map Series, identifies surface water management improvement water bodies for the application of the provisions of the surface water runoff policy of this element.

Policy V.5.5 The map entitled Regionally Significant Natural Areas - Surface Water Resources, dated ~~**July 17, 2001**~~ **October 27, 2011**, included within the Future Land Use Map Series, identifies surface water resources for the application of the provisions of the surface water protection policy of this element.

ILLUSTRATION A - XI-a

**Regionally Significant Natural Resources**

**Groundwater Resources**

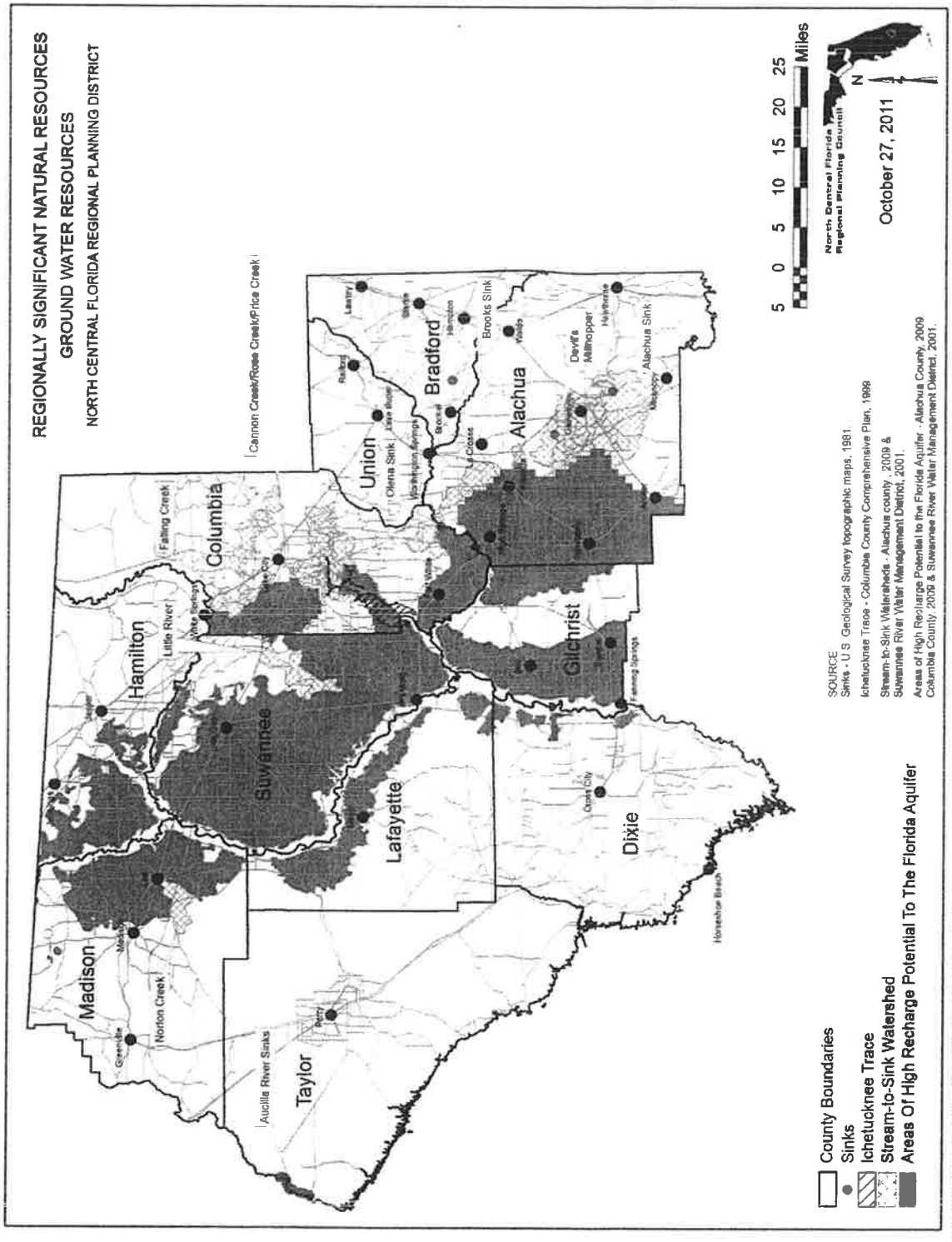


ILLUSTRATION A - XI-b

**Regionally Significant Natural Resources**

**Natural System**

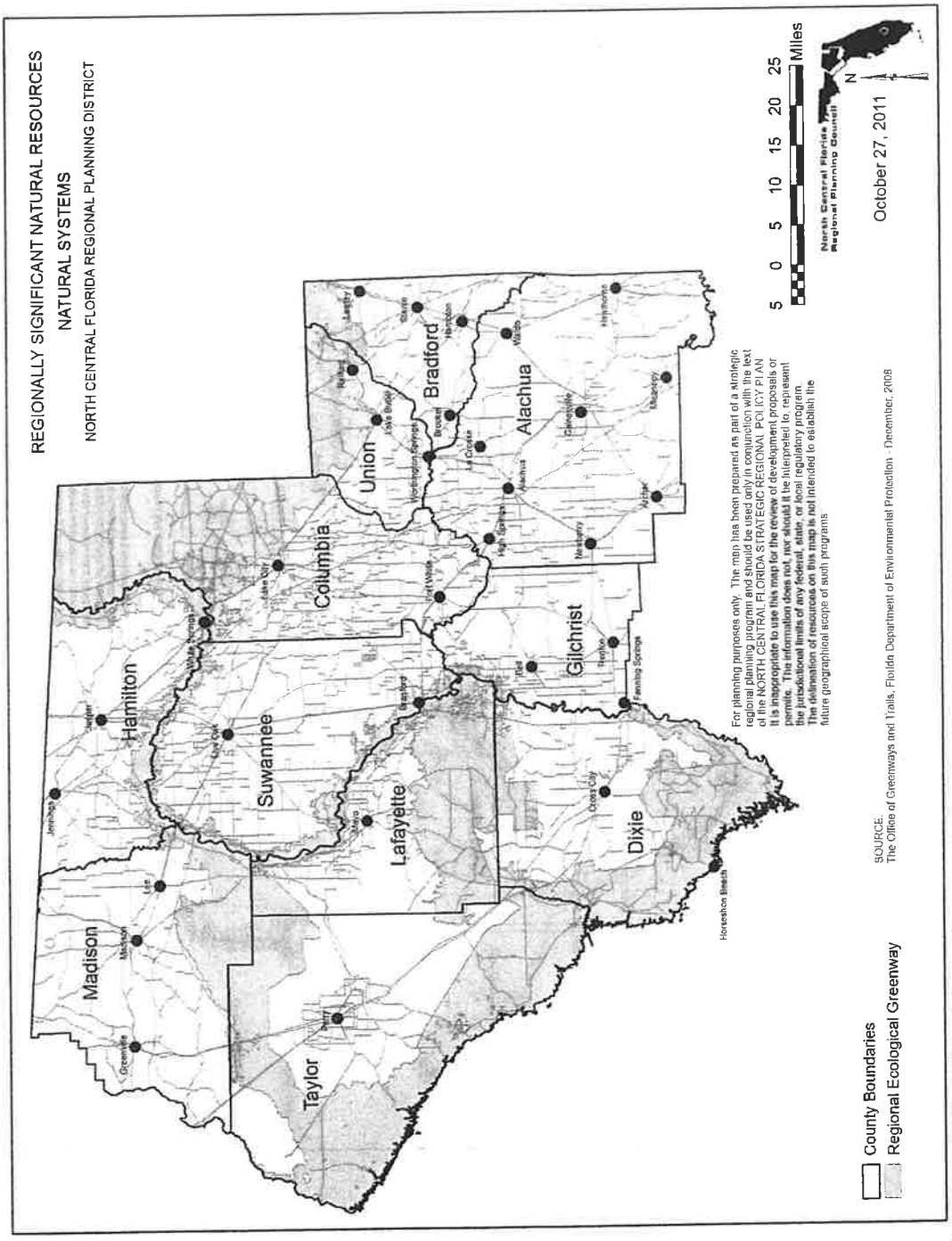
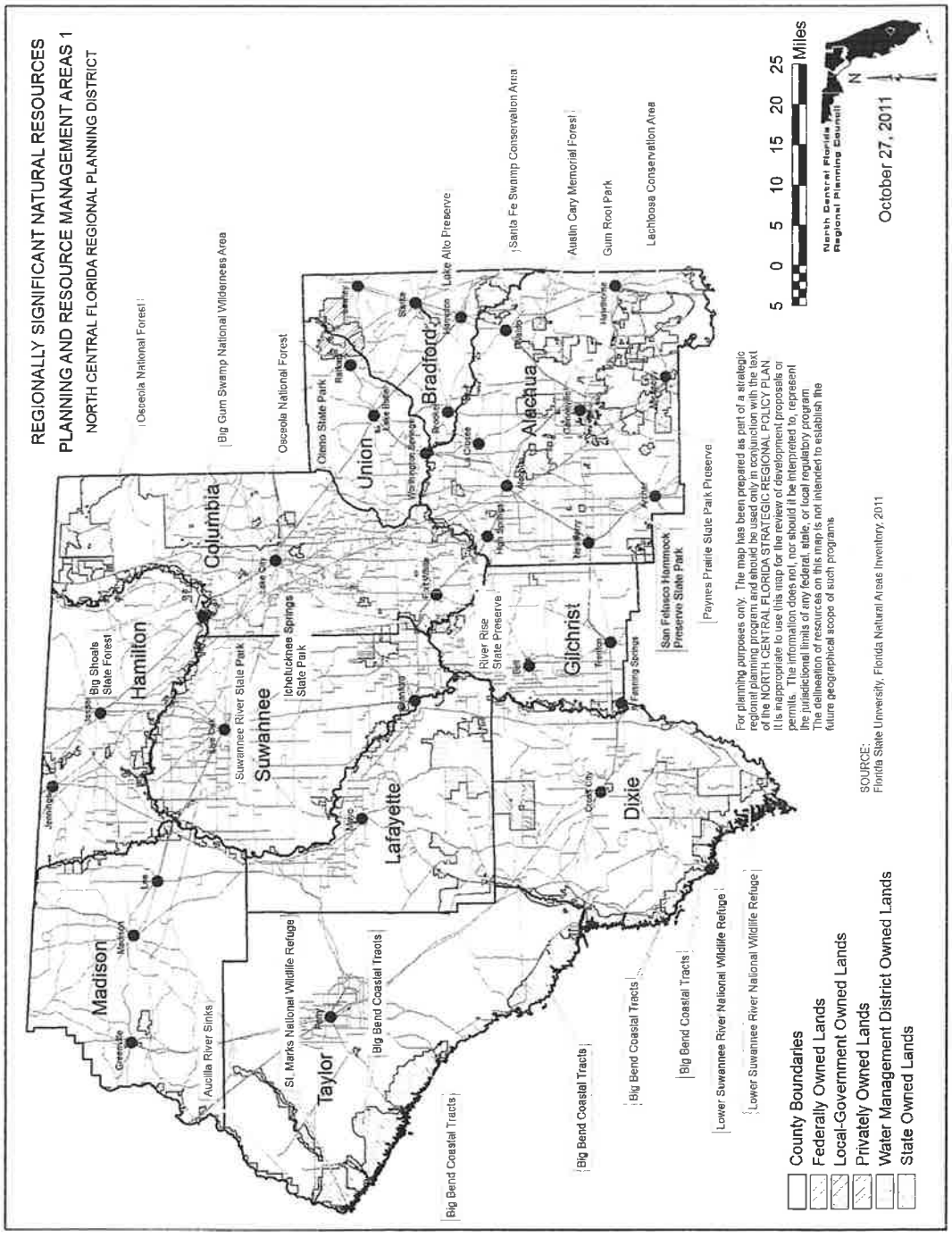


ILLUSTRATION A - XI-c

**Regionally Significant Natural Resources**

**Planning and Resource Management Areas 1**



# ILLUSTRATION A - XI-d

## Regionally Significant Natural Resources
## Planning and Resource Management Areas 2

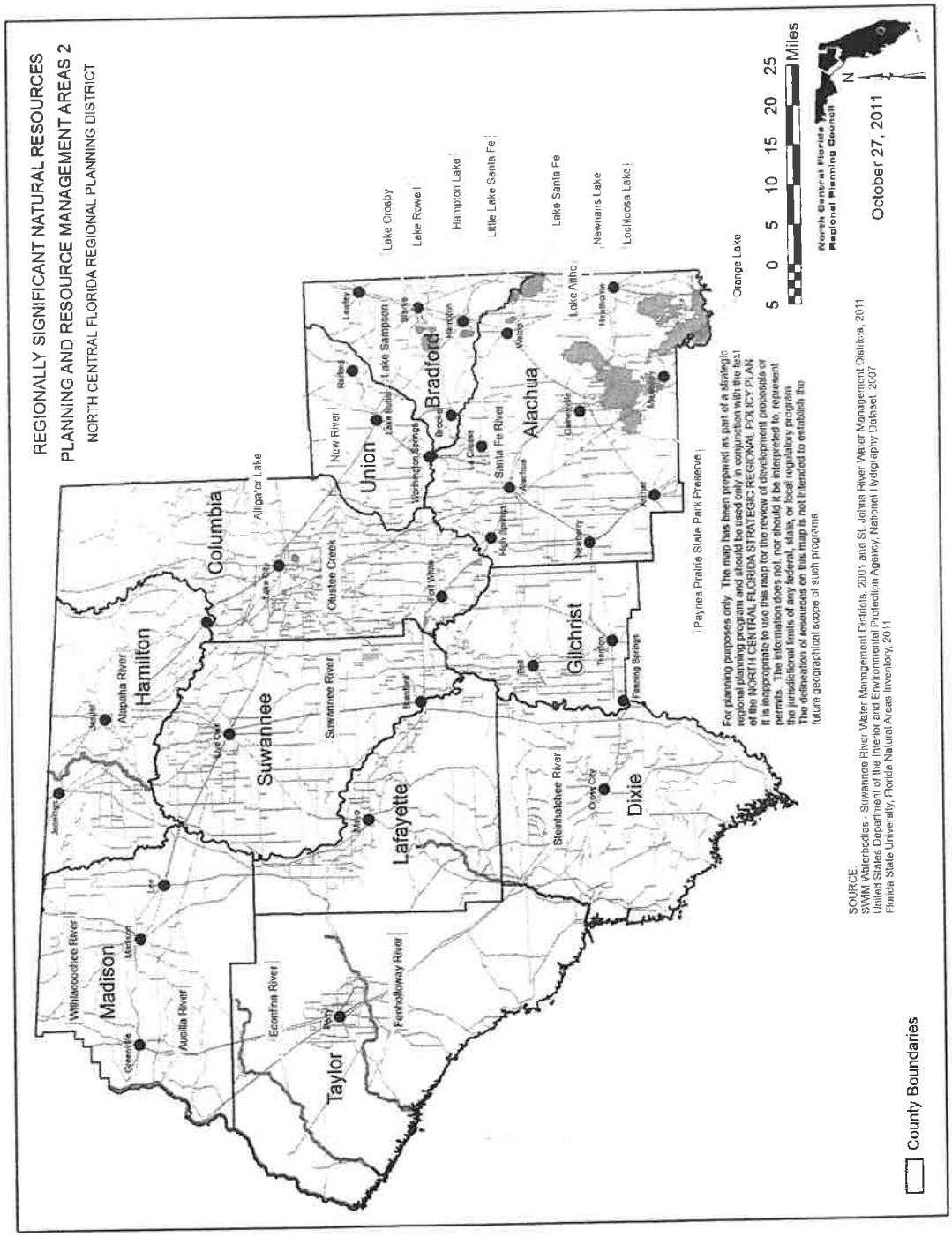


ILLUSTRATION A - XI-e

**Regionally Significant Natural Resources**

**Surface Water Resources**

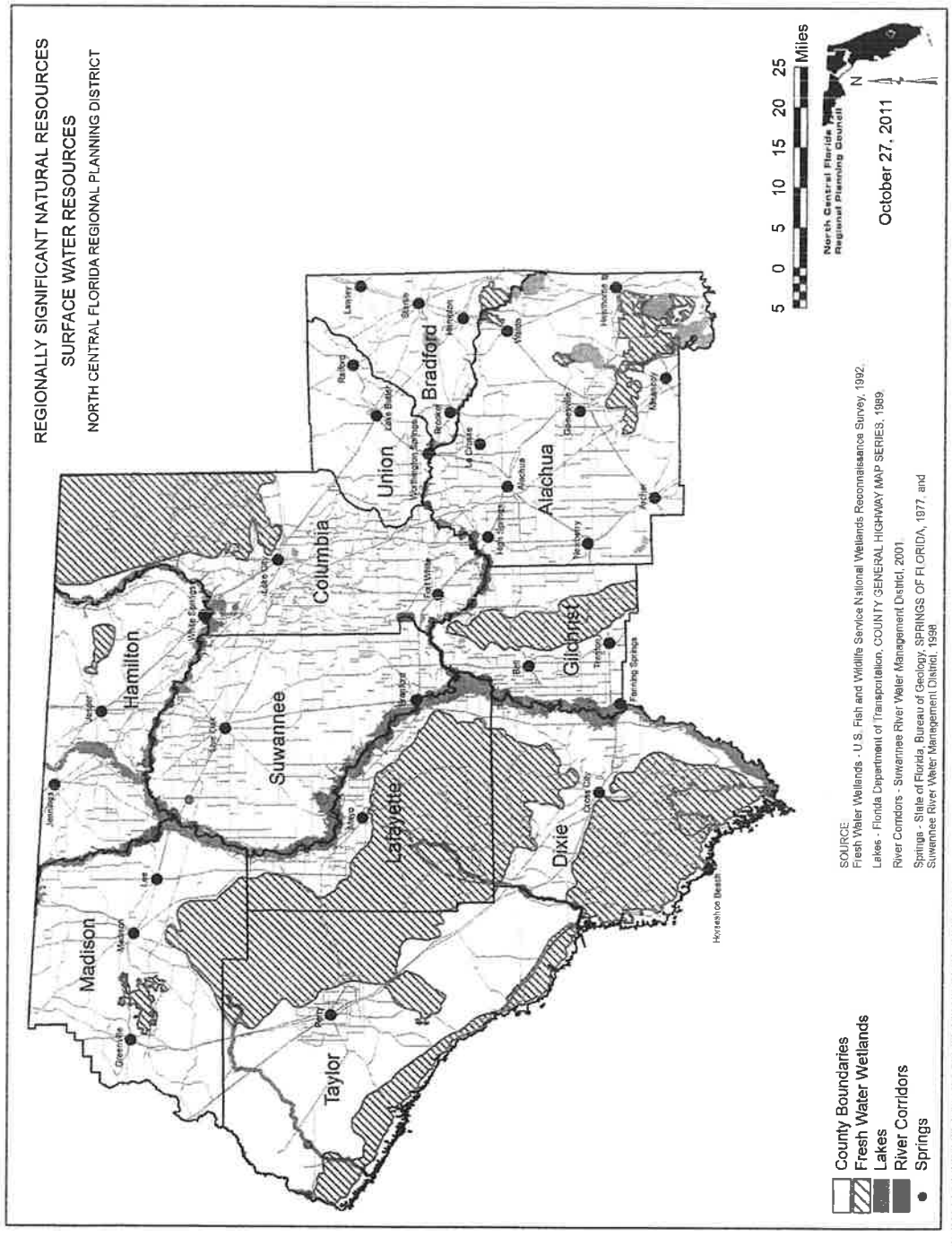



ILLUSTRATION A - XII

# EXCERPTS FROM THE
# NORTH CENTRAL FLORIDA STRATEGIC REGIONAL POLICY PLAN

# North Central Florida
# Strategic Regional Policy Plan

October 2011

This document has been prepared with financial assistance from the Florida Department of Community Affairs

North Central Florida Regional Planning Council
2009 NW 67th Place
Gainesville, Florida 32653-1603
352.955.2200

Adopted May 23, 1996
Amended August 28, 1997, February 27, 2003 and October 27, 2011


# Chapter V
# Regional Transportation

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003 and October 27, 2011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# Chapter V: Regional Transportation

## A. Conditions and Trends

### 1. Introduction

The region is served by four public transit system service providers, two major and three shuttle/commuter air carriers, one passenger and three freight rail systems, one bus line, and the regional road network. Due to its rural nature, north central Florida is heavily dependent upon automobile and truck transportation. Generally, the existing motor vehicle ground transportation and rail freight transportation systems are adequate.

### 2. Public Transit

Public transit is lightly utilized in north central Florida. The Gainesville Regional Transit System is the region's only community with a fixed-route public transit system. Paratransit services are available throughout the region provided by Big Bend Transit, Inc., the Suwannee River Economic Council, A & A Transport, MV Transportation, and Suwannee Valley Transit Authority. The Gainesville Regional Transit System also provides paratransit services in Alachua County. Intercity bus transportation is provided by Greyhound Bus Lines. The carrier stops in the following north central Florida municipalities: Gainesville, Hawthorne (bus stop), Waldo ( bus stop), Starke, Lake City, and Perry.[1]

The region's rural character and low population density does not easily lend itself to the provision of public transit systems. Correspondingly, only a small percentage of the region's population use public transit. As indicated in Table 5.1 only 1.5 percent of year 2000 north central Florida workers age 16 and over reported using public transportation as their means of transportation to work. Alachua County, which includes Gainesville's fixed-route bus system, had the highest percentage of workers using public transit at 2.4 percent. Lafayette County reported the lowest usage at 0.0 percent. The table also reveals a decline in public transit usage between 1990 and 2000.

[1]Greyhound Bus Lines, Inc., July 8, 2009, http://www.greyhound.com/home/TicketCenter/en/locations.asp?state=fl

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003 and October 27, 2011

proportion of the trips on the failing road network are attributable to the project. The percentage is multiplied by the costs of the transportation projects needed to restore level of service for the failing facilities to determine an amount of money, which is the developer's proportionate-fair share payment.

## e. Transportation Planning Best Practices

While north central Florida local governments are financially unable to fund traditional transportation concurrency, adverse impacts to the regional road network can be minimized through sound transportation planning. Transportation Planning Best Practices for north central Florida local governments could include enhancing road network connectivity, providing parallel local routes to the Regional Road Network, incorporating access management strategies, and developing multimodal transportation systems. By relying on transportation planning best practices, urban development can still be directed to incorporated municipalities, urban service areas, and urban development areas while minimizing transportation infrastructure costs and declines in level of service. Examples of policy areas which could be addressed in local government comprehensive plans to implement these transportation planning best practices include the following.

Enhance Road Network Connectivity by

Establishing a comprehensive system of street hierarchies with appropriate maximum spacing for local, collector, and arterial street intersection and arterial spacing, including maximum intersection spacing distances for local, collector, and arterial streets;

Establishing a thoroughfare plan and right-of-way preservation requirements to advance the development of arterial and collector streets throughout the jurisdiction;

Limiting or discouraging the use of cul-de-sacs and dead-end streets, limiting the maximum length of cul-de-sacs and dead end streets, and encouraging the use of traffic calming devices and strategies as an alternative to dead end streets and cul-de-sacs;

Encouraging street stubs for connections to future development requiring connections to existing street stubs/dead end streets when adjacent parcels are subdivided/developed in the future, and requiring developments to connect through to side streets at appropriate locations;

Encouraging the creation of paths that provide shortcuts for walking and cycling where dead-end streets exist, mid-block bike paths and pedestrian shortcuts, and limiting the maximum spacing between pedestrian/bicycle connections as well as; or

Limiting or discouraging gated communities and other restricted-access roads.

Provide Parallel Local Routes and Other Alternative Local Routes to the Regional Road Network.

Planning and mapping parallel roadway and cross street networks to provide a clear framework for implementing alternative routes to the Regional Road Network;

Adding segments of the parallel roadway and cross street networks to the capital improvements program;

Encouraging developer participation in implementing the system through fair share agreements as a condition of development approval for Regional Road Network concurrency mitigation; or

Encouraging the establishment of a long-term concurrency management system plan for accomplishing the parallel local routes and interparcel cross-access in selected areas.

Promote Access Management Strategies by

Requiring large commercial developments to provide and/or extend existing nearby local and collector streets and provide street connections with surrounding residential areas so residents may access the development without traveling on the Regional Road Network;

Requiring shopping centers and mixed-use developments to provide a unified access and circulation plan and require any outparcels to obtain access from the unified access and circulation system;

Properties under the same ownership or those consolidated for development will be treated as one property for the purposes of access management and will not received the maximum potential number of access points for that frontage indicated under minimum access spacing standards;

Existing lots unable to meet the access spacing standards for the Regional Road Network must obtain access from platted side streets, parallel streets, service roads, joint and cross-access or the provision of easements;

Establishing minimum access spacing standards for locally maintained thoroughfares and use these to also guide corner clearance;

Maintaining adequate corner clearance at crossroad intersections with the Regional Road Network;

Encouraging sidewalk connections from the development to existing and planned public sidewalk along the development frontage;

Encouraging cross-access connections easements and joint driveways, where available and economically feasible;

Encouraging closure of existing excessive, duplicative, unsafe curb cuts or narrowing of overly wide curb cuts at the development site;

Encouraging safe and convenient on-site pedestrian circulation such as sidewalks and crosswalks connecting buildings and parking areas at the development site;


Encouraging intersection and/or signalization modifications to improve roadway operation and safety;

Encouraging the addition of dedicated turn lanes into and out of development;

Encouraging the construction of public sidewalks along all street frontages, where they do not currently exist;

Encouraging the widening of existing public sidewalks to increase pedestrian mobility and safety;

Encouraging the deeding of land for the addition and construction of bicycle lanes;

Encouraging the provision of shading through awnings or canopies over public sidewalk areas to promote pedestrian traffic and provide protection from inclement weather to encourage walking;

Encouraging the construction of new road facilities which provide alternate routes to reduce congestion; or

Encouraging the addition of lanes on existing road facilities, especially where it can be demonstrated that the road will lessen impacts to the Regional Road Network.

Develop Multimodal Transportation Systems by

Encouraging development at densities within urban areas which support public transit;

Providing one or more park-and-ride lots to encourage carpooling and ridesharing, and the use of public transit among inter-city commuters;

Providing a system of sidewalks and/or bike paths connecting residential areas to schools, shopping, and recreation facilities;

Establishing an interlocal agreement with an existing public mass transit system provider to provide regular daily inter-city transit service for inter-city commuters; or

Establishing a local public mass transit system.

# C. Regional Goals and Policies

## 1. Regional Road Network

**REGIONAL GOAL 5.1.** Mitigate the impacts of development to the Regional Road Network as well as adverse extrajurisdictional impacts while encouraging development within urban areas.

**Regional Indicators**

1. In 2009, 33.9 miles, or 2.7 percent, of the north central Florida Regional Road Network did not meet the minimum operating level of service standard contained in local government comprehensive plans.

2. In 2009, 23.4 miles, or 5.4 percent, of Strategic Intermodal System roadways within north central Florida did not meet the minimum operating level of service standard established by the Florida Department of Transportation.

3. In 2009, 10.5 miles, or 1.3 percent, of State Highway System roads which were not part of the Strategic Intermodal System within north central Florida did not meet the minimum operating level of service standard established by the Florida Department of Transportation.

4. In 2009, 9 of the 44 local governments in the region had within their jurisdiction have at least 10 percent or more of the Regional Road Network located within their jurisdictions operating below the minimum level of service standard contained in local government comprehensive plans.

5. In 2009, 17 of the 44 local governments in the region are projected to have at least 10 percent or more of the Regional Road Network located within their jurisdictions operating below the minimum level of service standard contained in local government comprehensive plans by the year 2025.

### a. Local Government Comprehensive Plans

Table 5.17 below summarizes Regional Policies 5.1.1 through 5.1.4.

**TABLE 5.17**

**SUMMARY OF REGIONAL PLAN POLICIES 5.1.1 THROUGH 5.1.4
LOCAL GOVERNMENT COMPREHENSIVE PLANS**

| Area | Local Government Comprehensive Plans Containing Transportation Planning Best Practices | Regional Plan Determination of Impacts |
|---|---|---|
| Municipalities, Urban Service Areas, Urban Development Areas | Yes | Adequately Mitigated |
| Municipalities, Urban Service Areas, Urban Development Areas | No | Florida Department of Transportation Level of Service E |
| Rural Areas | Yes | Florida Department of Transportation Level of Service E |
| Rural Areas | No | Florida Department of Transportation Level of Service D |

Source: North Central Florida Regional Planning Council, 2011.

**Policy 5.1.1.** Within municipalities, urban service areas, or urban development areas where local government comprehensive plans include goals and policies which implement Transportation Planning Best Practices, adverse impacts to the Regional Road Network are adequately. Such local government comprehensive plans and plan amendments within municipalities, urban service areas, or urban development areas shall not be subject to a regional planning council determination of Regional Road Network or extrajurisdictional impacts.

**Policy 5.1.2.** Within municipalities, urban service areas, and urban development areas where local government comprehensive plans do not include goals and policies implementing Transportation Planning Best Practices, local government comprehensive plans and plan amendments shall be subject to a regional planning council determination of Regional Road Network and extrajurisdictional impacts based on the minimum level of service standard of E as determined by the Florida Department of Transportation Quality/Level of Service Handbook.

**Policy 5.1.3.** Outside municipalities, urban service areas, and urban development areas where local government comprehensive plans include goals and policies implementing Transportation Planning Best Practices, local government comprehensive plans and plan amendments shall be subject to a regional planning council determination of Regional Road Network and extrajurisdictional impacts based on the minimum level of service standard of E as determined by the Florida Department of Transportation Quality/Level of Service Handbook.

**Policy 5.1.4.** Outside municipalities, urban service areas, and urban development areas where local government comprehensive plans do not include goals and policies implementing Transportation Planning Best Practices, local government comprehensive plans and plan amendments shall be subject to a regional planning council determination of Regional Road Network and extrajurisdictional impacts based on the minimum level of service standard of D as determined by the Florida Department of Transportation Quality/Level of Service Handbook.

## b. Developments of Regional Impact

Table 5.18 below summarizes Regional Policies 5.1.5 and 5.1.6.

**TABLE 5.18**
**SUMMARY OF REGIONAL PLAN POLICIES 5.1.5 THROUGH 5.1.6**
**DEVELOPMENTS OF REGIONAL IMPACT**

| Area | Local Government Comprehensive Plans Containing Transportation Planning Best Practices | Regional Plan Determination of Impacts |
|---|---|---|
| **Municipalities, Urban Service Areas, Urban Development Areas** | Yes | Local Comprehensive Plan Level of Service Standard |
| **Municipalities, Urban Service Areas, Urban Development Areas** | No | Local Comprehensive Plan Level of Service Standard |
| **Rural Areas** | Yes | Local Comprehensive Plan Level of Service Standard |
| **Rural Areas** | No | Local Comprehensive Plan Level of Service Standard |

Source: North Central Florida Regional Planning Council, 2011.

**Policy 5.1.5.** The significant and adverse transportation impacts to the Regional Road Network created by a Development of Regional Impact shall be considered adequately mitigated where the local government development order contains conditions which either maintain the minimum level of service standard established in local government comprehensive plans for all significantly and adversely impacted portions of the Regional Road Network consistent with Section 380.06, Florida Statutes, or where the local government development order mitigates impacts to the Regional Road Network through the use of proportionate share consistent with Section 163.3184, Florida Statutes, and Rule 9J-2.045, Florida Administrative Code.

**Policy 5.1.6.** For purposes of Policy 5.1.5, the minimum level of service standard for the Regional Road Network shall be as established in local government comprehensive plans.

**Policy 5.1.7.** All proportionate share funds generated by anticipated significant and adverse impacts to the Regional Road Network as a result of Developments of Regional Impact shall be used to make transportation modifications identified in the local government development order which benefit the Regional Road Network.

# 2. Coordination and Assistance

**REGIONAL GOAL 5.2.** Coordinate with and assist state agencies, transportation planning organizations and local governments to implement an energy-efficient, interagency coordinated transportation system.

**NORTH CENTRAL FLORIDA REGIONAL PLANNING COUNCIL**

**September 17, 2015**

**Clearinghouse Item #79 - Sabal Trail Natural Gas Pipeline Draft Environmental Impact Statement**

## INTRODUCTION

Clearinghouse Item #79 consists of the Sabal Trail Natural Gas Pipeline Draft Environmental Impact Statement. Comments are sought by the Florida State Clearinghouse under the Federal Coastal Zone Management Act.

## PROJECT DESCRIPTION

The Applicant (Sabal Trail Transmission, LLC) has filed an application for the Federal Energy Regulatory Commission pursuant to Section 7 of the Natural Gas Act seeking Certificates of Public Convenience and Necessity to construct, own, operate and maintain an interstate natural gas transmission facility for which the preferred alternative transects the following north central Florida counties: Alachua; Gilchrist; Hamilton; Levy; Marion; and Suwannee (see attached map, page 29).

The Environmental Impact Statement contains and analysis of environmental impacts of the project as well as analysis of the following project variants, to the proposed action/preferred alternative: No Action; FGT (Florida Gas Transmission Company, LLC) Pipeline System; Gulfstream Pipeline System; SONAT (Southern Natural Gas Company) Pipeline System; Transco Pipeline System; Compression Intensive Alternative; Looping Intensive Alternative; LNG (Liquefied Natural Gas) Import; and Use of Trucks or Rail (see attached, pages 40 through 45).

The Environmental Impact Statement examines the route alternatives to the preferred alternative: Gulf Crossing; Interstate 75; Greenlaw 1; Greenlaw 2; Greenlaw 3; and Greenlaw 4. (see attached, pages 46 through 61).

The Environmental Impact Statement also examines the following route variations to the preferred alternative: Withlacoochee River Variations 1 and 2; Wacassassa Flats Variation; Hildreth Compressor Station Site Alternative; Dunnellon Compressor Station Site Alternative (see attached, pages 62 through 71)

It concludes that the preferred alternative does not pose a significant risk to karst resources, springs, wetlands, or the Floridan Aquifer; minimal adverse impacts to wetlands, vegetation or listed species. Additionally, the Environmental Impact Statement concludes that the alternative actions, alternative routes and alternative route variations do not provide any significant advantage to the preferred route when balancing environmental as well as socio-economic costs and benefits (see attached, pages 72 through 91).

**EVALUATION**

The preferred alternative bisects numerous Natural Resources of Regional Significance as identified and mapped in the North Central Florida Strategic Regional Policy Plan. In particular, it bisects the Suwannee River Corridor, the Santa Fe River Corridor and Wacassassa Flats. It is recommended that the Federal Energy Regulatory Commission approve the preferred alternative with the condition that the route follow existing rights-of-way and collocate with existing linear utilities to the maximum extent feasible.

**RECOMMENDATION**

It is recommended that these findings be forwarded to the Florida Department of Environmental Protection.

EXCERPTS FROM
ENVIRONMENTAL IMPACT STATEMENT

**FEDERAL ENERGY REGULATORY COMMISSION**
Routing Code PJ 11.3
Washington, DC 20426

Official Business
Penalty for Private Use

**FERC/EIS-0262D**

**Volume I of II**

**Southeast Market Pipelines Project**
***Draft Environmental Impact Statement***

**Docket Nos.**
**CP14-554-000**
**CP15-16-000**
**CP15-17-000**

**September 2015**

**Federal Energy Regulatory Commission**
Office of Energy Projects
Washington, DC 20426

# Southeast Market Pipelines Project
## *Draft Environmental Impact Statement*
## Volume I

**Florida Southeast Connection, LLC**
**Transcontinental Gas Pipe Line Company, LLC**
**Sabal Trail Transmission, LLC**

Docket Nos. CP14-554-000, CP15-16-000, and CP15-17-000
FERC/EIS-0262D

**Cooperating Agency:**

US Army Corps of Engineers

**U.S. Army Corps of Engineers**

**September 2015**

**VOLUME I – LIST OF APPENDICES**



**VOLUME II – LIST OF APPENDICES**

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Draft Environmental Impact Statement

VOLUME I

## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| °F | degrees Fahrenheit |
| µg/m$^3$ | micrograms per cubic meter |
| ACHP | Advisory Council on Historic Preservation |
| ADCNR | Alabama Department of Conservation and Natural Resources |
| ADEM | Alabama Department of Environmental Management |
| AHC | Alabama Historical Commission |
| APCO | Alabama Power Company |
| APE | area of potential effect |
| Applicants | Transcontinental Gas Pipe Line Company, LLC; Sabal Trail Transmission, LLC; and Florida Southeast Connection, LLC |
| AQCR | Air quality control regions |
| ATWS | additional temporary workspaces |
| BA | Biological Assessment |
| BACT | Best Available Control Technology |
| BCC | Birds of Conservation Concern |
| Bcf/d | billion cubic feet per day |
| BGEPA | Bald and Golden Eagle Protection Act |
| Board of Trustees | Board of Trustees of the Internal Improvement Trust Fund |
| CAA | Clean Air Act |
| CBMPP | Transco's Construction Best Management Practices Plan |
| CCL | Citrus County Line |
| CDP | Census-designated place |
| Certificate | Certificate of Public Convenience and Necessity |
| CFH | Central Florida Hub |
| CFR | Code of Federal Regulations |
| cfs | cubic feet per second |
| CH4 | methane |
| CHRP | Citrus Health Response Program |
| CIA | compression intensive alternative |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| $CO_{2e}$ | carbon dioxide equivalents |
| Commission | Federal Energy Regulatory Commission |
| CREC | Crystal River Energy Complex |
| CRP | Conservation Reserve Program |
| CWA | Clean Water Act |
| CZMA | Coastal Zone Management Act |
| dB | decibels |
| dBA | decibels on the A-weighted scale |
| DEF | Duke Energy Florida |
| Dixie | Dixie Pipeline Company |
| DOE | U.S. Department of Energy |
| DOT | U.S. Department of Transportation |
| DRI | Development of Regional Impact |
| E&SCP | Sabal Trail's Erosion and Sediment Control Plan |

| | |
|---|---|
| EFH | Essential Fish Habitat |
| eGRID | Emissions & Generation Resource Integrated Database |
| EI | Environmental Inspector |
| EIA | U.S. Department of Energy, Energy Information Administration |
| EIS | environmental impact statement |
| EPA | U.S. Environmental Protection Agency |
| ESA | Endangered Species Act |
| F&W | Fish and Wildlife |
| F.A.C. | Florida Administrative Code |
| FAS | Florida aquifer system |
| FCMP | Florida Department of Environmental Protection Coastal Zone Management Program |
| FCV | flow control valve |
| FDACS | Florida Department of Agriculture and Consumer Services |
| FDEP | Florida Department of Environmental Protection |
| FDHR | Florida Division of Historical Resources |
| FDOS | Florida Department of State |
| FDOT | Florida Department of Transportation |
| FERC | Federal Energy Regulatory Commission |
| FERC Plan | Upland Erosion Control, Revegetation and Maintenance Plan |
| FERC Procedures | Wetland and Waterbody Construction and Mitigation Procedures |
| FFS | Florida Forest Service |
| FFWCC | Florida Fish and Wildlife Conservation Commission |
| FGS | Florida Geological Survey |
| FGT | Florida Gas Transmission Company, LLC |
| FNST | Florida National Scenic Trail |
| FPL | Florida Power & Light Company |
| FPSC | Florida Public Service Commission |
| FS | U.S. Forest Service |
| FSA | Farm Service Agency |
| FSC | Florida Southeast Connection, LLC |
| FWS | U.S. Fish and Wildlife Service |
| G.B.A. | G.B.A. Associated, LLC |
| GDNR | Georgia Department of Natural Resources |
| GEPD | Georgia Environmental Protection Division |
| GFC | Georgia Forestry Commission |
| GGS | Georgia Geological Survey |
| GHG | greenhouse gas |
| GHGRP | Greenhouse Gas Reporting Program |
| GHPD | Georgia Historic Preservation Division |
| GLCP | Georgia Land Conservation Program |
| Global Village | The Global Village at Westmont |
| gpd | gallons per day |
| gpm | gallons per minute |
| GRAQC | Georgia Rules for Air Quality Control |
| Greenway | Marjorie Harris Carr Cross Florida Greenway State Recreation and Conservation Area |
| GSA | Geological Survey of Alabama |
| Gulfstream | Gulfstream Natural Gas System, LLC |

| | |
|---|---|
| GWP | global warming potential |
| HAPs | hazardous air pollutants |
| HCA | high consequence area |
| HCL | Hunters Creek Lateral |
| HDD | horizontal directional drill |
| hp | horsepower |
| HPSA | Health Professional Shortage Areas |
| Hz | hertz |
| IPCC | Intergovernmental Panel on Climate Change |
| ISMP | invasive species management plan |
| $L_{dn}$ | day-night sound level |
| $L_{eq}$ | equivalent sound level |
| LIA | looping intensive alternative |
| LiDAR | light detecting and ranging data |
| LNG | liquefied natural gas |
| M&R | metering and regulating |
| MACT | Maximum Achievable Control Technology |
| MAOP | maximum allowable operating pressure |
| Martin Plant | Martin Clean Energy electric generating plant |
| MBTA | Migratory Bird Treaty Act |
| MDEQ | Mississippi Department of Environmental Quality |
| Memorandum | *Memorandum of Understanding on Natural Gas Transportation Facilities* |
| MFLs | Maximum Flows and Levels |
| MGAG | Municipal Gas Authority of Georgia |
| mgd | million gallons per day |
| MLBs | mid-line buoys |
| MLRA | Major Land Resource Area |
| MLVs | mainline valves |
| MMcfd | million cubic feet per day |
| MPs | mileposts |
| MSA | Magnuson-Stevens Fishery Conservation and Management Act |
| MUAs/Ps | Medically Underserved Areas or Populations |
| MW | megawatt |
| $N_2O$ | nitrous oxide |
| NAAQS | National Ambient Air Quality Standards |
| NCED | National Conservation Easement Database |
| NEPA | National Environmental Policy Act |
| NESHAP | National Emission Standard for Hazardous Air Pollutants |
| NextEra | NextEra Energy, Inc. |
| NGA | Natural Gas Act |
| NHPA | National Historic Preservation Act |
| NMFS | National Marine Fisheries Service |
| NNSR | Nonattainment New Source Review |
| $NO_2$ | nitrogen dioxide |
| NOA | Notice of Application |
| NOI | Notice of Intent |
| $NO_x$ | nitrogen oxides |

| | |
|---|---|
| NPDES | National Pollutant Discharge Elimination System |
| NPS | U.S. Department of the Interior, National Park Service |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NSA | noise sensitive area |
| NSPS | New Source Performance Standards |
| NSR | New Source Review |
| NWR | National Wildlife Refuge |
| OEP | Office of Energy Projects |
| ORVs | outstandingly remarkable natural or cultural value |
| Pb | lead |
| PEM | palustrine emergent |
| PFO | palustrine forested |
| $PM_{10}$ | particulate matter less than 10 microns |
| $PM_{2.5}$ | particulate matter less than 2.5 microns |
| Port Dolphin | Port Dolphin LNG facility |
| ppb | parts per billion |
| ppm | parts per million |
| PSD | Prevention of Significant Deterioration |
| psig | pounds per square inch gauge |
| PSS | palustrine scrub-shrub |
| PTE | potential to emit |
| PWS | Public Water Supply |
| RCPs | residential construction plans |
| RFP | Request for Proposal |
| RHA | Rivers and Harbors Act |
| RIBITS | Regulatory In-lieu Fee and Bank Information Tracking System |
| RICE | reciprocating internal combustion engines |
| RMP | risk management plan |
| RR | Resource Report |
| S | Swimming and Other Whole Body Water-Contact Sports |
| Sabal Trail | Sabal Trail Transmission, LLC |
| SCADA | supervisory control and data acquisition |
| Secretary | Secretary of the Commission |
| SHPO | State Historic Preservation Office |
| SIP | State Implementation Plan |
| SMP Project | Southeast Market Pipelines Project |
| SONAT | Southern Natural Gas Company |
| SPA | Springs Protection Area |
| SSA | Sole Source Aquifer |
| SSURGO | Soil Survey Geographic |
| SWAPP | Source Water Assessment and Protection Program |
| TAPs | toxic air pollutants |
| TLV-TWAs | threshold limit value-time weighted averages |
| tpy | tons per year |
| Transco | Transcontinental Gas Pipe Line Company, LLC |
| U.S.C. | United States Code |

| | |
|---|---|
| UMAM | Universal Mitigation Assessment Methodology |
| USACE | U.S. Army Corps of Engineers |
| USDA | U.S. Department of Agriculture |
| USGCRP | U.S. Global Change Research Program |
| USGS | U.S. Geological Survey |
| VOCs | volatile organic compounds |
| WEGs | Wind Erodibility Groups |
| WHPAs | Wellhead Protection Areas |
| WMD | Water Management District |
| WRAP | Wetland Rapid Assessment Procedure |
| WRP | Wetland Reserve Program |

# EXECUTIVE SUMMARY

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared this draft Environmental Impact Statement (EIS) to fulfill requirements of the National Environmental Policy Act of 1969 (NEPA) and the Commission's implementing regulations under Title 18 of the Code of Federal Regulations Part 380 (18 CFR 380). This EIS assesses the potential environmental impacts that could result from constructing and operating the Hillabee Expansion, Sabal Trail, and Florida Southeast Connection (FSC) Projects; three separate, but related, interstate natural gas transmission pipeline projects collectively referred to as the Southeast Market Pipelines Project (SMP Project).

The Applicants (Transcontinental Gas Pipe Line Company, LLC (Transco); Sabal Trail Transmission, LLC (Sabal Trail); and Florida Southeast Connection, LLC (FSC)) each filed applications with the FERC in the Fall of 2014 pursuant to section 7 of the Natural Gas Act (NGA) seeking Certificates of Public Convenience and Necessity (Certificates) to construct, own, operate, and maintain interstate natural gas transmission pipelines and related facilities. The FERC is the federal agency responsible for authorizing interstate natural gas transmission facilities under the NGA, and is the lead federal agency responsible for preparing this EIS. The U.S. Army Corps of Engineers (USACE) participated as a cooperating agency in the preparation of this EIS because it has jurisdiction by law or has special expertise with respect to environmental resource issues associated with the SMP Project.

## PROPOSED ACTIONS

Transco's Hillabee Expansion Project would involve constructing and operating about 43.5 miles of 42-inch- and 48-inch-diameter pipeline loop[1] and associated facilities (mainline valves,[2] pig[3] launchers and receivers, and other appurtenant facilities) in eight segments; one new natural gas fired-compressor station; and modifications at three existing compressor stations. Transco's facilities would be constructed in three phases between 2016 and 2021 and would provide Sabal Trail with up to 1.1 billion cubic feet per day (Bcf/d) of natural gas service upon completion.

The Sabal Trail Project would involve constructing and operating about 515.5 miles of pipeline and associated facilities, including: 480.9 miles of 36-inch-diameter Mainline pipeline in Alabama, Georgia, and Florida; 13.1 miles of 36-inch-diameter lateral pipeline (the Hunters Creek Line) in Florida; 21.5 miles of 24-inch-diameter lateral pipeline (the Citrus County Line) in Florida; and five new natural gas-fired compressor stations. Sabal Trail would also construct and operate the Central Florida Hub[4] at the termination of the Mainline in Osceola County, Florida. Sabal Trail's facilities would be constructed in three phases between 2016 and 2021, with the second and third phases involving only additional compression facilities. The Sabal Trail Project would provide up to 1.0 Bcf/d of firm transportation service upon completion.

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1 A loop is a segment of pipe that is usually installed adjacent to an existing pipeline and connected to it at both ends. The loop allows more gas to move through the system.

2 A mainline valve is an aboveground facility on a pipeline with valves for controlling the flow of gas in the pipeline. The valves act as gateways that can be open and closed.

3 A pipeline "pig" is a device used to clean or inspect the pipeline. A pig launcher/receiver is an aboveground facility where pigs are inserted or retrieved from the pipeline.

4 A hub is a location where two or more pipeline systems interconnect and which offers administrative services that facilitate the movement and/or transfer of gas. A hub creates a market where buyers can seek the least expensive natural gas from multiple sellers. The Central Florida Hub would be the first natural gas hub in Florida.

The FSC Project would involve constructing and operating about 126.4 miles of pipeline and associated facilities, consisting of 77.1 miles of 36-inch-diameter pipeline and 49.3 miles of 30-inch-diameter pipeline in Florida. FSC's facilities would be constructed in one phase between 2016 and 2017. The FSC Project would connect with the Sabal Trail Project at the Central Florida Hub and would provide up to 600 million cubic feet per day of firm transportation service.

According to the Applicants, the SMP Project and its individual component projects were developed to meet the growing demand for natural gas by the electric generation, distribution, and end use markets in Florida and the southeast United States.

## PUBLIC INVOLVEMENT

In the Fall of 2013, the SMP Project Applicants filed requests to implement the Commission's Pre-filing Process for the Hillabee Expansion, Sabal Trail, and FSC Projects. These requests outlined the respective projects and included plans for public outreach and involvement. The Pre-filing Process was established to encourage early involvement of interested stakeholders, facilitate interagency cooperation, and identify and resolve environmental issues before an application is filed. The FERC granted and established pre-filing Docket Nos. PF14-1-000 (Sabal Trail Project), PF14-2-000 (FSC Project), and PF14-6-000 (Hillabee Expansion Project).

As part of the Pre-filing Process, the Applicants hosted 31 open house meetings in the SMP Project area between November 2013 and January 2014 to inform the public about their respective projects. FERC staff attended these meetings and provided information to the public about NEPA and the FERC's environmental review process. FERC staff also conducted site visits and met with various stakeholders along the project to gather and exchange information and to assist with the project analysis.

On February 18, 2014, the FERC issued a *Notice of Intent to Prepare an Environmental Impact Statement for the Planned Southeast Market Pipelines Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meetings* (NOI). The NOI was also published in the Federal Register on February 26, 2014, and copies were sent to 5,893 parties, including federal, state, and local agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners; local libraries and newspapers; and other interested stakeholders. The NOI opened a 60-day scoping period. We[5] than held 13 public scoping meetings in March 2014 to solicit and receive comments on environmental resources that could be affected by the SMP Project.

On October 15, 2014, the FERC issued a *Supplemental Notice of Intent to Prepare an Environmental Impact Statement for the Planned Southeast Market Pipelines Project and Request for Comments on Environmental Issues Related to New Alternatives Under Consideration.* This supplemental NOI described four route alternatives for the Sabal Trail Project and alternative locations for Sabal Trail's proposed Albany Compressor Station in Dougherty County, Georgia and opened a 30-day scoping period. The supplemental NOI was also published in the Federal Register and was sent to 898 parties, including federal, state, and local agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners; local libraries and newspapers; and other interested stakeholders. As part of its ongoing public outreach efforts related to the new alternatives, Sabal Trail hosted and FERC staff attended public open houses held in Albany, Georgia and Jasper, Florida on October 20 and 21, 2014, respectively. The FERC also issued two project newsletters

[5] The pronouns "we," "us," and "our" refer to the environmental staff of the Federal Energy Regulatory Commission's Office of Energy Projects.

on September 9, 2014 and February 24, 2015 that provided stakeholders current information on FERC's environmental review process and instructions on how comments could be filed with the Commission.

On June 19, 2015, we issued a second *Supplemental Notice of Intent to Prepare an Environmental Impact Statement for the Proposed Southeast Market Pipelines Project and Request for Comments on Environmental Issues Related to the Newly Proposed Albany Compressor Station Location.* This supplemental NOI described a new, proposed location for the Albany Compressor Station in Dougherty County, Georgia and opened a 30-day comment period. This supplemental NOI was also published in the Federal Register and was sent to 167 parties, including federal, state, and local agencies; elected officials; Native American tribes; potentially affected landowners; and local libraries and newspapers.

We received over 1,000 written comment letters during the Pre-filing Process, formal scoping periods, and throughout preparation of the draft EIS. Over 450 comment letters concerned impacts in Dougherty County; particularly in and around the City of Albany. We received written comments from 5 federal agencies (USACE, U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), U.S. Forest Service, and National Park Service); 7 state agencies (Georgia Department of Agriculture, Georgia Department of Natural Resources, Florida Department of Agriculture and Consumer Services, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Florida Department of Transportation, and Florida Department of State); 4 U.S. Senators; 2 U.S. Representatives; 4 Native American tribes; 24 state elected officials and local government bodies; 5 non-governmental organizations (Sierra Club, Florida Audubon Society, Clean Water Action, Our Santa Fe River, Inc., and WWALS Watershed Coalition); and approximately 641 affected landowners, individuals, groups, and companies (including about 410 form letters submitted by 300 individuals and affected landowners). In addition, we received 199 oral comments at the public scoping meetings.

As a result of the public's involvement in the pre-filing and post-application review processes, we identified several environmental issues of concern including geology (karst), groundwater quality, public health and safety, air quality and noise, socioeconomics, environmental justice, and wetlands and waterbodies. As appropriate these and other concerns expressed by the public are addressed throughout the EIS.

## PROJECT IMPACTS AND MITIGATION

Constructing and operating the SMP Project would temporarily and permanently impact the environment. Some of these impacts would be adverse; however, we have determined that, with the implementation of the Applicants' proposed impact avoidance, minimization, and mitigation measures and its adherence to our recommendations, the SMP Project would not result in a significant impact on the environment. Section 5.0 of this EIS summarizes our resource-specific conclusions and identifies our recommendations to further avoid, minimize, and mitigate project-related impacts. Cumulative impacts and alternatives are addressed in sections 3.14 and 4.0, respectively.

### Karst and Groundwater

Northern Florida and southwest Georgia are geologically unique due to the prevalence of karst terrain. These areas are also notable because of the underlying Floridan Aquifer which is used extensively for agriculture and drinking water supply. We received numerous comments from affected landowners and public resource managers expressing concern about how construction and operation of the Sabal Trail Project could impact (or be affected by) karst and groundwater. The majority of the comments concerned the impairment of cave systems, springs, and wells; construction methods triggering sinkhole development; and operational safety/pipeline integrity in karst areas.

The Sabal Trail Project Mainline would be located through the highly karstic south Georgia/north Florida region. The Mainline would also be located across the Floridan Aquifer. Through this area the majority of Mainline would be installed using standard overland construction techniques which would generally limit disturbance to within 6 to 8 feet of the ground surface, whereas groundwater and cave systems are generally found at greater depths. Additionally, only two springs were identified within 0.5 mile of proposed overland construction work areas. Sabal Trail would also use the horizontal directional drill (HDD) method at two locations in Georgia and three locations in Florida where karst bedrock would be encountered. Two additional springs would be within 0.5 mile of the proposed HDD locations. Constructing and operating the Sabal Trail Project in south Georgia/north Florida could induce sinkhole development, alter spring characteristics, and impact local groundwater flow and quality.

To ensure its project would not adversely impact groundwater and springs or exacerbate sinkhole development, Sabal Trail conducted an extensive analysis of geologic conditions and construction activities in this area, consulted with the applicable state agencies and local water management districts, and prepared plans to avoid, minimize, and mitigate potential project-related impacts on these resources. Sabal Trail completed geotechnical analyses of the subsurface for each of the HDD locations and the engineering reports concluded that the drills could be successfully completed. Further, Sabal Trail sited the HDDs to the extent practical to avoid major springs. Sabal Trail would also implement its Best Drilling Practices Plan, which includes measures to reduce the loss of drilling mud; plans to monitor wells and springs within 2,000 feet downgradient of a drilling mud loss; a commitment to consult with applicable agencies regarding remedial cleanup techniques should a spring be affected; and plans to mitigate impacts on wells, should they occur.

Based on our review of Sabal Trail's proposed construction methods, its implementation of impact minimization measures, and our consultations with the Florida Geological Survey and other resource managers, we conclude that constructing and operating of the Sabal Trail Project would not significantly impact karst terrain, springs, or the Floridan Aquifer (groundwater). We also conclude that the potential for the Sabal Trail Project to initiate or be affected by damaging karst conditions has been adequately minimized.

The FSC Project does not occur in an area of high karst sensitivity and none of FSC's HDDs would encounter carbonate bedrock. However, because localized subsidence could occur in conjunction with FSC's HDD installations, we are recommending that FSC file an updated Karst Mitigation Plan that specifies how FSC would monitor for and mitigate any subsidence attributable to HDD activities.

**Public Safety**

We received numerous comments expressing concern about the SMP Project's impact on public safety. All of the proposed facilities would be designed, constructed, operated, and maintained to meet or exceed the Pipeline and Hazardous Materials Safety Administration's Minimum Federal Safety Standards in 49 CFR 192 and other applicable federal and state regulations. These regulations include specifications for material selection and qualifications; minimum design requirements; and protection of the pipeline from internal, external, and atmospheric corrosion. In addition to meeting all federal design standards, the Applicants would also regularly monitor their facilities and perform routine inspections to ensure facility integrity. These efforts would assist in the early detection of leaks and would reduce the likelihood of a pipeline incident. Additionally, based on an extensive review of publicly available information, we have found no evidence that karst hazards such as sinkhole development pose a safety or integrity risk to pipeline facilities. For these reasons, we conclude that constructing and operating the SMP Project would not significantly affect public safety.

**Air Quality and Noise**

Constructing the SMP Project facilities would result in intermittent and short-term increases in air pollutant emissions; however, such emissions would be temporary and localized, and are not expected to cause or contribute to a violation of applicable air quality standards. We have reviewed the Applicants' measures to control fugitive dust and minimize equipment emissions during construction and find them acceptable.

Based on the estimated emissions from operating the new and modified compressor stations, the SMP Project would result in compliance with the National Ambient Air Quality Standards (NAAQS), which are protective of human health, including children, the elderly, and sensitive populations. However, we are recommending that Transco revise its air emission analysis to include existing compressor station emissions to verify that emissions of the modified compressor stations remain in compliance with the NAAQS in the area near the compressor station sites.

Noise would be generated during construction of the pipeline and aboveground facilities. However, this noise would be highly localized and attenuate quickly as the distance from the noise source increases. Construction activities in any one area would typically last from several days to several weeks on an intermittent basis. Construction equipment would be operated on an as-needed basis during this period, and would not be expected to exceed the FERC's noise standard of 55 decibels on a A-weighted scale – day/night average at the nearest noise sensitive areas. While HDD activities may exceed FERC's standard at the nearby noise sensitive areas, the companies would implement measures to reduce HDD noise. To ensure noise is reduce appropriately, we are also recommending that during construction, FSC document and file measures that were taken to minimize HDD noise.

New and modified compressor stations would generate noise on a continuous basis once operating. We reviewed the compressor station noise analyses and conclude that, if properly implemented, the Applicants' proposed noise control measures would ensure that noise attributable to the compressor stations would be less than the FERC noise standard at nearby noise sensitive areas. To ensure that the actual noise levels produced at the aboveground facilities are not significant, we are recommending that Transco and Sabal Trail submit operational noise surveys and add noise mitigation, as necessary, until noise levels are below our acceptable thresholds.

**Socioeconomics**

Numerous commentors in Georgia and Florida stated the SMP Project would not benefit their communities. Whereas a specific location may not benefit from direct connection to a particular interstate natural gas transmission pipeline, interstate transmission pipelines are necessary to transport natural gas from source areas to demand centers, and the end use by various customers including electric generation facilities, industrial plants, and local distribution companies extend benefits on a regional scale. For example, states that do not produce appreciable natural gas, including Georgia and Florida, benefit substantially from the nation's interstate natural gas transmission system as indicated by U.S. Department of Energy, Energy Information Administration data which indicates that Georgia and Florida consumed 626 billion cubic feet and 1.2 trillion cubic feet of natural gas, respectively, in 2013.

We received numerous comments concerning the SMP Project's impacts on property values. The effect that a pipeline easement may have on a property value is a damage-related issue that would be negotiated between the landowner and the Applicants during the easement acquisition process, which is designed to provide fair compensation to the landowner for the company's right to use the property for pipeline construction and operation. If easement negotiations are unsuccessful and the Commission issues Certificates for the SMP Project, fair compensation for the pipeline easement would be determined

through legal proceedings and the eminent domain process. It is possible that certain prospective home-buyers may find the pipeline or an aboveground facility to be a detractor and it could influence a potential buyer to not purchase a nearby property. However, each potential purchaser has different criteria and differing values or considerations for purchasing land. With some exceptions, such as building structures within the pipeline easement or planting trees, once a pipeline is buried, it does not preclude future use. Based on literature reviews and discussions with real estate appraisers, we have not found sufficient evidence to demonstrate that the SMP Project would result in decreased property values.

We received numerous comments regarding the potential for the Sabal Trail Project to adversely impact environmental justice populations in Dougherty County, Georgia, particularly near the City of Albany, Georgia. As result of stakeholder input, Sabal Trail changed its proposed location for the Albany Compressor Station in June 2015. While operation of the Albany Compressor Station would result in long term air quality emissions in the vicinity of the station, we conclude that the compressor station would not result in a significant impact on air quality. The proposed location of the site would provide adequate visual screening from public view and would result in noise levels that are in compliance with FERC standards. Where environmental justice populations would be crossed by or are adjacent to the proposed pipeline, we determined that the project would not result in high and adverse impacts, and would not disproportionally impact these populations.

**Wetlands and Waterbodies**

We received comments that pipeline construction would impact waterbodies and wetlands. Constructing the SMP Project would require 699 waterbody crossings, including 258 perennial, 309 intermittent, 98 ephemeral, and 34 open water waterbodies. Waterbodies would be crossed in accordance with the Applicants' construction plans which outline common industry construction methods and are generally consistent with the FERC's Wetland and Waterbody Construction and Mitigation Procedures. Seventeen waterbodies, many of which are sensitive or contain threatened and endangered species would be crossed via HDD, including major waterbodies such as the Tallapoosa, Chattahoochee, Flint, Suwannee, Santa Fe, Withlacoochee, and Kissimmee rivers. An HDD crossing places the pipeline below the waterbody and avoids direct impacts on water quality and aquatic life.

Constructing the SMP Project would impact 940.2 acres of wetlands, including 610.2 acres of forested wetlands, 46.8 acres of shrub-scrub wetlands, and 283.2 acres of emergent wetlands. The majority of affected wetlands would be allowed to return to pre-construction conditions following construction. The Applicants would maintain 214.2 acres of previously forested wetlands in a scrub-shrub or herbaceous state While temporary impacts on herbaceous and scrub-shrub wetlands would be expected to recover fairly quickly, we recognize that impacts on forested wetlands would be long-term in the temporary work areas and permanent in the maintained pipeline easement. The Applicants are working with the USACE and the EPA to determine wetland mitigation requirements and we are recommending that they file copies of their final wetland mitigation plans and documentation of USACE approval of the plans. Based on comments, Sabal Trail adopted route variations to avoid and minimize impacts on the Green Swamp and forested wetlands adjacent to the Happy Trails neighborhood.

Based on the avoidance and minimization measures developed by the Applicants, we conclude that surface water and wetland impacts would be effectively minimized or mitigated, and would be largely temporary in duration. Construction and operation-related impacts on wetlands would be further minimized or mitigated by compliance with the conditions imposed by the USACE and state water regulatory agencies.

## ALTERNATIVES EVALUATED

We evaluated the no-action alternative, and while this alternative would eliminate the environmental impacts identified in this EIS, the end-use markets would not be provided the SMP Project's 1.1 Bcf/d of natural gas transmission service. Several system alternatives were evaluated including the use of other existing natural gas transmission systems, additional compression/looping, a domestic liquefied natural gas seaborne transmission system, and trucks and/or rail. Other existing natural gas transmission systems in the SMP Project area lack the available capacity to meet the purpose of the project. Modifying these systems could result in impacts similar to those of the proposed project or would be economically impractical. Additional compression/looping would not offer a significant environmental advantage over the proposed action. The use of an alternative transportation system (e.g., liquefied natural gas ship carrier, truck, rail) would be economically impractical. We determined that the use of a system alternative was not preferable to the proposed action.

We evaluated 12 major pipeline route alternatives, including routes that would follow existing rights-of-way and cross the Gulf of Mexico. We also evaluated 20 route variations and reviewed over 300 variations considered by the Applicants. Furthermore, we evaluated numerous aboveground facility (compressor station) locations including several alternatives for the proposed Albany Compressor Station. Increasing collocation with existing rights-of-way, avoiding the State of Georgia, concern about construction through karst sensitive terrain, impacts on affected landowners and communities, environmental concerns, and future development were all reasons for evaluating alternatives and variations. In evaluating these alternatives and variations we compared a number of factors including (but not limited to) total length, acres affected, wetlands and waterbodies crossed, the number of residences within 50 feet of workspace, environmental justice populations, and high consequence areas. We also considered construction constraints, degree of nearby development, traffic impacts, and economic practicality. Based on our evaluations, we determined that the major pipeline route alternatives do not offer a significant environmental advantage when compared to the proposed route or would not be economically practical; and therefore, are not preferable to the proposed action. We also determined with one exception that the route variations evaluated do not offer significant environmental advantages when compared to the corresponding segments of the proposed pipeline route; and therefore, are not preferable to the proposed action. We are recommending one minor route variation along the Sabal Trail Project that would avoid existing construction constraints and reduce the potential to impede future development. Lastly, we determined that the alternative aboveground facility locations evaluated do not offer significant environmental advantages when compared to the proposed locations and are not preferable to the proposed action.

## MAJOR CONCLUSIONS

As described previously, we conclude that constructing and operating the SMP Project would result in temporary and permanent impacts on the environment. We also conclude that with the Applicants' implementation of their respective impact avoidance, minimization, and mitigation measures as well as their adherence to our recommendations to further avoid, minimize, and mitigate these impacts, the SMP Project would not result in a significant impact on the environment. Consequently, we are recommending that our recommendations as identified in section 5.0 be attached as conditions to any authorizations issued by the Commission.

These conclusions are based on our independent review of the SMP Project; information provided by the Applicants, affected landowners, and concerned citizens; and our consultations with federal and state regulatory agencies. Although many factors were considered during our environmental review, the principal reasons for these conclusions are:

- each Applicant would minimize impacts on the natural and human environments during construction and operation of its facilities by implementing the numerous measures described in their respective construction and restoration plans;
- the majority of the proposed facilities would be collocated within or adjacent to existing rights-of-way;
- all of the proposed facilities would be constructed and operated in compliance with federal standards, requirements, and thresholds including U.S. Department of Transportation materials requirements and EPA air emissions standards;
- a high level of public participation was achieved during the pre-filing and post application review processes and helped inform our analysis;
- environmental justice populations would not be disproportionately affected by the SMP Project;
- the HDD crossing method would be utilized for most major and sensitive waterbodies, the majority of other waterbodies would be crossed using dry crossing methods, and the Applicants would be required to obtain applicable permits and provide mitigation for unavoidable impacts on waterbodies and wetlands through coordination with the USACE and state regulatory agencies;
- we would complete Endangered Species Act consultations with the FWS prior to allowing any construction to begin;
- we would complete the process of complying with section 106 of the National Historic Preservation Act and implementing the regulations at 36 CFR 800 prior to allowing any construction to begin; and
- environmental inspection and monitoring programs would ensure compliance with all construction and mitigation measures that become conditions of the FERC authorizations and other approvals.


**Figure 1-1**
**Southeast Market Pipelines Project Overview**

1-3

Some commenters expressed concern that FPL limited the range of possibilities to meet the electric generation needs of its customers through the RFP process. The Commission independently evaluates proposals brought before it from the natural gas transmission industry, and these proposals identify an applicant's preferred facilities and route to transport natural gas from a specified source area to a specified demand center or end user based on the applicant's perceived market need. The SMP Project Applicants have done so in their proposals. However, as required by NEPA, the Commission evaluates a full range of practical and feasible alternatives to applicant proposals. Section 4.0 discusses system alternatives, and route alternatives to the proposed SMP Project, including numerous alternatives identified by the public.

We[7] also received comments asserting that the ultimate purpose of the SMP Project is to export natural gas overseas as liquefied natural gas (LNG). Whereas various proposals to site LNG liquefaction and export facilities are before the Commission and the U.S. Department of Energy (DOE), the Applicants do not propose to serve any LNG export facilities and the project shippers filed comments restating that the gas for which they have contracted on the SMP Project is needed to serve their domestic electric loads.

#### 1.1.1.1 Hillabee Expansion Project

Transco operates an interstate natural gas transmission system that begins in the Texas Gulf Coast region and extends easterly through Louisiana, Mississippi, Alabama, and Georgia, and then northerly through the mid-Atlantic states to southern New England. The Hillabee Expansion Project would transport all of the incremental capacity of the SMP Project from the receipt points at Compressor Station 85 to the proposed interconnection with the Sabal Trail Project in Tallapoosa County, Alabama. Transco and Sabal Trail have entered into a 25-year lease agreement for 100 percent of the capacity created by the Hillabee Expansion Project.

#### 1.1.1.2 Sabal Trail Project

The Sabal Trail Project would transport the incremental capacity of the SMP Project from the interconnection with the Hillabee Expansion Project to the contracted delivery points with DEF and FSC in Florida. Sabal Trail would also create the CFH by interconnecting with the existing Florida Gas Transmission Company, LLC (FGT) system, the existing Gulfstream Natural Gas System, LLC (Gulfstream) system, and the FSC Project at the proposed Reunion Compressor Station in Osceola County. Sabal Trail states that the CFH is intended to serve as a new natural gas trading point with the potential for increased market competition to result in economic benefit to end users.

Sabal Trail has executed 25-year precedent agreements to provide 600 MMcfd to the FSC Project, and 400 MMcfd to DEF through the CCL. DEF is planning a 1,640 MW combined-cycle electric generating plant in Citrus County, Florida, with an initial in-service date in spring, 2018. Sabal Trail also continues to seek other potential shippers and end-users in the region, including the Municipal Gas Authority of Georgia (MGAG). To facilitate MGAG members' future access to gas supplies, Sabal Trail agreed to install side-tap valves on the proposed Mainline pipeline in Dougherty and Mitchell Counties, Georgia.

Sabal Trail further states that a new, onshore interstate natural gas transmission system would help to meet the growing demand for electric generation in Florida because the existing FGT and Gulfstream systems are at or near full subscription and because Florida has no significant natural gas storage or production. Sabal Trail also asserts that the project would provide customers in the Southeast United States with increased access to more diverse natural gas supplies including multiple shale gas producing regions and conventional onshore and offshore supply areas; lessen the region's vulnerability to supply disruptions

[7] The pronouns "we," "us," and "our" refer to the environmental staff of the Federal Energy Regulatory Commission's Office of Energy Projects.

that can result from severe weather in the Gulf of Mexico; improve the reliability of natural gas transmission and associated electric generation should other disruptions occur on either of the existing systems; and create additional opportunities for new gas-fired electric generation or other users to be developed in areas of Florida not currently served by FGT or Gulfstream. Sabal Trail also contends that a new interstate transmission system would provide economic benefit to end users by creating greater competition for natural gas transportation services and to affected counties and local governments through job creation and tax revenues.

#### 1.1.1.3 FSC Project

The FSC Project would transport natural gas from the CFH to FPL's existing natural gas-fired Martin Plant in Martin County, Florida. FSC further states that the FSC Project would help meet the natural gas fuel supply needs of electric generators and other natural gas users in Florida; enhance the reliability of Florida's natural gas transmission grid; allow access to more diverse natural gas supplies; benefit affected communities through job creation and tax revenues; allow FPL to meet the U.S. Environmental Protection Agency's (EPA's) proposed goals of reducing carbon dioxide ($CO_2$) emission rate in Florida by approximately 40 percent by 2030 through increased use of natural gas to generate electricity; and allow future electric generation sites to be served with minimal added gas transmission infrastructure as well as the potential expansion of natural gas service to areas currently lacking infrastructure.

FSC has entered into a binding precedent agreement with FPL for 400 MMcfd of natural gas capacity beginning in May 2017, increasing to 600 MMcfd in May 2020.

### 1.1.2 Project Need

Section 7(b) of the NGA specifies that no natural gas company shall abandon any portion of its facilities subject to the Commission's jurisdiction without the Commission first finding that the abandonment will not negatively affect the present or future public convenience and necessity. Under section 7(c) of the NGA, the Commission determines whether interstate natural gas transportation facilities are in the public convenience and necessity and, if so, grants a Certificate to construct and operate them. The Commission bases its decisions on technical competence, financing, rates, market demand, gas supply, environmental impact, long-term feasibility, and other issues concerning a proposed project.

We received comments questioning the need for additional natural gas in Florida. As discussed above, the FPSC concluded that additional natural gas transportation capacity is necessary to help meet FPL's future electric generation needs, and the Applicants have entered into long-term precedent agreements for 93 percent of the project capacity. Sabal Trail also references various sources that project increased natural gas demand in Florida. The Florida Reliability Reporting Council reports that natural gas-fired electric generation grew from less than 40 percent of Florida's total electric generation in 2007 to approximately 65 percent in 2012, and projects an approximately 13 percent increase in the electric generation sector from 2013 to 2022. The DOE Energy Information Administration (EIA) indicates that natural gas demand in Florida increased by 24 percent during the past 5 years and anticipates continued increases in natural gas consumption in Florida. Sabal Trail also references the EPA Clean Power Plan, which projects increases in natural gas consumption in Florida of 18.5 percent by 2025 and 55.8 percent by 2050.

We received many comments from the Dougherty County, Georgia area and in localized areas of Florida questioning the need for the SMP Project on the grounds that it would not benefit the state of Georgia or the local communities in which the proposed facilities would be located. As indicated in section 3.10 of this EIS, Dougherty County would receive some economic stimulus from construction of the pipeline. In addition, *ad valorem* property tax benefits to Dougherty County are estimated to exceed $88

million over the life of the project. Also, as previously mentioned, Sabal Trail agreed to install side-tap valves on the proposed Mainline pipeline in Dougherty County, which would facilitate a future source of natural gas to the county. States that do not produce appreciable natural gas, including Georgia and Florida, benefit substantially from the nation's interstate natural gas transmission system as indicated by EIA data, which indicates that Georgia and Florida consumed 626 billion cubic feet and 1.2 trillion cubic feet of natural gas, respectively, in 2013 (EIA, 2015).

## 1.2 PURPOSE AND SCOPE OF THIS EIS

Our principal purposes in preparing this EIS were to:

1. identify and assess potential impacts on the natural and human environment that would result from constructing and operating the SMP Project;

2. describe and evaluate reasonable alternatives to the SMP Project that would avoid or minimize adverse impacts on the environment;

3. identify and recommend specific mitigation measures, as necessary, to avoid or further reduce/minimize environmental impacts; and

4. encourage and facilitate involvement by the public and interested agencies in the environmental review process.

The environmental topics addressed in this EIS include geology; soils; groundwater and surface water; wetlands; vegetation; fish and wildlife; threatened, endangered, and other special-status species; land use and recreation; visual resources; socioeconomics including environmental justice; cultural resources; air quality and noise; reliability and safety; and cumulative impacts. This EIS describes the affected environment as it currently exists, addresses the environmental consequences of the SMP Project, and compares the SMP Project's potential impacts to those of the alternatives. The EIS also presents our conclusions and recommended mitigation measures.

### 1.2.1 Federal Energy Regulatory Commission

The Energy Policy Act of 2005 established the FERC as the lead federal agency responsible for evaluating applications to construct and operate interstate natural gas pipeline facilities. Certificates are issued under section 7(c) of the NGA and Parts 157 and 284 of the Commission's regulations if the Commission determines a project is required by the public convenience and necessity.

As the lead federal agency, we prepared this EIS to assess the environmental impacts that could result from constructing and operating the SMP Project. This document was prepared in compliance with the requirements of NEPA, CEQ regulations implementing procedural provisions of NEPA in Title 40 Code of Federal Regulations (CFR) Part 1500-1508, and the FERC's regulations implementing NEPA in 18 CFR 380. As applicable, this EIS is also intended to fulfill the cooperating federal agency's NEPA obligations (see section 1.2.2).

The Commission will consider the findings contained herein as well as non-environmental issues in its review of the Applicants' applications. Approvals will be granted only if the FERC finds that the evidence produced on technical competence, financing, rates, market demand, gas supply, environmental impact, long-term feasibility, and other issues demonstrates that the SMP Project is required by the public convenience and necessity. Environmental impact analyses and mitigation development are important factors in the overall public interest determination.

occur within existing buildings, resulting in no ground disturbance. Compressor Station 100 is situated on a 167-acre parcel owned by Transco.

Compressor Station 105

Transco would modify existing Compressor Station 105 during Phase 1 of the project by installing a new 20,500 hp Titan 130 natural gas-driven turbine compressor unit within an acoustically attenuating building. Compressor Station 105 is situated on a 60-acre parcel owned by Transco.

**Other Aboveground Facilities**

Table 2.1.1-3 summarizes the other aboveground facilities associated with the Hillabee Expansion Project including new and removed/relocated MLVs and pig launchers/receivers. All of the proposed MLVs would be located within Transco's rights-of-way, and none would include remote blow-down facilities. Transco would also install minor facilities at the Transco Hillabee M&R Station to be constructed by Sabal Trail within Sabal Trail's Alexander City Compressor Station. These and other minor, appurtenant facilities such as valves and piping may be installed within the proposed right-of-way or Transco facility boundaries but are not included in table 2.1.1-3 or discussed in the remainder or this EIS.

### 2.1.2 Sabal Trail Project

The Sabal Trail Project would be located in Alabama, Georgia, and Florida and consist of pipeline facilities and aboveground facilities including compressor stations, M&R stations, MLVs, and pig launchers/receivers (see figure 2.1.2-1). Sabal Trail would also create the CFH by interconnecting the Sabal Trail Project, FSC Project, and existing FGT and Gulfstream systems at the termination of the Sabal Trail Project. The Sabal Trail Project would be constructed in three phases to meet the phased natural gas delivery requirements of the SMP Project. Phase 1 would include construction of all of the pipeline facilities and three compressor stations, and would create up to 830 MMcfd of capacity for proposed in-service in May, 2017. Phase 2 would include construction of two compressor stations and would provide an additional 169 MMcfd commencing in 2020. Phase 3 would involve installing additional compression at two of the compressor stations to provide an additional 76 MMcfd beginning in 2021. As noted in section 1.1.2.1, Sabal Trail has long term precedent agreements for 93 percent of the total capacity of the project.

#### 2.1.2.1 Pipeline Facilities

As summarized in table 2.1.2-1, Sabal Trail proposes to construct and operate about 515.5 miles of interstate natural gas transmission pipeline consisting of 480.9 miles of mainline pipeline in Alabama, Georgia, and Florida (Mainline); a 21.5-mile-long pipeline lateral in Florida (the CCL); and a 13.1-mile-long pipeline lateral in Florida (the HCL). The land requirements for the pipeline facilities are summarized in section 2.2.2.1.


**Figure 2.1.2-1**
**Sabal Trail Project Overview**

**Sabal Trail Mainline**

Sabal Trail's 36-inch-diameter Mainline would originate at the interconnection between the Sabal Trail Project and the Hillabee Expansion Project in Tallapoosa County, Alabama and terminate at the proposed Reunion Compressor Station in Osceola County, Florida. The Mainline route crosses four counties in southeastern Alabama; nine counties in southwestern Georgia; and 11 counties in northern and central Florida. The proposed MAOP of the Mainline is 1,456 psig.

**Citrus County Line**

The 24-inch-diameter CCL would originate at the Dunnellon Compressor Station at MP 392.7R in Marion County, Florida, and extend 21.5 miles west to a proposed DEF 1,640 MW combined-cycle electric generating plant in Citrus County, Florida (see section 1.4). The proposed MAOP of the CCL is 1,456 psig.

**Hunters Creek Line**

The 36-inch-diameter HCL would originate at the Reunion Compressor Station at MP 474.4 in Osceola County, Florida, and extend 13.1 miles easterly to interconnect with FGT's existing interstate natural gas transmission system in Orange County, Florida. The HCL would provide bi-directional flow between the FGT system and interconnections at the Reunion Compressor Station. The proposed MAOP of the HCL is 1,456 psig.

### 2.1.2.2 Aboveground Facilities

The Sabal Trail Project would include the construction of five new compressor stations, subsequent increased compression at two of the compressor stations, and other aboveground facilities. All of the aboveground facilities would be located within or generally adjacent to Sabal Trail's right-of-way or within Sabal Trail property boundaries.

**Compressor Stations**

Table 2.1.2-2 summarizes the new and modified compressor stations proposed by Sabal Trail.[3] Construction of the facilities would provide a total of 127,900 hp of compression during Phase 1, 41,000 hp of compression during Phase 2, and 41,000 hp of compression during Phase 3. Of the total compression on a state-by-state basis, 71,000 hp (34 percent) would occur in Alabama, 41,000 hp (20 percent) would occur in Georgia, and 97,900 hp (46 percent) would occur in Florida. All of the compressor units would be fueled by natural gas obtained from the Sabal Trail Mainline. The land requirements for each compressor station are summarized in section 2.2.2.2.

[3] Sabal Trail's compressor station plot plans can be found under Accession No. 20141121-5110; under the Files, select the PDF file titled "RR1_Sabal_Trail_APP-1A_PLOT-PLANS_11-21-14_FINAL.PDF."

TABLE 2.1.2-2

**Sabal Trail Project Compressor Stations**

| State/Compressor Station | County | Milepost | Phase | Scope of Work |
|---|---|---|---|---|
| Alabama | | | | |
| Alexander City | Tallapoosa | 0.0 | 1 | Construct compressor station with two Solar Titan 130 gas turbines and one Solar Titan 250 gas turbine driven compressor units; total 71,000 horsepower (hp). |
| Georgia | | | | |
| Albany | Dougherty | 154.7 | 2 | Construct compressor station with one 20,500 hp Solar Titan 130 gas turbine driven compressor unit. |
| | | | 3 | Add one new 20,500 hp Titan 130 gas driven compressor unit. |
| Florida | | | | |
| Hildreth | Suwannee | 296.3 | 1 | Construct compressor station with one 20,500 hp Solar Titan 130 gas turbine driven compressor unit |
| | | | 3 | Add one new 20,500 hp Titan 130 gas driven compressor unit. |
| Dunnellon | Marion | 392.7R | 2 | Construct compressor station with one 20,500 hp Solar Titan 130 gas turbine driven compressor unit. |
| Reunion | Osceola | 474.4 | 1 | Construct compressor station with one 20,500 hp Solar Titan 130 gas turbine and one 15,900 hp Solar Mars 100 gas turbine driven compressor unit. |

Alexander City Compressor Station

The Alexander City Compressor Station would be constructed during Phase 1 and would consist of two 20,500 hp Solar Titan 130 turbine driven compressor units and one 30,000 hp Solar Titan 250 turbine-driven compressor unit installed in an acoustically insulated building. Electric power to the station would be provided via connection to existing electrical service in the adjacent Transco pipeline right-of-way. The facility would be located on 29.7 acres within a 149.1-acre parcel that Sabal Trail would acquire adjacent to an existing natural gas-fired combined cycle electric generating plant operated by Exelon Generation Corporation, approximately 5 miles from Alexander City, Alabama.

Albany Compressor Station

The Albany Compressor Station would be constructed during Phase 2 and would include one 20,500 hp Solar Titan 130 turbine driven compressor unit installed in an acoustically insulated building. An additional 20,500 hp turbine drive compressor unit would be installed at the station during Phase 3 of the Sabal Trail Project.

In its November 2014 application, Sabal Trail proposed to locate the Albany Compressor Station along Newton Road just southwest of the City of Albany (the Newton Road Site). The Commission received numerous comments from affected landowners, local citizens, the City of Albany, Dougherty County, and others expressing environmental and safety concerns regarding the Newton Road Site. Upon further evaluation, Sabal Trail now proposes to locate the Albany Compressor Station within a 34-acre fenced area on a 98-acre parcel along West Oakridge Drive (the West Oakridge Drive Site). The West Oakridge Drive Site is located to the west of Albany, approximately 3 miles northwest from the Newton Road Site. The environmental and safety impacts associated with the West Oakridge Drive Site are disclosed in section 3.0, and section 4.4.2.1 includes our analysis of alternative locations for the Albany Compressor Station.

Hildreth Compressor Station

The Hildreth Compressor Station would be constructed during Phase 1 and would include one 20,500 hp Solar Titan 130 turbine driven compressor unit installed in an acoustically insulated building. An additional 20,500 hp turbine drive compressor unit would be installed at the station during Phase 3 of the Sabal Trail Project. Electric power to the station would be provided via connection to existing electrical service adjacent to the site. The facility would be located on 27.9 acres within a 44.7-acre parcel to be obtained by Sabal Trail.

Dunnellon Compressor Station

The Dunnellon Compressor Station would be constructed during Phase 1 and would include one 20,500 hp Solar Titan 130 turbine driven compressor unit installed in an acoustically insulated building. Electric power to the station would be provided via connection to existing electrical service adjacent to the site. The facility would be located on 37.3 acres within a 63.4-acre parcel to be obtained by Sabal Trail.

Reunion Compressor Station

The Reunion Compressor Station would be constructed during Phase 1 and would include one 20,500 hp Solar Titan 130 turbine driven compressor unit and one 15,900 hp Solar Mars 100 turbine driven unit installed in an acoustically insulated building. Electric power to the station would be provided via connection to existing electrical service adjacent to the site. The facility would be located on 17.8 acres within a 47.3-acre parcel to be obtained by Sabal Trail.

**Other Aboveground Facilities**

Table 2.1.2-3 summarizes the other aboveground facilities associated with the Sabal Trail Project including M&R stations, MLVs, and pig launchers/receivers. Additional information regarding the six M&R stations proposed by Sabal Trail is provided below. Sabal Trail would also install two side-tap valves on the Mainline pipeline in Dougherty and Mitchell Counties, Georgia. All of the other aboveground facilities would be located within Sabal Trail's rights-of-way or other Sabal Trail facility boundaries. Other minor, appurtenant facilities may be installed but are not included in table 2.1.2-3.

Transco Hillabee M&R Station

The Transco Hillabee M&R Station would be located at the interconnection between the Sabal Trail Project and Hillabee Expansion Project within the Alexander City Compressor Station site in Tallapoosa County, Alabama. The permanent access road associated with the Alexander City Compressor Station would also provide access to the M&R station.

The M&R facility would be a two dual 16-inch-diameter ultrasonic metering and two dual 16-inch-diameter monitor regulating station. The receipt station would have a maximum flow capacity of 851 MMcfd in 2017, increasing to 1,096 MMcfd in 2021.

TABLE 2.1.2-3

**Sabal Trail Project Other Aboveground Facilities**

| State/Facility | County | Milepost | Scope of Work |
|---|---|---|---|
| Alabama | | | |
| Mainline Valve (MLV)-1; Transco Hillabee Meter and Regulating (M&R) Station; pig launcher | Tallapoosa | 0.0 | Install M&R station, MLV, and pig launcher within the Alexander City Compressor Station site. |
| MLV-2 | Tallapoosa | 19.3 | Install MLV with remote blowdown due to adjacent powerline. |
| MLV-3 | Chambers | 29.8 | Install MLV. |
| MLV-4 | Lee | 48.8 | Install MLV. |
| MLV-5 | Russell | 66.7R | Install MLV. |
| MLV-6 | Russell | 75.4 | Install MLV. |
| Georgia | | | |
| MLV-7 | Stewart | 90.6 | Install MLV. |
| MLV-8 | Stewart | 104.2 | Install MLV. |
| MLV-9 | Terrell | 122.8 | Install MLV. |
| MLV-10 | Terrell | 140.3 | Install MLV. |
| MLV-11; pig launcher/receiver | Dougherty | 154.7R | Install MLV and pig launcher/receiver within the Albany Compressor Station site. |
| Tap Valve TV-MGAG-001 | Dougherty | 165.4 | Install side-tap valve. |
| MLV-12 | Mitchell | 173.5 | Install MLV. |
| Tap Valve TV-MGAG-002 | Mitchell | 176.3 | Install side-tap valve. |
| MLV-13 | Colquitt | 185.3R | Install MLV. |
| MLV-14 | Colquitt | 198.1 | Install MLV. |
| MLV-15 | Brooks | 211.7 | Install MLV. |
| MLV-16 | Brooks | 224.6 | Install MLV. |
| MLV-17 | Lowndes | 240.2 | Install MLV. |
| Florida | | | |
| Mainline | | | |
| MLV-18 | Hamilton | 259.1 | Install MLV with remote blowdown due to adjacent powerline. |
| MLV-19 | Suwannee | 270.0R | Install MLV. |
| MLV-20 | Suwannee | 280.9 | Install MLV. |
| MLV-21; pig launcher/receiver | Suwannee | 296.3 | Install MLV and pig launcher/receiver within the Hildreth Compressor Station site. |
| FGT Suwanee M&R Station | Suwannee | 299.7 | Install M&R station. |
| MLV-22 | Suwannee | 306.9 | Install MLV. |
| MLV-23 | Gilchrist | 320.4 | Install MLV with remote blowdown due to adjacent powerline. |
| MLV-24 | Alachua | 340.1 | Install MLV with remote blowdown due to adjacent powerline. |
| MLV-25 | Levy | 359.4 | Install MLV. |
| MLV-26 | Marion | 374.9R | Install MLV. |
| MLV-27 | Marion | 392.7R | Install MLV within the Dunnellon Compressor Station site. |
| MLV-28 | Sumter | 409.8 | Install MLV. |
| MLV-29 | Sumter | 422.9 | Install MLV. |
| MLV-30 | Lake | 437.3R | Install MLV. |
| MLV-31 | Lake | 451.7 | Install MLV. |
| MLV-32 | Osceola | 466.7R | Install MLV. |
| MLV-33; pig receiver; FSC M&R Station; Gulfstream M&R Station | Osceola | 474.4 | Install MLV, pig receiver, and two M&R stations within the Reunion Compressor Station site. |

TABLE 2.1.2-3 (cont'd)

**Sabal Trail Project Other Aboveground Facilities**

| State/Facility | County | Milepost | Scope of Work |
|---|---|---|---|
| Citrus County Line | | | |
| MLV-CCL-1; pig launcher | Marion | 0.0 | Install MLV and pig launcher within the Dunnellon Compressor Station site. |
| MLV-CCL-2 | Citrus | 7.3 | Install MLV. |
| MLV-CCL-3; pig receiver; DEF Citrus County M&R Station | Citrus | 21.5 | Install MLV, pig receiver, and M&R station at termination of the Citrus County Line. |
| Hunters Creek Line | | | |
| MLV-HCL-1; pig launcher | Osceola | 0.0 | Install MLV and pig launcher within the Reunion Compressor Station site. |
| MLV-HCL-2 | Osceola | 7.1 | Install MLV. |
| MLV-HCL-3; pig receiver; FGT Hunters Creek M&R Station | Orange | 13.1 | Install MLV, pig receiver, and M&R station at interconnection with FGT system. |

FGT Suwanee M&R Station

The FGT Suwannee M&R Station would be located at the interconnection between the Sabal Trail Mainline pipeline and the FGT Suwannee Lateral at approximate MP 299.7 of the Mainline facility in Suwannee County, Florida. Sabal Trail would construct a permanent, graveled roadway to provide access to the station from 232nd Street to the south of the site.

The M&R facility would be a triple 16-inch-diameter and single 8-inch-diameter ultrasonic metering, triple 16-inch-diameter and single 8-inch-diameter monitor regulating, and quad 30-inch-diameter bi-directional skid station. The bi-directional station would have a maximum delivery flow capacity of 873 MMcfd in 2017 increasing to 1.231 MMcfd in 2021, and a maximum receipt flow capacity of 1,015 MMcfd starting in 2017 increasing to 1,369 MMcfd in 2021.

FSC M&R Station

The FSC M&R Station would be located at the interconnection between the Sabal Trail Project and FSC Project within the Reunion Compressor Station site in Osceola County, Florida. The permanent access road associated with the Reunion Compressor Station would also provide access to the M&R station.

The M&R facility would be a dual 12-inch-diameter ultrasonic metering and dual 12-inch-diameter monitor regulating station. The delivery station would have a maximum flow capacity of 590 MMcfd in 2017, increasing to 802 MMcfd in 2021.

Gulfstream M&R Station

The Gulfstream M&R Station would also be located within the Reunion Compressor Station site, at the interconnection between the Sabal Trail Project and existing Gulfstream system. The permanent access road associated with the Reunion Compressor Station would also provide access to the station site.

The M&R facility would be a dual 16-inch-diameter ultrasonic metering, dual 16-inch-diameter monitor regulating, and quad 24-inch-diameter skid station. The bi-directional station would have a maximum delivery flow capacity of 118 MMcfd starting in 2017 and a maximum receipt flow capacity of 600 MMcfd starting in 2017.

FGT Hunters Creek M&R Station

The FGT Hunters Creek M&R Station would be located at the interconnection between the HCL (MP 13.1) and the FGT pipeline in Orange County, Florida. Sabal Trail would construct a permanent graveled roadway to provide access to the M&R station from South Orange Blossom Trail Highway to the east of the site.

The M&R Station would be a dual 12-inch-diameter and single 8-inch-diameter ultrasonic metering, dual 12-inch-diameter and single 8-inch-diameter regulating, and quad 24-inch-diameter skid station. The bi-directional station would have a maximum delivery flow capacity of 590 MMcfd in 2017 increasing to 802 MMcfd in 2021, and a maximum receipt flow capacity of 600 MMcfd starting in 2017.

DEF Citrus County M&R Station

The DEF Citrus County M&R Station would be located at the terminus of the CCL (MP 21.5) at the location of a proposed DEF combined cycle electric generating facility (see sections 1.4 and 3.14).

- truck turnarounds;
- equipment passing lanes;
- hydrostatic test water withdrawal and discharge locations; and
- staging and fabrication areas.

The Applicants would use existing public and private roads to gain access to their respective project areas. Many of the existing roads are presently in a condition that can accommodate construction traffic without modification or improvement. Some roads, however, are dirt or gravel roads that are not currently suitable for construction traffic. Where necessary, the Applicants would improve unsuitable dirt and gravel roads through widening and/or grading. Widening would involve increasing the width of the road bed by up to 25 feet. Grading would be confined to the existing road bed or to the footprint of the newly widened road. After construction and at roads used temporarily for construction, the Applicants would remove access road improvements and restore improved roads to their preconstruction condition unless the landowner or land-managing agency requests that the improvements be left in place

The majority of the permanent right-of-way would be allowed to revert to former use; however, certain activities, such as the construction of aboveground structures or the planting and cultivating of trees, would be prohibited within the permanent right-of-way. Operating the SMP Project would require the permanent use of about 4,143.3 acres for pipeline maintenance, aboveground facilities, and permanent access roads (see table 2.2-1).

TABLE 2.2-1

**Land Requirements of the Southeast Market Pipelines Project**

| Project/Component | Total (acres) | |
|---|---|---|
| | Construction | Operation |
| Hillabee Project Pipeline | | |
| Pipeline Right-of-Way | 560.3 | 264.4 |
| Additional Temporary Workspace | 176.7 | 0.0 |
| Aboveground Facilities | 110.3 | 26.6 |
| Access Roads | 62.1 | 5.8 |
| Pipe/Contractor Yards | 90.4 | 0.0 |
| Hillabee Expansion Project Subtotal | 999.8 | 296.8 |
| Sabal Trail Project | | |
| Pipeline Right-of-Way | 5,976.1 | 2,824.5 |
| Additional Temporary Workspace | 1,621.7 | 0.0 |
| Aboveground Facilities | 224.3 | 166.1 |
| Access Roads | 337.8 | 105.2 |
| Pipe/Contractor Yards | 388.8 | 0.0 |
| Sabal Trail Project Subtotal | 8,548.8 | 3,095.8 |
| Florida Southeast Connection Project | | |
| Pipeline Right-of-Way | 1,385.5 | 743.6 |
| Additional Temporary Workspace | 167.6 | 0.0 |
| Aboveground Facilities | 1.7 | 1.7 |
| Access Roads | 128.5 | 5.3 |
| Pipe/Contractor Yards | 204.3 | 0.0 |
| Florida Southeast Connection Project Subtotal | 1,887.6 | 750.7 |
| Southeast Market Pipelines Project Total | 11,436.2 | 4,143.3 |

Note: The totals shown in this table may not equal the sum of addends due to rounding.

TABLE 2.2.1-3

**Pipe/Contractor Yards and Staging Areas for the Hillabee Expansion Project**

| State/County - Yard Name | Construction Area (acres) | Operation Area (acres) |
|---|---|---|
| Alabama Yards | | |
| Choctaw County - Butler #3 | 5.0 | 0.0 |
| Choctaw County - Butler #4 | 10.3 | 0.0 |
| Chilton County - Billingsley #1 | 17.3[a] | 0.0 |
| Chilton County - Verbena #1 | 11.2 | 0.0 |
| Chilton County - Verbena #2 | 6.9 | 0.0 |
| Chilton County - Clanton #1 | 4.8[a] | 0.0 |
| Chilton County - Clanton #2 | 9.2[a] | 0.0 |
| Chilton County - Clanton #3 | 8.3 | 0.0 |
| Coosa County - Kellyton #1 | 9.2[a] | 0.0 |
| Mississippi Yard | | |
| Lauderdale County - Meridian #1 | 8.2 | 0.0 |
| Total | 90.4 | 0.0 |

[a] Construction area impacts do not include the acreages of wetlands located within the yards. Transco would avoid impacts on wetlands areas during use of the yards.

Note: The totals shown in this table may not equal the sum of addends due to rounding.

## 2.2.2 Sabal Trail Project

### 2.2.2.1 Pipeline Right-of-Way

Sabal Trail would generally use a 100-foot-wide temporary right-of-way to construct the proposed Mainline route and HCL, and a 90-foot-wide temporary right-of-way to construct the CCL (see appendix C). This right-of-way would be reduced as necessary through sensitive areas such as wetlands, waterbodies, and residential lands. Constructing the Sabal Trail Project would require the temporary use of about 5,976.1 acres of land.

Sabal Trail proposes pipeline routes that are collocated with existing rights-of-way or previously disturbed corridors for approximately 308.1 miles (60 percent) of the total pipeline lengths. The remaining approximately 207.5 miles (40 percent) of the pipeline route would deviate from these rights-of-way and corridors. Of the area affected by pipeline construction, approximately 487.3 acres (8 percent) would overlap with existing easements.

Following construction, Sabal Trail would retain a 50-foot-wide permanent right-of-way to operate the pipeline facilities. The permanent right-of-way would require about 2,824.5 acres of land. Of this area, about 94.7 acres would be within previously disturbed, maintained, operational easements.

In addition to the construction right-of-way, ATWS would be required in areas such as those identified in section 2.2. Most ATWSs would add 25 feet onto the construction right-of-way, effectively creating a 115- to 125-foot-wide work area at the ATWS location. In total, ATWSs would temporarily require about 1,621.7 acres of land. Table 2.2.1-1 in appendix D lists each ATWS proposed on the Sabal Trail Project.

### 2.2.2.2 Aboveground Facilities

Constructing and operating the aboveground facilities would require the temporary and permanent use of about 224.3 acres and 161.1 acres, respectively. Table 2.2.2-1 lists the land required for each aboveground facility.

TABLE 2.2.2-1

**Sabal Trail Project Aboveground Facility Land Requirements**

| State/Facility | Milepost | Construction Area (acres) | Operation Area (acres) |
|---|---|---|---|
| Alabama | | | |
| Alexander City Compressor Station | 0.0 | 66.8 | 29.7 |
| Transco Hillabee Meter Station | 0.0 | 1.3 | 1.3 |
| Additional Aboveground Facilities (MLVs, etc.) [a] | See table 2.1.1-3 | 0.5 | 0.5 |
| Georgia | | | |
| Albany Compressor Station | 154.7 | 33.4 | 26.3 |
| Additional Aboveground Facilities (MLVs, etc.) [a] | See table 2.1.1-3 | 1.0 | 1.0 |
| Florida | | | |
| Hildreth Compressor Station | 296.3 | 34.6 | 27.9 |
| Dunnellon Compressor Station | 392.7R | 37.3 | 37.3 |
| Reunion Compressor Station | 474.4 | 18.4 | 17.7 |
| FGT Suwannee Meter Station | 299.7 | 10.4 | 7.4 |
| FSC Meter Station | 474.4 | 1.5 | 1.5 |
| Gulfstream Meter Station | 474.4 | 1.4 | 1.4 |
| FGT Hunters Creek Meter Station | 13.1 | 6.4 | 3.6 |
| Duke Energy Citrus Meter Station | 21.5 | 9.8 | 4.1 |
| Additional Aboveground Facilities (MLVs, etc.) [a] | See table 2.1.1-3 | 1.4 | 1.4 |
| Total | | 224.3 | 161.1 |

[a] Includes MLVs, pig receivers, pig launchers, and tap valves that would be located entirely within the permanent, maintained right-of-way for the pipeline or are associated with the construction and operation of another proposed aboveground facility site.

Note: The totals shown in this table may not equal the sum of addends due to rounding.

### 2.2.2.3 Pipe/Contractor Yards and Staging Areas

Sabal Trail would use two contractor yards in Alabama, five pipe/contractor yards in Georgia, and seven pipe/contractor yards in Florida to house contractor management offices and to stage and store vehicles, equipment, pipe, and other materials (see table 2.2.2-2). The yards would temporarily occupy about 388.8 acres.

### 2.2.2.4 Access Roads

Sabal Trail has identified 158 existing roads that would need to be improved or modified. Additionally, Sabal Trail would build and permanently maintain 36 new roads for operations; permanently maintain 49 existing roads for operations; and build 21 new roads for temporary use during construction. Of the proposed access roads, 251 are associated with pipe/contractor yards and pipeline right-of-way access and 8 are associated with aboveground facility access. Access road use would temporarily impact about 337.7 acres of land and permanently impact about 105.2 acres. Table 2.2.1-4 in appendix D identifies each road improvement proposed for the Sabal Trail Project.

TABLE 2.2.2-2

**Pipe/Contractor Yards and Staging Areas for the Sabal Trail Project**

| State/County - Yard Name | Construction Area (acres) | Operation Area (acres) |
|---|---|---|
| Alabama | | |
| Chambers County, Yard 1-1 | 22.9 | 0.0 |
| Lee County, Yard 1-2 | 24.7 | 0.0 |
| Georgia | | |
| Lee County, Yard 2-1 | 21.3 | 0.0 |
| Dougherty County, Yard 2-2 | 24.1 | 0.0 |
| Dougherty County, Yard 2-3 | 77.0 | 0.0 |
| Lowndes County, Yard 3-2 | 25.0 | 0.0 |
| Lowndes, Yard 3-3 | 23.9 | 0.0 |
| Florida | | |
| Suwannee County, Yard 4-1 | 24.8 | 0.0 |
| Marion County, Yard 5-5 | 38.3 | 0.0 |
| Marion County, Yard 5-6 | 29.7 | 0.0 |
| Marion County, Yard 5-7 | 18.1 | 0.0 |
| Lake County, Yard 6-1 | 12.2 | 0.0 |
| Osceola County, Yard 6-3 | 17.7 | 0.0 |
| Sumter County Yard 6-5 | 29.1 | 0.0 |
| Total | 388.8 | 0.0 |

Note: The totals shown in this table may not equal the sum of addends due to rounding.

### 2.2.3 Florida Southeast Connection Project

#### 2.2.3.1 Pipeline Right-of-Way

FSC would generally use a 100-foot-wide temporary right-of-way to construct the majority of the proposed route in upland non-agricultural areas and a 125-foot-wide construction right-of-way in agricultural areas (see appendix C). This right-of-way would be reduced as necessary through sensitive areas such as wetlands, waterbodies, and residential lands. Constructing the FSC Project would require the temporary use of about 1,385.5 acres of land.

FSC proposes a pipeline route that is collocated with existing roads and utilities for approximately 101.9 miles (81 percent) of the total pipeline length. The remaining 24.5 miles (19 percent) of the pipeline route would deviate from these rights-of-way or corridors.

Following construction, FSC would retain a 50-foot-wide permanent right-of-way to operate the pipeline. The permanent right-of-way would require about 743.6 acres of land.

In addition to the construction right-of-way, ATWS would be required in areas such as those identified in section 2.2. Most ATWSs would add 25 feet onto the construction right-of-way, effectively creating a 125- to 155-foot-wide work area at the ATWS location. In total, ATWSs would temporarily require about 167.6 acres of land. Table 2.2.1-1 in appendix D lists each ATWS proposed on the FSC Project.

# 4.0 ALTERNATIVES

As required by NEPA and Commission policy, and in cooperation with the USACE per its responsibilities under the CWA, we identified and evaluated alternatives to the specific natural gas transmission facilities (and locations) comprising the SMP Project as proposed by the Applicants in their respective applications and associated supplements. Specifically, we evaluated the no action alternative, system alternatives, pipeline route alternatives, and aboveground facility location alternatives (including compressor station equipment alternatives).

The purpose of this evaluation is to determine whether an alternative would be preferable to the proposed action. We generally consider an alternative to be preferable to a proposed action using three evaluation criteria, as discussed in greater detail below. These criteria include: the alternative meets the stated purpose of the project; is technically and economically feasible and practical; and offers a significant environmental advantage over a proposed action.

Our evaluation of the identified alternatives is based on project-specific information provided by the Applicants, affected landowners, and other concerned parties; publicly available information; our consultations with federal and state resource agencies; and our expertise and experience regarding the siting, construction, and operation of natural gas transmission facilities and their potential impact on the environment. In evaluating alternatives, we considered and addressed as appropriate, the numerous comments provided to the Commission about possible alternatives.

**Public Comments**

As described in section 1.1, the Commission received hundreds of comments expressing concern about the SMP Project. Many of these comments requested that we evaluate alternatives to the SMP Project, the proposed pipeline routes, and the aboveground facility locations. In response to these comments, we required the Applicants to provide additional environmental information, requested they assess the feasibility of alternatives as proposed by the commenters, conducted site visits and field investigations, met with affected landowners and local representatives and officials, consulted with federal and state regulatory agencies, and sought additional public input. These efforts, along with the Applicants continued assessment of their respective projects resulted in numerous changes to the proposed actions. During the course of the pre-filing processes and the issuance of this draft EIS over 200 route variations were adopted. Additionally, several aboveground facility locations were evaluated and the location of the Albany Compressor Station was changed.

The Commission also received numerous comments suggesting that electricity generated from solar panels and/or other renewable energy sources could eliminate the need for the SMP Project and that the use of these energy sources as well as gains realized from increased energy efficiency and conservation should be considered as alternatives to the project. As stated previously, the purpose of the SMP Project is to transport price competitive natural gas from Alabama to Florida. The generation of electricity from renewable energy sources is a reasonable alternative for a review of power generating facilities. Authorizations related to how the southeast will meet demands for electricity are not part of the application before the Commission and their consideration is outside the scope of this draft EIS. Therefore, because the purpose of the SMP Project is to transport natural gas, and the generation of electricity from renewable energy sources or the gains realized from increased energy efficiency and conservation are not transportation alternatives, they are not considered or evaluated further in this analysis.

**Evaluation Process**

Through environmental comparison and application of our professional judgement, each alternative is considered to a point where it becomes clear if the alternative could or could not meet the three evaluation

criteria. To ensure a consistent environmental comparison and to normalize the comparison factors, we generally use desktop sources of information (e.g., publicly available data, GIS data, aerial imagery) and assume the same right-of-way widths and general workspace requirements. Where appropriate, we also use site-specific information (e.g., field surveys or detailed designs); however, we generally defer qualitative wetlands analysis and comparisons (e.g., WRAP scores) to the USACE. As described previously, our environmental analysis and this evaluation only considers quantitative data (e.g., acreage or mileage) and uses common comparative factors such as total length, amount of collocation, and land requirements. Our evaluation also considers impacts on both the natural and human environments. Impacts on the natural environment include wetlands, forested lands, karst geology, and other common environmental resources. Impacts on the human environment include residences, roads, utilities, and industrial and commercial development near construction workspaces. In recognition of the competing interests and the different nature of impacts resulting from an alternative that sometimes exist (i.e. impacts on the natural environment versus impacts on the human environment), we also consider other factors that are relevant to a particular alternative or discount or eliminate factors that are not relevant or may have less weight or significance.

The purpose of the SMP Project, which is described in greater detail in section 1.1, is to transport price competitive natural gas from existing transmission facilities in Alabama to customers in Florida. With its December 2012 authorization of a RFP for new natural gas transportation capacity to serve FPL's natural gas-fired generating facilities in Florida, the FPSC indicated that enhanced reliability and competitiveness was needed. Therefore, a preferable alternative must maintain the price competitive nature of the proposed action. An alternative that would significantly reduce or eliminate the price competitiveness of the transported natural gas would not satisfy the purpose for the project and is not a preferable alternative to the proposed action.

Many alternatives are technically and economically feasible. Technically practical alternatives, with exceptions, would generally require the use of common construction methods. An alternative that would require the use of a new, unique or experimental construction method may not be technically practical because the required technology is not available or unproven. Economically practical alternatives would result in an action that generally maintains the price competitive nature of the proposed action. Generally, we do not consider the cost of an alternative as a critical factor unless the added cost to design, permit, and construct the alternative would render the project economically impractical.

Determining if an alternative provides a significant environmental advantage requires a comparison of the impacts on each resource as well as an analysis of impacts on resources that are not common to the alternatives being considered. The determination must then balance the overall impacts and all other relevant considerations. In comparing the impact between resources (factors), we also considered the degree of impact anticipated on each resource. Ultimately, an alternative that results in equal or minor advantages in terms of environmental impact would not compel us to shift the impacts from the current set of landowners to a new set of landowners.

One of the goals of an alternatives analysis is to identify alternatives that avoid significant impacts. In section 3.0, we evaluated each environmental resource potentially affected by the SMP Project and concluded that constructing and operating the SMP Project would not significantly impact these resources. Consistent with our conclusions, the value gained by further reducing the (not significant) impacts of the SMP Project when considered against the cost of relocating the route/facility to a new set of landowners was also factored into our evaluation.

Because we received a large number of comments expressing concern about impacts on environmental justice communities, we included this as a comparison factor for several alternatives, particularly alternatives involving southwest Georgia. We compared the number of environmental justice populations crossed (census tracts), the miles of environmental justice populations crossed, and the number

of environmental justice populations within 1 mile of the centerline. Regarding these comparative factors, we generally consider it preferable if an alternative crosses fewer environmental justice populations.

## 4.1 NO ACTION ENERGY ALTERNATIVE

NEPA requires the Commission to consider and evaluate the no action alternative.[1] According to the Council on Environmental Quality, in instances involving federal decisions on proposals for projects, no action would mean the proposed activity would not take place and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity. In accordance with the section 404 (b)(1) guidelines, the no action alternative is not considered by the USACE in its review of alternatives to avoid or minimize impacts to waters of the U.S. because it does not allow the Applicant's to achieve the overall project purpose.

If the SMP Project is not constructed, then there would be no impact on the environment. Compared to the proposed action, no impact on the environment would offer a significant environmental advantage; however, this alternative would not meet the stated purpose of the SMP Project. Furthermore, not constructing the SMP Project may cause the natural gas shippers to seek other means of transporting the proposed volumes of natural gas from Alabama to Florida, and the purchasers of the natural gas to seek other sources of the gas, both of which may result in equal or greater environmental impacts. Additionally, the "no action" alternative could result in inadequate fuel supplies for the anticipated energy demands (i.e., fuel shortages), which could lead to insufficient energy production to meet expected demands. Therefore, we have determined that this alternative is not preferable to the proposed action.

## 4.2 SYSTEM ALTERNATIVES

System alternatives to the proposed action would make use of existing or other proposed natural gas transmission systems/facilities to meet the stated purpose of the SMP Project. Implementing a system alternative would make it unnecessary to construct all or part of the SMP Project, although some modifications or additions to an existing transmission system/facility or other proposed transmission system/facility may be necessary. We identified and evaluated several system alternatives as described below. These system alternatives would make us of existing natural gas pipeline and other transmission systems/facilities. We did not identify any other proposed natural gas transmission systems/facilities. These alternatives are depicted on figure 4.2-1.

### 4.2.1 Existing Natural Gas Pipeline Systems

The FGT, Gulfstream, SONAT, Cypress, and Transco pipeline systems are the only existing interstate, natural gas transmission systems operating in or in part of the SMP Project area.

#### 4.2.1.1 FGT Pipeline System

FGT operates approximately 5,400 miles of pipeline from Texas to south Florida. The FGT system is located approximately 70 miles south of Transco's Compressor Station 85. Additionally, there are multiple locations where the Sabal Trail and FSC pipelines would cross, be located in close proximity to, or parallel the FGT system.

[1] In accordance with the section 404 (b)(1) guidelines, the no action alternative is not considered by the USACE in its review of alternatives to avoid or minimize impacts on waters of the U.S. because it does not allow the Applicants to achieve the overall project purpose.

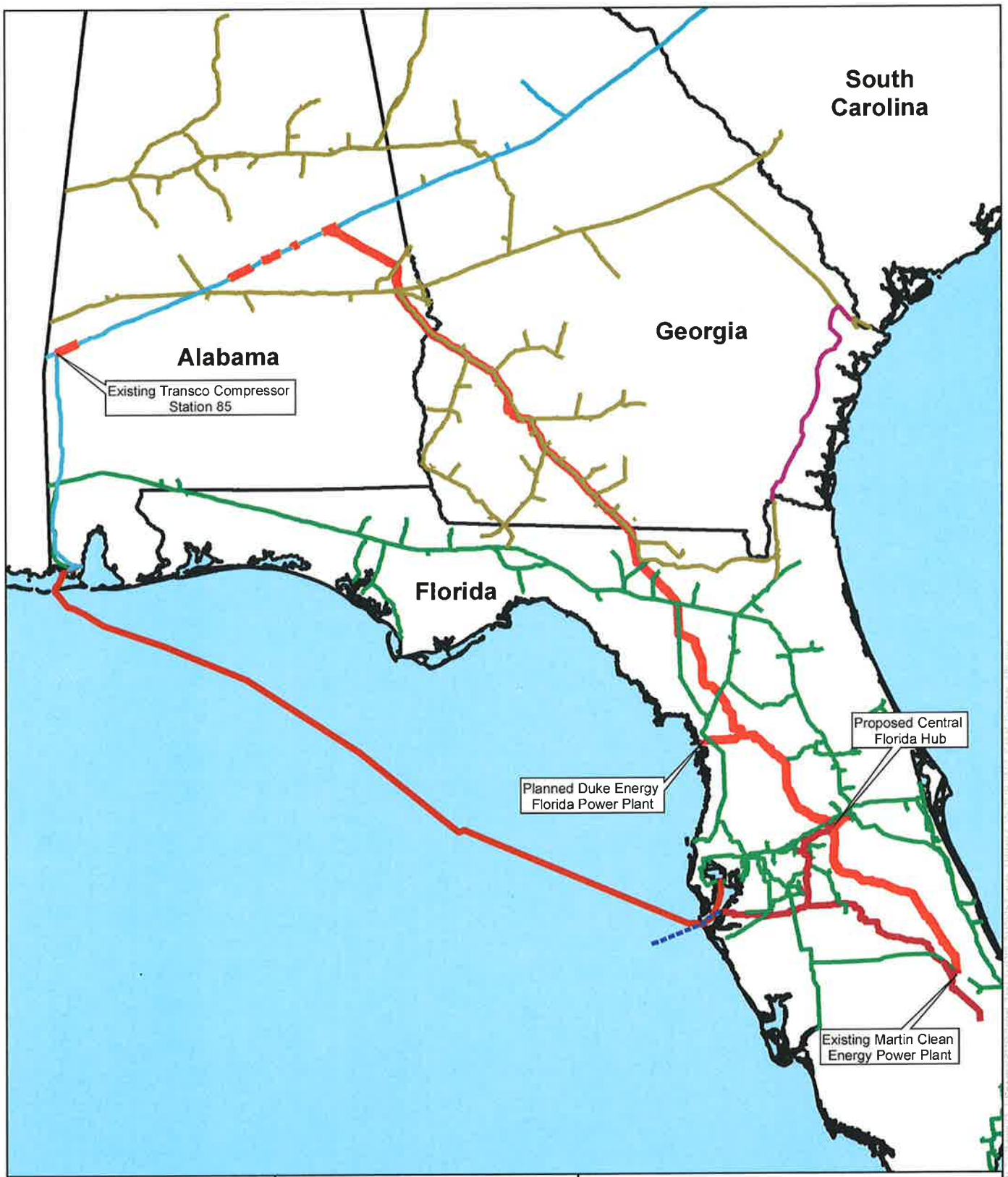



**Figure 4.2-1**
**Southeast Market Pipelines Project**
**System Alternatives**

The existing FGT system is operating at or near capacity and, therefore, is incapable of transporting the volumes of natural gas that would be transported by the SMP Project. Use of this system is not technically feasible or practical without significant modifications. However, by constructing substantial new natural gas transmission infrastructure, the FGT system may be able to meet the stated purpose of the SMP Project. An expansion of the FGT system is technically feasible. In 2010, FGT (Phase VIII Expansion Project[2]) constructed approximately 482.8 miles of natural gas pipeline to transport approximately 820 MMcfd of natural gas. Although this is slightly less than 75 percent of the SMP Project capacity, it is feasible that FGT could construct additional facilities that would allow it to meet the stated purpose of the SMP Project; however, based on the EIS developed for the FGT Phase VIII Expansion Project, the environmental impacts of another FGT expansion project would most likely be similar in scope and magnitude to the impacts of the SMP Project. Therefore, we have determined that this alternative would not offer a significant environmental advantage over the proposed action and is not preferable to the proposed action. In section 4.3.1 we address route alternatives that would collocate the SMP Project with portions of the FGT system.

#### 4.2.1.2 Gulfstream Pipeline System

Gulfstream operates a pipeline system that is about 745 miles long extending from near Mobile, Alabama across the Gulf of Mexico and into central Florida. The Gulfstream system is located approximately 110 miles south of Transco's Compressor Station 85. Additionally, there are multiple locations where the Sabal Trail and FSC pipelines would cross, be located in close proximity to, or parallel the Gulfstream system.

The existing Gulfstream system is operating at full capacity and, therefore, is incapable of transporting the volumes of natural gas that would be transported by the SMP Project. Use of this system is not technically feasible without significant modifications. However, by constructing substantial new natural gas transmission infrastructure, approximately 600 miles of pipeline, the Gulfstream system may be able to meet the stated purpose of the SMP Project. However, offshore construction is substantially more expensive than land-based construction and the total cost of a system expansion/modification, approximately 5.9 billion, would result in this alternative being economically impractical and unable to meet the stated purpose of the SMP Project. Therefore, we have determined that this alternative is not preferable to the proposed action. In section 4.3.1 we address route alternatives that would collocate the SMP Project with portions of the Gulfstream system.

#### 4.2.1.3 SONAT Pipeline System

SONAT operates approximately 7,600 miles of pipeline from the Gulf of Mexico to northern Florida, including portions of 10-inch-diameter pipeline that are collocated with the SMP Project in southwest Georgia and northern Florida. SONAT also operates the approximately 167-mile-long Cypress Pipeline that links the Elba Island LNG Terminal supplies in northeastern Georgia to interconnections with FGT in northeastern Florida.

These existing pipeline systems are operating at or near capacity and, therefore, are incapable of transporting the volumes of natural gas that would be transported by the SMP Project. Furthermore, these systems do not service the SMP Project interconnections. Use of these systems is not technically feasible without significant modifications and the construction of substantial new natural gas transmission infrastructure. Looping the SONAT system in southwest Georgia and constructing a greenfield pipeline from the terminus of SONAT in north Florida to central Florida is analogous to the SMP Project, which is primarily collocated with SONAT in southwest Georgia. This modification would offer no significant

[2] FERC Docket CP09-17-000.

environmental advantage. Use of the Cypress Pipeline system is not practical because the bulk of its facilities are located in eastern Georgia outside of the SMP Project area. Based on the factors described above, we have determined that these alternatives are not preferable to the proposed action.

#### 4.2.1.4 Transco Pipeline System

Transco operates approximately 10,200 miles of pipeline from Texas to New York. As described previously, Transco's Hillabee Expansion Project would involve looping existing Transco pipeline in order to transport natural gas from near the existing Compressor Station 85 to the kick-off point of the Sabal Trail Project. We evaluated two system alternatives to the Hillabee Expansion Project; the compression intensive alternative (CIA) and the looping intensive alternative (LIA).

**Compression Intensive Alternative**

The CIA would involve the use of compression only to meet the delivery requirements of the project and would eliminate the need for pipeline looping. The CIA would include construction of Compressor Station 84 and installation of additional compression at Transco's existing Compressor Stations 90, 95, 100, 105, and 110. Implementing this alternative would require a total of 185,245 hp, more than double the 88,500 hp for Transco's proposed project, and would impact about 144 acres of land during construction and 70 acres during operation of the facilities. In comparison, the proposed project would impact about 973 acres of land during construction and 312 acres during operation. Implementing the CIA alternative would reduce impacts on most environmental resources but would result in greater air and noise emissions and reduced reliability when compared to Transco's proposed combination of looping and compression. Assuming that this additional compression were achieved through the installation of new compressor units of similar efficiency to those currently proposed, we calculated that the air emissions would increase by about 114 percent, including an additional 185 tpy $NO_x$, 300 tpy CO, and 395,269 tons $CO_2e$. Therefore we conclude that the alternative is not preferable to the proposed action.

**Looping Intensive Alternative**

The LIA would involve the use of pipeline looping only to meet the delivery requirements of the project. The LIA would eliminate the need for new Compressor Station 84 and increased compression at existing stations, and the operational air emissions and noise associated with the compression. However, the LIA would require 84.6 miles of looping, or nearly twice the 43.5 miles of looping associated with the proposed project. Implementing this alternative would impact about 489 acres more land during construction and 202 acres during operation. In general, this alternative would result in additional impacts on the environment. Therefore, we have determined that this alternative is not preferable to the proposed action.

### 4.2.2 Other Natural Gas Transmission Systems

### 4.2.3 LNG Import

LNG is transported daily throughout the world via LNG ship carriers. We evaluated the use of a domestic LNG seaborne (Gulf of Mexico) transmission system and associated onshore pipeline (originating from the west central coast of Florida to the SMP Project delivery points) as an alternative to the SMP Project. Currently, there are no operating LNG terminals along the Florida panhandle or the west central coast of Florida. The Port Dolphin LNG facility (Port Dolphin) was licensed as a deep water LNG import terminal in 2010. As approved, the facility with a capacity to receive up to 1.2 billion cubic feet per day of LNG would be located about 28 miles offshore of Tampa, Florida and connected to the existing Gulfstream pipeline system via a 36-inch-diameter pipeline in Manatee County, Florida. However, this facility has not

been constructed[3] and we are unaware of any other licensed/approved or proposed LNG terminal facilities in the SMP Project area. Due to the cost of constructing two LNG terminals, operating LNG ship carriers, and constructing the necessary natural gas pipeline, this system would not be economically practical. Therefore, we have determined that this alternative is not preferable to the proposed action.

### 4.2.4 Use of Trucks and/or Rail

LNG in relatively small volumes is transported via truck and/or rail in many locations throughout the United States, including the SMP Project area. We evaluated the use of this existing transmission system as an alternative to the SMP Project. Commercially available LNG tanker trucks have storage/ transmission capacities ranging between 7,500 gallons and 16,000 gallons, and commercially available railway tankers have storage/transmission capacities ranging between 16,000 and 30,000 gallons. Based on the capacities of these systems, it would take approximately 1,100 to 1,900 trucks per day, or 440 to 885 railway tankers per day to deliver the 1.1 Bcf/d of gas from Transco's Compressor Station 85 to the SMP Project's delivery points. In addition, liquefaction and vaporization facilities would need to be constructed at the receipt and delivery points, respectively. Based on the number of trucks and/or rail cars that would be needed to transport the SMP Project volumes and the facilities, time, and cost necessary to process and deliver these volumes, we have determined the use of this system would not be economically practical. Therefore, we have determined that this alternative is not preferable to the proposed action.

## 4.3 ROUTE ALTERNATIVES AND VARIATIONS

We evaluated route alternatives and variations to determine whether their implementation would be preferable to the proposed corresponding action. Route alternatives are greater than 50 miles in length and can deviate from the proposed route by a significant distance. Route variations are less than 50 miles in length and deviate from the proposed route to a lesser degree than a major route alternative.

As described previously, route alternatives and variations were identified based on public comments, information provided by the Applicants, agency consultations, and our independent review of the SMP Project area. In developing their projects, the Applicants collectively considered numerous route alternatives and hundreds of route variations, all of which were included in their respective applications. We also received requests to evaluate dozens of additional route alternatives and variations. Furthermore, we identified during our review of the SMP Project many more route alternatives and variations. We reviewed, considered, and evaluated all of these alternatives.

### 4.3.1 Major Route Alternatives

We evaluated 12 major route alternatives to the proposed pipeline route or portions of the route (see table 4.3.1-1 and figure 4.3.1-1). We did not identify or evaluate any major route alternatives specific to Transco's proposed pipeline loops in Alabama because the loops would abut or only deviate slightly from Transco's existing cleared right-of-way. However, a number of the major route alternatives evaluated would eliminate the need for the Hillabee Expansion Project. Additionally, several alternatives were evaluated to address concerns raised about environmental impacts on southwest Georgia and north central Florida.

[3] On November 20, 2014 the FERC granted Port Dolphin an extension of time to construct the facilities by December 31, 2018.

TABLE 4.3.1-1

**Major Route Alternatives Evaluated for the Southeast Market Pipelines Project**

| Alternative | Milepost Range | Primary Reasons for Evaluation |
|---|---|---|
| Station 85 | 0.0 – 269.1 | Avoid or reduce routing in Georgia |
| FGT Onshore | 0.0 – 299.8 | Avoid routing in Georgia; follow other right-of-way |
| Gulf Crossing | 0.0 – 390.0 | Avoid routing in Georgia and northern Florida; minimize on-land disturbance |
| Hillabee | 42.2 – 252.3 | Follow other right-of-way in Georgia; increase collocation |
| Interstate 75 | 252.3 – 408.9 | Follow other right-of-way; increase collocation; reduce routing in karst sensitive areas of Florida |
| FGT to CFH | 316.8 – 474.4 | Follow other right-of-way; increase collocation |
| GreenLaw 1 | 142.7 – 474.4 | Increase collocation; reduce routing in karst sensitive areas; avoid routing in Dougherty County, Georgia |
| GreenLaw 2 | 0.0 – 474.4 | Increase collocation; reduce routing in karst sensitive areas; avoid routing in Dougherty County, Georgia |
| GreenLaw 3 | 142.7 – 474.4 | Increase collocation; reduce routing in karst sensitive areas; avoid routing in Dougherty County, Georgia |
| GreenLaw 4 | 104.3 – 474.4 | Increase collocation; reduce routing in karst sensitive areas; avoid routing in Dougherty County, Georgia |
| FSC 1 | 0.0 – 126.4 | Increase collocation |
| FSC 2 | 0.0 – 126.4 | Increase collocation |

### 4.3.1.1 Station 85 Route Alternative

Several commentors recommended the Station 85 Route Alternative to avoid and/or minimize impacts on southwest Georgia. The Station 85 Route Alternative begins at the receipt point for the SMP Project near Transco's Compressor Station 85 in Choctaw County, Alabama. From there the alternative extends southeast along the Alabama/Florida and Georgia/Florida borders into northern Florida, where it follows Interstate 10 east and intersects Sabal Trail's Mainline route near MP 269.1. Figure 4.3.1-1 illustrates the alternative and table 4.3.1-2 compares the alternative to the corresponding segments of the proposed routes.

TABLE 4.3.1-2

**Analysis of the Station 85 Route Alternative**

| Factor | Proposed Route [a] | Station 85 Route Alternative |
|---|---|---|
| Length (miles) | 312.8 | 369.1 |
| Length in Georgia | 161.7 | 48.5 |
| Collocation | | |
| Parallel to Existing Rights-of-Way (miles/percent) | 199.1/64 | 209.2/57 |
| Greenfield (miles/percent) | 113.7/36 | 159.9/43 |
| Construction Land Requirements (acres) | 3,791.5 | 4,473.9 |
| Operation Land Requirements (acres) | 1,895.8 | 2,237.0 |
| Forested Upland Impacts (acres) | 1,522.6 | 1,881.8 |
| Wetland Impacts (acres) | 159.2 | 381.8 |
| Forested Wetland Impacts (acres) | 145.9 | 367.6 |
| Karst Features Crossed (miles) | 174.6 | 259.6 |
| Recreation and Special Interest Areas Crossed (miles) | 6.8 | 72.4 |
| Residences within 50 feet of the Construction Right-of-Way (no.) | 92 | 98 |
| Environmental Justice Communities | | |
| Within 1 Mile of Centerline (no.) | 38 | 47 |
| Crossed (no.) | 35 | 38 |
| Crossed (miles) | 238.6 | 324.9 |

[a] Includes the Hillabee Expansion Project plus the Sabal Trail Mainline between MPs 0.0 – 269.1.

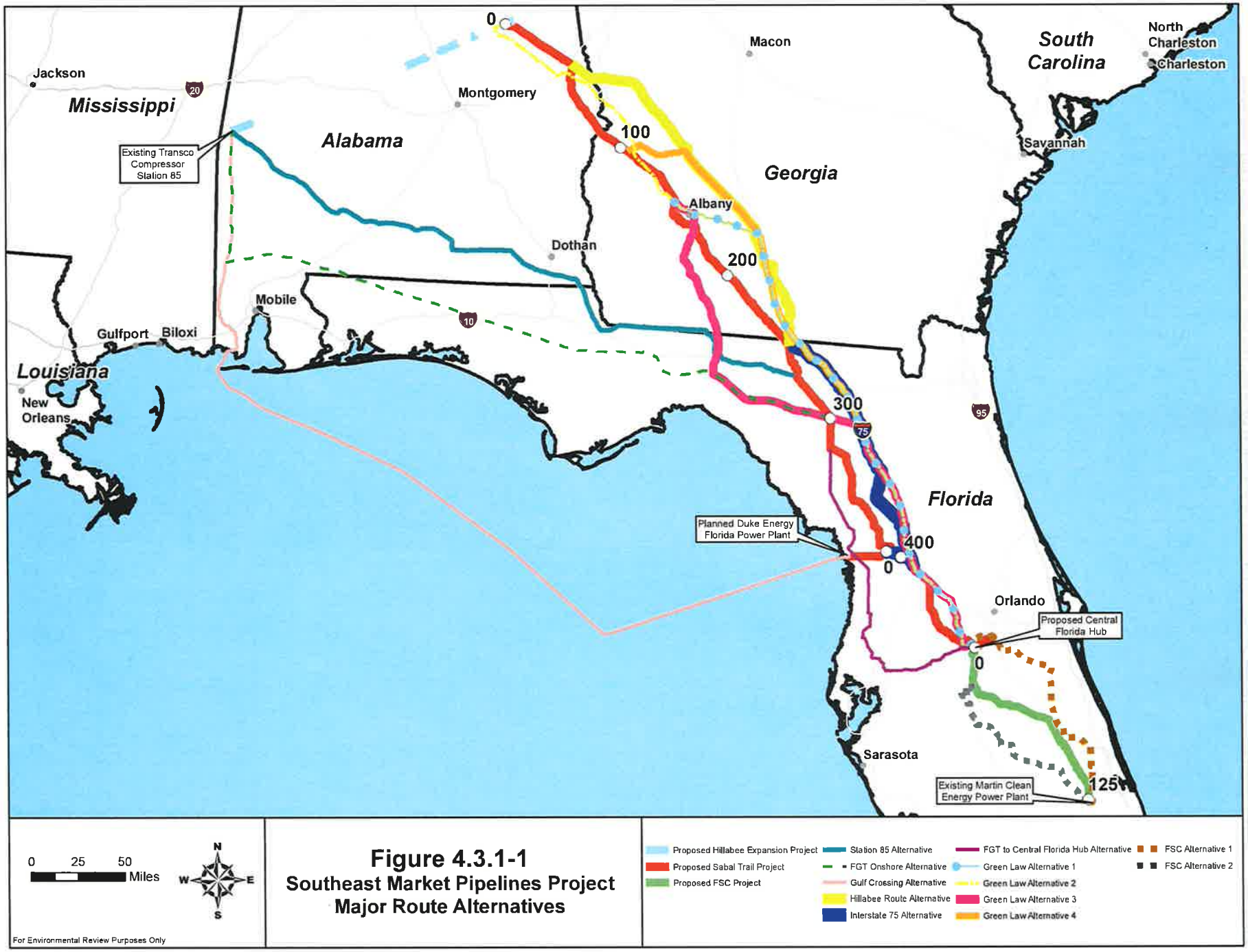



**Figure 4.3.1-1**
**Southeast Market Pipelines Project**
**Major Route Alternatives**

This alternative reduces pipeline construction in Georgia from 161.7 miles to 48.5 miles and eliminates the Hillabee Expansion Project. However, the alternative is 56.3 miles longer and involves 46.2 miles more of greenfield construction than the corresponding combination of Transco's proposed loops and Sabal Trail's Mainline. As a result, the alternative requires an additional 682.4 acres of land for construction, and affects 359 more acres of forest and 222 more acres of wetland than the proposed route. Compared to the proposed route, the alternative also crosses 86.3 miles more of areas classified as environmental justice communities, 85.0 miles more of karst features, and 65.6 miles more of special interest or recreational areas. For these reasons, we have determined that the Station 85 Route Alternative does not offer a significant environmental advantage and is not preferable to the proposed action.

#### 4.3.1.2 FGT Onshore Route Alternative

The FGT Onshore Route Alternative was evaluated to avoid construction in Georgia and increase collocation with existing pipeline facilities. This alternative begins at the receipt point for the SMP Project near Transco's Compressor Station 85 in Choctaw County, Alabama, extends south along an existing Gulf South Pipeline corridor to an existing FGT pipeline corridor, and then extends east adjacent to FGT through the Florida panhandle until intersecting the Sabal Trail Mainline route near MP 299.8. Figure 4.3.1-1 illustrates the alternative and table 4.3.1-3 compares the alternative to the corresponding segments of the proposed route.

TABLE 4.3.1-3

**Analysis of the FGT Onshore Route Alternative**

| Factor | Proposed Route [a] | FGT Onshore Route Alternative |
|---|---|---|
| Length (miles) | 343.5 | 428.0 |
| In Georgia | 161.7 | 0.0 |
| Number of Compressor Stations (new/modified) | 6/3 | 8/0 |
| Collocation | | |
| Parallel to Existing Right-of-Way (miles/percent) | 288.0/84 | 373.0/87 |
| Greenfield (miles/percent) | 55.5/16 | 55.0/13 |
| Construction Land Requirements (acres) | 4,163.6 | 5,187.9 |
| Operation Land Requirements (acres) | 2,081.8 | 2,593.9 |
| Forested Upland Impacts (acres) | 1,568.5 | 1,955.2 |
| Wetland Impacts (acres) | 163.6 | 685.5 |
| Forested Wetland Impacts (acres) | 151.8 | 663.6 |
| Karst Features Crossed (miles) | 205.3 | 263.2 |
| Recreation and Special Interest Areas Crossed (miles) | 5.4 | 120.8 |
| Residences within 50 feet of the Construction Right-of-Way (no.) | 50 | 28 |
| Environmental Justice Communities | | |
| Within 1 Mile of Centerline (no.) | 42 | 46 |
| Crossed (no.) | 38 | 43 |
| Crossed (miles) | 269.4 | 334.4 |

[a] Includes the Hillabee Expansion Project plus the Sabal Trail Mainline between MPs 0.0 – 299.8.

The FGT Onshore Route Alternative avoids construction of 161.7 miles of pipeline and one compressor station in Georgia, eliminates the Hillabee Expansion Project, and is located within 50 feet of 22 fewer residences than the proposed route. However, the alternative is 84.5 miles longer and includes a similar length of greenfield pipeline construction as the corresponding combination of Transco's proposed loops and Sabal Trail's Mainline. As a result, the alternative requires an additional 1,024.3 acres of land for construction and affects 386.7 more acres of forest and 521.9 more acres of wetland than the proposed route. Compared to the proposed route, the alternative also crosses 65.0 miles more of areas classified as

environmental justice communities, 57.9 miles more of karst features, and 115.4 miles more of special interest or recreational areas. Based on these factors, we have determined that the FGT Onshore Route Alternative does not offer a significant environmental advantage and is not preferable to the proposed action.

#### 4.3.1.3 Gulf Crossing Route Alternative

The Gulf Crossing Route Alternative was evaluated to avoid construction in Georgia and northern Florida and to minimize overall land-based impacts. Throughout our environmental review, we received comments requesting that this alternative be fully evaluated. This alternative would begin at Transco's Compressor Station 85 in Choctaw County, Alabama and follow an existing Gulf South Pipeline corridor south until reaching the existing Gulfstream Pipeline near Mobile, Alabama. The alternative then follows Gulfstream southeasterly for about 266 miles in the Gulf of Mexico, and then turns northeasterly for an additional 140.8 miles to make landfall near the terminus of the CCL in Citrus County, Florida. A more direct route across the Gulf of Mexico to the terminus of the CCL, while possible, was considered but discounted because it would cross more sensitive shallow water habitat. Once on land, the alternative follows the CCL alignment to rejoin Sabal Trail's Mainline at the proposed Dunnellon Compressor Station near MP 390.0. The comparative segment of the SMP Project includes the 43.5 miles of pipeline looping of the Hillabee Expansion Project, the Sabal Trail Mainline from MPs 0.0 to 390.0, and the CCL. Figure 4.3.1-1 illustrates the alternative and table 4.3.1-4 compares the alternative to the corresponding segments of the proposed routes.

The Gulf Crossing Route Alternative would eliminate the need for Hillabee Expansion Project and the Sabal Trail Project in Georgia and northern Florida. Overall, the alternative is 104.3 miles (23 percent) longer than the corresponding proposed routes and does avoid Georgia. The alternative results in approximately the same length of pipeline in Alabama and reduces the length of pipeline in Florida by about 122 miles. The alternative reduces onshore pipeline construction by 302.5 miles but increases offshore pipeline construction by 406.8 miles. Both routes are collocated with existing rights-of-way for a similar percentage of their length.

Constructing the alternative will affect 5,226.1 acres, or 289.1 acres less than the proposed SMP Project, including approximately 1,848.5 acres onshore and 3,377.6 offshore. Due to its alignment in the Gulf of Mexico, the alternative affects 3,666.7 acres less onshore including 1,164.2 acres less forested land. It also crosses 184 fewer waterbodies, 100.7 miles fewer designated springsheds, 279.2 miles fewer karst features, 296.6 miles fewer areas classified as environmental justice communities, and is located within 50 feet of 17 fewer homes than the proposed route. In addition, the alternative results in lower operating air emissions as it requires 129,000 hp less compression than the proposed SMP Project. However, the alternative impacts the marine environment, which is not affected by the proposed SMP Project, crossing 332.0 miles of EFH,[4] 394.2 miles of soft bottom habitat, 7.8 miles of hard bottom habitat, 5.6 miles of critical habitat for the Gulf sturgeon, and 2.8 miles of seagrass beds. It also affects 42.5 acres more wetlands, including 68.9 acres more forested wetlands. Further, approximately 117 miles of the alternative occurs in waters that are less than 200 feet deep, requiring that the pipeline be buried to a depth of at least 3 feet. This shallow marine water construction includes a 15.5-mile-long crossing of the Florida Middle Grounds, which is designated by the NMFS as a Habitat Area of Particular Concern, a 3-mile-long crossing of a Florida-designated Manatee Protection Area, and areas of dense seagrass beds as the alignment approaches Florida.

[4] In the Magnuson-Stevens Fishery Conservation and Management Act, Congress defined EFH as "...those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Federal agencies are required to consult with the NMFS when their activities, including permits and licenses they issue, may adversely affect EFH and respond to NMFS recommendations for protecting and conserving EFH. NMFS must also include measures to minimize the adverse effects of fishing gear and fishing activities on EFH as well.

TABLE 4.3.1-4

**Analysis of the Gulf Crossing Route Alternative**

| Factor | | Proposed Route [a] | Gulf Crossing Route Alternative [b] |
|---|---|---|---|
| Length (miles) | | | |
| Onshore | | 455.0 | 152.5 |
| Offshore | | N/A | 406.8 |
| | Total | 455.0 | 559.3 |
| Length in Georgia | | 161.7 | 0.0 |
| Collocation | | | |
| Onshore (miles/percent) | | 320.6/70 | 146.5/96 |
| Offshore (miles/percent) | | N/A | 266.0/65 |
| | Total | 320.6/70 | 412.5/74 |
| Construction Requirements (acres) [c] | | | |
| Onshore (acres) | | 5,515.2 | 1,848.5 |
| Offshore Dredging (acres) | | N/A | 1,511.0 |
| Offshore Anchor Placement (acres) | | N/A | 211.1 |
| Offshore Anchor Dragging (acres) | | N/A | 468.0 |
| Offshore Cable Sweep (acres) | | N/A | 1,187.5 |
| Subtotal Offshore | | N/A | 3,377.6 |
| | Total | 5,515.2 | 5,226.1 |
| Operation Requirements (acres) [d] | | | |
| Onshore (acres) | | 2,757.6 | 924.3 |
| Offshore (acres) | | N/A | 196.0 |
| | Total | 2,757.6 | 1,120.3 |
| Forested Upland Impacts (acres) | | 1,892.7 | 728.5 |
| Wetland Impacts (acres) | | 220.2 | 262.7 |
| Forested Wetland Impacts (miles) | | 179.3 | 248.2 |
| Karst Features Crossed (miles) | | 317.1 | 37.9 |
| Waterbody Crossings (no.) | | 350 | 166 |
| Major Water Crossings (no.) | | 2 | 5 |
| Springshed Crossing (miles) | | 116.2 | 15.5 |
| Recreation and Special Interest Areas Crossed (miles) | | 1.4 | 3.6 |
| Residences within 50 feet of the Construction Right-of-Way (no.) | | 77 | 60 |
| Critical Habitat Crossed (miles) | | N/A | 5.6 |
| Soft Bottom Habitat Crossed (miles) | | N/A | 394.2 |
| Hard Bottom Habitat Crossed (miles) | | N/A | 7.8 |
| Essential Fish Habitat Crossed (miles) | | N/A | 332.0 |
| Seagrass Beds Crossed (miles) | | N/A | 2.8 |
| Offshore Increase in Turbidity During Construction (Yes or No) | | No | Yes |
| Environmental Justice Communities | | | |
| Within 1 Mile of Centerline (no.) | | 56 | 18 |
| Crossed (no.) | | 51 | 14 |
| Crossed (miles) | | 384.7 | 88.1 |
| New/Modified Compressor Stations (no.) | | 6/3 | 3/0 |
| Total Compression (horsepower) | | 298,000 | 169,000 |

TABLE 4.3.1-4 (cont'd)

**Analysis of the Gulf Crossing Route Alternative**

| Factor | Proposed Route [a] | Gulf Crossing Route Alternative [b] |
|---|---|---|

[a] Includes the 43.5 miles of pipeline looping for the Hillabee Expansion Project, the Sabal Trail Mainline between MPs 0.0 – 390.0, and the Citrus County Line between MPs 0.0 – 21.5.

[b] Includes 131.0 miles of pipeline in Alabama, 406.8 miles of pipeline in the Gulf of Mexico, and the Citrus County Line between MPs 0.0 – 21.5.

[c] Construction land requirements based on a 100-foot-wide right-of-way. Based on marine construction methods in various water depths, the average construction right-of-way would be approximately 30 feet wide.

[d] Operation land requirements based on a 50-foot-wide right-of-way. For this analysis the width of the operating right-of-way in the Gulf of Mexico equals the diameter of the pipeline.

For the 117 miles where dredging occurs, turbidity will be generated that will result in sediment deposition over the seafloor and, for all 406.8 miles of offshore construction, there will be turbidity and physical impacts on the seafloor from anchoring the laybarge and the associated the footprint of the anchors, trenches created if the anchors fail to hold, and anchor cable sweeps. Cable sweep is caused by slack in anchor lines and the cables making contacting with the seafloor. When the cable is winched in or towed by the barge, it scrapes along the sea floor.

Following construction of its pipeline in 2001, Gulfstream conducted a comprehensive study comparing anchoring impacts to the seafloor as reported in *An assessment of potential additional impacts associated with non-use of mid-line buoys during the OCS construction of the Gulfstream Natural Gas System* (ENSR, 2002). Post-construction monitoring surveys were conducted using sidescan sonar, a remotely operated vehicle, and divers to assess the extent and magnitude of anchoring impacts. On Gulfstream, anchor footprints on the seafloor were approximately one to two times the size of the anchor (177 to 314 square feet), and cable sweep averaged 1,766 square feet per barge anchor set. In addition, approximately 10.3 percent of the Gulfstream barge anchors were documented to create anchor scars averaging 6,960 square feet per dragging when mid-line buoys (MLBs) were used to keep the anchor chain suspended, and possibly substantially more if MLBs were not used.

Assuming the SMP Project implements deepwater construction techniques similar to Gulfstream to construct the Gulf Crossing Alternative, i.e., using an anchored laybarge with MLBs on all anchor cables, we calculated that approximately 1,866.6 acres of physical impact on the seafloor simply due to the anchors.[5] In addition to the physical impacts on the seafloor, temporary increases in turbidity will occur during deepwater construction, which will not occur for the proposed SMP Project.

As identified in table 4.3.1-4, the Gulf Crossing Route Alternative would result in significantly less environmental impact on terrestrial resources than the Mainline route. This alternative would also reduce the amount of compression required for operating the project, avoid Georgia completely, and impact less environmental justice populations. However, Sabal Trail noted in its application that constructing the Gulf Crossing Route Alternative would cost at least $2.2 billion more than the SMP Project. Based on these factors, we have concluded that the Gulf Crossing Route Alternative offers environmental advantages over the proposed action, but implementing this alternative would not be economically practical; therefore, we have not recommended it.

#### 4.3.1.4 Hillabee Route Alternative

The Hillabee Route Alternative was evaluated to avoid residential lands and disadvantaged communities in southwest Georgia. This alternative is a relatively direct route following an existing 345-kV transmission line right-of-way from Alabama through Georgia and into northern Florida. The alternative deviates from the proposed route at approximately MP 42.2 in Lee County, Alabama, and continues southeasterly through Georgia where it is generally parallel to, but offset from the proposed Mainline route by 25 to 30 miles, until rejoining Sabal Trail's Mainline route at approximately MP 252.3 in Hamilton County, Florida. Figure 4.3.1-1 illustrates the alternative and table 4.3.1-5 compares the alternative to the corresponding segment of the proposed route.

[5] Assumes the laybarge will utilize an 8-point mooring array, with 3 anchor sets per mile, and 3 passes of the laybarge along the pipeline route; or approximately 29,290 anchor placements for the 406.8 mile offshore segment.

TABLE 4.3.1-5

**Analysis of the Hillabee Route Alternative**

| Factor | Proposed Route | Hillabee Route Alternative |
|---|---|---|
| Length (miles) | 210.2 | 214.2 |
| Collocation | | |
| Parallel to Existing Rights-of-Way (miles/percent) | 161.5/77 | 201.4/94 |
| Greenfield (miles/percent) | 48.7/23 | 12.8/6 |
| Construction Land Requirements (acres) | 2,547.4 | 2,596.8 |
| Operation Land Requirements (acres) | 1,273.7 | 1,298.4 |
| Forested Upland Impacts (acres) | 985.8 | 890.3 |
| Wetland Impacts (acres) | 120.5 | 207.5 |
| Forested Wetland Impacts (acres) | 112.8 | 167.6 |
| Karst Features Crossed (miles) | 157.8 | 168.4 |
| Waterbody Crossings (number) | 209 | 265 |
| Springshed Crossing (miles) | 65.1 | 5.3 |
| Recreation and Special Interest Areas Crossed (miles) | 1.6 | 2.1 |
| Residences Within 50 feet of the Construction Right-of-Way (no.) | 37 | 22 |
| Environmental Justice Communities | | |
| Within 1 Mile of Centerline (no.) | 30 | 27 |
| Crossed (no.) | 26 | 26 |
| Crossed (miles) | 181.8 | 137.0 |

The Hillabee Route Alternative avoids impacts on the communities of Albany and Moultrie, Georgia, but would result in impacts on the communities of Americus, Tifton, Adel, Bemis, and Valdosta, Georgia. Compared to the proposed route, the alternative impacts 95.5 acres fewer of forested land, crosses 59.8 miles fewer designated springsheds, is within 50 feet of 15 fewer homes than the proposed route, and crosses 44.8 miles fewer of environmental justice communities. However, the alternative is 4 miles longer, impacts an additional 49.4 acres of land, affects 87 acres more of wetlands (including 54.8 acres of forested wetlands), and crosses 56 more waterbodies and 10.6 miles more karst features than the proposed route. The Hillabee Route Alternative provides both advantages and disadvantages when compared with the proposed route. For most factors, the difference is not significant. In balancing the factors evaluated, we do not find an overall significant environmental advantage for the alternative when compared to the proposed route. Therefore, we determined this alternative is not preferable to the proposed action.

### 4.3.1.5 Interstate 75 Route Alternative

The Interstate 75 Route Alternative was evaluated to avoid sensitive karst areas in Florida and to increase the amount of collocation with other existing rights-of-way. The alternative would deviate from Sabal Trail's Mainline route at MP 252.2 in Hamilton County, Florida and traverses along County Road 152 to Interstate 75 and then follow the interstate in a southeasterly direction for approximately 169 miles until it deviates to the southwest about 3 miles southwest of Gainesville. The alternative then continues in a southerly direction until it rejoins the Mainline route near MP 408.9 in Sumter County, Florida.

Implementing this alternative would require relocating the Dunnellon Compressor Station from its proposed site to a new site near Interstate 75 and extending the CCL to the new compressor station in order to meet the contracted delivery volumes to the planned DEF Citrus Plant. We did not identify or analyze alternative sites for the Dunnellon Compressor Station relative to the Interstate 75 Route Alternative because impacts associated with an alternative compressor station site would be similar to the proposed site and, therefore, not decisive in light of the scope of the Interstate 75 Route Alternative. However, we include the impacts associated with constructing a 15.5-mile-long extension of the CCL from the proposed

Dunnellon Compressor Station site to the Interstate 75 Route Alternative. Figure 4.3.1-1 illustrates the Interstate 75 Route Alternative and table 4.3.1-6 compares the alternative to the corresponding segments of the proposed route.

TABLE 4.3.1-6

**Analysis of the Interstate 75 Route Alternative**

| Factor | Proposed Route [a] | Interstate 75 Route Alternative [b] |
|---|---|---|
| Length (miles) | 156.9 | 175.5 |
| Collocation | | |
| Parallel to Existing Right-of-Way (miles/percent) | 110.4/70 | 175.5/100 |
| Greenfield (miles/percent) | 46.5/30 | 0/0 |
| Construction Land Requirements (acres) | 1,901.6 | 2,126.2 |
| Operation Land Requirements (acres) | 950.8 | 1,063.1 |
| Forested Upland Impacts (acres) | 363.2 | 641.2 |
| Wetland Impacts (acres) | 57.8 | 58.3 |
| Forested Wetland Impacts (acres) | 32.6 | 46.2 |
| Bare or Thinly Covered Limestone Crossed (miles) | 94.9 | 81.6 |
| Waterbody Crossings (number) | 11 | 39 |
| Springshed Crossing (miles) | 198.1 | 276.6 |
| 1st, 2nd, and 3rd Order Springs Within 0.5 mile (no.) | 7 | 0 |
| Recreation and Special Interest Areas Crossed (miles) | 13.7 | 6.5 |
| Residences Within 50 feet of the Construction Right-of-Way (no.) | 83 | 218 |

[a] Includes Sabal Trail's Mainline between approximate MPs 252.2 – 408.9.
[b] Includes 160.0 miles of mainline construction and a 15.5-mile-long extension of the Citrus County Line.

The Interstate 75 Route Alternative is collocated with other existing rights-of-way for 100 percent of its route, compared to 70 percent for the proposed route, and while we conclude in section 3.1.2.3 that karst features can be crossed by the SMP Project without significant risk to the pipeline and environmental resources, this alternative does cross less karst sensitive areas in northern Florida. More specifically, the alternative crosses the area where the underlying limestone bedrock is bare or thinly covered for 13.3 miles less than the proposed route and there are no 1st, 2nd, or 3rd Order springs within 0.5 mile of the alternative, whereas there are seven designated springs within 0.5 mile of the proposed route. The alternative also crosses 7.2 miles less recreation and special interest areas as compared to the proposed route. The disadvantages of the alternative are that the pipeline facilities are 18.6 miles longer, affecting 224.6 acres more land, 278 acres more forest, 15.2 acres more of forested wetlands, and 28 more waterbodies during construction. The alternative also encounters more congested areas as indicated by 135 more residences within 50 feet of the alternative. Based on these factors, we determined that the Interstate 75 Route Alternative does not offer a significant environmental advantage when compared to the proposed action and is not preferable to the proposed action.

#### 4.3.1.6 FGT to Central Florida Hub Route Alternative

The FGT to Central Florida Hub Route Alternative was evaluated to increase collocation of the SMP Project with the existing FGT pipeline system through western Florida. We also considered an alternative that would have been collocated with FGT's existing system through eastern Florida but eliminated it from further evaluation as it would require construction in extensively developed areas.

The FGT to Central Florida Hub Route Alternative would deviate from Sabal Trail's proposed Mainline route near MP 316.8 in Gilchrist County and remain parallel to FGT, traversing southerly through Levy, Citrus, Hernando, and Pasco Counties into Hillsborough County, then turning easterly north of Tampa Bay to follow FGT until reaching the CFH/Reunion Compressor Station at MP 474.4 in Osceola

County. The alternative also includes a 3-mile-long lateral from routing parallel to the FGT system to the planned DEF Citrus Plant. Figure 4.3.1-1 illustrates the alternative route and table 4.3.1-7 compares the alternative to the corresponding segment of the proposed route.

TABLE 4.3.1-7

**Analysis of the FGT to Central Florida Hub Route Alternative**

| Factor | Proposed Route [a] | FGT to Central Florida Hub Route Alternative [b] |
|---|---|---|
| Length (miles) | 179.0 | 203.8 |
| Collocation | | |
| Parallel to Existing Right-of-Way (miles/percent) | 99.2/55 | 192.1/94 |
| Greenfield (miles/percent) | 79.8/45 | 11.7/6 |
| Construction Land Requirements (acres) | 2,169.4 | 2,468.9 |
| Operation Land Requirements (acres) | 1,084.7 | 1,234.8 |
| Forested Upland Impacts (acres) | 425.3 | 744.4 |
| Wetland Impacts (acres) | 264.4 | 183.8 |
| Forested Wetland Impacts (acres) | 169.7 | 127.9 |
| Bare or Thinly Covered Limestone Crossed (miles) | 81.8 | 91.5 |
| Waterbody Crossings (number) | 70 | 87 |
| Springshed Crossing (miles) | 232.4 | 201.1 |
| Recreation and Special Interest Areas Crossed (miles) | 16.9 | 23.4 |
| Residences Within 50 feet of the Construction Right-of-Way (no.) | 83 | 72 |

[a] Includes Sabal Trail's Mainline from MPs 316.8 – 474.4 plus the Citrus County Line from MPs 0.0 – 21.5.

[b] Includes 200.8 miles of mainline construction plus a 3-mile-long lateral from mainline routing parallel to the FGT system to the planned DEP Citrus Power Plant.

The FGT to Central Florida Hub Route Alternative increases the amount of pipeline collocation and reduces construction related wetland impacts by 80.6 acres, forested wetland impacts by 41.8 acres, avoids the proposed HDD crossing of the Withlacoochee River between Citrus and Marion Counties, and crosses 30.7 miles fewer of designated springsheds. Lastly, the alternative is located within 50 feet of 11 fewer homes. The primary disadvantages of the alternative are that it is 24.8 miles (14 percent) longer and impacts 299.5 acres more land than the proposed route, including 319.1 more acres of forested land. The alternative also crosses 17 more waterbodies and 6.5 miles more designated recreation and special interest areas than the proposed route. The alternative does not avoid the HDD crossings of the Suwannee River or Santa Fe River and crosses 9.7 miles more area where the underlying limestone bedrock is bare or thinly covered than the proposed alignment. The FGT to Central Florida Hub Route Alternative provides both advantages and disadvantages when compared with the proposed route. In balancing the factors evaluated, we determined that this alternative does not offer a significant environmental advantage when compared to the proposed action and is not preferable to the proposed action.

### 4.3.1.7 GreenLaw Route Alternatives 1 – 4

The GreenLaw route alternatives (1-4), which were identified on behalf of concerned parties including the Kiokee-Flint Group, Flint Riverkeeper, Chattahoochee Riverkeeper, and Georgia Chapter of the Sierra Club, were evaluated to avoid and minimize impacts on these parties and southwest Georgia in general.

Figure 4.3.1-1 illustrates the GreenLaw Route Alternatives 1 through 4 and table 4.3.1-8 compares the alternatives to the corresponding segments of the proposed route. Many of the factors included in our analyses characterize the natural environment. Other factors (e.g., residences within 50 feet and tracts) characterize the human environment that may be affected. Our analysis of these alternatives includes high population areas (called "urbanized areas" by the U.S. Census Bureau) and other populated areas (areas referred to by the Census Bureau as a "designated place") that are categorized by DOT as HCAs. HCAs include areas adjacent to the pipeline that contain 20 or more structures intended for human occupancy, buildings housing populations of limited mobility, buildings that would be hard to evacuate (e.g., nursing homes, schools), or buildings and outside areas occupied by more than 20 persons on a specified minimum number of days each year (DOT, 2015). The inclusion of HCAs is intended to reflect population densities that are more commonly aggregated along transportation corridors. The GreenLaw Route Alternatives would require relocating the Dunnellon Compressor Station from its proposed site to a new site near Interstate 75, and extending the CCL to the new compressor station. As in our analysis of the Interstate 75 Route Alternative (section 4.3.1.5), we did not analyze alternative sites for the Dunnellon Compressor Station, but we include the impacts associated with constructing a 15.5-mile-long extension of the CCL in each GreenLaw Route Alternative analysis.

**GreenLaw Route Alternative 1**

GreenLaw Route Alternative 1 would deviate from Sabal Trail's Mainline route at its intersection with U.S. Highway 82 near MP 142.7 in Terrell County, Georgia and generally follows U.S. Highway 82 and other existing rights-of-way in a southeasterly direction, staying north of the City of Albany until reaching Interstate 75 near Tifton, Georgia. The alternative then follows Interstate 75 through Georgia and into northern and central Florida until it intersects with the Florida Turnpike (State Highway 91) near Wildwood, Florida. The alternative then traverses in a southeasterly direction paralleling State Highway 91 until turning south to follow the Claude Pepper Memorial Highway (U.S. Highway 27) through Clermont, Florida, crossing over the proposed route and then turning easterly to follow an existing FGT pipeline right-of-way until it rejoins the proposed route near MP 471.4, just north of the CFH/Reunion Compressor Station.

GreenLaw Route Alternative 1 is collocated almost entirely along major highways and passes through developed areas of numerous cities not affected by the Mainline route including portions of Albany, Sylvester, Ty Ty, Tifton, Adel, Valdosta, and Lake Park, Georgia; and Lake City, Gainesville, Ocala, Mineola, Clermont, and Four Corners, Florida. The corresponding Mainline route would not impact these areas and would be collocated primarily with existing pipeline and electric transmission lines in predominantly rural or lesser developed areas.

This alternative is 5.5 miles longer than the corresponding Mainline route and is collocated with other existing rights-of-way for 97 percent of its length, compared to 65 percent for the corresponding Mainline route. Constructing the alternative would impact 66.6 acres more land but 227.5 acres less forest, 110.1 acres less wetland, 135.6 acres less forested wetland, and cross 59.2 miles less of areas designated as environmental justice communities than the proposed route. The alternative also crosses 715 more tracts, is within 50 feet of 115 more residences, and requires crossing 141 more miles of HCAs than the corresponding Mainline route.

TABLE 4.3.1-8

**Analysis of the GreenLaw Route Alternatives [a]**

| Environmental Factor | Proposed Route | GreenLaw Route Alternative 1 | Proposed Route | GreenLaw Route Alternative 2 | Proposed Route | GreenLaw Route Alternative 3 | Proposed Route | GreenLaw Route Alternative 4 |
|---|---|---|---|---|---|---|---|---|
| Length (miles) | 331.6 | 337.1 | 474.4 | 494.3 | 331.6 | 352.6 | 370.0 | 379.5 |
| Collocation | | | | | | | | |
| Parallel to Existing Right-of-Way (miles/percent) | 215.4/65 | 327.0/97 | 343.2/72 | 477.0/97 | 215.4/65 | 339.1/96 | 252.2/68 | 368.8/97 |
| Greenfield (miles/percent) | 116.2/35 | 10.1/3 | 131.2/28 | 17.3/3 | 116.2/35 | 13.5/4 | 117.8/32 | 10.7/3 |
| Construction Land Requirements (acres) | 4,019.4 | 4,086.0 | 5,750.3 | 5,991.5 | 4,019.4 | 4,273.9 | 4,484.8 | 4,600.0 |
| Operation Land Requirements (acres) | 2,009.7 | 2,043.0 | 2,875.2 | 2,995.8 | 2,009.7 | 2,137.0 | 2,242.4 | 2,300.0 |
| Forested Upland Impacts (acres) | 983.0 | 755.5 | 1,756.4 | 1,310.1 | 983.0 | 838.8 | 1,132.1 | 751.2 |
| Wetland Impacts (acres) | 348.2 | 258.3 | 402.7 | 259.1 | 348.2 | 396.0 | 296.4 | 255.4 |
| Forested Wetland Impacts (acres) | 256.4 | 120.8 | 305.5 | 120.8 | 256.4 | 205.2 | 270.9 | 118.2 |
| Karst Features Crossed (miles) | 331.6 | 337.1 | 379.9 | 393.4 | 331.6 | 352.6 | 370.0 | 379.5 |
| Waterbody Crossings (number) | 155 | 163 | 350 | 331 | 155 | 137 | 190 | 203 |
| Recreation and Special Interest Areas Crossed (miles) | 6.0 | 3.3 | 6.0 | 3.3 | 6.0 | 31.5 | 6.0 | 3.3 |
| Tracts Affected (no.) | 1,810 | 2,525 | 2,553 | 3,900 | 1,813 | 3,149 | 1,993 | 2,844 |
| Residences Within 50 feet of the Construction Right-of-Way (no.) | 233 | 348 | 355 | 572 | 241 | 482 | 270 | 374 |
| Environmental Justice Communities | | | | | | | | |
| Within 1 Mile of Centerline (no.) | 59 | 94 | 74 | 137 | 59 | 91 | 65 | 90 |
| Crossed (no.) | 47 | 58 | 61 | 89 | 47 | 57 | 51 | 62 |
| Crossed (miles) | 319.0 | 259.8 | 440.2 | 385.9 | 319.0 | 302.1 | 356.9 | 299.5 |
| High Consequence Areas (miles) [b] | 32.0 | 173.0 | 41.7 | 230.1 | 32.0 | 133.7 | 32.7 | 162.0 |

[a] See text for description of the GreenLaw Route Alternatives and comparative segments of the proposed Sabal Trail Mainline routes. Each GreenLaw Route Alternative includes a 15.5-mile-long extension of the Citrus County Line.

[b] Includes high population areas (called "urbanized areas" by the U.S. Census Bureau) and other populated areas (areas referred to by the Census Bureau as a "designated place"). Specifically, includes areas adjacent to the pipeline that contain 20 or more structures intended for human occupancy; buildings housing populations of limited mobility; buildings that would be hard to evacuate (e.g., nursing homes, schools); or buildings and outside areas occupied by more than 20 persons on a specified minimum number of days each year (DOT, 2015).

Constructing GreenLaw Route Alternative 1 would offer some environmental advantages when compared to the corresponding Mainline route; however, this alternative would also impact the human environment to a greater degree than the Mainline route. Therefore, we determined that this alternative does not offer a significant environmental advantage when compared to the proposed action and is not preferable to the proposed action.

**GreenLaw Route Alternative 2**

GreenLaw Route Alternative 2 would begin at Sabal Trail's proposed Alexander City Compressor Station in Tallapoosa County, Alabama. The alternative initially follows Transco's existing pipeline right-of-way about 7 miles to the southwest until intersecting U.S. Highway 280 where it turns southeasterly to follow U.S. Highway 280, staying south of Alexander City, until it intersects with Interstate 85 just southwest of Opelika, Alabama. From there it follows Interstate 85 and other road rights-of-way to the east, until crossing the proposed Mainline route near MP 48.5. It then continues southeasterly along State Highway 38 into Columbus, Georgia and then continues along U.S. Highway 280/State Highway 520 through Dawson and Sasser, Georgia until reaching the proposed Mainline route and GreenLaw Route Alternative 1 at MP 142.7. From there it follows the same route as GreenLaw Route Alternative 1.

GreenLaw Route Alternative 2 is 19.9 miles longer than the corresponding Mainline route and is collocated with other existing rights-of-way for 97 percent of its length, compared to 72 percent for the corresponding Mainline route. Constructing the alternative would impact 241.2 acres more land but 446.3 acres less forest and 143.6 acres less wetland than the corresponding Mainline route. The alternative also crosses 54.3 miles less of environmental justice communities and the same communities affected by GreenLaw Route Alternative 1 south of the Albany, Georgia area, which include all or new portions of 13 cities not affected by the corresponding Mainline route. GreenLaw Route Alternative 2 also crosses developed areas of Auburn and Opelika, Alabama; and Columbus, Parrot, Dawson, and Sasser, Georgia, which are not affected by the corresponding Mainline route. Furthermore, this alternative crosses 1,347 more tracts, is within 50 feet of 217 more residences, and requires crossing 188.4 more miles of HCAs than the corresponding Mainline route.

Constructing GreenLaw Route Alternative 2 would offer some environmental advantages when compared to the corresponding Mainline route; however, this alternative would also impact the human environment to a greater degree than the Mainline route. Therefore, we determined that this alternative does not offer a significant environmental advantage when compared to the proposed action and is not preferable to the proposed action.

**GreenLaw Route Alternative 3**

GreenLaw Route Alternative 3 is also similar to GreenLaw Route Alternative 1 in that it starts at Mainline MP 142.7 and follows existing road rights-of-way north of the City of Albany, but deviates due south on the east side of Albany to follow U.S. Highway 19/State Highway 3 through Camilla and Thomasville, Georgia, then U.S. Highway 19/State Highway 57 in Florida to the existing FGT pipeline right-of-way east of Wacissa, Florida. The alternative then follows the FGT corridor in an east-southeast direction until crossing the Mainline route near MP 300 and reaching Interstate 75 in Suwannee County, Florida. From there it follows the same route as GreenLaw Alternative 1.

GreenLaw Route Alternative 3 is 21.0 miles longer than the corresponding Mainline route and is collocated with other existing rights-of-way for 96 percent of its length, compared to 65 percent for the corresponding Mainline route. Constructing the alternative would impact 254.5 acres more land and 47.8 acres more wetland, but 144.2 acres less forest than the proposed route. The alternative also crosses 17 miles less of areas designated as environmental justice communities. GreenLaw Route Alternative 3

crosses the same areas as GreenLaw Route Alternative 1 where the two alternatives are common north and east of Albany Georgia, and where they follow Interstate 75 in Florida to the CFH, which includes all or new portions of seven cities not affected by the corresponding Mainline route. GreenLaw Route Alternative 3 also crosses developed areas east and south of Albany, Georgia plus the communities of Putney, Camilla, Pelham, and Thomasville, Georgia; and Monticello, Florida, which are not affected by the corresponding Mainline route. Furthermore, this alternative crosses 1,336 more tracts, is within 50 feet of 241 more residences, and requires crossing 101.7 more miles of HCAs than the corresponding Mainline route.

Constructing GreenLaw Route Alternative 3 would offer some environmental advantages when compared to the corresponding Mainline route; however, this alternative would also impact the human environment to a greater degree than the Mainline route. Therefore, we determined that this alternative does not offer a significant environmental advantage when compared to the proposed action and is not preferable to the proposed action.

**GreenLaw Route Alternative 4**

GreenLaw Route Alternative 4 deviates from the proposed Mainline route at MP 104.3 in Stewart County, Georgia and follows State Highway 27 through Richland, Plains, and Americus, Georgia, then turns south-southeast to follow an existing Georgia Power electric transmission corridor until it intersects with U.S. Highway 82/State Highway 520 and GreenLaw Route Alternative 1 about 2.5 miles west of Tifton, Georgia. From there it follows the same route as GreenLaw Route Alternative 1.

GreenLaw Route Alternative 4 is 9.5 miles longer than the corresponding Mainline route, and is collocated with other existing rights-of-way for 97 percent of its length, compared to 68 percent for the corresponding Mainline route. Constructing the alternative would impact 115.2 acres more land but 380.9 acres less forest and 41.0 acres less wetland than the corresponding Mainline route. The alternative also crosses 57.1 miles less of areas designated as environmental justice communities and the same communities affected by GreenLaw Route Alternative 1 where the two alternatives are common from near Tifton, Georgia to the CFH, which includes all or new portions of 10 cities not affected by the proposed Mainline route. GreenLaw Route Alternative 4 also crosses developed areas of Richland, Preston, Plains, Americus, and Tifton, Georgia, which are not affected by the corresponding Mainline route. Furthermore, this alternative crosses 851 more tracts, is within 50 feet of 104 more residences, requires crossing 129.3 more miles of HCAs than the corresponding Mainline route.

Constructing GreenLaw Route Alternative 3 would offer some environmental advantages when compared to the corresponding Mainline route; however, this alternative would also impact the human environment to a greater degree than the Mainline route. Therefore, we determined that this alternative does not offer a significant environmental advantage when compared to the proposed action and is not preferable to the proposed action.

#### 4.3.1.8 FSC Route Alternative 1

FSC Route Alternative 1 was identified as a northern route alternative between the CFH and the Martin Plant that would increase collocation with existing corridors. The alternative begins at the CFH and follows an existing FGT pipeline right-of-way northeast around Kissimmee, Florida before turning south and east until it intersects with an existing FPL 500 kV transmission line right-of-way. From there it follows the FPL right-of-way south to the Martin Plant. Figure 4.3.1-1 illustrates the alternative and table 4.3.1-9 compares the alternative to the corresponding segments of the proposed route.

TABLE 4.3.1-9

**Analysis of FSC Route Alternative 1**

| Factor | Proposed Route | FSC Alternative 1 |
|---|---|---|
| Length (miles) | 126.4 | 144.4 |
| Collocation | | |
| Parallel to Existing Right-of-Way (miles/percent) | 101.9/81 | 136.0/94 |
| Greenfield (miles/percent) | 24.5/19 | 8.4/6 |
| Construction Land Requirements (acres) | 1,532.1 | 1,750.3 |
| Operation Land Requirements (acres) | 766.0 | 875.2 |
| Forested Upland Impacts (acres) | 269.0 | 157.0 |
| Wetland Impacts (acres) | 105.3 | 169.8 |
| Forested Wetland Impacts (acres) | 60.0 | 71.6 |
| Karst Features Crossed (miles) | 3.3 | 1.2 |
| Waterbody Crossings (number) | 190 | 482 |
| Sensitive Habitats Crossed (miles) [a] | 106.4 | 129.6 |
| Recreation and Special Interest Areas Crossed (miles) | 7.2 | 46.1 |
| Residences within 50 feet of the Construction Right-of-Way (no.) | 70 | 150 |

[a] Core foraging habitat for the wood stork; Florida scrub-jay management areas.

FSC Route Alternative 1 is collocated with other existing rights-of-way for 94 percent of its length, compared to 81 percent for the proposed route. However, the alternative is 18 miles longer and would impact an additional 218 acres of land, 64.5 acres of wetlands, and 11.6 acres of forested wetlands compared to the proposed route. The alternative also crosses 39 miles more of recreation and special interest areas, 23.2 miles of wood stork and Florida scrub jay habitats, 292 more waterbodies, and is located within 50 feet of an additional 80 residences. Based on these factors, we determined that this alternative does not offer a significant environmental advantage and is not preferable to the proposed action.

### 4.3.1.9 FSC Alternative 2

The FSC Alternative 2 was identified to increase collocation with existing corridors. It follows an existing DEF electric transmission line and existing FGT and Gulfstream pipeline rights-of-way. The alternative begins at FSC MP 21 and follows existing citrus grove roads to the south and turns west along an existing DEF electric transmission line where it joins the FGT pipeline. It follows the FGT pipeline right-of-way toward Avon Park and then follows the Gulfstream pipeline in a southeasterly direction to the Martin Clean Energy Center. Figure 4.3.1-1 illustrates the alternative and table 4.3.1-10 compares the alternative to the corresponding segment of the proposed route.

FSC Route Alternative 2 is collocated with other existing rights-of-way for 89 percent of its length compared to 81 percent for the proposed route and reduces impacts on forested areas by 19 acres and on forested wetlands by 8.7 acres. However, the alternative is 21.5 miles longer and would impact 260.6 acres more land and 22.7 acres more wetlands than the corresponding proposed route. The alternative would also cross an additional 6.1 miles of recreation and special interest areas, 13.9 miles of wood stork and Florida scrub jay habitats, and 160 waterbodies, and is within 50 feet of an additional 11 residences. Based on these factors, we determined that this alternative does not offer a significant environmental advantage and is not preferable to the proposed action.

TABLE 4.3.1-10

**Analysis of FSC Route Alternative 2**

| Factor | Proposed Route | FSC Alternative 2 |
|---|---|---|
| Length (miles) | 106.3 | 127.8 |
| Collocation | | |
| Parallel to Existing Right-of-Way (miles/percent) | 83/81 | 113.5/89 |
| Greenfield (miles/percent) | 23.3/19 | 14.3/11 |
| Construction Land Requirements (acres) | 1,288.5 | 1,549.1 |
| Operation Land Requirements (acres) | 644.2 | 774.5 |
| Forested Upland Impacts (acres) | 187.0 | 168.0 |
| Wetland Impacts (acres) | 66.8 | 89.5 |
| Forested Wetland Impacts (acres) | 26.7 | 18.0 |
| Karst Features Crossed (miles) | 2.0 | 2.0 |
| Waterbody Crossings (no.) | 168 | 328 |
| Sensitive Habitats Crossed (miles) [a] | 86.3 | 100.2 |
| Recreation and Special Interest Areas Crossed (miles) | 6.5 | 12.6 |
| Residences within 50 feet of the construction right-of-way (no.) | 31 | 42 |

[a] Core foraging habitat for the wood stork; Florida scrub-jay management areas

### 4.3.2 Route Variations

Route variations are relatively short deviations (less than 50 miles in length and generally in close proximity to the proposed route) that would avoid or further reduce impacts on specific localized resources. A total of 305 route variations were considered by the Applicants during initial project planning and throughout the pre-filing processes, including 29 associated with the Hillabee Expansion Project, 257 associated with the Sabal Trail Project, and 19 associated with the FSC Project (see table 4.3.2-1 in appendix D). Almost all of these variations, which involved relatively minor adjustments of the pipeline alignments, were identified by affected landowners, local governments, and other stakeholders. Of the 305 route variations identified, 238 route variations (including 214 along the Sabal Trail Project and 14 along the FSC Project) were incorporated into the proposed routes that we analyzed in section 3.

Route variations that were not incorporated into the SMP Project are identified in table 4.3.2-1 in appendix D, which includes the Applicants' reason(s) for not incorporating each variation. We reviewed these route variations and unless otherwise noted, we determined that the Applicants reasoning was sufficient and the implementation of these variations was not preferable to the proposed action.

It is our understanding that Sabal Trail intends to incorporate five of the route variations listed in table 4.3.2-1 in appendix D into the proposed alignment in a future filing, and continues to evaluate three other route variations. Based on our preliminary review, these variations are relatively minor and, if adopted, would result in similar environmental impacts as the proposed alignment.

As identified in table 4.3.2-1 in appendix D, we provide additional discussion of the following route variations.

TABLE 4.3.2-6

**Analysis of the Lowndes County Variation**

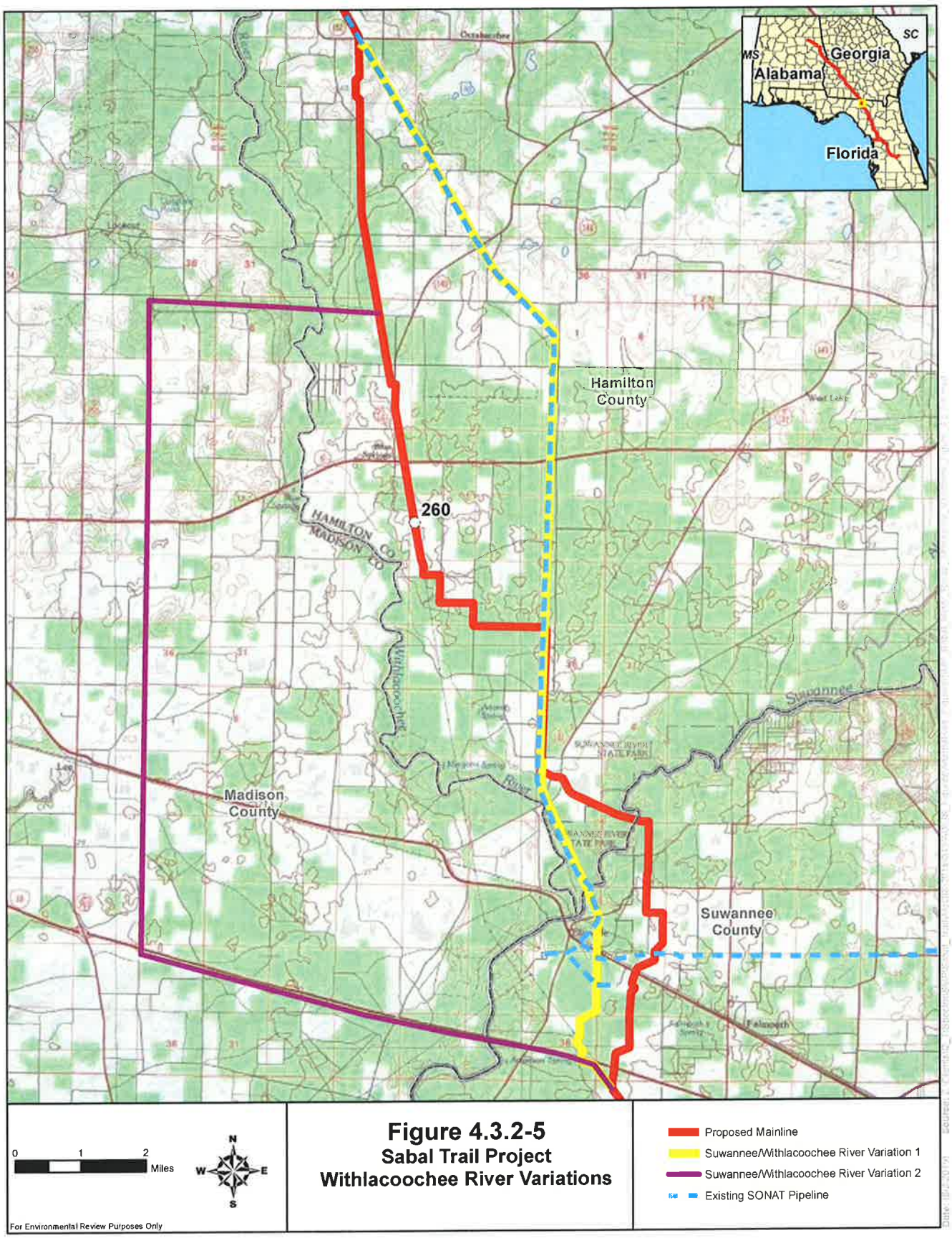
| Factor | Proposed Route | Lowndes County Variation |
|---|---|---|
| Length (miles) | 9.1 | 11.2 |
| Collocation | | |
| Parallel to Existing Right-of-Way (miles/percent) | 4.2/46 | 0.0/0 |
| Greenfield (miles/percent) | 4.9/54 | 11.2/100 |
| Construction Land Requirements (acres) | 110.1 | 135.2 |
| Permanent Land Requirements (acres) | 55.0 | 67.6 |
| Forested Upland Impacts (acres) | 44.8 | 70.1 |
| Wetland Impacts (acres) | 5.6 | 20.8 |
| Forested Wetland Impacts (acres) | 5.6 | 20.4 |
| Karst Features Crossed (miles) | 9.1 | 11.2 |
| Waterbody Crossings (no.) | 3 | 7 |
| Tracts Affected (no.) | 33 | 10 |
| Residences Within 50 feet of the Construction Right-of-Way (no.) | 0 | 0 |
| Environmental Justice Communities [e] | | |
| Within 1 Mile of Centerline (no.) | 3 | 4 |
| Crossed (miles) | 8.8 | 11.2 |

The Lowndes County Variation crosses 23 fewer tracts than the corresponding proposed route; however, the variation is about 2.1 miles longer, not collocated with any existing rights-of-way, and affects an additional 25.2 acres of land, 25.3 acres of forest land, 15.2 acres of wetlands (including 15.1 acres of forested wetlands), and 4 additional waterbodies compared to the corresponding proposed route. Based on the greater impacts of the Lowndes County Variation compared to the proposed route, we determined that the variation does not offer a significant environmental advantage over the corresponding proposed route and is not preferable to the proposed action.

### 4.3.2.6 Withlacoochee River Variations 1 and 2, and Echo Plantation Variation

The Withlacoochee River Variations 1 and 2 were evaluated to further minimize impacts on affected landowners and sensitive springs and karst features. Figure 4.3.2-5 illustrates the Withlacoochee River Variations, and table 4.3.2-7 compares the variations to the corresponding segments of the proposed route.

Withlacoochee River Variation 1 diverges from the proposed route near MP 252.4 by following the existing SONAT pipeline corridor to the southeast, and then to the south where it parallels NW 40th Avenue, and continues to follow SONAT through a portion of Twin Rivers State Forest and Suwannee River State Park where it crosses the Suwannee River and rejoins the proposed route near MP 270.4. Variation 2 diverges from the proposed route near MP 256.7 and extends to the west and across the Withlacoochee River along an existing Duke Energy powerline corridor, then south along the Duke corridor through a portion of the Twin Rivers State Forest until intersecting and following Interstate 10 to the southeast and rejoining the proposed route near MP 270.4.


SC
MS
Georgia
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Florida
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MADISON CO
Withlacoochee
Madison County
Suwannee County
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For Environmental Review Purposes Only
Figure 4.3.2-5
Sabal Trail Project
Withlacoochee River Variations
Proposed Mainline
Suwannee/Withlacoochee River Variation 1
Suwannee/Withlacoochee River Variation 2
Existing SONAT Pipeline

TABLE 4.3.2-7

**Analysis of Withlacoochee River Variations 1 and 2**

| Factor | Proposed Route | Variation 1 | Proposed Route | Variation 2 |
|---|---|---|---|---|
| Length (miles) | 20.0 | 17.8 | 15.7 | 21.3 |
| Collocation | | | | |
| Parallel to Existing Right-of-Way (miles/percent) | 11.2/56 | 15.7/88 | 6.9/44 | 14.1/66 |
| Greenfield (miles/percent) | 8.8/44 | 2.1/12 | 8.8/56 | 7.2/34 |
| Construction Land Requirements (acres) | 243.3 | 217.3 | 191.9 | 258.4 |
| Operation Land Requirements (acres) | 121.4 | 108.5 | 98.6 | 129.1 |
| Forested Upland Impacts (acres) | 82.5 | 87.0 | 66.1 | 109.3 |
| Wetland Impacts (acres) | 4.9 | 2.5 | 4.7 | 2.9 |
| Forested Wetland Impacts (acres) | 4.7 | 2.5 | 4.7 | 2.9 |
| Bare or Thinly Covered Limestone Crossed (miles) | 20.0 | 17.8 | 15.7 | 21.3 |
| 1st, 2nd, and 3rd Order Springs Within 0.5 mile (no.) | 7 | 4 | 7 | 1 |
| Hydraulically Upgradient Distance from Closest Known Spring within 0.5 mile (feet) | 1,076 | 160 | 1,076 | 0 |
| Waterbody Crossings (no.) | 3 | 3 | 3 | 3 |
| HDD Waterbody Crossings (no.) | 1 | 1 | 1 | 2 |
| Springshed Crossing (miles) | 6.7 | 6.4 | 2.5 | 7.6 |
| Recreation and Special Interest Areas Crossed (miles) | 1.8 | 2.8 | 1.8 | 2.0 |
| Tracts Affected (no.) | 92 | 103 | 78 | 81 |
| Residences Within 50 feet of the Construction Right-of-Way (no.) | 0 | 4 | 0 | 10 |

The primary advantages of the Withlacoochee River Variation 1 are that it is about 2.2 miles shorter; affects 16 acres less land; impacts 2.4 acres less wetland; is within 0.5 mile of three fewer springs; and crosses 2.2 miles less of bare or thinly covered limestone bedrock, which contains numerous karst features. The most significant disadvantage of the variation is that it involves overland construction in the Suwannee River State Park near overnight cabins, campgrounds, and the Columbus Cemetery, a civil war era cemetery. Representatives from the state park indicated their preference to avoid overland construction the park. In addition, at the HDD crossing of the Suwannee River, the variation is in the immediate vicinity of one 1st Order spring, two 2nd Order springs, and one 4th Order spring, whereas there are no 1st, 2nd, or 3rd Order springs within 0.5 mile of the proposed HDD crossing, or within 1 mile downstream from the proposed crossing. Therefore, there is an increased potential for the HDD associated with the variation to impact springs, which is a concern to many commentors in the area. Based on the above discussion, we determined that Withlacoochee River Variation 1 does not offer a significant environmental advantage over the corresponding proposed route and is not preferable to the proposed action.

Withlacoochee River Variation 2 affects 1.8 acres less wetland and is within 0.5 mile of six fewer springs than the proposed route. However, the variation is 5.6 miles longer and results in increased impacts on all other resources. The variation also requires an additional HDD crossing of the Withlacoochee River, which is avoided by the proposed route. Based on resources affected and the additional HDD that would be required, we determined that the Withlacoochee River Variation 2 does not provide a significant environmental advantage over the corresponding proposed route and is not preferable to the proposed action.

As discussed in section 3.9.2.5, the Mainline route in this area also crosses the Warner/Harrell Conservation Easement (also known as Echo Plantation) on the east side of the Suwannee River. Echo Plantation encompasses about 912 acres, and an environmental assessment provided by the landowner identified the biological, geological, and water resources within the property. The landowner is concerned that the proposed route will impact endangered species, springs, caves, and the underlying Floridan aquifer.

We did consider recommending the relocation of the overland construction segment of the Mainline about 150 feet west of the proposed route and into Suwannee River State Park for about 0.5 mile in order to avoid crossing this easement. However, the park in that area is completely forested, as compared to the corresponding proposed route, which is sparsely forested. Considering that all other factors are equal (e.g., length, land requirements, endangered species, springs, caves, aquifer effects), we determined that changing the route slightly to avoid the western perimeter of the Echo Plantation does not provide a significant environmental advantage over the corresponding proposed route and is not preferable to the proposed action.

### 4.3.2.7 Waccasassa Flats Variation

The Waccasassa Flats Variation was identified by the Gilchrist County (Florida) Board of Commissioners and the Gilchrist Pipeline Committee (a committee comprised of residents of Gilchrist County) to minimize impacts on landowners and the environment. As discussed in section 3.9.2.4, the Waccasassa Flats area has very limited development and is interspersed with pine plantations, forested wetlands, and large private hunting preserves. The Waccasassa Flats Variation deviates south from the Mainline route at approximately MP 320.7 and traverses south and southeasterly through the Waccasassa Flats area, rejoining the proposed route at MP 339.4 in Alachua County. Figure 4.3.2-6 depicts the Waccasassa Flats Variation and table 4.3.2-8 compares the variation to the corresponding Mainline route.

TABLE 4.3.2-8

**Analysis of the Waccasassa Flats Variation**

| Factor | Proposed Route | Waccasassa Flats Variation |
|---|---|---|
| Length (miles) | 18.7 | 19.4 |
| Collocation | | |
| Parallel to Existing Right-of-Way (miles/percent) | 16.5/88 | 0.0/0 |
| Greenfield (miles/percent) | 2.2/12 | 19.4/100 |
| Construction Land Requirements (acres) | 226.1 | 235.5 |
| Operation Land Requirements (acres) | 113.1 | 117.7 |
| Forested Upland Impacts (acres) | 43.4 | 73.0 |
| Wetland Impacts (acres) | 8.3 | 55.8 |
| Forested Wetland Impacts (acres) | 8.3 | 52.9 |
| Waterbody Crossings (no.) | 2 | 10 |
| Springshed Crossing (miles) | 37.3 | 59.6 |
| 1st, 2nd, and 3rd Order Springs Within 0.5 mile (no.) | 0 | 0 |
| Critical Habitat Crossed (miles) | 0.0 | 0.0 |
| Recreation and Special Interest Areas Crossed (miles) | 0.4 | 0.0 |
| Tracts Affected (no.) | 99 | 48 |
| Residences Within 50 feet of the Construction Right-of-Way (no.) | 2 | 2 |

The Waccasassa Flats Variation is approximately 0.7 mile longer than the corresponding Mainline route and is not collocated with any existing rights-of-way, compared with 88 percent collocation for the corresponding Mainline route. The variation also impacts an additional 9.4 acres of land, 30 acres of forested lands, 47.5 acres of wetlands, 44.6 acres of forested wetlands, and 22.3 miles of springshed areas. Although a higher percentage of the route variation occurs in an area with greater cover over the Floridan aquifer, no 1st, 2nd, or 3rd Order springs occur within 0.5 mile of either the proposed route or the variation and we conclude in section 3.1.2.3 that the SMP Project does not pose a significant risk to karst resources. Based on these factors, we have determined that the Waccasassa Flats Variation does not offer a significant environmental advantage over the corresponding Mainline route and is not preferable to the proposed action.

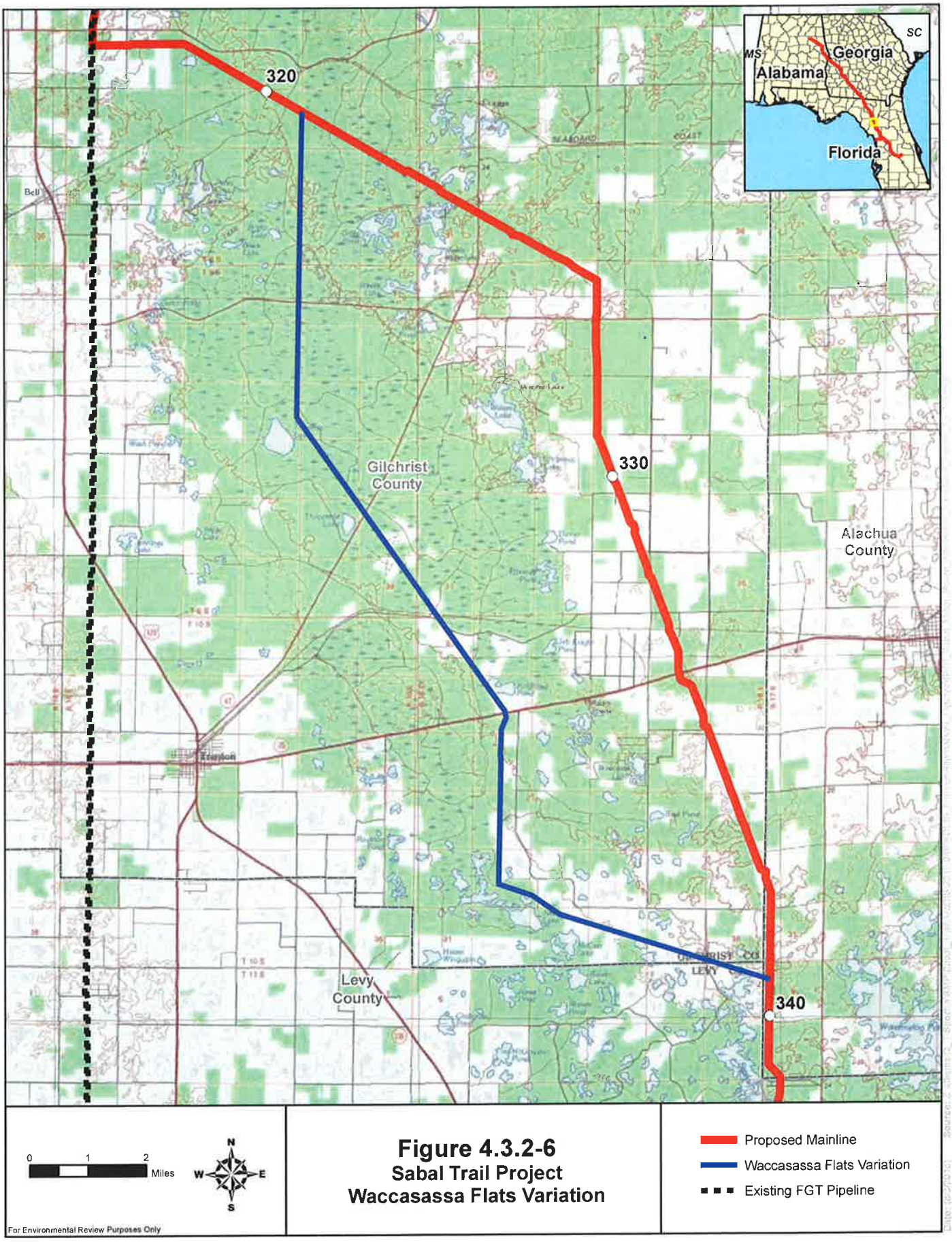


**Figure 4.3.2-6**
**Sabal Trail Project**
**Waccasassa Flats Variation**

### 4.4.2.2 Hildreth Compressor Station

We evaluated one alternative site for the Hildreth Compressor Station. Alternative A is located approximately 3.2 miles southeast of the proposed site at approximately MP 296.3 in Suwannee County, Florida. The alternative is adjacent to the Mainline and FGT Suwannee M&R Station, and adjacent to the existing FGT pipeline system. Figure 4.4.2-2 depicts the location of the Alternative A, and table 4.4.2-2 compares the alternative to the proposed site.

TABLE 4.4.2-2

**Analysis of the Hildreth Compressor Station Site Alternative**

| Factors | Proposed Location | Alternative A |
|---|---|---|
| Nearest Milepost | 293.1 | 296.3 |
| Size (acres) | 45.0 | 45.0 |
| Availability (Yes/No) | Yes | Unknown |
| Existing Land Use (type) | Forested/Shrubland/Grassland | Forested/Shrubland/Grassland |
| Construction/Operation Area (acres) | 35.6/27.9 | 40.0/30.0 |
| Construction/Operation Impact on Forested Upland (acres) | 29.3/21.6 | 26.3/16.3 |
| Prime Farmland Present (Yes/No) | Yes | Yes |
| Karst Risk | Low to Medium [a] | Unknown |
| Noise Sensitive Areas (NSA) within 0.5 mile (no.) | 7 | 0 |
| Distance to the nearest NSA (feet) | 1,530 | 3,690 |

[a] Geophysical and geotechnical testing at the site by Sabal Trail concluded that there is a low to medium risk of karst activity but grouting below structures not recommended.

Construction of Hildreth Compressor Station Alternative A would affect about 4.4 acres more land and 3.0 acres less forest than the proposed site, based on preliminary design information provided by Sabal Trail. The primary difference between the two sites is that there are no NSAs within 0.5 mile of the alternative, whereas there are seven NSAs within 0.5 mile of the proposed site, the nearest of which is 1,530 feet away. However, as described in section 3.12.2, noise generated from the compressor station would not exceed our noise requirements at NSAs. Based on these factors, we determined that Alternative A does not offer a significant environmental advantage over the proposed site and is not preferable to the proposed action.

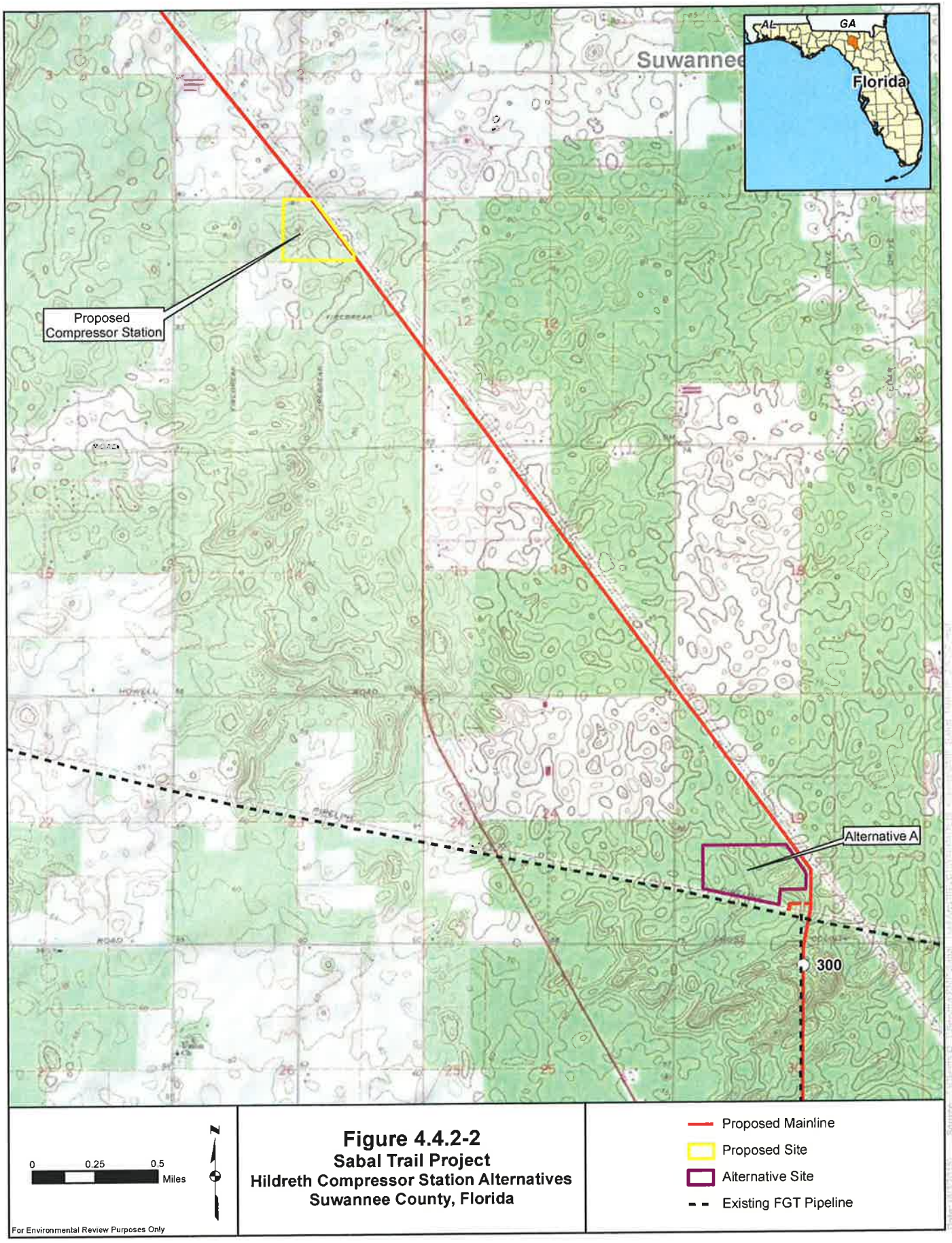


**Figure 4.4.2-2**
**Sabal Trail Project**
**Hildreth Compressor Station Alternatives**
**Suwannee County, Florida**

### 4.4.2.3 Dunnellon Compressor Station

We evaluated one alternative site for the Dunnellon Compressor Station. Alternative A is located on the south side of SW State Road 200, directly across from the proposed site, near MP 390.0 in Marion County, Florida. Figure 4.4.2-3 depicts the location of the Alternative A, and table 4.4.2-3 compares the alternative to the proposed Dunnellon Compressor Station site.

TABLE 4.4.2-3

**Analysis of the Dunnellon Compressor Station Site Alternative**

| Factors | Proposed Location | Alternative A |
|---|---|---|
| Nearest Milepost | 390.0 | 390.1 |
| Size (acres) | 63.2 | 44.1 |
| Availability (Yes/No) | Yes | Unknown |
| Existing Land Use (type) | Forested | Pasture/Grassland/Non-forested Wetlands |
| Construction/Operation Area (acres) | 35.7/35.7 | 44.1/26.4 |
| Construction/Operation Impact on Agricultural Land (acres) | 0/0 | 16.2/16.2 |
| Construction/Operation Impact on Forested Upland (acres) | 35.7/35.7 | 1.0/1.0 |
| Construction/Operation Impact on Non-forested Wetlands (acres) | 0/0 | 1.0/1.0 |
| Construction/Operation Impact on Forested Wetlands (acres) | 0/0 | 0.9/0.9 |
| Additional Pipeline Right-of-Way (miles) | 0 | 0.3 |
| Karst Risk | Low to Medium [a] | Unknown |
| Noise Sensitive Areas (NSA) within 0.5 mile (no.) | 2 | 2 |
| Distance to the Nearest NSA (feet) | 1,440 | 1,825 |

[a] Geophysical and geotechnical testing at the site by Sabal Trail concluded that there is a low to medium risk of karst activity but not within proposed structure footprints; grouting not recommended.

The primary difference between the proposed and alternative site is that the proposed site is largely forested pine whereas the alternative site is largely open land. Based on preliminary design information provided by Sabal Trail, constructing the alternative would impact an additional 8.4 acres of land, 16.2 acres of agricultural land, and 0.9 acre of wetlands compared to the proposed site. However, Sabal Trail proposes to retain a forested buffer around the compressor station to reduce noise and visually screen the facility from traffic on adjacent State Road 200, whereas a forested buffer is not available at the alternative site. There are two NSAs within 0.5 mile of each site, and the nearest NSA is about 385 feet further for the alternative than the proposed site. Further, Alternative A also requires approximately 0.2 mile of additional inlet/outlet pipelines for the CCL and about 0.1 mile for the Mainline route to tie-into the site. These pipelines would impact an additional 4.3 acres of land including 3.6 acres of forested land, assuming both the inlet/outlet lines can be built within a 100-foot-wide construction right-of-way. Although construction of the proposed site impacts more forest, the presence of forest on the site provides visual and noise screening that is not available at Alternative A. Based on these factors, we determined that Alternative A does not offer a significant environmental advantage over the proposed site and is not preferable to the proposed action.

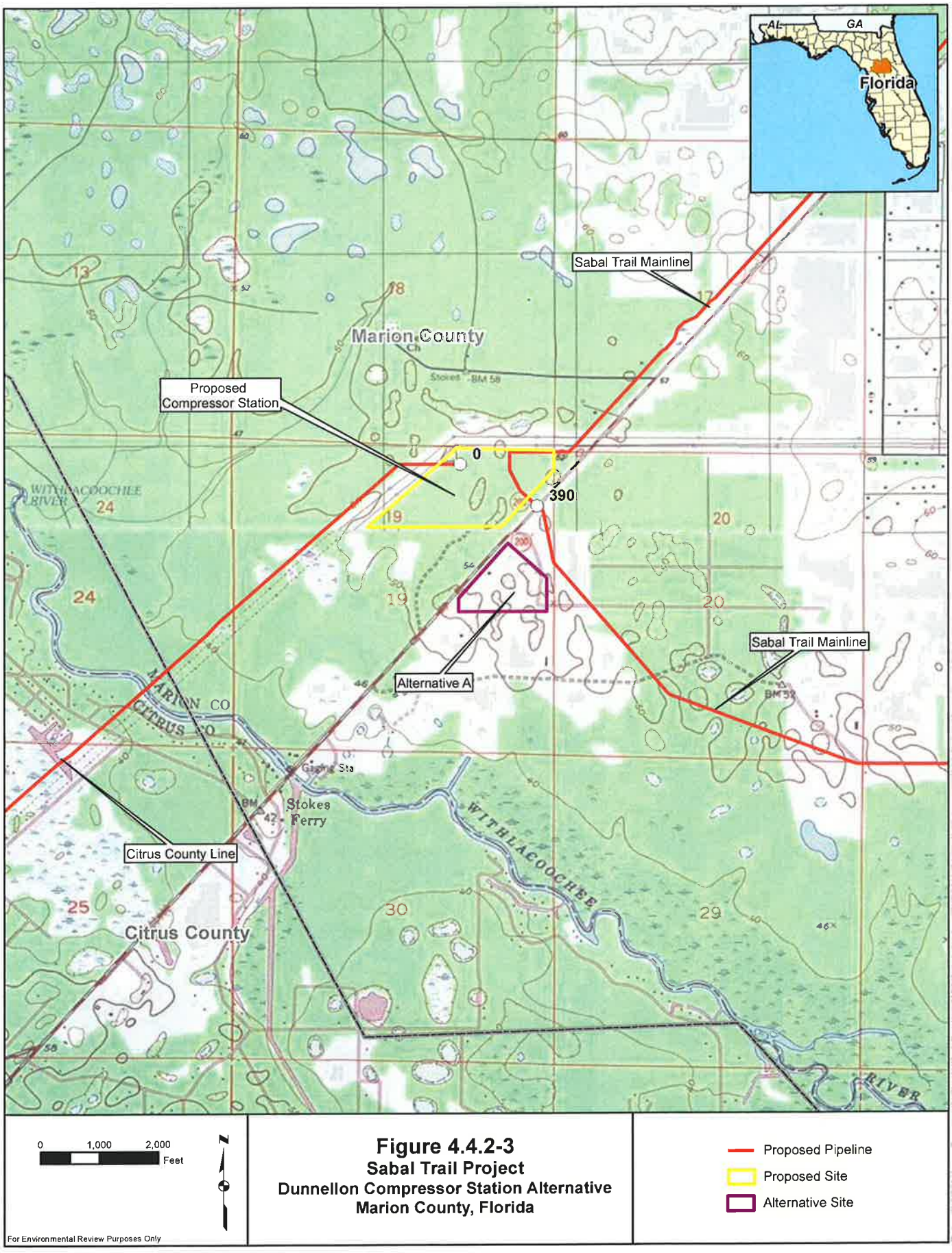


**Figure 4.4.2-3**
**Sabal Trail Project**
**Dunnellon Compressor Station Alternative**
**Marion County, Florida**

# 5.0 CONCLUSIONS AND RECOMMENDATIONS

## 5.1 CONCLUSIONS ON THE ENVIRONMENTAL ANALYSIS

The conclusions and recommendations presented in this section are those of the FERC environmental staff. Our conclusions and recommendations were developed with input from the USACE, which may adopt the EIS per 40 CFR 1506.3 if, after an independent review of the document, they conclude that their permitting requirements and/or regulatory responsibilities have been satisfied. However, the USACE would present its own conclusions and recommendations in its respective and applicable records of decision. Otherwise, the USACE may elect to conduct its own supplemental environmental analysis, if necessary.

We determined that construction and operation of SMP Project would result in adverse environmental impacts. However, if the SMP Project is constructed and operated in accordance with applicable laws and regulations, the mitigating measures discussed in this EIS, and our recommendations, the project would not result in a significant impact on the environment. This determination is based on a review of the information provided by the Applicants and further developed from data requests; field investigations; scoping; literature research; alternatives analysis; and contacts with federal, state, and local agencies as well as individual members of the public. As part of our review, we developed specific mitigation measures that we determined would appropriately and reasonably reduce the environmental impacts resulting from construction and operation of the SMP Project. We are therefore recommending that our mitigation measures be attached as conditions to any authorizations issued by the Commission. A summary of the anticipated impacts and our conclusions is provided below by resource area.

### 5.1.1 Geology and Paleontological Resources

The SMP Project would traverse a range of geologic conditions and resources, including karst sensitive areas in Georgia and Florida. Numerous commentors expressed concern that construction of the Sabal Trail Project and, to a substantially less degree the FSC Project, could impact cave systems and trigger sinkhole development in karst sensitive areas. Commentors were also concerned that future sinkhole activity could damage the pipeline and aboveground facilities, potentially resulting in a public safety hazard.

FSC in general and Sabal Trail in particular conducted detailed studies to characterize karst geologic conditions and developed project-specific plans and procedures that would minimize potential karst-related effects during construction and operation of the proposed facilities. These plans include procedures for managing construction-related water in a manner to minimize the potential for sinkhole activation; measures to mitigate sinkholes and other karst features if encountered during construction; and monitoring the pipeline rights-of-way for signs of subsidence during operations. Sabal Trail also developed a Best Drilling Practices Plan that details how HDD activities would be conducted, including the five HDDs that would occur in karst sensitive areas. The HDD method has been used successfully in karst regions, and Sabal Trail anticipates successful completion of the proposed HDDs. None of the HDDs proposed by FSC would cross karstic bedrock, but we have recommended that FSC update its Karst Mitigation Plan to specify how FSC would monitor for and address any subsidence attributable to HDD activities, and to provide the updated plan to the Commission prior to the start of construction. Karst concerns at aboveground facilities would be mitigated by appropriate subgrade preparation and foundation design.

We reviewed FSC's and Sabal Trail's geologic studies and construction and operation plans in karst areas and find them acceptable. We also found no record of karst activity causing damage to existing interstate transmission pipeline facilities, some of which have operated in karst sensitive areas of Georgia and Florida for decades. By implementing the Applicants' proposed construction and restoration plans and

our recommendations, we conclude that construction of the SMP Project would not significantly impact karst features, including caves; that the risk of initiating karst activity would be minimized; and karst features would be adequately mitigated. We also conclude that operation of the proposed facilities in karst sensitive areas would not pose a significant risk to the public. Other geologic hazards would not be expected to impact the SMP Project.

Blasting would likely be necessary along portions of Transco's proposed loops and between MPs 0 and 100 of the Sabal Trail Project Mainline. Each company stated that blasting would be conducted by licensed professionals in accordance with applicable state and local regulations. Each company also provided a Blasting Plan that includes measures to ensure worker and public safety and protect nearby facilities including existing pipelines, residences, and water wells. We find these plans acceptable and conclude that by conducting blasting in accordance with the Blasting Plans and applicable state and local regulations, impacts on geologic resources and nearby residences and facilities would be avoided or adequately minimized.

The SMP Project would largely avoid active mineral resource facilities and is substantially collocated with existing infrastructure that already precludes mineral development, if resources are present. The permanent use of land for operation of the SMP Project would reduce the amount of land potentially available for mineral development; however, considering the large geographic extent over which most mineral resources occur, the SMP Project would not significantly reduce future mineral extraction. Construction of the SMP Project would require the use of mineral resources such as sand and gravel and we expect that existing mining operations in the area would be readily able to provide the necessary materials.

Transco and FSC provided Unanticipated Paleontological Resource Discovery Plans that describe the procedures for recognizing and handling important fossils discovered during construction, including notification to the appropriate state agency. The Sabal Trail Project would also cross rocks that could contain important fossils, and we received comments regarding the potential for Sabal Trail to discover fossils in sinkholes within the construction workspace. Therefore we have recommended that Sabal Trail provide an Unanticipated Paleontological Resource Discovery Plan similar to those prepared by Transco and FSC to the Commission prior to the start of construction. By implementing these contingency plans we conclude that paleontological resources would be adequately protected.

### 5.1.2 Soils

The SMP Project would traverse a variety of soil types and conditions. Construction activities such as clearing, grading, trenching, and backfilling, could adversely impact soil resources by causing erosion, compaction, and the introduction of excess rock or fill material to the surface, which could hinder restoration. However, the Applicants would implement mitigation measures contained in their construction and restoration plans to control erosion and enhance successful restoration. Specifically, soil impacts would be mitigated through measures such as topsoil segregation, temporary and permanent erosion controls, and post-construction restoration and revegetation of work areas. The Applicants would also implement plans to avoid and limit inadvertent spills of fuel and other hazardous substances, and to address pre-existing contaminated soil if encountered.

Permanent impacts on soils would occur at aboveground facilities where structures and various surfaces would be installed. Operation of the SMP Project would also impact about 1,374 acres of prime or state classified farmland; however, 1,219 acres (88 percent) would be within the operating right-of-way of the pipeline facilities where agricultural use would typically be allowed to continue.

Based on the overall soil conditions in the SMP Project area and the Applicants' proposed construction and operation methods, we conclude that the SMP Project would not significantly alter the soils of the region.

### 5.1.3 Water Resources

**Groundwater**

The SMP Project crosses four major aquifer systems, none of which are designated as an EPA sole source aquifer in the project area. The proposed pipelines would be installed for 98 percent of their length using standard overland construction methods, which would generally limit ground disturbance to a depth of about 6 to 8 feet. Because groundwater generally occurs at greater depths, construction related impacts on most groundwater resources would be avoided. In areas of shallow groundwater, pipeline construction could result in increased turbidity and altered hydrology. These impacts would be short term and localized, and would be further mitigated by implementation of the Applicants' construction and restoration plans. Each Applicant has also developed a plan to appropriately manage fuel and other hazardous materials during construction, and to cleanup any spills that would occur. We have reviewed these spill plans and find that they would be protective of groundwater resources.

Groundwater resources could also be affected by the inadvertent release of drilling mud during HDD operations. Drilling mud is composed of water and bentonite, a naturally occurring clay mineral that is used in potable well construction; thus the primary impact of a drilling mud loss on groundwater quality would be increased turbidity. Water supply wells located hydraulically downgradient from a drilling mud loss could also experience increased turbidity and reduced production due to blocking of the well screen. No HDDs are proposed for the Hillabee Expansion Project. Sabal Trail and FSC developed HDD drilling and contingency plans that include measures to reduce the likelihood of an inadvertent loss of mud from occurring and to minimize the volume of drilling mud lost during a release. The companies would also attempt to recover drilling mud that discharges to the ground surface. All of the Applicants have identified water supply wells within 150 feet of construction workspaces. The Applicants would provide pre- and post-construction testing of the nearby wells with landowner permission and would repair or replace any wells affected by the project, or otherwise compensate the affected landowner. Due to high groundwater flow rates within karst sensitive areas of Georgia and Florida, Sabal Trail has and would continue to identify water supply wells within 2,000 feet downgradient from HDD locations and would extend its well monitoring plan further downgradient as necessary in the event of an inadvertent loss of drilling mud. We conclude that the Applicants' HDD drilling procedures, drilling mud loss contingency plans, and well monitoring and mitigation plans would reduce any impact from HDD operations to less than significant levels.

We also received many comments concerning the potential for the HDD method to impact the hydrology and groundwater quality in nearby springs in the karst sensitive areas of southwest Georgia and northern Florida. As summarized in section 5.1.1, Sabal Trail conducted detailed studies to characterize the karst geology and identify springs in proximity to the proposed HDDs in karst sensitive areas. Sabal Trail sited the HDDs in karst sensitive areas to avoid close construction to major springs and would implement its Best Drilling Practices Plan which includes procedures to reduce the loss of drilling mud; plans to monitor springs within 2,000 feet downgradient of a drilling mud loss; and a commitment to consult with applicable agencies regarding remedial cleanup techniques should a spring be affected. By implementing these plans and procedures, we conclude that the inadvertent loss of drilling mud during HDD operations in karst sensitive areas would not result in significant impacts on the hydrology or groundwater quality in springs.

The City of Albany and other stakeholders in the area expressed concern that construction and operation of the Sabal Trail Project could adversely impact the municipal water supply. Unlike a spill from a pipeline that conveys a liquid such as oil or gasoline, a leak of natural gas from a pipeline would dissipate quickly to the atmosphere and not contaminate surrounding media. In addition, the storage and use of hazardous materials at the Albany Compressor Station would comply with applicable regulations designed to avoid inadvertent spills. Therefore, we conclude that the Sabal Trail Project would not pose a risk to the City of Albany's water supply.

Lastly construction of the SMP Project would utilize approximately 47 million gallons of groundwater; however, considering the large extent and productivity of groundwater aquifers in the region, and that groundwater would be obtained from multiple sources over a period of several months, the volume of groundwater proposed for use during construction would not impact the availability or productivity of groundwater resources in the area.

**Surface Waters**

The SMP Project pipeline facilities would cross 699 waterbodies, including 258 perennial, 309 intermittent, 98 ephemeral, and 34 open water. This also includes 25 major waterbody crossings and 6 section 10 (navigable) waterbodies.

The Applicants would use one of three general methods to install the proposed pipelines across waterbodies. These include the open-cut method, dry-ditch methods (flumed and dam and pump), and the HDD method. Sabal Trail may also use the conventional bore (bore) method at select waterbody crossings. Five waterbodies would be affected by aboveground facilities including three intermittent streams and one ephemeral stream at Transco's Compressor Station 84, and one pond at Sabal Trail's Citrus County M&R Station. In addition, access roads would cross 68 waterbodies during construction of the SMP Project including two waterbodies that would be permanently crossed by Transco's new access road for Compressor Station 84. Sabal Trail identified 10 access roads and FSC identified 1 access road which would be adjacent to or in close proximity to waterbodies, but would not be crossed. Where waterbodies are crossed by access roads, temporary and permanent culverts or equipment bridges would be installed.

The Applicants are proposing to use surface waters and municipal water for hydrostatic testing, dust control, and the HDD construction method. A total of 189 million gallons of water would be used including approximately 13.7 million gallons for the Hillabee Expansion Project, 145.6 million gallons for the Sabal Trail Project, and 29.7 million gallons for the FSC Project. Transco and Sabal Trail have identified the sources and volumes they would use but FSC has not finalized its water use plans so we are recommending that they do so prior to construction. Impacts associated with the withdrawal and discharge of water would be minimized by the Applicants adherence to the measures contained in their construction and restoration plans. In addition, the Applicants would obtain appropriate state water withdrawal and NPDES discharge permits, and would prevent spills during construction and operations through implementation of their respective spill plans.

Pipeline construction activities affecting surface waters would be conducted in accordance with the Applicants' construction and restoration plans, along with any conditions that are part of other federal or state water approvals. We conclude that with these measures, along with our additional recommended mitigation measures, impacts on surface waters would be effectively minimized or mitigated, and would be largely temporary in duration.

### 5.1.4 Wetlands

Construction of the SMP Project would impact a total of 940.2 acres of wetlands, including 107.6 acres in Alabama, 134.3 acres in Georgia, and 698.3 acres in Florida. The majority of wetland impacts would be from temporary construction work areas and ATWS (717.2 acres) which would return to pre-construction conditions following construction. The Applicants would maintain a 30-foot-wide corridor over the pipeline with selective removal of trees within forested and scrub-shrub wetlands, impacting a total of 214.2 acres through the operational life of the SMP Project. Additionally, the Applicants would mow and maintain a 10-foot-wide corridor within scrub-shrub wetlands, impacting a total of 4.8 acres during operation. A small amount of wetlands (less than 4 acres) would be permanently affected due to construction of new aboveground facilities and associated access and fencing.

Construction and operation-related impacts on wetlands would be mitigated by the Applicants' construction and restoration plans and compliance with the USACE section 404 and state permit requirements, including providing in-kind mitigation. The Applicants would conduct annual post-construction monitoring of wetlands affected by construction to assess the condition of revegetation and the success of restoration until revegetation is successful.

The Applicants identified site-specific conditions that do not allow for a 50-foot setback of ATWS from wetlands, or where a 75-foot-wide right-of-way is insufficient to accommodate wetland construction, and requested approval to implement alternative measures. Based on our review, we conclude that those requests are justified.

Based on the Applicants' efforts to route the pipeline facilities and site aboveground facilities to avoid and minimize impacts on wetlands, and by the Applicants' implementation of proposed construction and restoration plans, we conclude that impacts on wetland resources would be effectively minimized and mitigated.

### 5.1.5 Vegetation

Impacts on vegetation from the SMP Project would range from short-term to permanent due to the varied amount of time required to reestablish certain community types, as well as the maintenance of grassy vegetation within the permanent rights-of-way and the conversion of aboveground facility locations to non-vegetated areas. Construction of the proposed facilities would temporarily impact about 10,848 acres of vegetation (5,920 acres of open land and 4,928 acres of forested vegetation) and permanently impact about 3,994 acres (2,097 acres of open land and 1,897 acres of forested vegetation). The SMP Project would also impact vegetation communities of special concern, including longleaf pine forests and xeric shrub habitat of the Lake Wales Ridge. While 2,097 acres of open land would remain within the permanent right-of-way, most of this acreage would return to open land vegetation during operation of the SMP Project facilities.

The greatest impact on vegetation would be on forested areas because of the time required for tree regrowth in all temporary workspace back to preconstruction condition. The Applicants would limit the amount of disturbance to forests by utilizing existing rights-of-way during construction to the extent possible. Construction in forest lands would remove the tree canopy over the width of the construction right-of-way, which would change the structure and local setting of the forest area. The regrowth of trees in the temporary workspaces would take years and possibly decades. Moreover, the forest land on the permanent right-of-way would be affected by ongoing vegetation maintenance during operations, which would preclude the re-establishment of trees on the rights-of-way. However, the SMP Project would not contribute significantly to forest fragmentation. Much of the proposed pipeline routes are located along existing rights-of-way, are in areas that are already developed and highly fragmented, or consist of

silviculture land (1,670.2 acres) which is prescriptively altered by harvesting practices. As a result, the forested areas that are present are predominantly edge habitats.

Multiple invasive species have been identified throughout the SMP Project area. The Applicants would implement Invasive Species Control Plans to address the spread of invasive plants within the pipeline rights-of-way and control invasive populations that might prevent successful revegetation. This management would include construction personnel training, inspecting and washing construction equipment, construction phase mitigation measures, post-construction monitoring, and post-construction management.

Following construction, all disturbed areas would be restored. The impact of the SMP Project on open lands would be short term, as these areas would recover within one to two growing seasons. Construction of the proposed pipeline facilities would have a long-term impact on forested wetland and upland vegetation within the construction rights-of-way. Maintenance activities would result in permanent conversion of some areas of existing upland forested vegetation to herbaceous or scrub-shrub vegetation. However, because the Applicants have routed the pipeline facilities to use existing utility rights-of-way and road corridors to the extent possible, impacts on forested vegetation would be minimized. We find that project-specific minimization and mitigation measures, and mitigation measures described in the Applicants' construction and restoration plans, would be sufficient to offset adverse impacts on vegetation in the SMP Project area. Therefore, we conclude that constructing and operating the proposed facilities would not significantly impact existing vegetation populations.

### 5.1.6 Wildlife and Aquatic Resources

#### Wildlife

The SMP Project would impact wildlife species and their habitats. Impacts from construction include the displacement of wildlife from the right-of-way or work sites into adjacent areas and the potential mortality of some individuals. The cutting, clearing, and/or removal of existing vegetation within the construction work area could also impact wildlife by reducing the amount of available habitat for nesting, cover, and foraging. Construction could also lower reproductive success by disrupting courting, nesting, or breeding of some species, which could also result in a decrease in prey available for predators of these species. These impacts would be temporary, lasting only while construction is occurring, or short-term, lasting no more than a few years until the pre-construction habitat and vegetation type would be reestablished. Other impacts would be longer term such as the re-establishment of forested habitats, which could take decades. The Applicants proposed several measures to minimize or avoid impacts on wildlife, including collocating the proposed workspace with other existing rights-of-way (approximately 66 percent of the proposed alignment), implementing speed restrictions, inspecting the construction rights-of-way and pipeline trench daily for trapped wildlife, and utilizing trench exit ramps and placing wildlife movement gaps along the construction rights-of-way.

A variety of migratory bird species, including BCCs, are associated with the habitats that would be affected by the SMP Project. Based on the proposed construction schedule, the Applicants would conduct the majority of tree-clearing activities within the breeding and nesting season, which would impact migratory birds. The Applicants developed a Migratory Bird Conservation Plan to minimize breeding and nesting impacts, which was developed in conjunction with and approved by the FWS. With the implementation of the measures outlined in the bird plan, we conclude that constructing and operating the SMP Project would not result in population-level impacts or significant measureable negative impacts on migratory birds including BCC species.

Given the impact avoidance, minimization, and mitigation measures proposed by the Applicants, we conclude that the SMP Project would not have a significant adverse impact on wildlife.

**Aquatic Resources**

The SMP Project would cross 699 waterbodies, all of which are classified as warmwater fisheries. Seven waterbodies are considered sensitive due to the presence of sensitive aquatic species. None of the waterbodies that would be crossed by the SMP Project are managed by the NMFS or contain EFH. State resource agencies have confirmed that no timing restrictions are necessary for in-stream construction activities.

In-stream pipeline construction across waterbodies could impact aquatic species and their habitats, including increased sedimentation and turbidity, alteration or removal of aquatic habitat cover, stream bank erosion, impingement or entrainment of fish and other biota associated with the use of water pumps, downstream scouring, and the potential for fuel and chemical spills. In-stream blasting may occur along portions of the Hillabee Expansion Project and Sabal Trail Project. Transco and Sabal Trail have developed blasting plans that provide measures for minimizing blasting-related fishery impacts.

The Applicants would minimize the impacts of their respective projects on aquatic resources through the use of various trenchless or dry crossing methods, extra workspace restrictions, and restoration procedures. The Applicants would also implement measures outlined in their construction and restoration plans to minimize impacts on aquatic resources such as restoring stream beds and banks to pre-construction conditions and implementing measures to minimize erosion and sediment loads. Adherence to the restoration plans would maximize the potential for regrowth of riparian vegetation.

Sabal Trail and FSC propose to use the HDD method at 39 waterbody crossings, including 15 major waterbody crossings (greater than 100 feet wide). This method would avoid impacts on the streambed, stream banks, and aquatic resources. The Applicants would also use dry crossing methods (flume, dam and pump, or cofferdam) to minimize potential sedimentation and turbidity impacts. The Applicants would ensure that hydrostatic test water appropriations and discharges would not result in a significant entrainment of fish, loss of habitat, or an adverse impact on water quality. Discharge would comply with regulatory permit conditions and be controlled to prevent scour and sedimentation, flooding, or the introduction of foreign or toxic substances into the aquatic system. The Applicants would minimize the potential for spills to impact aquatic resources by implementing the measures contained in their spill plans.

Given the impact avoidance, minimization, and mitigation measures proposed by the Applicants, including their adherence to multiple resource protection plans, we conclude that the SMP Project would not result in significant adverse impacts on aquatic resources.

### 5.1.7 Special Status Species

To comply with section 7 of the ESA, we consulted either directly or indirectly (through the Applicants' informal consultation) with the FWS, NMFS, and state resource agencies regarding the presence of federally listed, proposed for listing, or state-listed species in the project area. Based on these consultations and assuming implementation of our recommendations for 8 species, we determined that construction and operation of SMP Project would not adversely affect 17 federally listed species and may adversely affect 11 federally listed species. No designated critical habitat would be adversely affected by the SMP Project. In compliance with section 7, we have prepared a BA and requested formal consultation with the FWS. We are recommending that construction of the SMP Project should not commence until our consultation with the FWS is complete.

In addition to the federally listed and proposed species, several candidate, state-listed, or special concern species were identified as potentially present in the SMP Project area. Many of these species could be affected by the SMP Project, but we do not expect any adverse impacts given the proposed construction and restoration measures and our recommendations. Based on implementation of those measures, we conclude that impacts on special status species would be adequately avoided or minimized.

### 5.1.8 Land Use and Visual Resources

Constructing the SMP Project would affect approximately 11,436.2 acres of land, and operating the proposed facilities would affect about 4,143.3 acres of land. Of this, constructing and operating the Hillabee Expansion Project would respectively impact 999.8 acres and 296.8 acres; the Sabal Trail Project would respectively impact 8,548.8 acres and 3,095.8 acres; and the FSC Project would respectively impact 1,887.6 acres and 750.7 acres. The new pipelines would require a 50-foot-wide permanent right-of-way. To facilitate pipeline inspection, operation, and maintenance, the entire permanent right-of-way in upland areas would be maintained in an herbaceous/scrub-shrub vegetated state. This maintained right-of-way would be mowed no more than once every 3 years, but a 10-foot-wide strip centered over the pipelines may be mowed annually to facilitate operational surveys.

The Applicants' proposed construction work areas are within 50 feet of 213 residential and other structures. The Applicants prepared site-specific residential construction plans to address impacts for residences within 50 feet of construction workspace. We reviewed these plans and find them acceptable. However, we are encouraging the owners of each of these residences to provide us comments on the plan specific to their property. The Applicants have also developed plans that identify how stakeholders can contract project representatives with questions, concerns, and complaints prior to, during, and after construction. We have reviewed these plans and processes and find them acceptable.

Ninety-four planned developments in various stages of development were identified within 0.5 mile of the Sabal Trail Project and FSC Project. Sabal Trail and FSC committed to work with individual affected landowners and developers in order to minimize impacts on the planned developments. Further, Sabal Trail and FSC would obtain the appropriate state or county permits (rezoning, development plan, etc.), and would either purchase the property or negotiate an easement from the current landowner in order to construct and operate the proposed facilities. We analyzed alternatives to minimize or avoid impacts on some planned developments and are recommending adoption of a variation at one of the planned developments along Sabal Trail's Mainline in Moultrie, Georgia.

In general, impacts on recreational and special interest areas would be temporary and limited to the period of active construction, which typically would last only several days to several weeks in any one area, with the exception of linear trails where a detour or temporary closure may be required. Sabal Trail developed site-specific plans for several of these crossings. However, site-specific crossing plans were not provided for the Florida National Scenic Trail at Sabal Trail's Mainline MP 384.9 or where the FSC Project would affect trails that may require a detour or closure. Therefore, we are recommending that a site-specific crossing plan for each of these features be provided by Sabal Trail and FSC prior to the close of the draft EIS comment period.

The Sabal Trail Project and FSC Project pipeline would cross several tracts of land supporting specialty crops such as fruit (e.g., citrus), pecan, and pine trees; and lands enrolled in Forest Certification Programs, Agricultural Certification Programs, the Conservation Reserve Program, the Conservation Reserve Enhancement Program, and Conservation Use Valuation Assessments. The Applicants have committed to continuing coordination with landowners to avoid and minimize impacts on specialty crops and the landowners' participation in these programs. Where impacts on specialty crops cannot be avoided, the Applicants would compensate landowners for any project-related damages to specialty crop areas. The

Applicants would implement special construction procedures in accordance with their respective construction, restoration, and mitigation plans.

Visual resources along the pipeline route are a function of geology, climate, and historical processes, and include topographic relief, vegetation, water, wildlife, land use, and human uses and development. Of the 685.4 miles of pipeline for the SMP Project, about 448.9 miles (66 percent) would be collocated with other existing rights-of-way. As a result, the visual resources along collocated portions have been previously affected by other similar activities. Impacts in other areas would be greatest where a conversion from forested land to a grassy, maintained right-of-way would occur, particularly at viewing locations such as roadways and features managed for their visual quality (e.g., Florida National Scenic Trail).

In general, the impacts on visual resources resulting from the construction and operation of the MLVs and pig launchers/receivers would be minimal as each site is small and would be operated within the pipeline operational right-of-way, and/or within an aboveground facility. Construction and operation of compressor stations and M&R stations would result in a greater impact on the visual landscape, resulting in conversion of 194.4 acres of land to a commercial/industrial facility. Most compressor stations would be visually screened from nearby residences or roadways, located within previously disturbed areas, located within areas with consistent industrial/commercial qualities, and/or located more than 1,000 feet from a residence. We anticipate that visual impacts on nearby visual receptors during operation would be permanent, but negligible.

We received comments regarding impacts on visual resources resulting from installation of the Albany Compressor Station. Sabal Trail committed to maintaining a minimum 100-foot-wide buffer of existing, mature trees around the compressor station site. Currently, this buffer contains 30-foot-tall pine trees that stand between the proposed site and the Countryside Village Mobile Home Park. The tallest proposed structure is approximately 60 feet tall. Based on the site elevation and the tree cover, a structure would need to be a minimum of 85 feet tall to be visible from the Countryside Village Mobile Home Park. Consequently, no part of the compressor station would be visible from the nearby mobile home park and roadways, or the more distant residences and public areas (fairgrounds, churches, schools).

With adherence to the Applicants' proposed impact avoidance, minimization, and mitigation plans, and our recommendations, we conclude that overall impacts on land use and visual resources would be adequately minimized.

### 5.1.9 Socioeconomics

Construction of the SMP Project would not have a significant adverse impact on local populations, housing, employment, or the provision of community services. There would be temporary increases in housing such as hotels, motels, and other rental units due to the influx of construction workers. Also, traffic levels would temporarily increase due to the commuting of the construction workforce to the area of the project as well as the movement of construction vehicles and delivery of equipment and materials to the construction right-of- way.

We received comments regarding the potential effect of the SMP Project on property values. We assessed available studies regarding property values and conclude that a significant loss of property value is not supported by the literature. Also, the effect that a pipeline easement may have on property value is a damage-related issue that would be negotiated between the parties during the easement acquisition process.

We received comments specific to the Sabal Trail Project expressing concern about potentially adverse impacts on environmental justice populations in Dougherty County, Georgia, particularly in and

near the City of Albany as a result of project-related dust and compressor station air emissions. Based on our research and analysis, there is no evidence that the Sabal Trail Project would result in disproportionately high and adverse health or environmental effects on environmental justice populations.

The SMP Project construction would benefit state and local economies by creating a short-term stimulus to the affected areas through payroll expenditures, local purchases of consumables and project-specific materials, and sales tax. The long-term socioeconomic effect of the SMP Project during operation is also likely to be beneficial, based on the increase in tax revenues that would accrue in the affected communities and jurisdictions; however, these benefits would not be as significant as during construction.

Based on the analysis presented, we conclude that the SMP Project would not have a significant adverse impact on the socioeconomic conditions of the project area.

### 5.1.10 Cultural Resources

The Applicants conducted archival research and field surveys to identify historic resources and locations for additional subsurface testing in areas with potential for prehistoric and historic archaeological sites. Transco identified 30 archaeological sites within the Hillabee Expansion Project's APE. Sixteen sites are not eligible for listing on the NRHP; 14 sites are eligible or require further evaluation.

Sabal Trail identified 424 archaeological sites within the Sabal Trail Project's APE. Of these, 279 sites are not eligible for listing on the NRHP and 145 sites are eligible or require further evaluation. Additionally, Sabal Trail identified 198 historic aboveground resources within the APE. We have determined that 42 of these historic aboveground resources are eligible for listing in the NRHP and that 156 resources are not eligible. Sabal Trial would avoid impacts on eligible or unevaluated cultural sites by project design, or would conduct additional studies to further assess NRHP eligibility.

FSC identified 32 archaeological sites and 25 historic architecture sites. We have determined that none of the 32 archaeological sites are eligible for listing on the NRHP. Of the 25 historic architecture sites, we have determined that 21 historic architectural sites are not eligible for listing in the NRHP and 4 sites would be avoided.

Both we and the Applicants consulted with 28 federally recognized Native American tribes to provide them an opportunity to comment on the SMP Project. Several tribes and organizations requested additional information, and we have responded to tribes that commented on the project.

The Applicants have prepared plans to be used in the event any unanticipated archaeological sites or human remains are encountered during construction. The plans provide for work stoppage and the notification of interested parties, including Indian tribes, in the event of discovery.

To ensure that our responsibilities under Section 106 of the NHPA are met, we are recommending that the Applicants not begin construction until any additional required surveys are completed; that survey reports, special studies, evaluation reports and treatment plans have been reviewed by the appropriate parties; and we provide written notification to proceed. The studies and impact avoidance, minimization, and measures proposed by the Applicants, and our review and recommendations, would ensure that historic properties are identified, evaluated, and any adverse effects appropriately mitigated.

### 5.1.11 Air Quality and Noise

**Air Quality**

Air quality impacts associated with construction of the SMP Project would include emissions from fossil-fueled construction equipment and fugitive dust. These impacts would generally be temporary and localized, and would not be expected to cause or contribute to a violation of applicable air quality standards.

Operation of SMP Project would generate emissions of nitrogen oxides, carbon monoxide, and particulate matter, sulfur dioxide, volatile organic compounds, GHGs, and hazardous air pollutants. Emissions from the new compressor stations would be minor sources of air pollution and, therefore, not subject to the federal permitting programs. Transco's existing Compressor Stations 95 and 105 would remain subject to Title V, which involves additional reporting and monitoring requirements, but would not result in emissions that rise to the level of PSD where additional emission controls are necessary. Based on the air dispersion modeling analysis presented in section 3.12.1 and the Applicants' strict compliance with the primary and secondary NAAQS, we conclude that operation of Transco Compressor Stations 84; Sabal Trail's Alexander City, Albany, Hildreth, Dunnellon, and Reunion Compressor Stations; and Sabal Trail's FGT Hunters Creek M&R Station would not have a significant impact on regional air quality. The modifications at Transco's Compressor Stations 95 and 105 themselves would meet the primary and secondary NAAQS. However, we are recommending that, prior to the close of the draft EIS comment period, Transco provide an analysis demonstrating that all equipment (new and existing) at Compressor Stations 95 and 105 comply with the primary and secondary NAAQS.

**Noise**

Noise would be generated during construction of the proposed facilities. Construction activities in any one area would typically last from several days to several weeks on an intermittent basis. Construction equipment would be operated on an as-needed basis during this period. Construction of the SMP Project would be limited primarily to daytime hours with the exception of some discrete construction related activities (e.g., hydrostatic testing, tie-ins, purge and packing the pipeline) and select HDD work. Generally, nighttime noise is expected to increase only in localized areas near 24-hour HDD activities; however, these activities are expected to last for only a matter of 1 to 15 days. In addition, the Applicants have agreed to notify nearby residences prior to commencing 24-hour HDD activities. Transco and Sabal Trail indicate that blasting may be necessary at certain locations during construction, whereas FSC does not anticipate the need to conduct blasting. Blasting would cause noise but would be conducted in accordance with Blasting Plans that require limiting the amount of charge needed to complete the work and require notification of persons in the area.

The Applicants performed noise assessments for proposed new and modified compressor stations and M&R stations. Based on the noise assessments, these aboveground facilities would be in compliance with our noise criteria of 55 dBA $L_{dn}$ and no perceptible vibration at the nearest NSAs. To ensure that compressor stations meet our noise criteria, we are recommending that the Applicants file noise surveys of the facilities operating at full load conditions after placing the new/modified equipment into service, and install additional noise controls if the applicable noise standards are exceeded.

Given adherence to the Applicants' proposed measures as well as our additional recommendations, we conclude that potential air and noise-related impacts associated with the SMP Project would be adequately minimized or mitigated.

### 5.1.12 Reliability and Safety

The pipeline and aboveground facilities associated with the SMP Project would be designed, constructed, operated, and maintained to meet the DOT Minimum Federal Safety Standards in 49 CFR 192 and other applicable federal and state regulations. These regulations include specifications for material selection and qualification; minimum design requirements; and protection of the pipeline from internal, external, and atmospheric corrosion. The DOT rules require regular inspection and maintenance, including repairs as necessary, to ensure the pipeline has adequate strength to transport the natural gas safely.

We received comments regarding the potential for fires and controlled burns to affect the proposed pipeline facilities. DOT requirements do not include standards for the use of fire-resistant materials during the installation of underground natural gas pipelines. However, the Applicants would develop emergency plans that would include establishing and maintaining adequate means of communication with appropriate fire, police, and other public officials, and developing prompt and effective response to a notice of each type of emergency, including that of a fire near or directly involving a pipeline facility.

We received comments regarding the ability to detect leaks in the pipeline system when an odorant has not been introduced into the natural gas. The Applicants would install data acquisition systems that allow monitoring of pipeline flows and pressures at various points along the system. The system would allow for remote closing of MLVs in the event of an incident along the pipeline systems and would utilize a combination of radio and/or satellite communications to transmit data from the pipeline to the Applicants' current gas control centers.

We received comments regarding the potential to damage existing, older pipelines during construction of the SMP Project, and the potential cumulative safety risk of multiple collocated natural gas pipelines. Collocation of natural gas transmission facilities is a common and encouraged industry practice. Although the Applicants would utilize existing pipeline rights-of-way as temporary workspace to some degree, the Applicants would typically not operate heavy equipment over existing pipeline facilities and would generally install the new facilities at least 25 feet from existing pipelines.

SONAT expressed concern regarding the number of times Sabal Trail's Mainline would cross SONAT's existing pipeline system. In response, Sabal Trail modified the Mainline route to eliminate more than one-third of the originally proposed crossings and has committed to work with SONAT on the design and construction methods for the remaining crossings, cathodic protection systems, and future maintenance activities. We conclude that the remaining Mainline crossings of SONAT's pipeline system are sufficiently justified to minimize impacts on residences, cultural resources, and other environmental resources and to address construction constraints (e.g., steep side slopes).

We received comments from Dougherty County, the City of Albany, and numerous citizens expressing concern about impacts on residences and public safety resulting from operation of the proposed Albany Compressor Station. In addition to complying with DOT Minimum Federal Safety Standards in 49 CFR 192, Sabal Trail would implement specific safety measures at its compressor stations including installation of chain link fence with barbed wire to maintain facility and worker safety; controlled access and alarm systems; ventilation of compressor buildings to prevent the accumulation of gas; automatic emergency detection and shut-down systems; and maintenance of fire protection, first aid, and safety equipment.

The Applicants would meet with the emergency services departments of the municipalities and counties along the proposed pipeline facilities on an ongoing basis as part of their liaison programs and as required by the DOT's federal safety standards. The Applicants would provide these departments with emergency contact information and verbal, written, and mapping descriptions of the pipeline systems. This

liaison program would identify the appropriate fire, police, and public officials and the responsibilities of each organization that may respond to a gas pipeline emergency, and coordinate mutual assistance in responding to emergencies.

We conclude that the Applicants' compliance with applicable design, construction and maintenance standards, and DOT safety regulations would be protective of public safety.

### 5.1.13 Cumulative Impacts

If constructed, the SMP Project and other projects in the area could result in varying degrees of cumulative impact on different resources depending on the type and scope of each project, their proximity to each other, the timeframe in which they are constructed, and the measures that would be implemented to avoid or reduce impacts at each project site. The majority of impacts associated with the SMP Project would be temporary or short-term, and about 66 percent of the pipeline facilities would be collocated with existing infrastructure, thereby reducing overall impacts. The environmental impacts associated with the SMP Project would be less than significant if the SMP Project is constructed and operated in accordance with the Applicants' proposed construction and restoration plans, other applicable regulations or permit requirements, and our additional recommendations. As such, we conclude that construction and operation of the SMP Project would not significantly contribute to cumulative environmental impacts in the region.

### 5.1.14 Alternatives

As an alternative to the proposed action, we evaluated the no-action alternative, system alternatives, route alternatives and variations, and aboveground facility site alternatives. While the no-action alternative would eliminate the short- and long-term environmental impacts identified in this EIS, the end-use markets would not be provided the SMP Project's 1.1 Bcf/d of natural gas transmission service. Because this alternative would not be able to meet the purpose of the SMP Project, we conclude it is not preferable to the proposed action. We also conclude alternative energy sources, energy conservation, and efficiency are not within the scope of this analysis because the purpose of the SMP Project is to transport natural gas. The generation of electricity from renewable energy sources, or the gains realized from increased energy efficiency and conservation, are not transportation alternatives.

Our analysis of system alternatives included an evaluation of whether the use of other existing or proposed natural gas transmission systems; additional compression/looping; a domestic liquefied natural gas seaborne transmission system; and trucks and/or rail could meet the Applicants' objectives while offering an environmental advantage. Other existing natural gas transmission systems in the SMP Project area lack the available capacity to meet the purpose of the project. Modifying these systems could result in impacts similar to those of the proposed project or would be economically impractical. Additional compression/looping would not offer a significant environmental advantage over the proposed actions. The use of an alternative transportation system; liquefied natural gas ship carrier, truck, or rail would be economically impractical. We conclude that the use of a system alternative is not preferable to the proposed action.

We evaluated twelve major pipeline route alternatives including routes that would follow existing rights-of-way and one that would cross the Gulf of Mexico. We also evaluated 20 route variations and reviewed the over 300 variations considered by the Applicants. Furthermore, we evaluated numerous aboveground facility (compressor station) locations including several alternatives for the proposed Albany Compressor Station. Increasing collocation with existing rights-of-way, avoiding the State of Georgia, concern about construction through karst sensitive terrain, impacts on affected landowners and communities, general environmental concerns, and future development were all reasons for evaluating pipeline alternatives and variations. In evaluating these alternatives and variations, we compared a number

of factors including (but not limited to) total length, acres affected, wetlands and waterbodies crossed, the number of residences within 50 feet of workspace, environmental justice populations, and high consequence areas. We also considered construction constraints, degree of nearby development, traffic impacts, and economic practicality.

Based on our evaluations, we conclude that the major pipeline route alternatives do not offer a significant environmental advantage when compared to the proposed route or would not be economically practical; and therefore, are not preferable to the proposed action. We also conclude with one exception that the route variations evaluated do not offer significant environmental advantages when compared to the corresponding segments of the proposed pipeline route; and therefore, are not preferable to the proposed action. We are recommending one minor route variation that would reduce the potential to impede potential future development. Lastly, we conclude that the alternative aboveground facility locations evaluated do not offer significant environmental advantages when compared to the proposed locations and are not preferable to the proposed action.

## 5.2 FERC STAFF'S RECOMMENDED MITIGATION

If the Commission authorizes the SMP Project, we recommend that the following measures be included as specific conditions in the Commission's Order. We believe that these measures would further mitigate the environmental impact associated with constructing and operating the proposed SMP Project. In the following section, "file" means to file with the Secretary at the FERC.

1. The Applicants shall follow the construction procedures and mitigation measures described in their applications and supplements (including responses to staff data requests) and as identified in the EIS, unless modified by the Order. The Applicants must:

    a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;

    b. justify each modification relative to site-specific conditions;

    c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and

    d. receive approval in writing from the Director of OEP **before using that modification.**

2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the SMP Project. This authority shall allow:

    a. the modification of conditions of the Order; and

    b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction and operation.

3. **Prior to any construction**, the Applicants shall file affirmative statements with the Secretary, certified by a senior company official, that all company personnel, EIs, and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of

the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

4. The authorized facility locations shall be as shown in the EIS, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction,** the Applicants shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

   The Applicants' exercise of eminent domain authority granted under NGA section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. The Applicants' right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipeline/facilities to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

5. The Applicants shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area**.

   This requirement does not apply to extra workspace allowed by the Applicants' project-specific construction plans described in the EIS and/or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

   Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

   a. implementation of cultural resources mitigation measures;

   b. implementation of endangered, threatened, or special concern species mitigation measures;

   c. recommendations by state regulatory authorities; and

   d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

6. **Within 60 days of the acceptance of the authorization and before construction begins**, the Applicants shall file Implementation Plans with the Secretary for review and written approval by the Director of OEP. The Applicants must file revisions to the plans as schedules change. The plans shall identify:

a. how the Applicants will implement the construction procedures and mitigation measures described in their applications and supplements (including responses to staff data requests), identified in the EIS, and required by the Order;

b. how the Applicants will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;

c. the number of EIs assigned per spread, and how the companies will ensure that sufficient personnel are available to implement the environmental mitigation;

d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;

e. the location and dates of the environmental compliance training and instructions the Applicants will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change), with the opportunity for OEP staff to participate in the training session(s);

f. the company personnel (if known) and specific portion of the Applicants' organizations having responsibility for compliance;

g. the procedures (including use of contract penalties) the Applicants will follow if noncompliance occurs; and

h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:

(1) the completion of all required surveys and reports;
(2) the environmental compliance training of onsite personnel;
(3) the start of construction; and
(4) the start and completion of restoration.

7. Beginning with the filing of their Implementation Plans, the Applicants shall file updated status reports with the Secretary on a biweekly basis until all construction and restoration activities are complete. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:

a. an update on the Applicants' efforts to obtain the necessary federal authorizations;

b. the construction status of each spread, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally-sensitive areas;

c. a listing of all problems encountered and each instance of noncompliance observed by the EI(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);

d. a description of the corrective actions implemented in response to all instances of noncompliance, and their cost;

e. the effectiveness of all corrective actions implemented;

f. a description of any landowner/resident complaints which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and

g. copies of any correspondence received by the Applicants from other federal, state, or local permitting agencies concerning instances of noncompliance, and the Applicants' response.

8. **Prior to receiving written authorization from the Director of OEP to commence construction of any project facilities**, the Applicants shall file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).

9. The Applicants must receive written authorization from the Director of OEP **before placing each phase of the SMP Project into service**. Such authorization will only be granted following a determination that rehabilitation and restoration of the right-of-way and other areas affected by the project are proceeding satisfactorily.

10. **Within 30 days of placing the authorized facilities in service**, the Applicants shall file an affirmative statement with the Secretary, certified by a senior company official:

a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or

b. identifying which of the conditions in the Order the Applicants have complied with or will comply with. This statement shall also identify any areas affected by the SMP Project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

11. **Prior to construction**, FSC shall file, for the review and written approval of the Director of OEP, an updated Karst Mitigation Plan that specifies how FSC would monitor for and mitigate any subsidence features attributable to HDD activities. (Section 3.1.2.3)

12. **Prior to construction**, Sabal Trail shall file, for the review and written approval of the Director of OEP, an Unanticipated Paleontological Resources Discovery Plan that describes how Sabal Trail would recognize and manage significant fossils encountered during construction. This plan shall also describe the notification procedures to the State Geologists in each state crossed by the Sabal Trail Project. (Section 3.1.5.2)

13. **Prior to construction**, FSC shall provide the sources and volumes of water that would be used for hydrostatic testing activities. This shall include hydrostatic test water discharge locations, the volumes of water that would be discharged at each location, the maximum discharge rate, and the watershed associated with each source and discharge location. In addition, FSC shall provide the volume and sources of water to be used for HDD operations. (Section 3.3.3.5)

14. **Prior to construction**, the Applicants shall file copies of their final wetland mitigation plans and documentation of USACE approval of the plans. (Sections 3.4.3.1, 3.4.3.2, and 3.4.3.3)

15. **Prior to construction**, the Applicants shall each provide a plan describing the feasibility of incorporating plant seeds that support pollinators into the seed mixes used for restoration of construction workspaces. These plans shall also describe the Applicants' consultations with the relevant federal and/or state regulatory agencies. (Section 3.5.8)

16. The Applicants shall not begin construction **until**:

    a. all outstanding biological surveys have been completed;

    b. the staff receives comments from the FWS regarding the proposed actions;

    c. the staff completes formal consultation with the FWS; and

    d. the Applicants have received written notification, respectively, from the Director of OEP that construction or use of mitigation may begin. (Section 3.8)

17. Sabal Trail and FSC shall avoid construction within occupied scrub-jay habitat **between March 1 and June 30**, unless additional surveys confirm that this habitat is unoccupied and Sabal Trail or FSC receives written confirmation from the Commission that construction activities can occur within this timeframe. (Section 3.8.1)

18. **Prior to construction**, Sabal Trail shall file for the review and written approval by the Director of OEP, results of consultation with the FWS indicating the minimization/avoidance measures that will be used for the longspurred mint, including (in the order listed), opportunities for:

    a. avoidance of plant locations and associated habitat as feasible, including "necking-in" or reducing the construction footprint;

    b. "temporary" removal of plants and soil profile plugs (which include the A and B horizons) with the intent to replace to original location post construction; and

    c. transplanting and seed banking (only after all other options are considered). (Section 3.8.1)

19. **Prior to construction**, FSC shall file for the review and written approval by the Director of OEP, results of consultation with the FWS indicating the minimization/avoidance measures that would be used for the Florida bonamia, Lewton's polygala, papery whitlow-wort, scrub buckwheat, scrub mint, and Small's jointweed including (in the order listed), opportunities for:

    a. avoidance of plant locations and associated habitat as feasible, including "necking-in" or reducing the construction footprint;

    b. "temporary" removal of plants and soil profile plugs (which include the A and B horizons) with the intent to replace to original location post construction; and

    c. transplanting and seed banking (only after all other options are considered). (Section 3.8.1)

20. **Prior to the close of the draft EIS comment period**, Sabal Trail shall:

    a. file an evaluation of the feasibility of using the bore or HDD crossing method for the FNST crossing at Mainline MP 384.9; and

b. if the bore or HDD method is not feasible, file a FNST site-specific crossing plan that identifies the location(s) of a detour, public notification, signage, and consideration of avoiding days of peak usage. The crossing plan shall be developed in consultation with the land managing agency. (Section 3.9.2.5)

21. **Prior to construction,** Sabal Trail and FSC shall file documentation of concurrence from the FDEP that their respective projects are consistent with the CZMA. (Sections 3.9.2.6 and 3.9.3.6)

22. **Prior to the close of the draft EIS comment period**, FSC shall file site-specific crossing plans for the Lake Marion Creek Watershed Trail and Upper Lakes Watershed Basin Trail/Snell Creek Trail and access roads that identify the location(s) of a detour (if applicable), public notification, signage, and consideration of avoiding days of peak usage. The crossing plans shall be developed in consultation with the land managing agency. (Section 3.9.3.5)

23. **Prior to the close of the draft EIS comment period**, FSC shall provide documentation that construction and operation of the FSC Project would not be precluded by the conditions of the Tiger Lake Ranch Conservation Easement. (Section 3.9.3.5)

24. The Applicants shall not begin implementation of any treatment plans/measures (including archaeological data recovery); construction of facilities; or use staging storage, or temporary work areas and new or to-be-improved access roads **until**:

a. the Applicants file:

(1) all survey reports, including special studies like Ground Penetrating Radar, evaluation reports, and treatment plans; and

(2) comments on survey reports, special studies, evaluation reports, and treatment plans from the Alabama, Georgia, and Florida SHPOs, as well as any comments from federally recognized Indian tribes, and other consulting parties, as applicable;

b. the ACHP is afforded an opportunity to comment on the undertaking if historic properties would be adversely affected; and

c. the FERC staff reviews and the Director of OEP approves all cultural resources reports and plans, and notifies the Applicants in writing that treatment plans/mitigation measures may be implemented and/or construction may proceed.

All material filed with the Commission that contains **location, character, and ownership** information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering **"CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE."** (Section 3.11.6)

25. **Prior to the close of the draft EIS comment period,** Transco shall file the results of an air quality screening (AERSCREEN), or refined modeling analysis (AERMOD or EPA-approved alternative) for all of the emission generating equipment (including existing equipment) at Compressor Stations 95 and 105. The results shall demonstrate that the modeled existing emissions, plus the modeled incremental increase in emissions of criteria pollutants from the modifications either:

a. results in local concentrations below the NAAQS where current **modeled** concentrations from the existing compressor station (existing and ambient background) are below the NAAQS; or

b. does not cause or contribute to significantly increased local area concentrations above the NAAQS where the current ambient background concentrations are currently above the NAAQS. (Section 3.12.1.3)

26. FSC shall file **in its construction status reports** the following information for each HDD entry site:

a. noise measurements from HDD activities at the nearest NSA, obtained at the start of drilling operations; and

b. documentation of noise complaints and measures FSC has taken to resolve such complaints. (Section 3.12.2.2)

27. Transco shall file noise surveys **no later than 60 days** after placing the equipment at Compressor Stations 84, 95, 100, and 105 into service. If full load condition noise surveys are not possible, Transco shall provide interim surveys at the maximum possible horsepower load and provide the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at each station under interim or full horsepower load exceeds an $L_{dn}$ of 55 dBA at the nearest NSA, Transco shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. Transco shall confirm compliance with the above requirement by filing a second noise survey for each station **no later than 60 days** after it installs the additional noise controls. The timeframes above apply to the in-service dates for each phase of construction at each station. (Section 3.12.2.2)

28. Sabal Trail shall file noise surveys **no later than 60 days** after placing the equipment at the Alexander City, Albany, Hildreth, Dunnellon, and Reunion Compressor Stations into service. If full load condition noise surveys are not possible, Sabal Trail shall provide interim surveys at the maximum possible horsepower load and provide the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at each station under interim or full horsepower load exceeds an $L_{dn}$ of 55 dBA at the nearest NSA, Sabal Trail shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. Sabal Trail shall confirm compliance with the above requirement by filing a second noise survey for each station **no later than 60 days** after it installs the additional noise controls. The timeframes above apply to the in-service dates for each phase of construction at each station. (Section 3.12.2.2)

29. **Prior to the close of the draft EIS comment period**, Sabal Trail shall work with G.B.A. to the extent feasible and file a revised alignment sheet that incorporates G.B.A. Variation 3 into the proposed route and documentation of or confirmation that Sabal Trail will obtain the necessary federal approvals for the variation. (Section 4.3.2.4)