CESAJ-RD-NJ
CESAM-RD-N
CESAS-RD-C
SAJ-2013-03030 (Sabal Trail Transmission LLC)
SAJ-2013-03099 (Florida Southeast Connection, LLC)
SAM-2014-00238 (Transcontinental Gas Pipeline Company, LLC)
SAM-2014-00655 (Sabal Trail Transmission, LLC)
SAS-2013-00942 (Sabal Trail Transmission, LLC)

MEMORANDUM FOR RECORD

SUBJECT: Department of the Army Record of Decision and Statement of Findings (ROD-SOF) for Department of the Army (DA) Permit Applications SAJ-2013-03030, SAJ-2013-03099, SAM-2014-00238, SAM-2014-00655, and SAS-2013-00942

1. NEPA Adoption:

a. In accordance with 40 C.F.R. § 1506.3(c) and 33 C.F.R. Part 325, Appendix B, Paragraph 8(c), the Jacksonville District (SAJ), Mobile District (SAM), and Savannah District (SAS) of the U.S. Army Corps of Engineers (collectively, the "Corps") hereby adopt the Federal Energy Regulatory Commission's (FERC's) December 2015 Final Environmental Impact Statement (FEIS) for the Southeast Market Pipelines (SMP) Project with some exceptions outlined below. The 18 December 2015, FEIS is available at http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14409956. This document constitutes the Record of Decision (ROD), Clean Water Act (CWA) Section 404(b)(1) Guidelines Analysis, Public Interest Review, and Statement of Findings (SOF) for the above-referenced DA permit applications in accordance with 40 C.F.R. § 1506.4.

b. In accordance with 40 C.F.R. § 1505.2, the Corps is preparing this ROD for DA permit applications SAJ-2013-03030, SAJ-2013-03099, SAS-2013-00942, SAM-2014-00238, and SAM-2014-00655 requesting authorization to construct the Southeast Market Pipelines, including the Hillabee Expansion Pipelines, the Sabal Trail Transmission Pipelines, and the Florida Southeast Connection Pipeline. The Corps has independently reviewed the FEIS prepared by FERC for the SMP Project. The Corps adopts the FEIS with two exceptions. Specifically, the Corps adopts the FEIS with exception to the sentence, "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," on page 4-3 of the FEIS. The Corps does consider a no action alternative pursuant to both NEPA and the CWA as explained in Section 7.b.v.(1) below. In addition, the Corps adopts the FEIS with exception to the sentence, "no section 408 authorizations would be required for the SMP Project," on page 3-53 of the FEIS. The Corps notes that 33 U.S. C. Section 408 authorization is required for the Florida Southeast Connection, LLC pipeline at C-23.

c. 40 C.F.R. § 1505.2(a) requires the Corps to state the decision associated with the DA action. The Corps' decision is to issue DA permits for the SMP Project, which is more fully discussed below.

d. 40 C.F.R. § 1505.2(b) requires the Corps to "identify all alternatives considered by the agency in reaching its decision, specifying the alternative or alternatives which were considered to be environmentally preferable." FERC is the lead Federal agency for the proposed connected actions and completed an alternative evaluation process including a "no action alternative." See FEIS Chapter 4.0 Alternatives Including Proposed Action, for the full discussion of alternatives considered. The Corps has independently reviewed the FEIS for the SMP Project. The Corps has determined the applicants' preferred alternative, with the inclusion of three route variations noted within this document, is the Least Environmentally Damaging Practicable Alternative (LEDPA). The Corps' analysis of the alternatives that were considered is in the discussion below.

e. 40 C.F.R. § 1505.2(c) requires the Corps to "[s]tate whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not. A monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation." The Corps' analysis included review of system, route, and alignment alternatives and a "no action alternative." The Corps determined that the applicants' preferred alternative, with the inclusion of three route variations noted within this document, is the LEDPA. Environmental harm associated with the applicants' preferred alternative would be minimized and mitigated to the maximum extent practicable. A discussion of the mitigation and monitoring program and the Corps' process of avoiding and minimizing environmental harm is described below.

2. Application:

a. Applicants:

(1) Transcontinental Gas Pipe Line Company, LLC
Attn: Ms. Karen Olson
2800 Post Oak Boulevard, Level 17
Houston, Texas 77056

(2) Sabal Trail Transmission, LLC
Attn: Mr. George McLachlan
400 Colonial Center Parkway, Suite 300
Lake Mary, Florida 32746

(3) Florida Southeast Connection, LLC
Attn: Mr. Randall LaBauve
700 Universe Boulevard JES/JB
Juno Beach, Florida 33408

b. Location and Waterways:

(1) The SMP Project would affect waters of the United States, including wetlands, within the States of Alabama, Georgia, and Florida. Information regarding the proposed location of the project corridor is provided in Chapter 2 of the FEIS. The SMP Project as a whole would also impact unnamed lake, pond, drainage, roadside ditch, and irrigation ditch features. A comprehensive list of waterbodies affected by the SMP Project is included in FEIS Appendix D, Table 3.3.2-3.

(2) Hillabee Expansion Project (SAM-2014-00238): The Hillabee Expansion Project would be located entirely within Alabama and within or generally adjacent to Transcontinental Gas Pipe Line Company, LLC's existing natural gas transmission system. The Project would include natural gas pipeline loops, new aboveground facilities, and modifications to other existing facilities and appurtenances in portions of Choctaw, Dallas, Autauga, Chilton, Coosa, and Tallapoosa Counties in Alabama. The Hillabee Expansion Project would affect waters of the United States, including wetlands. Affected waterways include Wahalak Creek, Pickett Creek, Mellen Creek, Sucarbowa Creek, Little Mulberry Creek, Swift Creek, Autauga Creek, Proctor Creek, Oaktasasi Creek, Town Creek, and Hillabee Creek. In addition, unnamed tributaries of Bogueloosa Creek, Wahalak Creek, Spear Creek, Pickett Creek, Little Mulberry Creek, Swift Creek, Indian Creek, Autauga Creek, Chestnut Creek, Coosa River, Proctor Creek, Hatchet Creek, Hackemedga Creek, Jacks Creek, Oaktasasi Creek, Town Creek, Hillabee Creek, Turkey Branch, Oaktuppa Creek, Cat Creek, and Coon Creek, as well as drainage to Davidson Creek.

(3) Sabal Trail Project:

(a) The Sabal Trail Project would affect waters of the United States, including wetlands, within the States of Alabama, Georgia, and Florida.

(b) The portion of the Sabal Trail Project in Alabama (SAM-2014-00655) would interconnect with the Transcontinental Gas Pipe Line Company, LLC mainline system in Tallapoosa County, Alabama, at the interconnection with the Alexander City Loop of the Hillabee Expansion Project. The pipeline would traverse portions of Tallapoosa, Chambers, Lee, and Russell Counties, Alabama reaching the Alabama-Georgia state

line. The segment of the Sabal Trail Project in Alabama, would affect waterways including Oaktasasi Creek, Hillabee Creek, Josie Leg Creek, Timber Gut Creek, Tallapoosa River, Snapper Creek, Halawakee Creek, Little Halawaka Creek, Phelps Creek, Little Uchee Creek, Flake Creek, Halawakee Creek, Island Creek, Horse Lot Branch, Ihagee Creek, Snake Creek, Chattahoochee River, and their unnamed tributaries; as well as unnamed tributaries of Miller Creek, Chattasofka Creek, Andrews Branch, Pretty Creek, Little Sandy Creek, Little Chattahospee Creek, Boyds Creek, Maringo Creek, Cowpen Creek, and Caneyhead Branch.

(c) For the portion of the Sabal Trail Project in Georgia (SAS-2013-00942), affected waters include Flint River, Frog Bottom Creek, Cooleewahee Creek, Sloans Creek and Millrace Creek; and Hannahatchee Creek, Colochee Creek, Hodchodkee Creek, Pataula Creek, Reedy Creek, Mossy Branch, Raccoon Creek, Bridge Creek, Little Creek, Ochlockonee River, Hog Creek, Little Creek, Okapilco Creek, Withlacoochee River, and their unnamed tributaries; as well as unnamed tributaries of Chattahoochee River, Hightower Branch, Mossy Creek, Clear Creek, Bear Creek, Chickasawatchee Creek, Middle Creek, Fowltown Creek, Hodges Creek, Tiger Creek, and Lanes Mill Creek.

(d) For the portion of the Sabal Trail Project in Florida (SAJ-2013-03030), affected waters include Jumping Gully Creek, Suwannee River, Little River, Santa Fe River, Davenport Creek, and Shingle Creek; and, the Withlacoochee River and Reedy Creek and their unnamed tributaries.

(4) Florida Southeast Connection (FSC) Project (SAJ-2013-03099): The FSC Project would affect waters of the United States, including wetlands, within Florida. Affected waters include Snell Creek, Weohyakapa Creek, Lake Kissimmee, Blanket Bay Slough, Cow Creek Branch, Parker Slough, Boggy Branch, and Fort Drum Creek.

c. Approximate Central Coordinates:

(1) Hillabee Expansion Project (SAM): latitude 32.669503°, longitude -86.720064°

(2) Sabal Trail Project:

(a) Alabama (SAM): latitude 32.729815°, longitude -85.308877°

(b) Georgia (SAS): latitude 31.442700°, longitude -84.091465°

(c) Florida (SAJ): latitude 29.106450°, longitude -82.407842°

(3) FSC Project (SAJ): latitude 27.745614°, longitude -81.055956°

d. Existing Conditions:

(1) The land use communities crossed by the SMP Project are generally classified into the categories noted below (reference the FEIS section 3.9). The acreage of land use types affected by the construction and operation of the SMP Project is detailed in the FEIS, section 3.9, Table 3.9-1.

(a) *Forested/Woodland* – upland and wetland forests and pine plantations.

(b) *Open Land* – utility rights-of-way (ROW), open fields, vacant lands, herbaceous and scrub-shrub uplands, non-forested lands, emergent wetlands, scrub-shrub wetlands, golf courses, and municipal lands.

(c) *Agricultural* – active hayfields, cultivated croplands, and specialty crops. Agricultural lands in the Sabal Trail Project area include row crops (e.g., wheat, cotton, peanuts), sod, hay crops, pasture, citrus; and, ranchland (e.g., poultry, cattle).

(d) *Industrial/Commercial* – manufacturing or industrial plants, paved areas, landfills, mines, quarries, electric power or natural gas utility facilities, developed areas, roads, railroads and railroad yards, and commercial or retail facilities.

(e) *Residential* – existing developed residential areas and planned residential developments. This may include large developments, low, medium, and high density residential neighborhoods, urban/suburban residential developments, multi-family residences, and residentially zoned areas that have been developed or short segments of the route at road crossings with homes near the route alignment.

(f) *Open Water* – ponds, reservoirs, lakes, and streams greater than 100 feet wide and streams visible on aerial photography but less than 100 feet in width.

(2) Site Visits:

(a) Hillabee Expansion Project: Site inspections were conducted 17 – 19 June 2015, with representatives from the Corps; Transcontinental Gas Pipe Line Company, LLC; and, Cardno (project agent) participating. These inspections were conducted in order to verify information presented in the applicant's submittals regarding the locations of wetlands and other waters (i.e. preliminary jurisdictional information) along the

proposed route of the Hillabee Expansion Project. As a result of these site inspections Transcontinental Gas Pipe Line Company, LLC submitted a supplemental report dated 20 September 2015.

(b) Sabal Trail Project:

(1) Alabama: Site inspections were conducted 16 – 18 November 2015, with representatives from the Corps; Sabal Trail Transmission, LLC; and TRC (project agent), participating. These inspections were conducted in order verify information presented in the applicant's submittals regarding the locations of wetlands and other waters (i.e. preliminary jurisdictional information) along the proposed route of the Sabal Trail Project. Subsequent to these inspections TRC submitted their *Waters of the United States Delineation Report USACE-MOBILE DISTRICT document in December 2015*.

(2) Georgia: Site inspections were conducted 17-18 October 2015, with representatives from the Corps; Sabal Trail Transmission, LLC; and TRC (project agent), participating. These inspections were conducted in order verify information presented in the applicant's submittals regarding the locations of wetlands and other waters (i.e. preliminary jurisdictional information) along the proposed route of the Sabal Trail Project. Subsequent to these inspections TRC submitted their *Waters of the United States Delineation Report USACE-SAVANNAH DISTRICT document in December 2015*.

(3) Florida: The Corps did not conduct site inspections of the Sabal Trail Project corridor. The Corps determined that the information within the project file (information submitted by the applicant that the Corps augmented through the use of remote tools such as, but not limited to GoogleEarth®, Microsoft Bing®, infrared aerial imagery, historic aerial imagery, and topographic maps) was sufficient to accurately evaluate the project.

(c) FSC Project: The Corps did not conduct site inspections of the FSC Project corridor. The Corps determined that the information within the project file (information submitted by the applicant that the Corps augmented through the use of remote tools such as, but not limited to GoogleEarth®, Microsoft Bing®, infrared aerial imagery, historic aerial imagery, and topographic maps) was sufficient to accurately evaluate the project.

e. Project Purpose and Need:

(1) Information regarding the purpose and need for the proposed project is provided in Chapter 1.1 of the FEIS. The Corps is required to consider alternatives in the context of the applicant's purpose and need for a proposed project. 33 C.F.R. Part 325, Appendix B, which outlines the National Environmental Policy Act (NEPA) implementation procedures for the Corps' regulatory program, states that the Corps needs to consider in detail only those reasonable alternatives that are feasible, and that such feasibility must focus on the accomplishment of the underlying purpose and need (of the applicant or public) that would be satisfied by the proposed Federal action (permit issuance by the Corps). The Corps will generally focus on the applicant's statement of purpose and need. However, the Corps will exercise independent judgment in defining the purpose and need both from the applicant's and the public's perspective. In addition to NEPA, the Corps' review must include a consideration of the purpose of the proposed project in light of the Clean Water Act Section 404 (b)(1) Guidelines (Guidelines) found at 40 C.F.R. Part 230. Under the Guidelines, the Corps determines both a basic and an overall project purpose. Defining the basic project purpose enables the Corps to determine whether the activity is water dependent (40 C.F.R. § 230.10(a)(3)), while the overall project purpose is used to identify and evaluate practicable alternatives within a specific geographical area (40 C.F.R. §230.10(a)(2)). Finally, the Corps considers the public and private need for the project in evaluating whether the project is contrary to the public interest. See 33 C.F.R. § 320.4.

(2) Project purpose as stated in the Corps' 11 September 2015 joint public notice: The overall project purpose is the construction and operation of new interstate natural gas pipeline infrastructure to meet the growing demand for natural gas by the electric generation, distribution, and end use markets in Alabama, Georgia, and Florida.

f. Proposed Work:

(1) Three general wetland types as described by *Cowardin et al*. (1979) would be affected by the SMP Project. In natural systems, these three wetland community classifications are often interspersed creating a mosaic landscape.

(a) *Palustrine emergent wetlands* (PEM or emergent wetlands), which are dominated by erect, rooted, herbaceous, perennial hydrophytic vegetation.

(b) *Palustrine scrub-shrub wetlands* (PSS or scrub-shrub wetlands), which are dominated by woody vegetation that is less than 20 feet tall, including tree shrubs, young trees, and trees or shrubs that are small due to environmental conditions.

(c) *Palustrine forested wetlands* (PFO or forested wetlands), which are dominated by woody vegetation that is equal to or greater than 20 feet tall.

(2) In addition to the referenced wetland types the proposed SMP Project would affect other types of waterbodies both temporarily and permanently. Waterbodies may be defined as "any natural or artificial stream, river, or drainage with perceptible flow at the time of crossing, and other permanent waterbodies such as ponds and lakes." The Corps further defines streams as belonging to one of three classes based primarily on hydrologic flow regime (reference the Transcontinental Gas Pipe Line Company, LLC Resource Report 2).

(a) Perennial stream: Has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source for stream flow.

(b) Intermittent stream: Has flowing water during certain times of the year, when ground water provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

(c) Ephemeral stream: Has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

(3) Draft Environmental Impact Statement (DEIS):

(a) Table 3.4.1-1 from the September 2015 DEIS (copy below) summarizes the wetland types crossed by the initial SMP Project. Table 3.4.1-2 in Appendix D of the DEIS details each wetland crossing. Constructing the SMP Project would affect 940.2 acres of wetland, including 610.2 acres of forested wetlands, 46.8 acres of scrub-shrub wetlands, and 283.2 acres of emergent wetlands. Following construction, affected wetlands (with the exception of forested wetlands within the permanent ROW) would be allowed to return to pre-construction conditions. Operating the SMP Project would permanently affect approximately 214.2 acres of forested wetlands due to vegetative maintenance within 15 feet of the pipeline centerline. Additionally, the applicants would maintain a 10-foot-wide corridor centered over the pipeline as herbaceous vegetation, affecting 4.8 acres of scrub-shrub wetlands during operation.

Approximately 4.0 acres of wetlands would be permanently affected due to construction of new aboveground facilities and associated access and fencing, as described in the DEIS section 3.4.3.

DEIS TABLE 3.4.1-1
Summary of Wetland Impacts Associated with the Southeast Market Pipelines Project

Type/State [a]	Construction (acres)	Operation (acres)
PEM Wetlands		
Alabama	34.5	0.1
Georgia	15.0	0.0
Florida	233.7	0.9
Total PEM Wetland Impacts	**283.2**	**1.0**
PSS Wetlands		
Alabama	10.7	0.5
Georgia	6.9	0.7
Florida	29.2	4.0
Total PSS Wetland Impacts	**46.8**	**5.2**
PFO Wetlands		
Alabama	62.4	17.6
Georgia	112.4	41.6
Florida	435.4	157.6
Total PFO Wetland Impacts	**610.2**	**216.8**
Total Wetland Impacts	**940.2**	**223.0**

[a] Wetland classification according to Cowardin et al., 1979: PEM = Palustrine Emergent Wetland; PSS = Palustrine Scrub- Shrub Wetland; PFO = Palustrine Forested Wetland.
Note: Sum of addends may not equal total due to rounding.

(b) Additional work within uplands along the project corridor would include the installation of additional pipeline, the installation or removal/relocation of mainline valves, the construction of Metering and Regulating stations, the establishment of Compressor Stations and pig launch/retrieval facilities, the modification of existing Compressor Stations and other above-ground facilities, and additional construction staging areas. The DEIS, section 2.1, contains a full description of all of the work proposed (wetland and upland).

(c) Table 3.3.2-4 from the September 2015 DEIS (copy below) summarizes the water body types crossed by the initial SMP Project. Table 3.4.1-2 in Appendix D of the DEIS details each water body crossing. Constructing the SMP Project would require 699 waterbody crossings. Table 3.3.2-4 also summarizes the number of minor, intermediate, and major waterbodies, perennial, intermittent, and ephemeral streams, and ponds or other open water waterbodies, crossed by the SMP Project pipelines. For the purpose of this review waterbodies are classified as minor if they are 10 feet wide or less, intermediate if they are between 10 and 100 feet wide, and major if they are greater than 100 feet wide at the crossing location.

DEIS TABLE 3.3.2-4
Number of Waterbodies Crossed by the Southeast Market Pipelines Project Pipeline Facilities [a]

Project/State	Size Classificati			Flow Classification			
	Major	Intermediate	Minor	Perennial	Intermittent	Ephemeral	Open Water
Hillabee Expansion							
Project Alabama	3	19	120	53	47	37	5
Sabal Trail							
Project	4	55	139	110	52	35	1
Alabama	8	36	86	48	48	25	9
Georgia	7	26	2	15	5	0	15
Florida	19	117	227	173	105	60	25
Sabal Trail Project Subtotal							
Florida Southeast Connection	3	79	112	32	157	1	4
Project	25	215	459	258	309	98	34
Florida							
Southeast Market Pipelines Project Total							

[a] Does not include access roads.

(4) Changes to the Project: In consideration of revised design requirements and comments received after the circulation of the DEIS and the Corps public notice, the applicants revised portions of the overall SMP Project; and, reduced the area of work affecting waters of the United States, including wetlands. The changes included minor reroutes, workspace adjustments, relocation or addition of mainline valves, reconfiguration of aboveground facilities, installation of cathodic protection facilities, and the addition or modification of access roads. FSC, LLC also proposed to implement the Horizontal Directional Drilling (HDD) method at three additional locations. Table 2.3-1 in appendix D of the FEIS conveys a summary of the proposed modifications to the FERC plan and procedures; and, Table 2.1.4-1 in appendix D of the FEIS conveys a summary of the proposed project modifications. The environmental analysis section of the FEIS was revised to include the proposed modifications.

(5) FEIS:

(a) Table 3.4.1-1 from the FEIS (copy below) summarizes the wetland types crossed by the final SMP Project. Table 3.4.1-2 in appendix D of the FEIS details each wetland crossing. Constructing the SMP Project would affect 877.7 acres of wetlands, including 562.7 acres of forested wetlands, 45.5 acres of scrub-shrub wetlands, 269.5 acres of emergent wetlands; and, 939.86 linear feet of streams, including 502.86 linear feet of perennial streams and 437 linear feet of intermittent streams (stream crossing generally would only result in temporary effects associated with the actual period of work implementation). Following construction, affected wetlands (with the exception of forested wetlands within the permanent ROW) would be allowed to return to pre-

construction conditions. Operating the SMP Project would permanently affect approximately 200.3 acres of forested wetlands due to vegetative maintenance within 15 feet of the pipeline centerline. Additionally, the applicants would maintain a 10-foot-wide corridor centered over the pipeline as herbaceous vegetation, affecting 5.0 acres of scrub-shrub wetlands during operation. Approximately 4.1 acres of wetlands would be permanently affected due to construction of new aboveground facilities and associated access and fencing, as described in section 3.4.3, of the FEIS. The acreage of land use types affected by the construction and operation of the SMP Project is detailed in the FEIS, section 3.9, Table 3.9-1.

FEIS TABLE 3.4.1-1
Summary of Wetland Impacts Associated with the Southeast Market Pipelines Project

Type/State a	Construction (acres)	Operation (acres)
PEM Wetlands		
Alabama	32.3	0.1
Georgia	10.4	0.0
Florida	223.8	1.7
Total PEM Wetland Impacts	**269.5**	**1.8**
PSS Wetlands		
Alabama	10.5	0.6
Georgia	7.1	1.0
Florida	27.8	3.5
Total PSS Wetland Impacts	**45.5**	**5.0**
PFO Wetlands		
Alabama	62.5	17.7
Georgia	110.1	41.3
Florida	390.1	141.3
Total PFO Wetland Impacts	**562.7**	**200.3**
Total Wetland Impacts	**877.7**	**207.2**

a Wetland classification according to Cowardin et al., 1979: PEM = Palustrine Emergent Wetland; PSS = Palustrine Scrub- Shrub Wetland; PFO = Palustrine Forested Wetland.
Note: Sum of addends may not equal total due to rounding.

(b) Table 3.3.2-4 from the FEIS (copy below) summarizes the other water body types (i.e. non-wetland water bodies) crossed by the final SMP Project. Table 3.4.1-2 in appendix D of the FEIS details each crossing. Constructing the SMP Project would require 699 waterbody crossings. Table 3.3.2-4 also summarizes the number of minor, intermediate, and major waterbodies, perennial, intermittent, and ephemeral streams, and ponds or other open water waterbodies, crossed by the SMP Project pipelines. Five waterbodies would be affected by aboveground facilities including three intermittent streams and one ephemeral stream at Transcontinental Gas Pipe Line Company, LLC's Compressor Station 84; and, one pond at the Sabal Trail Project Citrus County Metering and Regulating (M&R) Station. Access roads would cross 78 waterbodies during construction of the SMP Project including three waterbodies that would be permanently

crossed by Transcontinental Gas Pipe Line Company, LLC's new access road for Compressor Station 84. In addition, Sabal Trail Transmission, LLC identified 10 access roads and FSC, LLC identified one access road which would be adjacent to or in close proximity to waterbodies, but would not be crossed. Approximately 940 linear feet of streams would be permanently affected due to construction of new aboveground facilities and associated access and fencing, as described in section 3.3.2.5, of the FEIS.

FEIS TABLE 3.3.2-4
Number of Waterbodies Crossed by the Southeast Market Pipelines Project Pipeline Facilities [a]

Project/State	Size Classificati			Flow Classification			
	Major	Intermediate	Minor	Perennial	Intermittent	Ephemeral	Open Water
Hillabee Expansion							
Project Alabama	3	19	120	53	47	37	5
Sabal Trail							
Project	4	55	139	110	52	35	1
Alabama	9	39	93	49	54	27	11
Georgia	7	26	0	15	5	0	13
Florida	20	120	232	174	111	62	25
Sabal Trail Project Subtotal							
Florida Southeast Connection	23	116	46	36	143	2	4
Project	46	255	398	266	301	101	34
Florida							
Southeast Market Pipelines Project Total							

[a] Does not include access roads.

(c) Additional work within uplands along the project corridor includes the installation of additional pipeline, the installation or removal/relocation of mainline valves, the construction of Metering and Regulating stations, the establishment of Compressor Stations and pig launch/retrieval facilities, the modification of existing Compressor Stations and other above-ground facilities, and additional construction staging areas. The FEIS, section 2.1, contains a full description of all of the work proposed (wetland and upland).

(6) Additional alterations to the SMP Project post-FEIS:

(a) Hillabee Expansion Project:

(*i*) In an electronic mail message dated 27 April 2016, Transcontinental Gas Pipe Line Company, LLC notified the Corps that Transcontinental Gas Pipe Line Company, LLC would be requesting a deviation to its previously submitted *Wetland and Waterbody Construction and Mitigation Procedures* (Appendix D of Transcontinental Gas Pipe Line

Company, LLC's Wetland Delineation Report). Transcontinental Gas Pipe Line Company, LLC specifically noted that the variance is necessary in steep gradient areas (Table 1 and Table 2, next page) where standard procedures could cause additional adverse effects to wetland hydrology. Transcontinental Gas Pipe Line Company, LLC stated that all wetlands covered under the variance had been previously included in Transcontinental Gas Pipe Line Company, LLC's application and that impact acreages would not change as a result of the variance request. The request included the following changes to the existing methodology.

(*aa*) Where the pipeline trench may drain a wetland, construct trench breakers at the wetland boundaries and/or seal the trench bottom as necessary to maintain the original wetland hydrology (reference Transcontinental Gas Pipe Line Company, LLC's Procedures, Section VI, Wetland Crossings, C. Restoration, 1).

(*bb*) Transcontinental Gas Pipe Line Company, LLC proposes to modify its Procedures to allow for installation of trench breakers within certain wetlands located on steep slopes in order to prevent the pipeline trench from draining the wetlands (reference Transcontinental Gas Pipe Line Company, LLC's Procedures, Section VI, Wetland Crossings, C. Restoration, 1).

(*cc*) Limit pulling of tree stumps and grading activities to the area directly over the trench line. Do not grade or remove stumps or root systems from the rest of the construction ROW in wetlands unless the Chief Inspector and Environmental Inspector determine that safety-related construction constraints require grading or the removal of tree stumps from under the working side of the construction ROW (reference Transcontinental Gas Pipe Line Company, LLC's Procedures, Section VI, Wetland Crossings, B. Installation, 2. Crossing Procedures, h).

(*dd*) Transcontinental Gas Pipe Line Company, LLC proposes to modify its *Wetland and Waterbody Construction and Mitigation Procedures* to allow for grading within certain wetlands located on steep side slopes in order to create a safe work area (reference Transcontinental Gas Pipe Line Company, LLC's Procedures, Section VI, Wetland Crossings, B. Installation, 2. Crossing Procedures, h).

Table 1 – Hillabee Expansion Project
Locations Where Grading Will Be Required Within Wetlands

Facility	MP	Length (feet)	Wetland ID	Justification *
Rock Springs	786.13	256	WCW9C003	Side Slope
Rock Springs	788.04	570	WCW9C016	Side Slope
Butler Loop	791.94	307	W14CCW003	Side Slope
Billingsley Loop	886.00	628	WAU9C004	Side Slope
Billingsley Loop	887.06	201	WAU9C006	Side Slope
Billingsley Loop	887.15	1288	WAU9C006	Side Slope
Autauga Loop	895.10	120	WAU14C012	Road Approach
Autauga Loop	895.37	312	WAU14C014	Side Slope

*Justification:
Side Slope - Wetland located on steep side. Grading will be necessary within wetland to provide a safe work area.
Road Approach - Wetland located at a road approach. Grading will be necessary within wetland to provide a safe work area.

Table 2 – Hillabee Expansion Project
Locations Where Trench Plugs Will Be Required Within Wetlands

Facility	MP	Wetland ID	Justification*
Butler Loop	791.94	W14CCW003	Slope
Billingsley Loop	886.03	WAU9C004	Slope
Billingsley Loop	886.08	WAU9C004	Slope

*Justification:
Slope - Wetland located on steep slope. Trench plug needed within wetland to prevent the pipeline trench from draining the wetland.

(*ii*) In addition to the previous request to modify construction methodologies in steep wetlands, Transcontinental Gas Pipe Line Company, LLC supplied updated information related to effects to waters of the U.S. associated with the construction of the Hillabee Expansion Project's Compressor Station 84. The provided information (via electronic message dated 10 May 2016) was intended to supplement and, in some cases, replace information previously submitted in Appendix A of Transcontinental Gas Pipe Line Company, LLC's Supplemental Wetland Delineation Report (September 2015). Finally, Transcontinental Gas Pipe Line Company, LLC provided all final alignments including post-FEIS routing changes as well as final drawings for above ground facilities on 10 May 2016, and 17 June 2016, respectively.

(b) Sabal Trail Project:

(*i*) The Sabal Trail Project Supplemental III, received 1 March 2016, was prepared to identify the incorporation of two FERC requested reroutes, several reroute and/or workspace variations to address state regulatory requirements (e.g., Georgia stream buffer exemption criteria), and adjustments made during final landowner negotiations. The Supplemental III also presents the Issued for Construction (IFC) workspaces which Sabal Trail Transmission, LLC requested all Federal and state agencies to review and approve. The last workspace configuration submitted to the Corps was in October 2015 as part of Supplemental II. A figure comparing the Supplemental III IFC workspaces to the Supplemental II October 2015 workspaces is presented as Appendix A of Supplemental III (reference the Administrative Record). The Supplemental III presents changes that occurred since the 26 October 2015 Supplemental II filing through 23 February 2016 and reflects the facilities and routes that were approved in the FERC Certificate.

(*ii*) In response to concerns expressed by the Corps regarding the use of mitigation bank credits as compensatory mitigation for work affecting wetlands that is proposed outside of the service area of the mitigation banks that would be used within the State of Florida, Sabal Trail Transmission, LLC revised the credit allocation from the identified banks to meet the Corps calculation of compensatory mitigation requirements (reference section 11.c.(2)(c), below).

(c) FSC Project: FSC, LLC did not submit revisions to the FSC Project route after the compilation of the FEIS. FSC, LLC did submit additional information in response to requests for additional information, as noted herein below. In addition, in response to concerns expressed by the Corps regarding the use of mitigation bank credits as compensatory mitigation for work affecting wetlands that is proposed outside of the service area of the mitigation banks that would be used within the State of Florida, FSC, LLC revised the credit allocation from the identified banks to meet the Corps calculation of compensatory mitigation requirements (reference section 11.c.(3), below).

3. Authority:

a. Rivers and Harbors Act of 1899 (RHA): In accordance with Section 10 of the RHA (33 U.S.C. § 403), the Corps regulates the construction, excavation, or deposition of materials in, over, or under such waters, or any work which would affect the course, location, condition, or capacity of navigable waters of the United States. Navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for

use to transport interstate or foreign commerce (reference 33 C.F.R. Part 329). Furthermore, in accordance with Section 14 of the RHA (33 U.S.C. § 408), the Corps regulates activities that could alter or occupy Federal projects.

b. Clean Water Act of 1972 (CWA): In accordance with Section 404 of the CWA (33 U.S.C. § 1344), the Corps regulates the discharge of dredge or fill material into waters of the United States. Waters of the United States are defined at 33 C.F.R. Part 328.

c. The Hillabee Expansion Project affects one navigable water. The Sabal Trail Project mainline crosses five navigable waters, including one at the Alabama/Georgia border, two in Georgia, and two in Florida. The Sabal Trail Project Citrus County Line (CCL) also would cross one navigable waterbody. The FSC Project crosses one navigable waterway. Neither the Hillabee Expansion Project nor the Sabal Trail Project requires Section 14 RHA authorization; however, the FSC Project does require Section 14 RHA authorization. The Hillabee Expansion Project, the Sabal Trail Project, and the FSC Project require Section 404 CWA authorization. Table 3.4.1-1 from the FEIS summarizes the wetland types crossed by the final SMP Project. Table 3.4.1-2 in appendix D of the FEIS details each wetland crossing. Sabal Trail Project Supplemental III, Table 2.3-3 – Waterbodies Crossed by the Sabal Trail Project (Appendix B) and Table 2.4-1 – Wetlands Affected by the Sabal Trail Project (Appendix C) present the final project design and locations of work requiring Section 404 CWA authorization.

d. The Corps authorities are referenced in the FEIS within section 1.2.2.

4. Scope of Analysis

a. NEPA

(1) Scope of Action: The Corps is a cooperating agency, with the FERC as the lead agency, in the preparation of the EIS for the SMP Project. The Corps participated in the compilation of the EIS as the proposed SMP Project could have significant impacts to waters of the United States, including wetlands, if implemented. The FEIS was released to the public in December 2015. The SMP Project area encompasses wetlands and uplands, as well as open waterbodies, such as rivers, streams, canals, and ditches. Due to the complex mosaic and juxtaposition of wetlands, uplands, and waterbodies, construction of the SMP Project requires work affecting waters of the United States, including wetlands. In addition, all of the proposed components of the SMP Project are required to implement the project and achieve the project goals. In consideration of this information, the scope of action under NEPA for the SMP Project

includes all of the various locations for the proposed pipelines and ancillary facilities. The extent of Federal control and responsibility for the SMP Project include authorities under Section 10 of the RHA, Section 14 of the RHA, Section 404 of the CWA, the National Historic Preservation Act (NHPA), the Endangered Species Act (ESA), the Fish and Wildlife Coordination Act (FWCA), the Natural Gas Act (NGA), and the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA).

(2) Scope of Impact Analysis: The project is a natural gas pipeline which is planned to transport natural gas from one specific point to another. The Corps' scope of analysis is consistent with the FEIS, which evaluated the entire SMP Project to include consideration and potential environmental impacts that could result from constructing and operating three separate, but related, interstate natural gas transmission pipelines and associated facilities. Transcontinental Gas Pipe Line Company, LLC proposes to construct and operate the Hillabee Expansion Project; Sabal Trail Transmission, LLC proposes to construct and operate the Sabal Trail Project; and FSC, LLC proposes to construct and operate the FSC Project (FEIS section 1.0). The overall SMP Project is a linear venture; and, as such, the location of work affecting wetlands and waterbodies is determined, in part, by the location of upland facilities in the immediate vicinity of the regulated activity. The aboveground facilities generally would be installed along the pipeline route and generally would be located within or adjacent to the applicants' ROW or within property owned or controlled by the applicants (FEIS section 2.1.1.2; FEIS section 2.1.2.2; and, FEIS section 2.1.3.2). The lead Federal agency is FERC with Corps as a cooperating agency. The scope of analysis, therefore, is three separate, but related, interstate natural gas transmission pipeline projects collectively referred to as the SMP Project. Based on an examination of NEPA (33 C.F.R. Part 325, Appendix B) and applicable program guidance (e.g. Council on Environmental Quality's (CEQ) *Considering Cumulative Effects Under National Environmental Policy Act and the Standard Operating Procedures for the U.S. Army Corps of Engineers Regulatory Program, July 2009*), the Corps has determined that the appropriate scope of analysis for the SMP Project encompasses all of the various pipeline corridors and associated facilities. This scope of analysis is concomitant with the scope of analysis for the FEIS.

b. NHPA "Permit Area": The FERC, as the lead Federal agency, established the Area of Potential Effect, obtained Cultural Resource Assessment Surveys, and coordinated the proposed action with the appropriate State agencies in Alabama, Georgia, and Florida in accordance with 33 C.F.R. 800.2(a)(2). The FEIS, in section 3.11, conveys information regarding cultural and historical resources.

c. Endangered Species Act (ESA) "Action Area": The ESA Action Area is composed of the areas that could be affected directly or indirectly by this Federal action by the construction and operation of the proposed project and its various components, including the proposed transmission lines. The proposed Federal actions and the action areas are described in detail in the final Biological Assessments (BA) submitted to the U.S. Fish and Wildlife Service (FWS) in the FEIS Appendix K.

5. Chronology:

a. Corps Action:

(1) Hillabee Expansion Project:

(a) DA Application Received: 13 November 2014

(b) DA Application Complete: 4 September 2015

(c) Date DA Public Notice Issued: 11 September 2015

(d) End Date for DA Public Notice Comment Period: 11 December 2015

(e) Additional Information: On 8 October 2015 the Corps extended the DA Public Notice Comment Period by 60 days.

(2) Sabal Trail Project:

(a) DA Application Received: 22 December 2014

(b) DA Application Complete: 4 September 2015

(c) Date DA Public Notice Issued: 11 September 2015

(d) End Date for DA Public Notice Comment Period: 11 December 2015

(e) Additional Information: On 8 October 2015 the Corps extended the DA Public Notice Comment Period by 60 days.

(3) FSC Project:

(a) DA Application Received: 13 March 2014

(b) DA Application Complete: 4 September 2015

(c) Date DA Public Notice Issued: 11 September 2015

(d) End Date for DA Public Notice Comment Period: 11 December 2015

(e) Additional Information: On 8 October 2015 the Corps extended the DA Public Notice Comment Period by 60 days.

b. FERC Action:

(1) FERC Notice of Intent (NOI) to Prepare an EIS – 18 February 2014: The NOI was also published in the Federal Register on 26 February 2014 (79 FR 10793), 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.

(2) FERC Supplemental NOI to Prepare an EIS – 15 October 2014: This supplemental NOI described four route alternatives for the Sabal Trail Project and alternative locations for Sabal Trail Transmission, LLC's proposed Albany Compressor Station in Dougherty County, Georgia and opened a 30-day scoping period. The supplemental NOI also was published in the Federal Register (79 FR 63115 (Oct. 22, 2014)) 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.

(3) FERC Second Supplemental NOI to Prepare an EIS – 19 June 2015: 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 (80 FR 36798 (Jun. 26, 2015)) 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.

(4) FERC Notice of Availability of DEIS – 4 September 2015: The FERC filed the draft EIS with the U.S. Environmental Protection Agency (EPA) and issued a formal notice of availability in the Federal Register (80 FR 54777 (Sep. 11, 2015), which established a 45-day comment period on the draft EIS that ended on 26 October 2015.

(5) FERC Notice of Availability of FEIS – 18 December 2015: The FERC posted the FEIS at http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14409956. The notice of availability was published in the Federal Register on December 24, 2015 (80 FR 80354).

6. Public Involvement:

a. Public Meetings:

(1) FERC Public Meetings (reference the FEIS, section 1.3):

(a) Pre-filing Process: In autumn 2013, the SMP Project applicants filed requests to implement the FERC 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 numbers PF14-1-000 (Sabal Trail Project), PF14-2-000 (FSC Project), and PF14-6-000 (Hillabee Expansion Project). The FERC participated in 31 public open houses hosted by the applicants between November 2013 and January 2014. The purpose of the public open house meetings was to inform landowners, government officials, and the general public about the SMP Project components, invite them to ask questions, and express their concerns.

(b) FERC Meetings after the NOI: In March 2014, the FERC held 13 public scoping meetings during the formal scoping period to provide the public with the opportunity to learn more about the SMP Project and present oral comments on environmental issues that should be addressed in the EIS. The scoping meetings were held in Butler, Alexander City, and Seale, Alabama; Moultrie, Albany, and Valdosta, Georgia; and Live Oak, Bell, Dunnellon, Clermont, Kissimmee, Lake Wales, and Okeechobee, Florida. Approximately 955 people attended the public scoping meetings, including representatives from the FERC, cooperating agencies, and the applicants. A total of 199 attendees provided oral comments at the meetings. Transcripts of each scoping meeting and all written comments filed with the FERC are part of the public record for the SMP Project and are available for viewing on the FERC Internet website (www.ferc.gov).

(c) FERC Meetings after the Supplemental NOI: As part of its ongoing public outreach efforts related to the new alternatives, FERC staff attended public open houses held in Albany, Georgia and Jasper, Florida on October 20 and 21, 2014, respectively. Public meeting transcripts and comment letters are available for viewing on the FERC Internet website.

(d) FERC Meetings after the circulation of the DEIS: The FERC held 10 public comment meetings for the DEIS in September and October 2015. A total of 154 people commented at the meetings. Public meeting transcripts and comment letters are available for viewing on the FERC Internet website.

(e) Additionally, the FERC visited certain areas that could be affected by the SMP Project and met with various groups and landowners. The FERC also inspected the remainder of the SMP Project area via automobile and helicopter in conjunction with open houses, public scoping meetings, and other meetings. Public meeting transcripts and comment letters are available for viewing on the FERC Internet website.

(2) The numerous FERC meetings provided interested parties with an opportunity to present verbal and written comments on the environmental impacts of the SMP Project. Topics raised during these meeting included, but were not limited to, alternatives, socioeconomics, environmental justice, and air quality, as well as several general comments regarding the FERC process and the purpose and need for the SMP Project. A transcript of each meeting and copies of each written comment are part of the public record for the SMP Project. FERC responses to relevant comments are provided in the FEIS, Appendix O. A subject index is provided in the FEIS, Appendix P. In consideration of the extent of public meetings hosted by, or attended by, the FERC; and, in consideration of the diverse topics discussed at the public meetings held, the Corps did not independently host public meetings for the SMP Project.

b. Comments Submitted During the Corps Public Notice Comment Period:

(1) The Corps received diverse submittals in response to the 11 September 2015 joint public notice for SAJ-2013-03030 (Sabal Trail Transmission, LLC), SAJ-2013-03099 (Florida Southeast Connection, LLC), SAS-2013-00942 (Sabal Trail Transmission, LLC), SAM-2014-00238 (Transcontinental Gas Pipeline Company, LLC), and SAM-2014-00655 (Sabal Trail Transmission, LLC). However, the majority of the comments submitted focused on the Sabal Trail Project.

(2) During the public notice comment period, the Corps received numerous electronic mail submittals from individuals associated with, or responding to solicitation from, the Gulf Restoration Network. The vast majority of the submittals from members/supporters of the Gulf Restoration Network utilized a template document provided by the Gulf Restoration Network organization; and, focused on the Sabal Trail Project. The submittals generally noted that the proposed pipeline route traversed karst features, fracture systems, sinkholes, springs and caverns, which might make the proposed pipeline susceptible to rupture and explosion - endangering the surrounding habitats, communities and waterbodies. In addition, the submittals generally noted that the preferred route would traverse numerous stands of mature wetland hardwoods, in places like Albany, Georgia, that support endangered and protected species including the wood stork (*Mycteria americana*), bald eagle (*Haliaeetus leucocephalus*), and red cockaded woodpecker (*Picoides borealis*). Additionally, the correspondence conveyed a belief that the preferred route would affect numerous drinking water sources, river watersheds, and wetlands, including waterbodies designated Outstanding Florida Waters such as the Suwanee and Santa Fe rivers. None of the submittals requested a public hearing.

(3) Nine individuals who own, or live on, property adjacent to the proposed route of the project submitted comments. These individuals generally requested the consideration of alternate routes that would avoid their property and/or objected to adverse effects to waters of the United States (including wetlands), objected to potential adverse effects to drinking water, use of ground water during construction, adverse effects to stream systems, effects upon listed species, and/or effects to karst geology.

(a) Gerry and Dinorah Hall:

(*i*) In correspondence dated 5 October 2015, Mr. and Mrs. Hall submitted a letter indicating that they owned/managed land that would be affected by the project; and, associated with his signature, represented, or were members of, the Kiokee-Flint Group and Graham Angus Farms. The submittal objected to the placement of the Sabal Trail Project pipeline on property owned/managed by Mr. and Mrs. Hall. Specifically, the submittal objected to adverse effects to wetlands, the risk of spills and/or leaks, and construction-related disturbances to natural habitat. Additionally, the submittal noted potential adverse effects to karst geology; and, potential flooding of the Hidden Lakes subdivision. Finally, the submittal requested further consideration of alternate routes parallel to existing roads, power line corridors, or pipeline corridors. This submittal did not request a public hearing.

(*ii*) In an electronic mail correspondence dated 9 December 2015, Ms. Hall provided the Corps a copy of a Board of Commissioners of the City of Albany, Georgia, resolution (dated 28 October 2014) opposing the Sabal Trail Project and the Albany Compressor Station; and, a Dougherty County Board of County Commissioners (BOCC) resolution (dated 27 October 2014) opposing the Sabal Trail Project.

(b) Ms. Bonnie Potters: In correspondence dated 1 November 2015, Ms. Potters conveyed concerns associated with the proposed Sabal Trail Project. Her concerns generally focused on potential adverse effects to the Florida aquifer and several Florida Outstanding Waterways from river crossings, work in flood prone areas, and work in karst geology. She also expressed concerns associated with potential adverse effects on listed species and the destruction of unknown cultural/historical resources.

(c) Ms. Janet Messcher: In an electronic mail submittal dated 11 December 2015, Ms. Messcher conveyed diverse concerns directly and/or indirectly associated with the SMP Project (specifically the Sabal Trail Project). These concerns included potential adverse effects upon karst geology, effects upon (or generation of) sinkholes, adverse effects during/after routine local flooding, adverse effects upon endangered/threatened species, a perceived lack of local benefit (e.g., job creation), the potential export of natural gas (versus local benefits), and the better use of a Tampa facility (which she purports could be utilized in place of the proposed end-use facility). She also expressed concerns related to potential contamination from a local construction debris landfill and potential contamination associated with the technique of fracking, which are not directly related to the SMP Project.

(d) Ms. Janet Barrow: In an electronic mail correspondence dated 11 December 2015, Ms. Barrow conveyed several concerns regarding the Sabal Trail Project including potential effects upon water quality and water supply, springs, wildlife (including threatened and endangered species), wetlands, soils, and karst geology and sinkholes. In addition, Ms. Barrow expressed concerns regarding the potential for spills and leaks and adverse effects from above ground facilities, e.g., noise and air pollution, to communities.

(e) Mr. Landis Hurst: During telephone calls on 16 September 2015 and 21 September 2015, Mr. Hurst expressed concerns about pipeline routing and installation across his property. Specifically, he objected to the location of the proposed pipeline placement and the location of required right of way on his property. Additionally, he requested that the pipeline be installed underground throughout his property. Mr. Hurst's concerns extended beyond the construction phase into the operation of the proposed pipeline.

(f) Mr. Barry Andrews:

(*i*) In an electronic mail document dated 24 September 2015, Mr. Andrews noted that he has concerns that he would like to discuss with the Corps.

(*ii*) During a telephone conversation dated 14 December 2015, Mr. Andrews conveyed his objections to the use of his property; and, the limited payment offers from Sabal Trail Transmission, LLC.

(g) Ms. Jane Beattie: In correspondence dated 18 October 2015, Ms. Beattie echoed concerns raised in the Gulf Restoration Network template electronic mails. Specifically, she objected to adverse effects to wetlands and drinking water sources, the risk of spills and/or leaks and ruptures, and construction-related disturbances to natural habitat. Finally, Ms. Beattie suggested that constructing the proposed pipeline could result in similar adverse effects during the operational life of the project.

(h) Ms. Patricia Tayman: In correspondence received 11 December 2015, Ms. Tayman expressed concerns associated with potential effects to the Falmouth Cathedral Cave System and sinkholes associated with the Suwanee River that may be generated by the Sabal Trail Project. Ms. Tayman included several newspaper articles with her submittal.

(i) Mr. John Gunter: In undated correspondence, Mr. Gunter expresses concerns about hydrostatic testing of the proposed pipeline. Mr. Gunter notes that, in his opinion, the FERC filings and Draft EIS do not provide adequate information for assessing the potential impact of water withdrawals and discharges associated with hydrostatic testing of the pipeline. Specifically, Mr. Gunter requested that the applicant's provide additional information (e.g. intake and discharge rates, topography, before and after water body flow rates) related to hydrostatic testing at proposed withdrawal and discharge points. Mr. Gunter expressed specific concerns over the size of the water bodies, especially Proctor Creek. He closed by noting that the larger Coosa River is within 0.5 mile of the Proctor Creek site and questioned why it could not be used in lieu of Proctor Creek.

(4) Three non-governmental organizations submitted comments opposing the project. These non-governmental organizations are Our Santa Fe River, WWALS Watershed Coalition Incorporated (WWALS) [to include, for the purposes of this document, the Chattahoochee Riverkeeper, Flint Riverkeeper, Florida Clean Water Network, Kiokee-Flint Group, Sierra Club, and WWALS Coalition, which is the Withlacoochee, Willacoochee, Alapaha, Little, and Upper Suwannee River Watershed Coalition], and Gulf Restoration Network – GreenLaw.

(a) Our Santa Fe River, Incorporated: In correspondence dated 10 December 2015, Our Santa Fe River, Incorporated, reiterated their support of the comments submitted by WWALS in correspondence dated 10 December 2015. The letter also specifically conveyed concerns associated with adverse effects upon karst geology, the Floridan Aquifer, sinkholes, and wetlands.

(b) WWALS Coalition:

(*i*) In correspondence dated 15 September 2015, the WWALS coalition requested a 60-day extension to the public notice comment period.

(*ii*) In correspondence received 13 October 2015, WWALS expressed an opinion that the project did not provide a public benefit for Georgia and minimal benefit for Florida; conveyed objections to the project associated with potential adverse effects upon karst geology; and, noted objections to the project expressed by various government representatives and individuals. In addition, WWALS requested a public hearing.

(*iii*) In an electronic mail correspondence dated 6 December 2015, Mr. Chris Mericle, a WWALS representative, expressed several concerns associated with the proposed SMP Project route (specifically the Sabal Trail Project route) through the Suwannee River State Park and the associated HDD crossing of the Suwanee River. Mr. Mericle provided a copy of the 25 October 2015 geological report compiled by Mr. Dennis Price and noted perceived discrepancies between that report and information within the DEIS; and, conveyed several concerns associated with those perceived discrepancies.

(*iv*) In correspondence dated 10 December 2015, WWALS again conveyed concerns related to the SMP Project (specifically the Sabal Trail Project); and, again requested a public hearing. In this letter, WWALS summarized several previous letters (from various authors) conveying concerns and/or objections to the Sabal Trail Project. In addition, WWALS conveyed information associated with the potential adverse effects of methane as a greenhouse gas and the benefits of solar energy.

(c) Gulf Restoration Network – GreenLaw:

(*i*) In correspondence dated 2 October 2015, GreenLaw requested a 60-day extension to the public notice comment period; and, a public hearing for the Sabal Trail Project. The submittal noted that the groups associated with GreenLaw had participated actively in the FERC process and had filed several sets of comments.

(*ii*) In correspondence dated 11 December 2015, Gulf Restoration Network and GreenLaw submitted an extensive examination of the Sabal Trail Project on behalf of several non-governmental organizations (reference the administrative record for a full listing of the organizations). The submittal challenged the assessment of practicable alternatives and questioned the project purpose and need. GreenLaw also criticized the sufficiency of the public notice and the appropriateness of the applicants' avoidance, minimization, and mitigation efforts. With respect to the general concerns conveyed, the submittal focused on the potential effects, including direct/indirect and cumulative effects, to karst geology, sinkholes and sinkhole formation, surface waters and wetlands, springs, water quality, and endangered and threatened species. The submittal also identified four potential alternate routes, which the authors believed would have fewer overall effects to the physical environment. Finally, the submittal conveyed an opinion that an analysis of the SMP Project should incorporate an examination of climate change and the potential effects of climate change on the project.

(5) Three local government entities submitted correspondence. These entities were the Suwannee County BOCC, the Dougherty County BOCC, and the Board of Commissioners of the City of Albany, Georgia.

(a) Suwannee County BOCC: In correspondence dated 2 December 2015, the Suwannee County BOCC provided a copy of a 17 November 2015 resolution that requested a reconsideration of the location of the "Hildreth" compression station to decrease the rural residential properties affected by that station.

(b) Dougherty County BOCC: In correspondence dated 6 October 2015, Dougherty County BOCC requested a 30-day extension to the public notice comment period.

(c) City of Albany: In correspondence dated 8 October 2015, the City of Albany, Office of the City Attorney, requested a 60-day extension to the public notice comment period.

(6) Three governmental agencies submitted comments regarding the project. These agencies were the Florida Fish and Wildlife Conservation Commission (FFWCC), the EPA, and the Alabama Department of Environmental Management – Water Division (ADEM –WD).

(a) FFWCC – 29 October 2015: The FFWCC comments focused on the Sabal Trail Project and the FSC Project. The FFWCC noted that the DEIS incorporated a Biological Assessment (DEIS Appendix K), which evaluated the potential environmental

effects of the SMP Project on federally listed threatened or endangered species or designated critical habitat of a federally listed species. The FFWCC noted that the DEIS included numerous measures for the proposed SMP Project that would avoid and minimize affects upon fish and wildlife and their habitats, several of which FFWCC staff recommended; and, conveyed an expectation that the measures identified should address the majority of potential effects to Florida fish and wildlife resources.

(b) EPA:

(*i*) In correspondence to the FERC (copied to the Corps) dated 26 October 2015, the EPA conveyed an analysis of the DEIS. The Corps accepted the correspondence as a preliminary EPA response to the circulation of the public notice. Within this correspondence, the EPA expressed an opinion that the DEIS environmental analysis primarily focused on identifying and mitigating impacts associated with the proposed project and not avoiding and minimizing impacts to environmentally sensitive areas. The EPA noted several concerns including, but not limited to, the lack of a compensatory mitigation plan, potential long-term effects to water quality and aquatic resources, an incomplete analysis of potential greenhouse gas emissions, and compliance with the Section 404 requirements of the CWA. The EPA letter included a lengthy attachment conveying specific and detailed comments on the DEIS (reference the administrative record), which concluded with a summary comment recommending the consideration and objective analysis of an alternative route selected to completely avoid the most vulnerable karst areas of the Floridan Aquifer and avoid/minimize jurisdictional wetlands and other environmentally sensitive areas.

(*ii*) In correspondence dated 11 December 2015, the EPA submitted comments in response to the Corps public notice. In this submittal, the EPA noted their review of the Corps public notice, the applicable sections of the DEIS, various correspondence related to the SMP Project, and additional information provided by Sabal Trail Transmission, LLC. The EPA, in consideration of the additional information reviewed since the submittal of their previous correspondence, expressed a belief that the applicants fully considered avoidance and minimization of impacts during the development of the preferred route. In addition, based on the review of the additional information, the EPA conveyed a belief that previous concerns regarding potential effects to conservation lands had been sufficiently addressed; and, that the EPA had no remaining concerns regarding that issue. With respect to potential effects to karst geology, the EPA noted that the additional information reviewed demonstrates that a thorough analysis of potential karst effects was conducted, that the project avoids the most sensitive karst features, and karst areas in the path of the pipeline are unlikely to be significantly affected. Moreover, the EPA conveyed an opinion that it was unlikely

that the project would impact the Floridan Aquifer through karst or sinkhole features. In consideration of the various safeguards and advanced design considerations, the EPA also conveyed an opinion that it is highly unlikely that the project would generate any direct impacts to groundwater.

(c) ADEM-WD: In correspondence dated 28 September 2015, the ADEM-WD submitted information related to the ADEM construction stormwater permit review process.

(7) One Federal representative submitted comments in response to the circulation of the public notice. In correspondence dated 7 October 2015, Congressman Sanford Bishop, Jr. (Georgia 2) conveyed his concerns regarding a full and transparent review of the project by the Corps and, in order to provide his constituents sufficient time to submit pertinent comments, requested a 30-day extension to the public notice comment period.

c. Corps acknowledgement of comments:

(a) The Corps, in general, did not acknowledge or reply to specific comments submitted in response to the circulation of the public notice.

(b) In separate letters dated 15 October 2015, the Corps advised the City of Albany and Dougherty County BOCC that the Corps had extended the public notice comment period to 11 December 2015.

(c) In separate letters dated 15 October 2015, the Corps acknowledged the public hearing requests submitted by GreenLaw and WWALS; and, advised these organizations that the Corps had extended the public notice comment period to 11 December 2015. Subsequently, in separate letters dated 21 January 2016, the SAS Corps denied the request for a public hearing submitted by these organizations in conjunction with SAS-2013-00942. Additionally, in separate letters dated 20 July 2016, the SAJ Corps denied the request for a public hearing submitted by these organizations in conjunction with SAJ-2013-03030 and SAJ-2013-03099.

(d) In correspondence dated 30 October 2015, the Corps acknowledged the comments submitted by Congressman Bishop. In this acknowledgement the Corps notified the Congressman that the comment period had been extended to 11 December 2015. Additionally, Congressman Bishop was notified that the Corps was responding to the FOIA requests referenced in his letter.

d. Issues identified by the Corps: In consideration of the information contained within the DEIS and submitted to the Corps in conjunction with the permit application, the Corps concluded that additional information was necessary regarding potential alternate routes (e.g., the Sabal Trail Project Florida Gas Transmission Company, LLC (FGT) to Central Florida Hub (CFH) Route). In addition, the Corps noted that the applicants had not submitted comprehensive information regarding a compensatory mitigation plan, which would include updated lists/tables identifying and quantifying work affecting waters of the United States, including wetlands; revised graphics depicting the updated work proposed; functional assessment reports qualifying the environmental effect of work affecting waters of the United States, including wetlands; and, for any permittee-responsible mitigation endeavor(s), comprehensive reports documenting compliance with the *Compensatory Mitigation for Losses of Aquatic Resources, Final Rule*.

e. Issues/comments forwarded to the applicants:

(1) Hillabee Expansion Project:

(a) A 1 March 2016 meeting that included the applicant, the agent, and the Corps was held to consider outstanding information needs. During the meeting the Corps noted the need for information related to Section 106 of the NHPA. Specifically, the Corps requested information related to the change in eligibility statuses of three sites from those shown in Table 3.11.1-1 of the FEIS. The participants also discussed the applicant's final compensatory mitigation proposal and the Corps need for a revised plan in order to finalize the evaluation of the project. A summary of information needs resulting from this meeting was sent to the applicant and the agent via electronic mail dated 8 March 2016.

(b) In electronic mail correspondence dated 11 March 2016, the Corps reiterated the need to receive additional information associated with Section 106 of the NHPA to finalize the evaluation of the project. The Corps also forwarded the comments submitted in response to the circulation of the public notice and attached the Gulf Restoration Network correspondence dated 10 March 2016. The Corps requested that the applicant incorporate a response to the additional comments from the Gulf Restoration Network into their response to comments generated by the public notice, if applicable.

(2) Sabal Trail Project:

(a) In correspondence dated 1 March 2016, the Corps noted that the Corps needed to receive additional information associated with Section 7 of the ESA and Section 106 of the NHPA to finalize the evaluation of the project. The Corps also forwarded the comments submitted in response to the circulation of the public notice with a general summary of those comments. In addition, within that correspondence, the Corps conveyed concerns identified by the Corps during the review of the DEIS (reference section 6(d) above). The Corps requested comprehensive responses to the concerns/issues identified.

(b) In a supplemental communication dated 11 March 2016, the Corps forwarded to Sabal Trail Transmission, LLC the Gulf Restoration Network correspondence dated 10 March 2016; and, requested that the applicant incorporate a response to the additional comments from the Gulf Restoration Network into their response to comments generated by the public notice.

(3) FSC Project: In correspondence dated 1 March 2016, the Corps noted that the Corps needed to receive additional information associated with Section 7 of the ESA and Section 106 of the NHPA to finalize the evaluation of the project. The Corps also forwarded the comments submitted in response to the circulation of the public notice with a general summary of those comments. In addition, within that correspondence, the Corps conveyed concerns identified by the Corps during the review of the DEIS (reference section 6(d) above). The Corps requested comprehensive responses to the concerns/issues identified.

f. Applicants replied/provided views:

(1) Hillabee Expansion Project: By letter dated 16 March 2016, Transcontinental Gas Pipe Line Company, LLC provided detailed responses to the public comments received during the public comment period. In their submittal, Transcontinental Gas Pipe Line Company, LLC provided additional information and/or responses to concerns specifically related to surface water withdrawals and discharges, hydrostatic test water withdrawals and discharges, ADEM Section 401 water quality certification, and Transcontinental Gas Pipe Line Company, LLC's mitigation plan for proposed impacts to waters of the U.S. In addition to these areas of concern Transcontinental Gas Pipe Line Company, LLC's correspondence also included an update regarding outstanding issues related to Section 106 of the NHPA (i.e. adjustments to avoid sensitive resource areas). Finally, Transcontinental Gas Pipe Line Company, LLC noted that minor project re-routing and a modified installation methodology was implemented based on

comments received. These changes resulted in a reduction in impacts to waters of the U.S. of 1.10 acres. Finally, Transcontinental Gas Pipe Line Company, LLC provided additional information (via electronic message dated July 28, 2016) regarding the compression intensive alternative to the Corps.

(2) Sabal Trail Project: In correspondence dated 25 March 2016, Sabal Trail Transmission, LLC provided detailed responses to the comments received during the public notice comment period as well as the additional submittal by the Gulf Restoration Network. The applicant noted that many of the comments concerned potential effects on sensitive environmental features such as wetlands, waterbodies, springs, and caves, which have been extensively evaluated, studied, and considered through the development and issuance of the FEIS and ancillary state processes. The applicant expressed an opinion that potential risks to drinking water sources, air quality, local communities, and endangered species, as well as questions concerning construction and operation of a pipeline through karst-sensitive and sinkhole areas, have been thoroughly considered and addressed. Reference the Administrative Record for the specific information provided by the applicant regarding these issues. Sabal Trail Transmission, LLC though, noted that the vast majority of issues filed with the Corps were the same issues raised in the comments filed with the FERC and addressed in the body of the FEIS as well as specifically addressed in Appendix O to the FEIS. In the submittal, Sabal Trail Transmission, LLC confirmed that it intends on complying with or implementing all of the measures recommended within the FFWCC correspondence. With respect to the concerns expressed by the Corps, Sabal Trail Transmission, LLC reviewed the pre-filing alternate route evaluation, the continued evaluation of alternate routes during the compilation of the EIS, and provided additional detail regarding potential alternate routes. Sabal Trail Transmission, LLC specifically provided additional information regarding the disadvantages identified regarding the FGT to CFH Route (e.g., longer length and greater effects on land, forest, waterbodies, karst features, and roads), which Sabal Trail Transmission, LLC opined would not make it a reasonable alternative and why it should not be considered practicable given the additional impacts on the human environment, including greater logistical and technical costs compared to the proposed route. The submittal also provided additional information associated with the avoidance and minimization of work affecting aquatic resources; and, the compensatory mitigation plan for unavoidable impacts to aquatic resources. Sabal Trail Transmission, LLC however, noted that the FEIS addressed the majority of these concerns.

(3) FSC Project: In correspondence dated 23 March 2016, FSC, LLC provided detailed responses to the comments received during the public notice comment period. In their submittal, FSC, LLC provided additional information and/or responses to

concerns specifically related to the adverse effects on waters of the United States (e.g., wetlands); adverse effects on geological features (karst, sinkhole formation, springs, and caverns); adverse effects on wildlife (specifically endangered species); adverse effects on drinking water and groundwater usage; concerns regarding alternatives (solar power as a practicable alternative to the transmission of natural gas); questions concerning the basic need, water dependency, and alternatives for the project; questions regarding HDD and river crossings; concerns regarding mitigation; concerns regarding cumulative and secondary impacts; climate change and lifecycle analysis. FSC, LLC also provided additional information regarding the proposed compensatory mitigation plan.

g. Comments Submitted Subsequent to the Corps Public Notice Comment Period:

(1) Individuals:

(a) After the close of the public notice comment period, the Corps received additional electronic mail submittals from individuals associated with, or responding to solicitation from, the Gulf Restoration Network (reference section 6(b)(1) above).

(b) In addition, the Corps received additional correspondence from Ms. Janet Barrow. In her submittal, dated 16 June 2016, Ms. Barrow identified sinkholes and other land features that she believed had not been incorporated into the evaluation of the SMP Project (specifically, the Sabal Trail Project). She also reiterated the majority of the environmental concerns that she previously submitted (e.g., wetlands, safety, karst geology).

(2) Non-governmental Organizations:

(a) Gulf Restoration Network: In correspondence dated 10 March 2016, Gulf Restoration Network reiterated the majority of their previously submitted concerns and indicated that the FEIS had not adequately addressed their concerns. The concerns conveyed included, but were not limited to, freshwater withdrawals and discharges, increases in erosion and sedimentation, adverse effects to water quality, public water supply, karst and sinkhole risks, and wetland impacts and mitigation. The submittal included a copy of the Gulf Restoration Network correspondence dated 11 December 2015. Reference section 6.e.(2)(b), above.

(b) WWALS:

(*i*) In correspondence dated 4 April 2016, WWALS reiterated several previously presented concerns including, but not limited to, public interest and cumulative effects on wetlands, waterbodies, springs, and cave systems. WWALS conveyed an opinion that new evidence had arisen of numerous discrepancies in what Sabal Trail Transmission, LLC presented to the FERC; and, identified other projects in Pennsylvania, Alabama, Georgia, and Florida that WWALS believed should be considered cumulatively with the SMP Project. WWALS also reiterated a request for an inspection of the proposed route through the Suwannee River State Park and near the Falmouth Cathedral Cave system.

(*ii*) In correspondence dated 8 July 2016, WWALS provided a copy of a document prepared by Mr. Peter Schreuder (Schreuder, Incorporated, Water-Resources and Environmental Consultants); and, a copy of a WWALS letter conveying concerns associated with the storage of pipe at a location north of Lake City in Columbia County, Florida.

(*aa*) Mr. Schreuder's correspondence conveyed general information on HDD methodology and his assessment of anticipated impacts from the proposed SMP Project HDD crossing of the Suwannee River. Mr. Schreuder opines that information within the FEIS was erroneous; and, that the proposed HDD crossing of the Suwannee River would likely cause sinkholes or "frac-outs", adversely affect groundwater and surface water, adversely affect geologic fractures/features, and adversely affect springs and caves. Mr. Schreuder concludes that there is the "potential for a major impact to occur to the karst system" during the execution of the proposed HDD crossing of the Suwannee River.

(*bb*) The concerns regarding the storage of pipe at a site in Columbia County, Florida, had been submitted to the Corps previously (5 July 2016); and, focused on potential effects to wetlands at a site north of Lake City in Columbia County where a large quantity of pipe had been placed. The Corps forwarded the previous submittal by WWALS to the SAJ Enforcement Section for investigation as a possible unauthorized activity. [Note: In response to the WWALS 5 July 2016 correspondence, SAJ Enforcement Section staff inspected this site; and, determined that the work implemented had not affected any waters of the United States within Federal jurisdiction. Therefore, enforcement action was not warranted.]

(c) Center for Biodiversity: In correspondence dated 22 July 2016, Ms. Jaclyn Lopez, Center for Biodiversity, conveyed several concerns associated with the SMP Project. Ms. Lopez correspondence was based on her belief that the Corps had not received Biological Opinions from the FWS for the total SMP Project. In her correspondence, Ms. Lopez opined that the Corps must compile a Supplemental Environmental Impact Statement (SEIS), as significant new circumstances or information relevant to environmental concerns regarding the project had been identified since the compilation of the FEIS. Specifically, Ms. Lopez expressed an opinion that potential effects upon manatee had not been addressed; and, that effects upon manatee could occur through the migration of pollutants through karst geology from the proposed pipeline work sites to waters of the Crystal River and King's Bay. In addition, Ms. Lopez noted that the FEIS did not specifically contain a compensatory mitigation plan for work affecting waters of the United States, including wetlands; and, as such, an SEIS was necessary to adequately evaluate any final compensatory mitigation plan(s) associated with the SMP Project. Ms. Lopez also conveyed an opinion that the Corps must address potential effects on climate change associated with the SMP Project. In consideration of these concerns, Ms. Lopez indicated that an SEIS should be compiled. In addition to her comments regarding the compilation of an SEIS, Ms. Lopez expressed a belief that the Corps had not fulfilled its obligations under the ESA. Ms. Lopez conveyed her position that the Corps' coordination with the FWS must include potential effects upon manatee, Gulf sturgeon, Shinyrayed pocketbook, and eastern indigo snake. Finally, Ms. Lopez conveyed several concerns associated with the Section 404 CWA review of the project (e.g., water dependency, practicable alternatives, and public interest).

(3) Local Governmental Entities:

(a) Hamilton County BOCC: In correspondence dated 18 March 2016, the Hamilton County BOCC, in consideration of information submitted by WWALS (including a report from SE Environmental Geology, authored by Mr. Dennis Price), requested site inspections by the Corps to determine the actual proximity of active sinkholes and other features of the aquifer and cave systems to the proposed pipeline route.

(b) Suwannee County BOCC: In correspondence dated 6 April 2016, the Suwannee County BOCC, in consideration of information submitted by WWALS (including a report from SE Environmental Geology, authored by Mr. Dennis Price), requested site inspections by the Corps to determine the actual proximity of active sinkholes and other features of the aquifer and cave systems to the proposed pipeline route.

(c) Marion County BOCC: In correspondence dated 3 May 2016, the Marion County BOCC requested information specifically associated with work proposed within Marion County. The information requested was associated with, but not limited to, karst investigations/analyses, construction techniques, pipeline integrity, work affecting wetlands (specifically wetland associated with the Marjorie Harris Carr Cross Florida Greenway), and avoidance/minimization of work affecting wetlands.

(d) Madison County BOCC: In correspondence received 26 July 2016, the Madison County BOCC expressed concerns related to the potential effects to groundwater associated with the work proposed within karst geology; and, requested a comprehensive study prior to any final action by the Corps. The Madison County BOCC also requested a site inspection of the project corridor by the Corps to determine the proximity of active sinkholes and other features of the aquifer and cave systems; and, requested the compilation of a Supplemental EIS prior to any final action by the Corps.

(4) Non-federally Recognized Tribes: In correspondence dated 26 July 2016, the Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples (Council) submitted copies of several documents authored by other entities (e.g., Hamilton County BOCC, Marion County BOCC, Suwanee County BOCC, and WWALS) and individuals (e.g., Mr. Schreuder and Mr. Price); and, noted numerous requests by various organizations and individuals that the Corps compile an SEIS. The Council also requested the compilation of an SEIS.

(5) Governmental Agencies: In correspondence to the FERC (copied to the Corps) dated 25 January 2016, the EPA provided comments to FERC regarding the FEIS. In this submittal, the EPA acknowledged the FERC responses to comments previously provided; and, recommended the implementation of best management practices and other potential measures identified in the FEIS to avoid and minimize impacts to jurisdictional resources. The EPA did provide additional commentary associated with climate change and greenhouse gases, which included a recommendation for future project reviews. Finally, the EPA provided additional commentary and recommendations regarding the environmental justice review.

(6) Federal Representatives:

(a) Congressman Sanford Bishop, Jr. (Georgia 2): In correspondence dated 27 May 2016, Congressman Bishop requested the Corps address several concerns raised regarding the permitting of the proposed project. In response letter 5 July 2016, the Corps reiterated that the FERC was the lead Federal agency with the primary responsibility for preparing the environmental impact statement, therefore, the specific

issues presented in the letter are best addressed by FERC. The Corps continues to evaluate the project in accordance with its regulatory authorities pursuant to Section 404 of the CWA and Section 10 of the RHA and a final decision has not been rendered.

(b) Congressman Ted Yoho (Florida 3):

(*i*) During a telephone conversation dated 23 May 2016, Ms. Jessica Norfleet, staff member for Congressman Yoho, contacted the Corps Jacksonville District to obtain information regarding the evaluation of the Sabal Trail Project. In consideration of concerns presented to Congressman Yoho by WWALS, Ms. Norfleet conveyed inquiries regarding the overall evaluation of the project and any site inspections of the project corridor, specifically as compared to the processing of other DA permit applications (i.e., is the Corps evaluating the project with the same level of scrutiny as any other application). The Corps assured Ms. Norfleet that the Corps is evaluating the project in compliance with all laws and regulations; and, without bias. The Corps project manager also provided an overview of past and future actions associated with the Corps' evaluation of the permit applications. The Corps also discussed the remote tools (e.g., GoogleEarth®, Microsoft Bing®, infrared aerial imagery, historic aerial imagery) generally used to evaluate DA permit applications, which have been used in conjunction with the evaluation of the Sabal Trail Project; and, the Corps position regarding site inspections of the project corridor within the Suwannee River State Park and near the Falmouth Cave system (Hamilton County and Suwanee County, Florida). Ms. Norfleet indicated that the information provided was sufficient for her to update Congressman Yoho; and, that she would contact the Corps if she had additional questions.

(*ii*) During a telephone conversation dated 6 June 2016, Congressman Yoho personally contacted the Corps Jacksonville District. Congressman Yoho advised the Corps project manager that he had attended another local meeting where the participants discussed the Sabal Trail Project. He indicated that individuals present at the meeting again requested that he ask the Corps to conduct a site inspection of the proposed pipeline route, and the land adjacent to the route, within the Suwannee River State Park and near the Falmouth Cathedral Cave System. The individuals requesting the site inspection expressed their concerns that Sabal Trail Transmission, LLC had not adequately identified sinkhole features and/or investigated potential effects upon karst geology in the identified areas; and, that the work proposed would adversely affect land associated with the Suwannee River State Park and/or the Falmouth Cathedral Cave System. The Corps advised Congressman Yoho that the Corps had thoroughly reviewed the information submitted in conjunction with the requests for a site inspection and additional information submitted by the applicant. The Corps also summarized the information reviewed and specifically noted the Corps' review of the applicant's reports

and planned actions (e.g., Karst Characterization Studies for Florida and Georgia, Best Drilling Practices Plan, and Karst Mitigation Plan). Further, the Corps advised Congressman Yoho that the Corps had determined that the referenced site inspection would not provide substantive additional information or new information. In consideration of that determination, the Corps advised Congressman Yoho that the Corps did not intend to conduct the referenced site inspection

h. Additional Applicant Information/Responses:

(1) Hillabee Expansion Project:

(a) In an electronic mail message dated 27 April 2016, Transcontinental Gas Pipe Line Company, LLC notified the Corps of a requested variance to normal construction methodologies needed in higher gradient wetland areas. Transcontinental Gas Pipe Line Company, LLC requested that the Corps review and approve the variance prior to Transcontinental Gas Pipe Line Company, LLC's submittal to FERC.

(b) During a 2 May 2016, telephone conversation with the applicant; and, a subsequent electronic mail correspondence dated 3 May 2016, the Corps identified outstanding information requirements needed prior to completing its final evaluation. Specifically, the Corps requested additional information related to Transcontinental Gas Pipe Line Company, LLC's requested construction methodology variance in steep slope wetlands of 27 April 2016. In addition the Corps reiterated the need for additional information and explanation relating to Section 106 of the NHPA, and finally, the Corps identified the need for Transcontinental Gas Pipe Line Company, LLC to provide final routing diagrams for the proposed Hillabee Expansion Project.

(c) During a 9 May 2016, telephone conversation and in subsequent electronic mail correspondence, the Corps notified Transcontinental Gas Pipe Line Company, LLC that a review of Transcontinental Gas Pipe Line Company, LLC's proposed compensatory mitigation plan revealed that the applicant had not included permanent impacts to streams in its compensatory mitigation plan. An electronic mail exchange between the Corps and Transcontinental Gas Pipe Line Company, LLC on 10 May 2016, resulted in the applicant submitting a revised compensatory mitigation plan on 13 May 2016.

(d) As previously noted the Corps requested additional information related to a construction variance proposed by Transcontinental Gas Pipe Line Company, LLC. In electronic mail correspondence dated 10 May 2016, Transcontinental Gas Pipe Line Company, LLC supplied additional information, including typical drawings of the

proposed installation methodology. The Corps reviewed the information provided and responded to Transcontinental Gas Pipe Line Company, LLC's request in correspondence dated 13 May 2016. In that correspondence, the Corps stated that the installation methodology appeared to be acceptable and provided post construction restoration guidelines for Transcontinental Gas Pipe Line Company, LLC. Transcontinental Gas Pipe Line Company, LLC responded 13 May 2016 that an appropriate restoration strategy would be utilized.

(2) Sabal Trail Project:

(a) In correspondence dated 22 April 2016, Sabal Trail Transmission, LLC provided a response to the WWALS letter dated 4 April 2016. In this correspondence, Sabal Trail Transmission, LLC expressed an opinion that WWALS' comments concerning the public interest and cumulative effects on sensitive environmental features, such as wetlands, waterbodies, springs, and caves have been extensively evaluated, studied, and considered through the development and issuance of the FEIS, as well as through ancillary state permitting or authorization processes; and, similarly, questions concerning the risk that the Sabal Trail Project poses to drinking water sources, local communities, as well as questions concerning the construction and operation of a pipeline through karst-sensitive and sinkhole areas, have been thoroughly considered and addressed. Sabal Trail Transmission, LLC again also specifically addressed WWALS statements associated with the report compiled by Mr. Price concerning work proposed in the Suwannee River State Park, at the proposed crossing of the Suwannee River, and near the Falmouth Cathedral Cave system. Finally, Sabal Trail Transmission, LLC again specifically addressed WWALS contention that the SMP Project is part of, and should be cumulatively evaluated as part of, a larger national pipeline network (i.e., that the SMP Project should be considered as a connected action to other pipeline projects throughout the nation).

(b) In correspondence dated 3 May 2016, Sabal Trail Transmission, LLC provided updated and additional information in response to a teleconference between the applicants and the Corps, held on 19 April 2016. In this submittal, Sabal Trail Transmission, LLC addressed coordination associated with historical/cultural resources, the Chattahoochee River crossing (potential Section 408), Uniform Mitigation Assessment Procedure (UMAM) scoring and calculation of compensatory mitigation values, and the proposed use of specific mitigation banks. In addition, Sabal Trail Transmission, LLC provided supplemental information regarding specific potential alternate routes identified by the Corps and information directly addressing concerns expressed by BOCCs with Hamilton County and Suwannee County, Florida.

(c) In correspondence dated 6 May 2016, Sabal Trail Transmission, LLC provided a specific response to the request for information submitted by the Marion County BOCC.

(d) In correspondence dated 7 July 2016, Sabal Trail Transmission, LLC provided additional information specifically addressing the concerns expressed by the Hamilton County BOCC and the Suwanee County BOCC.

(e) In correspondence dated 27 June 2016, Sabal Trail Transmission, LLC provided specific information addressing the concerns raised by Ms. Barrow in her 16 June 2016 submittal. Sabal Trail Transmission, LLC individually addressed each of Ms. Barrow's comments/concerns; and, adequately demonstrated that her submittal did not contain new relevant information that had not been previously considered.

(f) In correspondence dated 6 July 2016, Sabal Trail Transmission, LLC submitted a response to the report compiled by Mr. Schreuder, which WWALS submitted. In this response, Sabal Trail Transmission, LLC noted that Mr. Schreuder had not indicated that he had conducted any specific geotechnical or geophysical investigations on land within or contiguous to the proposed SMP Project corridor; and, as such, Mr. Schreuder's assessment did not provide specific data that contradicted the data compiled by the applicant's team (e.g., Best Drilling practices Plan – FEIS Appendix E, Karst Mitigation Plan – FEIS Appendix F, and Karst Characterization Studies for Florida and Georgia – FEIS Appendix H). Sabal Trail Transmission, LLC expressed an opinion that Mr. Schreuder's report contained numerous errors and omissions; and, that his conclusions drew extensively from misreading portions of the FEIS or other sources. However, Sabal Trail Transmission, LLC presented information to address each of his conclusions. Specifically, Sabal Trail Transmission, LLC expressed an opinion that Mr. Schreuder's comparison of HDD to an incident associated with the establishment of a well at *Heritage Pines* contained several flaws; and, identified several distinct differences between these actions. Further, in contrast to the general assertions presented by Mr. Schreuder, the applicant noted the successful installation of several HDD pipelines beneath the Suwannee and Santa Fe Rivers within the last decade. Sabal Trail Transmission, LLC addressed point-by-point the remaining concerns/topics presented by Mr. Schreuder; and, noted that extensive geophysical surveys and geotechnical borings at the proposed Suwannee River HDD crossing had been implemented to investigate the stability of the rock where the HDD would occur. In consideration of those investigations, Sabal Trail Transmission, LLC concluded that it is feasible to successfully and safely emplace the pipeline beneath the river.

(g) In correspondence dated 25 July 2016, Sabal Trail Transmission, LLC submitted additional information pertinent to the Section 404(b)(1) Guidelines alternatives analysis. Sabal Trail Transmission, LLC conveyed an opinion that the various alternatives proposed and considered not only pose greater overall environmental impacts than the certificated route but are also not practicable in implementation. The correspondence provided specific information on several of the potential alternate routes. This information is incorporated into the Alternatives Analysis section of this document.

(3) FSC Project:

(a) In correspondence dated 22 April 2016, FSC, LLC provided updated and additional information in response to a teleconference between the applicants and the Corps, held on 19 April 2016. In this submittal, FSC, LLC clarified information within a previous submittal, addressed UMAM and Wetland Rapid Assessment Procedure (WRAP) scoring and calculation of compensatory mitigation values, and the proposed use of specific mitigation banks.

(b) In correspondence dated 22 June 2016, FSC, LLC provided additional information regarding the proposed compensatory mitigation plan. In response to the Corps notification that the Federal service area coverage by various mitigation banks adequately covered almost the entire proposed corridor route, which would preclude the need to use bank credits for work proposed outside of a service area, FSC, LLC indicated two of the noted banks are Florida Department of Transportation (FDOT) single-user mitigation banks that do not have credits available for the project; that one of the noted banks only has herbaceous credits (which would not address the functional loss of forested canopy); and, that other noted banks did not have Federal credits available at the time that FSC, LLC purchased mitigation credits.

i. Additional Corps Coordination of Information/Responses:

(1) In correspondence dated 9 May 2016, the Corps forwarded to the Marion County BOCC the complete information submitted by Sabal Trail Transmission, LLC in correspondence dated 6 May 2016.

(2) In an electronic mail correspondence dated 17 June 2016, the Corps advised Mr. Dennis Price that the Corps did not intend to specifically conduct coordinated site visits of the Sabal Trail Project corridor within the Suwanee River State Park or near the Falmouth Cathedral Cave system.

(3) In correspondence dated 11 July 2016, the Corps forwarded to the Hamilton County BOCC the complete information submitted by Sabal Trail Transmission, LLC in submittals received on 7 July 2016.

(4) In correspondence dated 11 July 2016, the Corps forwarded to the Suwanee County BOCC the complete information submitted by Sabal Trail Transmission, LLC in submittals received on 7 July 2016.

j. FEIS Discussion of Environmental Issues and Concerns: The FEIS, section 1.3, Table 1.3-1 (copy below), conveys a summary of the environmental issues and concerns presented to FERC for the SMP Project and the section of the EIS addressing those issues/concerns. The concerns presented to the Corps during the public notice comment period are generally similar to the concerns expressed to the FERC. Therefore, the Corps incorporates Table 1.3-1 into this document; and, as such, references that table for the section(s) of the FEIS that specifically address the noted concerns.

FEIS TABLE 1.3-1
Environmental Issues and Concerns Raised for the Southeast Market Pipelines Project

Issue/Concern	EIS Section(s) Addressing Issue
GENERAL	
Purpose and need for the SMP Project	1.1
Evaluate impacts associated with SMP Project natural gas source areas	1.1.2
SMP Project will not benefit Georgia	1.1.4
Natural gas from the SMP Project will be exported	1.1.4
Lack of availability of project information to the public	1.3
Analyze related projects	1.4
Required permits and approvals	1.5
Design and location of the pipeline, project schedule, land requirements, construction techniques	2.0
GEOLOGY	
Impacts of nearby blasting activities on the pipeline	3.1.2.2
Impacts from blasting, including the potential for blasting to result in sinkhole development	3.1.2.2, 3.1.2.3
Importance and environmental sensitivity of karst terrain in Georgia and Florida	3.1.2.3
Need to thoroughly characterize karst terrain	3.1.2.3
Feasibility of construction in karst terrain	3.1.2.3
Potential for overland trench construction to initiate sinkhole development	3.1.2.3
Potential for HDD activities/vibration to initiate sinkhole development	3.1.2.3
Potential for HDD activity to damage cave systems	3.1.2.3
Karst mitigation measures	3.1.2.3
Potential for sinkholes to develop and damage pipeline or compressor stations	3.1.2.3
SOILS	
Impacts from herbicides	3.2.2
Potential for soil disturbance to result in additional sunlight exposure, loss of moisture, and subsequent wind erosion	3.2.2

Impacts from soil compaction	3.2.2
Impacts on agricultural activities and prime farmland	3.2.2.1
Impacts on topsoil and methods to prevent topsoil/subsoil mixing	3.2.2.1
Erosion impacts on soils	3.2.2.2
Potential for the pipeline to shift in sandy or saturated soils	3.2.2.3
Impacts associated with pre-existing contaminated soils	3.2.2.7
Potential for soil contamination to occur during construction	3.2.2.7
WATER RESOURCES	
Impacts from blasting on drinking water supplies	3.3.1
Potential changes in groundwater flow from alterations to natural ground contours	3.3.1
Potential impacts on the Albany, Georgia municipal well field	3.3.1.4, 3.3.1.7
Impacts of overland pipeline construction on groundwater flow in karst terrain	3.3.1.5, 3.3.1.7
Impacts of HDD construction on groundwater flow in karst terrain	3.3.1.5, 3.3.1.7
Potential for use and management of hydrostatic test water and stormwater management to initiate sinkhole development	3.3.1.5, 3.3.1.7
Potential for chemical spills and HDD drilling mud to impact groundwater quality, water wells, and springs	3.3.1.5, 3.3.1.7
Potential for groundwater flow along the trench, including reducing aquifer recharge	3.3.1.7
Impacts on groundwater from contaminants in discharged hydrostatic test water	3.3.1.7
Impacts on groundwater from pipeline releases	3.3.1.7
Impacts on groundwater from spills during operation of the aboveground facilities	3.3.1.7
Impacts on waterbodies during construction, including from HDD activities and potential drilling mud releases	3.3.2
Impacts on aquatic habitat	3.3.2.2, 3.3.2.4, 3.3.2.5
Impacts on waterbodies from trenching through acid-producing rock	3.3.2.4
Impacts of herbicides on waterbodies	3.3.2.4
WETLANDS, VEGETATION, WILDLIFE, AND FISHERIES	
Impacts on riparian habitat	3.4.2
Impacts on high-quality/sensitive wetlands, including forested and limesink wetlands	3.4.3.2
Avoid/reduce impacts on wetlands, including restoration of surface flow patterns	3.4.2, 3.4.3
Potential for invasion or spread of undesirable vegetation and noxious weeds during and after construction	3.4.2, 3.5.4
Need for compensatory wetland mitigation	3.4.2.1
Impacts on forest land, including live oaks	3.5
Impacts on vegetation during operational maintenance, including use of herbicides	3.5
Impacts on wildlife and their habitat	3.6
Air quality, noise, and light impacts on wildlife	3.6
Impacts on bird sanctuaries	3.6
Protection of wildlife from open trenches during construction	3.6.3
Potential for wildlife to be displaced by the project	3.6.3
Potential for habitat fragmentation	3.6.3, 3.6.4
Impacts on migratory bird species	3.6.4
Impacts on aquatic species from potential pipeline leaks	3.7.2
Impacts on fish species	3.7.2
Impacts of HDD drilling mud release on aquatic species and habitat	3.7.2.1
THREATENED AND ENDANGERED SPECIES	
Potential for impacts on federally listed or proposed threatened or endangered species or their critical habitat, including (but not limited to): the gopher tortoise, alligator snapping turtle, bald eagle, Florida grasshopper sparrow, Florida scrub jay, southeast fox squirrel, manatee, and black indigo snake	3.8 and appendix K

LAND USE, RECREATION, AND VISUAL RESOURCES	
Impacts on agricultural activities	3.9
Impacts on canals/ditches that provide flow of water away from residences	3.9
Impacts of multiple pipeline easements on a property	3.9
Potential for unauthorized right-of-way access during operation	3.9
Infringement on private property rights	3.9.1.3, 3.9.2.3, 3.9.3.3, 3.9.1.4, 3.9.2.4, 3.9.3.4
Legality of eminent domain and adequacy of easement payments	3.9.1.3, 3.9.2.3, 3.9.3.3
Compensation to landowners	3.9.1.3, 3.9.2.3, 3.9.3.3
Impacts on residences, including septic systems and wells	3.9.1.4, 3.9.2.4, 3.9.3.4
Impacts on potential future developments	3.9.1.4, 3.9.2.4, 3.9.3.4
Limitation of right-of-way on land use	3.9.1.4, 3.9.2.4, 3.9.3.4
Impacts on ranching facilities	3.9.2.5, 3.9.3.5
Impacts on existing conservation easements	3.9.1.5, 3.9.2.5, 3.9.3.5
Impacts on recreation and tourism, including parklands	3.9.1.5, 3.9.2.5, 3.9.3.5
Visual impacts of the pipeline right-of-way and aboveground facilities	3.9.1.8, 3.9.2.8, 3.9.3.8
Responsibility for right-of-way maintenance	3.9.1.9, 3.9.2.9, 3.9.3.9
SOCIOECONOMICS	
Construction personnel should be local hires	3.10.1.1, 3.10.2.1, 3.10.3.1
Ability of local law enforcement and emergency response services during construction and operation; identify time for emergency response to arrive at the pipeline location	3.10.1.3, 3.10.2.3, 3.10.3.3
Impacts on nearby schools, churches, and medical facilities	3.10.1.3, 3.10.2.3, 3.10.3.3
Potential economic impacts on local agricultural/rancher and tourism activities	3.10.1.4, 3.10.2.4, 3.10.3.4
Impacts on local roads and utilities	3.10.1.5, 3.10.2.5, 3.10.3.5
Impacts from traffic during construction	3.10.1.5, 3.10.2.5, 3.10.3.5
Impacts on property values/resale ability and property insurance coverage/rates	3.10.1.6, 3.10.2.6, 3.10.3.6
Landowners will be required to pay property taxes for land that is no longer usable	3.10.1.6, 3.10.2.6, 3.10.3.6
Construction materials should be sourced regionally or locally	3.10.1.7, 3.10.2.7, 3.10.3.7
Economic benefits will be short term	3.10.1.7, 3.10.2.7, 3.10.3.7
Potential employment and tax revenue benefits to local communities	3.10.1.7, 3.10.2.7, 3.10.3.7
Impacts on environmental justice communities, including near the Albany Compressor Station	3.10.4

CULTURAL RESOURCES	
Effects to known and undiscovered cultural resources	3.11
Impacts on historic cemeteries	3.11.2
Impacts on historic structures and plantations	3.11
Impacts on Native American traditional lands and burials in the project area	3.11.4
Need for consultations with Native American groups	3.11.4
Family burials and/or cremated remains are located on property	3.11.4
AIR QUALITY AND NOISE	
Effects of the project on air quality during construction and operation	3.12.1
Potential for nuisance fugitive dust generated during construction and operation	3.12.1.3
Potential air quality impacts from pipeline leaks	3.12.1.3
Noise impacts during construction, including HDDs	3.12.2.2
Noise impacts from compressor station operation	3.12.2.2
RELIABILITY AND SAFETY	
Safety impacts in populated areas and near residences; pipeline should be placed in rural areas	3.13
Describe pipeline monitoring procedures in the event of a leak	3.13.1
Impacts of multiple pipelines placed together; including age of existing pipelines	3.13.1
Ability of leak detection when the natural gas in the system will not be odorized	3.13.1
Potential hazards to natural gas pipelines from fires	3.13.1
Potential safety impacts from multiple crossings of existing utilities	3.13.1
Potential for agricultural activities (e.g., use of deep tillage tools) to strike the pipeline; need for increased pipe depth	3.13.1
Impacts associated with prescribed burns	3.13.1
Safety of compressor station operation	3.13.1
Previous safety record of the applicants	3.13.2
Potential for third-party damage to the pipeline	3.13.3
Potential impacts from terrorism	3.13.4
CUMULATIVE IMPACTS	
Potential for project to encourage industrial development along the new right-of-way	3.14
Potential for project to encourage natural gas development (e.g., fracking) in Florida	3.14
Impacts of multiple pipeline easements on a property	3.14.3
Potential for the cleared pipeline right-of-way to contribute to resource fragmentation	3.14.3
Potential for increased greenhouse gas emissions to contribute to global warming	3.14.3
Potential for forest clearing to result in increased atmospheric carbon dioxide levels	3.14.3
ALTERNATIVES	
Consider renewable energy and energy conservation alternatives	4.0
No Action Alternative	4.1
Consider system alternatives using existing natural gas transmission pipelines	4.2.1
Consider system alternative that provides gas from liquefied natural gas (LNG) import terminals (e.g., Port Dolphin)	4.2.3
Route the proposed pipelines along existing energy, utility, railroad, or road corridor	4.3
Route alternatives to avoid sensitive features (e.g., Green Swamp, wetlands, major river crossings, karst terrain)	4.3
Consider routes to avoid the State of Georgia	4.3
Use of alternative construction methods, including HDD, to cross private properties	4.3
Route alternatives to avoid existing and planned developments	4.3
Consider route through the Gulf of Mexico	4.3.1.3
Compressor station alternatives to avoid community and environmental justice impacts	4.4

7. Alternatives Analysis

a. FEIS Alternatives Analysis:

(1) The FERC and the Corps identified and evaluated reasonable 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, to make independent determinations according to each agency's governing regulations. Both agencies must meet the NEPA requirements for their respective evaluations of alternatives; and, must fulfill additional agency-specific regulations in making their independent determinations. The FERC and the Corps evaluated the no action alternative, system alternatives, pipeline route alternatives, and aboveground facility location alternatives (including compressor station equipment alternatives). The separate and independent Corps evaluation must also meet the requirements of the CWA and the Corps' public interest review.

(2) Chapter 4 of the FEIS presents the details of the NEPA alternatives analysis for the proposed project. The information provided in the FEIS was used by the Corps to select the LEDPA among the alternatives, which included the applicant's preferred alternative.

b. Clean Water Act Section 404(b)(1) Alternatives Analysis:

(1) Basic and Overall Project Purpose and Need:

(a) Basic Project Purpose: The basic SMP Project purpose is the transmission of natural gas (reference the Corps Public Notice and the FEIS section 1.1.1).

(b) Overall Project Purpose: The overall project purpose is the construction and operation of new interstate natural gas pipeline infrastructure to meet the growing demand for natural gas by the electric generation, distribution, and end use markets in Alabama, Georgia, and Florida (reference the Corps Public Notice and the FEIS section 1.1.1).

(2) Water Dependency Determination: The SMP Project is not water dependent.

(3) Screening Criteria:

(a) Hillabee Expansion Project: A tiered approach to alternative evaluation was utilized to first determine practicability. Alternatives considered practicable were carried forward for further evaluation and comparison. Three system alternatives, including the applicant's preferred alternative, were initially considered. For this discussion, system alternatives are the alternatives involving route variation and aboveground facility location alternatives; and, are evaluated in relation to project practicability as defined 40 CFR Part 230. Accordingly, practicable, alternatives are available, achieve the overall project purpose (as defined by the Corps), and are feasible when considering cost, logistics and technology. The following provides a summary of screening criteria used in the evaluation of considered system alternatives.

(*i*) System alternatives are alternatives to the proposed action that would make use of other existing, modified, or proposed pipeline systems to meet the stated objectives of the proposed Project. According to Transcontinental Gas Pipe Line Company, LLC's "Resource Report 10", three generalized criteria were utilized when assessing system alternatives in light of project practicability. In order to be considered a less environmentally damaging practicable alternative potential system alternatives must meet three criteria:

- The system alternative must be capable of supplying up to 1,131,730 dt/day of natural gas to the Sabal Trail Project pipeline from Station 85;

- The system alternative must be capable of transporting the required volumes within the same schedule as the proposed Project; and

- The system alternative must be able to meet the criteria above and at the same time result in reduced environmental impacts when compared to the proposed Project.

(*ii*) For the purposes of this review, practicable system alternatives (i.e., those carried forward as part of the LEDPA determination) are further evaluated utilizing additional criteria such as: construction impact on wetlands, operation impact on wetlands, potential to impact sensitive features (e.g. karst), waterbodies impacted, critical habitat impacted, and other environmental factors. Section 5 provides more detailed discussion related to the evaluation of system alternatives.

(*iii*) Once impracticable or more environmentally damaging system alternatives were excluded, using the preceding process and criteria, routing/ above ground configuration alternatives were examined. In addition to previously listed criteria (e.g.

work in wetlands, etc.), other criteria for evaluating these alternatives included logistics (i.e. work in difficult or unsafe environments, etc.), siting near sensitive areas (e.g. homes), and/or a greater degree of environmental impact. Two classes of alternatives were considered in this discussion and are discussed in detail in the following sections.

(*aa*) Route Variation alternatives involve minor re-routes and variations of the preferred alternative that would avoid or further reduce impacts on specific localized resources.

(*bb*) Like routing alternatives, aboveground facility alternatives were considered once a practicable and least environmentally damaging system alternative was selected. According to Transcontinental Gas Pipe Line Company, LLC "Resource Report 10", these alternatives included installation of additional compression at Transcontinental Gas Pipe Line Company, LLC's existing Compressor Station 85, installation of additional pipeline looping, facility siting, and electric-driven compression.

(b) Sabal Trail Project: In evaluating the routing options for the Project, Sabal Trail Transmission, LLC attempted to collocate with existing utility corridors and ROW to the maximum extent practicable. Sabal Trail Transmission, LLC identified several screening criteria, noted below, to choose a route that would accommodate the construction of a natural gas pipeline from Alabama to Florida. The applicant did not include criteria that would not differentiate route alternatives (e.g., type of pipe); and, as such, the Corps did not consider those criteria in the evaluation of whether the applicant's alternatives were practicable.

(*i*) Wetlands and Waterbodies – The route selection criterion for wetlands and water bodies was based on the general avoidance of wetlands and the minimization of work affecting higher quality wetlands (e.g., cypress dominated wetlands and/or wetlands with a UMAM score of 7 or higher) and higher quality rivers, creeks, and streams where the avoidance of work affecting wetlands and waterbodies could not be achieved. In conjunction with this screening process, the applicant conveyed a belief that the crossing of wetlands and waterbodies by HDD and standard boring installation construction techniques would not have a direct adverse effect on the wetland or waterbody.

(*ii*) Karst Areas – The applicant indicates that the route selection criterion associated with Karst areas was based on the avoidance of areas with karst geology as determined from a Geographic Information System (GIS) version of an Engineering Aspects of Karst Map developed by Davies, et al., 1984. The applicant expressed an

opinion that the use of that information provided a consistent data source for Alabama, Georgia, and Florida; and, facilitated valid comparisons of routes crossing all three states.

(*iii*) Existing Utility Corridors – This route selection criterion was based on a preference to follow existing utility rights-of-way (e.g., existing electric transmission lines and all other types of pipeline). The applicant noted that this preference criterion is compliant with FERC directives, as the use of or co-location with existing utility corridors reduces the areas of potential effect associated with construction and operation of a proposed pipeline.

(*iv*) Conservation Easements – This route selection criterion sought to avoid existing conservation easements. If a particular easement could not be avoided, the applicant graded avoidance (greatest to least significance) in the order of regulatory, proprietary, and land protection agreements.

(*v*) Residential Development Areas – This route selection criterion sought to avoid populated areas where there was insufficient space to construct the pipeline without adversely affecting existing residences, developing residential areas, and associated facilities such as retention or detention ponds installed solely for the residential development.

(*vi*) Threatened and Endangered Species Critical Habitat – This route selection criteria sought to avoid known locations of critical habitat, as identified by the FWS. As with several of the other criteria, the applicant considered the use of HDD and standard boring as avoidance; and, not causing an adverse effect when the proposed route crossed habitat supporting threatened or endangered species (or critical habitat).

(*vii*) Restrictive Land Uses – This routing criterion sought to avoid areas that are actively mined for sand or other minerals; or, areas that are used to support mining activities.

(*viii*) State and National Forests – This routing criterion sought to avoid a proposed pipeline route through these areas. Again, the applicant expressed an opinion that traversing State and/or National Forests through the use of HDD or standard boring would not adversely affect these areas and would not restrict the crossing of these areas by the pipeline.

(*ix*) State and National Parks and Recreation Areas – This routing criterion sought to avoid a proposed pipeline route through these areas. Again, the applicant expressed an opinion that traversing State and/or National Parks and/or Recreation Areas through the use of HDD or standard boring would not adversely affect these areas and would not restrict the crossing of these areas by the pipeline.

(*x*) Cultural Resource Sites – This routing criteria sought to avoid reported or identified cultural resource sites, including archaeological and historical sites that are eligible for the National Register of Historic Places (NRHP).

(c) FSC Project: The applicant identified several screening criteria, noted below, to choose a corridor that would accommodate the construction of a natural gas pipeline and associated aboveground facilities. Similar to the position of Sabal Trail Transmission, LLC the applicant did not include criteria that would not differentiate route alternatives (e.g., type of pipe); and, as such, the Corps did not consider those criteria in the evaluation of whether the applicant's alternatives were practicable.

(*i*) Water Resources: The applicant indicated that this screening criterion sought to avoid and minimize work affecting water resources to the extent practicable. The applicant used the U.S. Geologic Service National Hydrography Dataset to identify reservoirs and major waterbodies, typically defined as greater than 100 feet wide. The applicant acknowledged that these larger water resources may not be avoided entirely due to the linear nature of the project. However, the applicant assigned a preference to alignments that minimized the intersections with, and crossings of, major waterbodies and reservoirs. The applicant considered the location and angle of crossing of waterbodies by the proposed ROW so that, to the extent practicable, impacts to the streambed and riparian areas could be avoided or minimized. The applicant also avoided Outstanding Florida Waters, Wild and Scenic Rivers, high quality waters, and water protection areas to the extent practicable. Where avoidance was not possible, the applicant attempted to collocate the project with other infrastructure crossings. The applicant indicated that the crossing of water resources by HDD and standard boring installation construction techniques was considered to not have an adverse effect on the wetland or waterbody. Wetland resources were mapped using available datasets and aerial photo-interpretation. Preference was given to alignments that avoid or minimize the number/length of crossings of wetlands systems, particularly forested wetlands. Springs normally provide the headwaters of streams or provide a significant inflow of water to streams; and, these areas have a direct interface with groundwater. In consideration of that analysis, the applicant, to the extent practicable, avoided and minimized work affecting springs; with a preference given to siting the ROW and access ways outside of, and 50 feet from, springs.

(*ii*) Existing Utility Corridors – This route selection criterion was based on a preference to follow existing utility rights-of-way (e.g., existing electric transmission lines and all other types of pipeline). The applicant noted that this preference criterion is compliant with directives of the FERC, as the use of or co-location with existing utility corridors reduces the areas of potential effect associated with construction and operation of a proposed pipeline.

(*iii*) Residential Development Areas – This route selection criterion sought to avoid major public interest facilities, tourist attractions, and infrastructure such as hospitals, churches, parks, and schools to the extent practicable.

(*iv*) Threatened and Endangered Species Critical Habitat – This route selection criterion sought to avoid known locations of critical habitat, as identified by the FWS. As with several of the other criteria, the applicant considered the use of HDD and standard boring as avoidance; and, not causing an adverse effect when the proposed route crossed habitat supporting threatened or endangered species (or critical habitat).

(*v*) Federal, State, and Local Lands – This route selection criterion noted that the crossing of such lands would increase the overall permitting complexity and permit review timeframes for the project. As such, if government lands could not be avoided, preference was given to collocating with existing rights-of-way that cross the lands.

(*vi*) Cultural Resource Sites – This routing selection criterion sought to avoid identified/reported cultural resource sites within 0.25 miles from the project, including archaeological and historical sites that are eligible for the NRHP.

(*vii*) Contaminated Sites – This routing selection criterion sought to avoid environmentally regulated sites that may be contaminated and/or are potentially undergoing site investigation or remediation. The applicant mapped these sites if within 0.25 mile of each alternative. The analysis conducted included review of Resource Conservation and Recovery Act (RCRA) sites and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) sites. The applicant concluded that the avoidance of these areas to the extent practicable would benefit the project, as issues pertaining to the remediation of contaminated soils or groundwater contamination would not adversely affect the project.

(*viii*) Engineering Considerations – The routing selection criterion for engineering considerations was based on the avoidance and minimization to the extent practicable of intersecting electrical transmission lines greater than 230kV, other pipelines, and major roads. The applicant considered transmission line crossings during corridor siting

process, as any electrical transmission line crossing may present construction constraints. Engineering constraints also were considered in areas where the project would cross other pipelines, as construction methods may need to accommodate the presence of another pipeline and, as a result, construction costs could be significantly higher in those areas. The applicant additionally considered engineering constraints where the project would cross major roads, as major road crossings could increase construction costs and cause visual disruption for a traveler. Additionally, with respect to roadway crossings, easements or permits from the FDOT or local governments may be required when crossing major roads.

(ix) Karst Areas – The route selection criterion karst areas was based on the avoidance of area with karst geology as determined from a review of geologic maps, aerial photographs, and state databases that identify closed topographic depressions (Florida Geological Survey, 2004) and sinkhole incidents (Florida Department of Environmental Protection (FDEP), 2013b), as well as features identified within 0.25 mile of the project route (reference the FEIS, section 3.1.2.3).

(4) Applicants' preferred alternative:

(a) Hillabee Expansion Project:

(*i*) The proposed project would impact approximately 973 acres of land during construction and 312 acres during operation. The general location of the proposed action is largely pre-determined both by the selection of new pipeline loops that maximize the use of existing facilities and by the location of Transcontinental Gas Pipe Line Company, LLC's existing pipeline system. In developing the facilities proposed for construction, Transcontinental Gas Pipe Line Company, LLC conducted a system flow analysis to evaluate various alternative pipeline and compressor station modification configurations. Pipeline loops at different locations were considered from a system flow perspective, as was the option of increasing gas delivery capacity solely through the addition of compression. Based upon computer models, the currently-proposed configuration is the most cost-effective and efficient design. The selection of pipeline loops and compression expansions represents the most environmentally sensitive and most cost-effective means for supplying the existing demands for energy, thereby conforming with the guidelines contained in 18 C.F.R. Part 2.69. These guidelines specify, as a general goal, the use of existing ROW in order to minimize environmental impacts (reference Transcontinental Gas Pipe Line Company, LLC "Resource Report 10").

(*ii*) Operation and maintenance of the proposed facilities also would be cost effective and accomplished in the most environmentally acceptable manner. For example, less permanent ROW will be maintained because the location of the proposed facilities is parallel and adjacent to Transcontinental Gas Pipe Line Company, LLC's existing facilities. This would minimize long-term impacts on land use, vegetation, and wildlife. Any surveillance and maintenance activities may be accomplished concurrently with the maintenance of existing facilities, and aerial and ground inspection of the proposed Hillabee Expansion Project can be conducted within Transcontinental Gas Pipe Line Company, LLC's existing maintenance schedules. Reference Transcontinental Gas Pipe Line Company, LLC "Resource Report 10". Additional information related to the preferred alternative is found in the FEIS, section 2.1.1.

(b) Sabal Trail Project: Reference the FEIS, section 2.1.2; and, the Sabal Trail Project Supplemental III.

(c) FSC Project: Reference the FEIS, section 2.1.3.

(5) Avoidance Alternatives:

(a) No Action Alternative: For purposes of the Corps Regulatory Program, "[t]he 'no action' alternative is one which results in no construction requiring a Corps permit." 33 C.F.R. Part 325, Appendix B, Paragraph 9.(5)(b). This includes alternatives where all work under the jurisdiction of the Corps has been eliminated and where the permit application is denied. The SMP Project could not be constructed without authorization from the Corps because it is not practicable to construct a new natural gas pipeline in Alabama, Georgia, and Florida that avoids all crossings of waters of the United States. Furthermore, as provided below, the Corps determined that two system (functional) alternatives are not practicable. Therefore, under the no action alternative, there would be no effect on the environment from construction of the SMP Project. Further, not constructing the SMP Project may force the natural gas shippers to pursue other means of transporting the proposed volumes of natural gas from Alabama to Florida. Furthermore, purchasers of the natural gas may seek other sources of gas, 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 demand. Therefore, the no action alternative is not practicable because it does not meet the overall project purpose (reference the FEIS section 4.1 and section 5.1.14).

(b) System Alternatives (Functional Alternatives) (reference the FEIS section 4.2): System alternatives are alternatives to the proposed action that would make use of other existing, modified, or proposed natural gas pipeline systems or existing compression to meet the stated purpose and need of the project. System alternatives include the transportation of the equivalent amount of incremental natural gas volumes by the expansion of existing pipeline systems or by the construction and operation of other new pipeline systems.

(*i*) Hillabee Expansion Project: Transcontinental Gas Pipe Line Company, LLC operates approximately 10,200 miles of pipeline from Texas to New York. The Hillabee Expansion Project would involve looping existing Transcontinental Gas Pipe Line Company, LLC pipeline in order to transport natural gas from near the existing Compressor Station 85 to the kick-off point of the Sabal Trail Project. The Corps and the FERC evaluated two system alternatives to the Hillabee Expansion Project; the compression intensive alternative (CIA) and the looping intensive alternative (LIA) (reference the FEIS section 4.2.1.4).

(*aa*) Although the CIA would include impacts to approximately 144 acres of land during construction and 70 acres during operation of the facilities, it presents other logistical, technological, and cost related issues that would preclude implementation. The FEIS notes that implementing the CIA alternative would reduce impacts on most environmental resources but would result in greater air and noise emissions and reduced reliability. The following paragraphs present information related to the practicability of implementing the compression intensive alternative.

• Specifically, the CIA would result in significant cost and logistical challenges including greater fuel consumption, fuel costs and air emissions. Moreover, because of the known reliability factors for compression versus transmission lines, the CIA would be inferior from a reliability standpoint. The typical reliability/availability of compression-related equipment for the transportation of natural gas is in the range of 90 to 99 percent. The typical reliability/availability of pipeline assets for the transportation of natural gas is in the range of 98 to 99.5 percent. This is because compression facilities require more frequent routine maintenance, whereas pipelines require repairs only on an as needed basis.

• As indicated by its name, 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. Like the preferred alternative, the CIA would include construction of Compressor Station 84 and installation of additional compression at Transcontinental Gas Pipe Line Company, LLC's existing Compressor Stations 90, 95, 100, 105, and

110. However, in order to provide the necessary compression (utilizing existing compressor technology and efficiency) the CIA alternative would require a total of 185,245 horsepower (hp), or more than double the 88,500 hp for Transcontinental Gas Pipe Line Company, LLC's proposed project. In addition to the proposed greenfield Station 84 and modifications to Station 95 (which are included in both scenarios), the Compression-Intensive Alternative would have the following additional equipment needs:

- Compressor Station 90 – addition of two Solar Taurus 70 gas turbine driven compressor units producing 10,915 hp each (for a total of 21,830 hp);
- Compressor Station 100 – addition of one Solar Taurus 70 gas turbine driven compressor unit producing 10,915 hp;
- Compressor Station 105 – addition of three Solar Mars 100 gas turbine driven compressor units producing 16,000 hp each (for a total of 48,000 hp); and
- Compressor Station 110 – addition of one Solar Mars 100 gas turbine driven compressor unit producing 16,000 hp.

• The referenced equipment requirements represent a 109 percent horsepower increase over the preferred alternative. Assuming the additional compression necessary to implement the CIA was achieved through the installation of new compressor units of similar efficiency (technology) to those currently proposed, calculated air emissions would increase on average by about 114 percent over the preferred alternative. Due to the additional 96,745 hp of compression required by the compression intensive alternative, the overall air emission increases, specifically in the forms of Nitrogen Oxides (NOX), Carbon Monoxide (CO), Particulate Matter Less Than 10 Microns in Diameter (PM10), Particulate Matter less than 2.5 Microns in Diameter (PM2.5), and Greenhouse Gases (GHG) as Carbon Dioxide Equivalents (CO2e) would be much greater than for the preferred alternative. Table 3 presents a breakdown of the emissions increases:

Table 3
Compression-Intensive Alternative Scenario Additional Emissions

Pollutant	Additional CIA Annual Emissions (ton/year)	Percent Increase Over Preferred Alternative
NOX	187.91	117.98
CO	313.17	127.56
PM10/2.5	22.3	115.36
CO2e	330,526	95.37

• Moreover, under the compression intensive alternative, due to the substantially higher horsepower needed, the project would exceed the "significant" emissions thresholds for several of the impacted facilities despite the modern emission controls proposed to be installed by Transcontinental Gas Pipe Line Company, LLC. Specifically, based on a preliminary review, Transcontinental Gas Pipe Line Company, LLC has identified that the Compression-Intensive Alternative would exceed the "significant" emissions thresholds at Station 105 for NO_X, CO, PM_{10}, $PM_{2.5}$, and GHG, and at Station 90 for NO_x and GHG.

• For projects that are above the "significant" emissions threshold, the Prevention of Significant Deterioration regulations require the demonstration that the new or modified facilities would not "cause or contribute" to violations of the National Ambient Air Quality Standards (NAAQS). Such a demonstration would take into account the emission increases for the project in question, as well as existing air pollutant concentrations in the area (background concentrations). This analysis was not necessary because the preferred alternative's projected emissions are below the "significant" emissions threshold. However, for the Compression-Intensive Alternative, this analysis would be necessary to demonstrate that the impacted facilities would not cause or contribute to violations of NAAQS in the areas where the facilities are located. Finally, Transcontinental Gas Pipe Line Company, LLC has proposed modern emission controls for the stations impacted by the Hillabee Expansion Project, which in combination with the lower horsepower of the preferred alternative allow the project to have an air emissions impact below the "significance" levels. Transcontinental Gas Pipe Line Company, LLC's 28 July 2016 communication provided a more in-depth analysis of how it intends to meet the air emission challenges. Cumulatively, the preceding considerations represent significant technological and logistical challenges to implementing the CIA Alternative.

• In addition to the logistical/technology based issues identified in the preceding section, the compression-intensive alternative would increase the overall cost to construct the project by at least $29 million, which represents a 6.3 percent increase in total project costs. Additional capital costs would include additional equipment and installation costs for the 7 additional gas turbines, as well as potential costs for emission control equipment that may be required depending on the results of the PSD analyses. Furthermore, the selection of this alternative would result in increased fuel costs of up to $28 million per year when compared to the Proposed Project. This additional cost would persist throughout the life of the project. Over the 25-year primary contract term of the project, $700 million in additional fuel costs (in 2016 dollars) would be incurred, which is a cost increase of 26 percent. Based on the preceding air emissions discussion, it is likely that CIA would also incur significant additional costs related to air

quality monitoring. Transcontinental Gas Pipe Line Company, LLC estimates the cost of installing and operating air quality monitoring equipment at each of these three stations for a period of five years to be $15 million ($1 million per year, per site). In light of the technological, logistical, and cost considerations detailed above, the compression intensive alternative is not a practicable alternative (Reference: FEIS 4.2.1.4, Transcontinental Gas Pipe Line Company, LLC Resource Report 10, and additional applicant correspondence dated 28 July 2016).

(*bb*) The LIA would involve the use of pipeline looping to meet the delivery requirements of the project. The LIA would eliminate the need for Compressor Station 84 and increased compression at existing stations. The elimination of these requirements would allow for the reduction of air emissions and noise associated with these operations. 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 significant additional impacts on the environment. Specifically, Transcontinental Gas Pipe Line Company, LLC's "Resource Report 10" notes that, in comparison with the preferred alternative, the LIA would include additional construction and operational impacts to wetlands and would include impacts to designated Critical Habitat for the gulf sturgeon (reference the FEIS section 4.2.1.4 and Transcontinental Gas Pipe Line Company, LLC "Resource Report 10"). Therefore, this alternative is not preferable to the proposed action and is not the LEDPA.

(*ii*) Sabal Trail Project and FSC Project: System alternatives considered in this analysis included the FGT pipeline system, the Gulfstream pipeline, and the Southern National Gas Company (SONAT) pipeline system (reference the FEIS section 4.2.1). These system alternatives are not practicable alternatives.

(*aa*) The FGT pipeline is an approximately 5,400-mile gas pipeline network that transports natural gas from South Texas to South Florida. The pipeline has a capacity of nearly 3 billion cubic feet per day (Bcf/d) of natural gas, which is delivered to a diverse customer base in Florida including electric utilities, independent power producers, industrial clients, and local distribution companies. Although the FGT pipeline route passes along the east coast of Florida and provides a connection to Florida Power and Light (FPL) Martin Clean Energy Center, it currently does not have sufficient capacity to meet the SMP Project requirements without construction of substantial additional gas delivery infrastructure. 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. Therefore, the simple utilization of

the FGT pipeline, rather than implementation of the SMP Project or expansion of the FGT pipeline, is not practicable as it does not fulfill the overall project purpose. The Corps reviewed the EIS developed for the FGT Phase VIII Expansion Project, which is available at https://www.ferc.gov/industries/gas/enviro/eis/2009/09-18-09.asp. The Corps concurs with the statements within the SMP Project FEIS that the environmental impacts of another FGT expansion project would be similar in scope and magnitude to the impacts of the SMP Project (reference the FEIS section 4.2.1.1, Figure 4.2-1, and section 4.3.1). Although an expansion of the FGT system may be technically feasible (FEIS section 4.2.1.1), the Corps concludes that such an action would generate substantial adverse effects to listed species and, due to costs associated with the procurement of properties and the relocation of residences/businesses, is cost prohibitive (i.e., this alternative is not practical). In addition, the expansion of the FGT system would not address the project purpose and need (transport price competitive natural gas), as the expansion of the FGT system would not provide additional options within the competitive market. Based on the information reviewed, the Corps concludes that the expansion of the FGT system is not practical; would not be less environmentally damaging than the work proposed; and, would not address the project purpose and need. Therefore, the Corps concludes that this alternative is not the LEDPA.

(*bb*) The Gulfstream pipeline is approximately 745 miles long and traverses the Gulf of Mexico. It is currently operating at full capacity and, therefore, is incapable of transporting the volumes of natural gas that would be transported via the SMP Project. Offshore construction is substantially more expensive than land-based construction. The total cost of a system expansion/modification, approximately $5.9 billion, would result in this alternative being impractical and unable to meet the overall project purpose of the SMP Project (reference the FEIS section 4.2.1.2 and Figure 4.2-1). Additionally, due to the sensitive marine ecosystems that would be affected by such work, the Corps expects that the adverse environmental effects of such work would be greater than the SMP Project. Therefore, this alternative is not practicable in terms of cost, logistics, and technology; and, would likely generate greater adverse environmental effects. As such, this alternative is not the LEDPA.

(*cc*) SONAT is a 7,600 mile pipeline system that traverses Alabama and Georgia to market areas including North Florida. The SONAT system is operating at or near capacity and, therefore, incapable of transporting the volumes of natural gas that would be transported by the SMP Project. The SONAT system would not be a suitable system alternative as it cannot provide the capacity objective of the SMP Project without significant additional pipeline 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. Use of the SONAT Cypress Pipeline system is not practical because the bulk of its facilities are located in eastern Georgia outside of the SMP Project area (reference the FEIS section 4.2.1.3). Therefore, this alternative does not meet the overall project purpose, is not practicable, and is not the LEDPA.

(*iii*) In summary, the system alternatives currently operating within the State of Florida either currently lack the capacity, or the ability to practicably increase their capacity, to provide transportation service that would be generated by the SMP Project; and, would not fulfill the overall project purpose of the SMP Project. The FEIS, section 4.2.2, also evaluates other natural gas transmission systems (system alternatives) including the importation of LNG and the use of trucks and/or railways.

(*aa*) LNG import: The FERC noted that, although there are several proposals to construct LNG export facilities along the gulf coasts of Texas, Louisiana, and Mississippi, there are currently no proposed or operating LNG terminals along the Florida panhandle or the west central coast of Florida. An LNG import facility, the Port Dolphin LNG Project (Port Dolphin) was licensed in 2010. However, the FERC noted on 25 September 2015 that Port Dolphin had filed a motion with the FERC to vacate its certificate. In support thereof, Port Dolphin stated that it was abandoning its plans for the project. Using LNG imports to meet the demands of the SMP Project would require a large but unspecified environmental impact and the financial costs of constructing and operating the facilities (one import/export facility alone may range from $3 billion to $11 billion dollars) would render the alternative economically impractical. Further, the cost of gas to end users would not be competitive with current domestic prices, which is a component of the project purpose. The Corps has not received or discovered information that contradicts the FERC assessment; and, the Corps acknowledges that the FERC, as a Federal agency tasked with the assessment and authorization of numerous energy-related projects, is likely the best source for information pertinent to such actions and assessments. In consideration of the information reviewed, the Corps concludes that LNG import not practicable at this time and, therefore, is not the LEDPA.

(*bb*) Trucks and/or Railways: The FEIS summarizes the storage/transmission capacity of LNG tanker trucks and railway tankers commercially available. Based on the capacities of those systems, the FEIS calculates that it would take approximately 1,100 to 1,900 trucks per day, or 440 to 885 railway tankers per day to deliver 1.1 Bcf/d of gas from Transcontinental Gas Pipe Line Company, LLC's Compressor Station 85 to the SMP Project's delivery points. 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, the FERC determined that the use of trucks and/or railways would not be economically practical. The Corps has not received

or discovered information that contradicts the FERC assessment; and, the Corps acknowledges that the FERC, as a Federal agency tasked with the assessment and authorization of numerous energy-related projects, is likely the best source for information pertinent to such actions and assessments. In consideration of the information reviewed, the Corps concludes that the use of trucks and/or railways is not practicable; and, as such, is not the LEDPA.

(c) Route Alternatives (Off-site Alternatives): Route alternatives, as well as variations of routes, and aboveground facilities were considered. 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. The applicants considered a total of 334 route variations during initial project planning and throughout the pre-filing processes, including 29 associated with the Hillabee Expansion Project, 282 associated with the Sabal Trail Project, and 23 associated with the FSC Project (reference the FEIS section 4.3.1, Table 4.3.1-1, Figure 4.3.1-1, section 4.3.2, and FEIS Appendix D, Table 4.3.2-1). The general analysis of alternate routes and deviations in this section is based on the FEIS. To the extent impacts of the proposed route construction and operation have been updated from those provided in the FEIS, any changes are minor and do not alter the conclusions in this analysis.

(*i*) Hillabee Expansion Project: Transcontinental Gas Pipe Line Company, LLC evaluated a number of localized variations of both pipeline routing and the configuration of aboveground facilities of the proposed project based on engineering constraints and desktop environmental data. Summary comparisons of the 29 variations considered are provided in Transcontinental Gas Pipe Line Company, LLC “Resource Report 10” Table 10.3-1. Of the 29 variations that were considered but not incorporated into the proposed loops, 6 were not selected because they would require one or more crossovers. Crossing over/under existing pipelines or other infrastructure is common for all types of utilities and can be done safely. However, Transcontinental Gas Pipe Line Company, LLC and its contractors seek to avoid unnecessarily crossing over/under existing lines because crossovers require deeper excavation, greater volume of spoil, additional workspace, and exposure of the crossed pipelines. All of these factors increase impacts to the surrounding land, and require extra care during installation of the new pipeline. Consequently, the crossover method of avoiding obstacles is reserved for locations where it is absolutely necessary to avoid sensitive resources (reference Transcontinental Gas Pipe Line Company, LLC “Resource Report 10”). As previously indicated, criteria for excluding routes from consideration included logistics (i.e. work in difficult or unsafe environments, etc.), siting near sensitive areas (e.g. homes), and/or a greater degree of environmental impact. The following provides a

succinct, yet informative, discussion of each alternative route or routing variation and above ground facility variation considered (reference Transcontinental Gas Pipe Line Company, LLC Resource Report section 10.3).

(*aa*) Rock Springs Loop: Transcontinental Gas Pipe Line Company, LLC evaluated six alternative routing scenarios along the Rock Springs Loop portion of the Hillabee Expansion Project:

• Route Variation 1: This route variation would involve switching the proposed route to the opposite side (north side) of the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 784.68 to MP 791.40. This route variation would extend along the entire proposed Rock Springs Loop and would parallel the existing Transcontinental Gas Pipe Line Company, LLC Mainline A rather than the existing Transcontinental Gas Pipe Line Company, LLC Mainline E. This route variation was not selected because it would traverse rough terrain, whereas the terrain along the southern side of the existing maintained ROW would be more favorable for construction. In addition, this variation would require two crossovers (one at the beginning and one at the end of the Rock Springs Loop). The proposed alternative involves logistical challenges; and, therefore, in consideration of the information presented above and within the FEIS the Corps has determined that it is not a practicable alternative (not the LEDPA).

• Route Variation 2: This route variation would involve maintaining the offset from the existing Transcontinental Gas Pipe Line Company, LLC Mainline E from MP 784.75 to MP 784.78 rather than pulling the route in to avoid residences that are in close proximity to the existing Transcontinental Gas Pipe Line Company, LLC ROW. This variance was not selected because it is necessary to pull the line in closer to the existing Transcontinental Gas Pipe Line Company, LLC Mainline E in order to avoid residences. Reducing the offset between the centerline of the proposed loop and the closest adjacent existing pipeline is typically not a preferred practice; however, Transcontinental Gas Pipe Line Company, LLC has determined that it is necessary in this area to avoid impacts to the residences. In consideration of the information noted above and within the FEIS, the Corps has determined that the route is not the LEDPA.

• Route Variation 3: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 786.35 to MP 786.57 rather than deviating to the south from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected because it would result in paralleling a stream. The proposed route provides a closer to perpendicular crossing of the stream, thus minimizing impacts to

the stream. In consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

• Route Variation 4: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 787.23 to MP 788.02 rather than deviating slightly to the south from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected because it would result in paralleling a stream and fringing wetland and would result in construction along a steep side slope. The proposed route provides a closer to perpendicular crossing of the stream, thus minimizing impacts to the stream, avoids extensive impact to the wetland, and avoids construction along the steep side slope. In consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

• Route Variation 5: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 789.19 to MP 789.30 rather than deviating slightly to the south from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, the proposed route pulls away from the existing Transcontinental Gas Pipe Line Company, LLC ROW in order to avoid electrical transmission structures. Variation 5 would not be practicable due to the logistical and safety constraints of the existing transmission structures (not the LEDPA).

• Route Variation 6: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 790.81 to MP 791.08 rather than deviating to the south from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected because it would result in paralleling a stream. The proposed route would avoid impacting the stream and reduce impacts to wetland. In consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

(*bb*) Butler Loop: Transcontinental Gas Pipe Line Company, LLC evaluated four alternative routing scenarios along the Butler Loop portion of the Hillabee Expansion Project:

• Route Variation 1: This route variation would involve switching the proposed route to the opposite side (north side) of the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 791.40 to MP 796.70. This route variation would extend along the entire proposed Butler Loop and would parallel the existing Transcontinental Gas Pipe Line Company, LLC Mainline A rather than the existing Transcontinental Gas Pipe Line Company, LLC Mainline E. This route variation was not selected because it would require two crossovers (one at the beginning and one at the end of the Butler Loop). As noted in the information above crossovers present logistical challenges and are reserved for special circumstances where traditional methods are not practicable; therefore, in consideration of the information presented the Corps has determined that it is not a practicable alternative (not the LEDPA).

• Route Variation 2: This route variation would involve pulling the route in from MP 791.68 to MP 791.90 to avoid residences rather than deviating to the south from the existing maintained ROW. Although this route variation would have resulted in greater collocation with existing maintained ROW, after avoiding the existing residence the remaining work space area was insufficient for project implementation. This alternative, in consideration of the logistics associated with the limited workspace, is not practicable. In consideration of this information and other information within the FEIS, the Corps has determined that this alternate route is not the LEDPA.

• Route Variation 3: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 791.95 to MP 792.21 rather than deviating to the south from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected because it would result in paralleling a stream and fringing wetland. The proposed route would avoid impacting approximately 0.25 miles of the paralleling stream and would provide a closer to perpendicular crossing of the stream, thus minimizing impacts to the stream, and would also result in significantly less wetland impact. In consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

• Route Variation 4: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 792.78 to MP 792.95 rather than deviating to the south from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected because it would result in paralleling a stream and fringing wetland. The proposed route would provide a closer to perpendicular crossing of the stream, thus minimizing impacts to the stream and would also result in less wetland impact. In

consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

(*cc*) Billingsley Loop: Transcontinental Gas Pipe Line Company, LLC evaluated five alternative routing scenarios along the Billingsley Loop portion of the Hillabee Expansion Project:

• Route Variation 1: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 886.14 to MP 886.74 rather than deviating to the south from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected because of its proximity to a cultural resource site and it would result in paralleling a stream. The proposed route would provide a closer to perpendicular crossing of the stream, which would minimize impacts to the stream, generate less wetland impact, and avoid potential impacts to a cultural resource. In consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

• Route Variation 2: This route variation would involve paralleling existing Transcontinental Gas Pipe Line Company, LLC Mainline D along the south side of the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 886.74 to MP 890.48. The proposed route in this area begins on the south side of the existing maintained ROW, deviates from the existing maintained ROW from MP 886.14 to MP 886.74, and then crosses over to the opposite side (north side) of the existing maintained ROW for the remainder of the route. This route variation would extend along the majority of the proposed Billingsley Loop and would parallel the existing Transcontinental Gas Pipe Line Company, LLC Mainline A. This route was not selected because a crossover would be required before reaching Compressor Station 100 in order to enter the facility on the north side of the existing lines. Therefore, in consideration of the information presented the Corps has determined that it is not a practicable alternative (not the LEDPA).

• Route Variation 3: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 888.77 to MP 888.86 rather than deviating to the north from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected because it would result in paralleling a stream. The proposed route would provide a closer to perpendicular crossing of the stream, thus minimizing impacts to the

stream and would also result in less wetland impact. In consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

• Route Variation 4: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 889.29 to MP 889.39 rather than deviating very slightly to the north. This route variation was not selected because it would result in paralleling a stream and greater impact to a wetland. The proposed route would provide a closer to perpendicular crossing of the stream, thus minimizing impacts to the stream and would also result in less wetland impact. In consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

• Route Variation 5: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 889.74 to MP 889.84 rather than deviating slightly to the north from the existing maintained ROW. This variation was not selected because a very slight pullout is necessary to better align the crossing of Little Mulberry Creek. In consideration of this information and other information within the FEIS, the Corps has determined that this alternate route is not practicable (not the LEDPA).

(*dd*) Autauga Loop: Transcontinental Gas Pipe Line Company, LLC evaluated three alternative routing scenarios along the Autauga Loop portion of the Hillabee Expansion Project:

• Route Variation 1: This route variation would involve switching the proposed route to the opposite side (south side) of the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 890.67 to MP 898.15. This route variation would extend along the entire proposed Autauga Loop and would parallel the existing Transcontinental Gas Pipe Line Company, LLC Mainline C rather than the existing Transcontinental Gas Pipe Line Company, LLC Mainline E. This route variation was not selected because it would require two crossovers due to discharge from Compressor Station 100. As noted in the information above crossovers present logistical challenges and are reserved for special circumstances where traditional methods are not practicable; therefore, in consideration of the information presented the Corps has determined that it is not a practicable alternative (not the LEDPA).

• Route Variation 2: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 892.05 to MP 892.33 rather than deviating to the north from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected due to two paralleling streams. The proposed route avoids impact to one stream and provides for a closer to perpendicular crossing of another stream, thus minimizing impact to the streams. In consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

• Route Variation 3: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 893.10 to MP 893.25 rather than deviating to the north from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected due to a paralleling stream. The proposed route provides for a closer to perpendicular crossing of, thus minimizing impact to the stream. In consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

(*ee*) Verbena Loop: Transcontinental Gas Pipe Line Company, LLC evaluated two alternative routing scenarios along the Verbena Loop portion of the Hillabee Expansion Project:

• Route Variation 1: This route variation would involve remaining collocated along the north side of the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 905.77 to MP 909.65 rather than crossing over to the south side of the ROW in this area. Although this route variation would not require crossovers, it was not selected because it would cross through the dam of a large pond. Crossing over to the south side of the existing maintained ROW would avoid impacts to the pond. In consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

• Route Variation 2: This route variation would involve remaining collocated along the south side of the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 906.71 to MP 907.45 rather than deviating to the south from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected due to two paralleling streams (over 2,000 linear feet of streams) and a fringing wetland. The proposed route would avoid the streams

and would also result in less wetland impact. In consideration of this information, the Corps determined that this route variation generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

(*ff*) Proctor Creek Loop: Transcontinental Gas Pipe Line Company, LLC evaluated four alternative routing scenarios along the Proctor Creek Loop portion of the Hillabee Expansion Project:

• Route Variation 1: This route variation would involve switching the proposed route to the opposite side (north side) of the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 911.12 to MP 916.45. This route variation would extend along the entire proposed Proctor Creek Loop and would parallel the existing Transcontinental Gas Pipe Line Company, LLC Mainline A rather than the existing Transcontinental Gas Pipe Line Company, LLC Mainline D. This route variation was not selected because it would require a crossover to tie-in to existing mainline at the end of the loop. As noted in the information above crossovers present logistical challenges and are reserved for special circumstances where traditional methods are not practicable; therefore, in consideration of the information presented the Corps has determined that it is not a practicable alternative (not the LEDPA).

• Route Variation 2: This route variation would involve remaining collocated and along the south side of the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 914.20 to 914.55 rather than deviating to the south from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected due to multiple stream crossings and two paralleling streams, including Proctor Creek. The proposed route would avoid streams (the two unnamed streams and Proctor Creek) as well as provide for closer to perpendicular crossing of one of the streams, thus minimizing impact to aquatic resources. In consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

• Route Variation 3: This route variation would involve maintaining the offset from the existing Transcontinental Gas Pipe Line Company, LLC Mainline D from MP 915.77 to 915.85 rather than pulling the line in slightly to the north and further into the existing maintained ROW to avoid a residence. This route variation was not selected because a pull in is necessary to avoid the residence. Reducing the offset between the centerline of the proposed loop and the closest adjacent existing pipeline is typically not a preferred practice as described in Transcontinental Gas Pipe Line Company, LLC's "Resource Report 1"; however, Transcontinental Gas Pipe Line Company, LLC has

determined that it is necessary in this area to avoid impacts to the residence. In an effort to avoid greater impacts to the human environment the applicant suggested that this variation is not a practicable alternative. When considering Proctor Creek Variation 3 does not include proposed impacts to waters of the U.S., but would affect a residence, the Corps concluded that the route is not the LEDPA.

• Route Variation 4: This route variation would involve maintaining the offset from the existing Transcontinental Gas Pipe Line Company, LLC Mainline D from MP 916.30 to 916.45 rather than pulling the line in slightly to the north and further into the existing maintained ROW to avoid a residence. This route variation was not selected because a pull in is necessary to avoid the residence. Reducing the offset between the centerline of the proposed loop and the closest adjacent existing pipeline is typically not a preferred practice as described in Resource Report 1; however, Transcontinental Gas Pipe Line Company, LLC has determined that it is necessary in this area to avoid impacts to the residence. When considering Proctor Creek Variation 4 does not include proposed impacts to waters of the U.S., but would affect a residence, the Corps concluded that the route is not the LEDPA.

(*gg*) Hissop Loop: Transcontinental Gas Pipe Line Company, LLC considered one routing alternative to the proposed project along the Hissop Loop section of the Hillabee Expansion Project. The evaluated route variation would involve switching the proposed route to the opposite side (south side) of the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 924.27 to MP 926.85. This route variation would extend along the entire proposed Hissop Loop and would parallel the existing Transcontinental Gas Pipe Line Company, LLC Mainline B rather than the existing Transcontinental Gas Pipe Line Company, LLC Mainline D. This route variation was not selected because it would require two crossovers to tie-into the existing lines (one at the beginning and one at the end of the Hissop Loop). As noted in the information above, crossovers present logistical challenges and are reserved for special circumstances where traditional methods are not practicable; therefore, in consideration of the information presented, the Corps has determined that it is not a practicable alternative (not the LEDPA).

(*hh*) Alexander City Loop: Transcontinental Gas Pipe Line Company, LLC evaluated four alternative routing strategies along the Alexander City Creek Loop section of the Hillabee Expansion Project:

• Route Variation 1: This route variation would involve switching the proposed route to the opposite side (south side) of the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 941.83 to MP 949.38. This route variation would extend along the entire proposed Alexander City Loop and would parallel the existing

Transcontinental Gas Pipe Line Company, LLC Mainline B rather than the existing Transcontinental Gas Pipe Line Company, LLC Mainline D. This route variation was not selected because it would require a restricted construction corridor due to being in close proximity to Miller Lake and a power plant, both of which are located on the south side of the existing maintained ROW. As such, the logistics of this route render it impractical. In consideration of the information noted above and within the FEIS, the Corps has determined that the route is not a practicable alternative (not the LEDPA).

- Route Variation 2: This route variation would involve maintaining the offset from the existing Transcontinental Gas Pipe Line Company, LLC Mainline D from MP 941.91 to MP 942.03 rather than pulling the line in slightly to the south and further into the existing maintained ROW to avoid an existing meter station. This route variation was not selected because a pull in is necessary to avoid the meter station. Reducing the offset between the centerline of the proposed loop and the closest adjacent existing pipeline is typically not a preferred practice as described in Resource Report 1; however, Transcontinental Gas Pipe Line Company, LLC has determined that it is necessary in this area to avoid impacts to the meter station. In consideration of the information noted above and within the FEIS, the Corps has determined that the route is not the LEDPA.

- Route Variation 3: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 943.65 to MP 943.97 rather than deviating to the north from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected due to a paralleling stream (Oaktasasi Creek) and poor alignment for the stream crossing. The proposed route would provide for closer to perpendicular crossing of Oaktasasi Creek, thus minimizing impact to the stream and would also avoid crossings of two additional streams. In consideration of this information, the Corps determined that this route generates greater adverse effects upon aquatic resources and other environmental features; and, therefore, is not the LEDPA.

- Route Variation 4: This route variation would involve paralleling the existing Transcontinental Gas Pipe Line Company, LLC ROW from MP 944.76 to MP 945.15 rather than deviating to the north from the existing maintained ROW. Although this route variation would result in greater collocation with existing maintained ROW, it was not selected because it would not provide adequate workspace for the crossings of two large creeks, Town Creek and Hillabee Creek. In light of the referenced work space related logistical challenges (i.e. Variation 4 would not provide the needed work space for the required creek crossings), the Corps has determined that this route is not a practicable alternative (not the LEDPA).

(*ii*) Aboveground Facility Variations:

• The FEIS contemplates (FEIS section 4.4.1.1) modifying Transcontinental Gas Pipe Line Company, LLC's existing Compressor Station 85 as an alternative to constructing Compressor Station 84; however, Compressor Station 85 is designed to serve the Mobile Bay Lateral, which extends south for approximately 120 miles to Mobile, Alabama. Based on hydraulic modeling information provided by Transcontinental Gas Pipe Line Company, LLC independently verified by FERC engineering staff, SAM determined that modifying Compressor Station 85 is not feasible because the modification would interrupt service on the Mobile Bay Lateral. Modeling further determined that the additional compression needed for the Hillabee Expansion Project must be located no more than 2 miles upstream (west) from Compressor Station 85. Transcontinental Gas Pipe Line Company, LLC searched for suitable sites along its mainline facilities but found no alternatives to the proposed site; and, no other alternative sites were identified during a review by SAM.

• The use of electric-driven compressors were evaluated as an alternative to the proposed natural gas fired compressor units at Compressor Station 84 because electric-driven compressors would not result in any direct air emissions. However, natural gas is a secondary source of energy, meaning that other sources of energy are used to create electricity. About 54 percent of the electricity generated in Alabama comes from the burning of fossil fuels; thus, the use of electric-driven compressors at Compressor Station 84 would result in regional air emissions. In addition, a high-voltage power line would have to be constructed to the compressor station site, which would result in additional environmental impacts compared to Transcontinental Gas Pipe Line Company, LLC's proposal. Lastly, the use of natural gas to power compressors is more reliable than electric service, which can be more readily interrupted by storms or extreme power demands. For these reasons we concluded that the use of electric-driven compressors at Compressor Station 84 does not offer a significant environmental advantage when compared to the proposed action and is not preferable to the proposed action. The proposed alternative involves logistical challenges; and, therefore, in consideration of the information presented above and within the FEIS the Corps has determined that it is not a practicable alternative (not the LEDPA).

(*ii*) Sabal Trail Project:

(*aa*) Station 85 Route: This alignment alternative would commence at Transcontinental Gas Pipe Line Company, LLC's Station 85 in Choctaw County, Alabama, and extended southeast roughly paralleling the Florida border prior to a tie-in with the currently proposed alignment at approximate mile post (MP) 269.1 (reference

the FEIS section 4.3.1.1 and FEIS Figure 4.3.1-1). While the Station 85 Route alternative increases the extent of collocation with existing utility infrastructure by 10.1 miles, the primary disadvantages of this alternative are that it would be 56.3 miles longer (additional cost) and affect a total of 222.6 acres more wetlands (with the sub-set area of impacts to forested wetlands increasing by 221.7 acres) (additional environmental impact). The Station 85 Route alternative also would cross 85 more miles of karst features (environmental risk), 65.6 more miles of recreation and special interest areas (environmental impact), and be within 50 feet of 6 more residences than the corresponding segment of the proposed route, which increases adverse effects to people (human environment) (reference the FEIS section 4.3.1.1 and Table 4.3.1-2). In consideration of the information associated with this alternative, the Corps determined that this route generates greater adverse effects upon wetlands, aquatic resources, and other environmental features; and, therefore, is not the LEDPA.

(*bb*) FGT Onshore Route: The FGT Onshore Route alternative is a comparison of the potential impacts of the SMP Project between MP 0.0 and the point where the Sabal Trail Project pipeline route intersects the existing FGT pipeline system in Suwannee County, Florida (at approximate MP 299.8), plus the impacts associated with Transcontinental Gas Pipe Line Company, LLC's Hillabee Expansion Project. As initially conceptualized, this route is compared to a route that begins at Transcontinental Gas Pipe Line Company, LLC Station 85 in Choctaw County, Alabama, and extends south along existing pipeline ROW to the intersection with the FGT pipeline system in northwestern Mobile County, Alabama. The Florida portion of this route alternative would follow the FGT route where it enters Florida from Alabama to the intersection with the Project at approximate MP 299.8, in Suwannee County, Florida (reference the FEIS section 4.3.1.2 and Figure 4.3.1-1). From an environmental perspective, the primary advantages of the FGT Onshore Route alternative as compared to the corresponding segment of the Sabal Trail – Hillabee Expansion Project Pipelines (ST-HE Pipeline) are that it would increase the extent of collocation with existing utility infrastructure by 85 miles, avoids construction of 161.7 miles of pipeline and one compressor station in Georgia, eliminates the Hillabee Expansion Project, and would be within 50 feet of 22 fewer residences. The primary environmental disadvantages of the FGT Onshore Route alternative are that it would be 84.5 miles longer than the corresponding segment of the ST-HE Pipeline; and, thereby adversely affect more land during construction and operation of the pipeline. The FGT Onshore Route alternative would also adversely affect a total of 522.2 acres more wetlands (with the sub-set of impacts to forested wetlands increasing by 511.8 acres) (additional environmental impact), 57.9 miles more of karst features (environmental risk), and 115.4 miles more of special interest or recreational areas (environmental impact), and an additional 65 miles of environmental justice communities (human environment) than the corresponding segment of the ST-

HE pipeline (reference the FEIS section 4.3.1.2 and Table 4.3.1-3). Because this alternative would generate significant additional adverse effects to the aquatic environment, including wetlands, the Corps determined that it is not the LEDPA.

(*cc*) Sabal Trail/Hillabee Gulf of Mexico Route: The Sabal Trail/Hillabee Gulf of Mexico Route alternative (Gulf Alternative or Gulf Crossing Route) is a comparison of the potential impacts of the Project between MP 0.0 to a point near the terminus of Sabal Trail Transmission, LLC's proposed CCL (at approximate MP 390.0) plus Transcontinental Gas Pipe Line Company, LLC's Hillabee Expansion Project to a route alternative that begins at Transcontinental Gas Pipe Line Company, LLC Station 85 in Choctaw County, Alabama, extends south along existing pipeline ROW and crosses the Gulf of Mexico from the vicinity of Mobile Bay to a point near the terminus of Sabal Trail Transmission, LLC's proposed CCL. The offshore portion of this route is largely adjacent to the existing Gulfstream pipeline system (reference the FEIS section 4.3.1.3 and Figure 4.3.1-1). As identified in the FEIS Table 4.3.1-4, the Gulf Crossing Route alternative would result in significantly less adverse environmental effects to terrestrial resources than the Sabal Trail Project Mainline route, reduce the amount of compression required for operating the pipeline, completely avoid land within the State of Georgia, and impact less environmental justice populations. However, the alternative generates substantial effects to the marine environment of the Gulf of Mexico, including physical effects upon the seafloor and temporary increases in turbidity that would occur during deep water construction, which would not occur in conjunction with the SMP Project. This alternative also would generate adverse effects upon 332.0 miles of essential fish habitat and 15.5 miles of the Florida Middle Grounds, which is designated by the National Marine Fisheries Service (NMFS) as a Habitat Area of Particular Concern. Additionally, the route would adversely affect a total of 42.5 acres more wetlands (with the sub-set of impacts to forested wetlands increasing by 68.9 acres) (environmental impact). Sabal Trail Transmission, LLC moreover, noted in its application that constructing the Gulf Crossing Route alternative would cost at least $2.2 billion more than the SMP Project (cost factor). Although the ecological effects associated with the Gulf Crossing Route are substantially different and generally cannot be directly compared to the ecological effects associated with the SMP Project route, in consideration of the information noted above and additional information within the FEIS (reference the FEIS section 4.3.1.3 and Table 4.3.1-4), the Corps has determined that the Gulf Crossing Route alternative would not damage the overall environment less than the proposed SMP Project route (would not be the LEDPA). In addition, due to the additional cost, the Corps has determined that the Gulf Crossing Route is not a practicable alternative. As such, the Corps determined that it is not the LEDPA.

(*dd*) Hillabee Route: Sabal Trail Transmission, LLC evaluated the co-location of its proposed pipeline route within existing electric transmission infrastructure to the greatest extent practicable. The Hillabee Route alternative would follow an existing 345-kV transmission ROW starting in Alabama, traverse Georgia, and pass into northern Florida. The Hillabee Route alternative deviates from the proposed route at MP 42.2, extends southeast for approximately 214.24 miles, and rejoins the proposed route at MP 252.3 (reference the FEIS section 4.3.1.4 and Figure 4.3.1-1). The Hillabee Route alternative avoids effects upon the communities of Albany and Moultrie, Georgia; however, would generate adverse effects upon the communities of Americus, Tifton, Adel, Bemis, and Valdosta, Georgia. The primary advantages of the Hillabee Route alternative are that it would be collocated with existing ROW for 94 percent of its length and affect 95.5 fewer acres of forest land (environmental advantage). In addition, this alternative would be within 50 feet of 3 fewer residences (human environment). The primary disadvantages of this alternative are that it would be 4 miles longer (cost) and affect a total of 87 acres more wetlands (with the sub-set area of impacts to forested wetlands increasing by 54.8 acres) (environmental impact); cross 0.5 additional miles of recreational and special interest areas (environmental impact); and cross 10.6 more miles of karst features (environmental risk) (reference the FEIS section 4.3.1.4 and Table 4.3.1-5). In consideration of the additional significant adverse effects to the aquatic environment, including wetlands, the Corps determined that this alternative is not the LEDPA.

(*ee*) Interstate 75 Route: The Interstate 75 Route Alternative deviates from the proposed route at MP 252.2 in Hamilton County, Florida, and heads in an easterly direction along County Road (CR) 152 before it begins to follow Interstate 75 (I-75). Once at I-75, the route heads in a southerly direction parallel to I-75 for approximately 169 miles before it rejoins the proposed SMP Project route at MP 408.9 in Sumter County, Florida (reference the FEIS section 4.3.1.5 and Figure 4.3.1-1). The primary advantages of the Interstate 75 Route alternative is that it would be located adjacent to an existing ROW for its entire length and affect 7.2 fewer miles of recreation and special interest areas (environmental advantage). While karst features can be crossed by the SMP Project without significant risk to the pipeline and environmental resources, the Interstate 75 Route 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 (environmental advantages). The primary disadvantages of this alternative are that it would be 18.6 miles longer (cost) and affect 224.6 acres more land and 278 acres more forest. Although this route would only affect a total of 0.5 acres more wetlands, the sub-set area of impacts to forested wetlands increases by 13.6 acres. Also, this route would affect 28 more waterbodies during construction (environmental impacts). The Interstate

75 Route alternative would also be within 50 feet of 135 more residences than the corresponding segment of the proposed route (human environment) (reference the FEIS section 4.3.1.5 and Table 4.3.1-6). Due to the cost and logistical concerns about collocation along the interstate, as well as the greater impacts to forested wetlands and water crossings, the applicant expressed an opinion that this route is not practicable; and, therefore, not the LEDPA. In consideration of the additional adverse effects to the aquatic environment, including forested wetlands and stream systems, the Corps has determined that this alternative route is not the LEDPA.

(*ff*) FGT to Central Florida Hub: The FGT to Central Florida Hub alternative would commence near MP 316.8, the point where the proposed pipeline route would cross FGT's mainline, and ends at approximate MP 474.4, the Central Florida Hub. The route would be largely collocated with the western branch of FGT's pipeline system. The FGT to Central Florida Hub Route Alternative deviates from the proposed route at MP 316.8 in Gilchrist County, extends in a southerly direction towards Sumter County, and then turns east to MP 474.4 where it rejoins the proposed route in Osceola County at the proposed Reunion Compressor Station site. The FGT to Central Florida Hub Route alternative would be located to the west of the corresponding segment of the proposed route and would include the impacts associated with an approximate 3.1 mile extension of the Citrus County Line from the intersection of the alternative, west to the Citrus M&R Station (reference the FEIS section 4.3.1.6 and Figure 4.3.1-1). 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. The primary advantages of the FGT to Central Florida Hub Route Alternative are that it would be located adjacent to an existing ROW for 92.9 more miles and affect a total of 80.6 acres less wetlands (with the sub-set area of impacts to forested wetlands decreasing by 41.8 acres) (environmental advantages). The primary disadvantages of this alternative are that it would be 24.8 miles longer and cross 155 more roadways (costs), affect 299.5 more acres of land, cross 17 more waterbodies (environmental impact), cross 9.7 more miles where the underlying limestone bedrock is bare or thinly covered (environmental risk), and be within 50 feet of 384 more residences than the corresponding segment of the proposed route (human environment) (reference the FEIS section 4.3.1.6 and Table 4.3.1-7). Sabal Trail Transmission, LLC expressed an opinion that the FGT to Central Florida Hub Route Alternative is not practicable because it presents logistical, technological, and cost issues that would preclude implementation. In particular, because of the concentration of numerous densely populated areas along the existing FGT route, construction along substantial portions of this route alternative (approximately 100 miles) would not be practical. Further, following the existing powerline and pipeline corridor would not be feasible, as the space is currently occupied by electric transmission lines and natural gas pipelines; and, there is insufficient

available space to install an additional pipeline and insufficient land available to adequately expand the width of the ROW. This alternative also would affect 384 more residences, which is not logistically practical and would significantly increase the project costs. In consideration of the logistical constraints associated with this alternative, the additional substantial costs associated with this alternative, and other information within the FEIS, the Corps has determined that this alternative is not practical; and, as such, is not the LEDPA.

(*gg*) Waccasassa Flats: Sabal Trail Transmission, LLC evaluated this alternative in response to concerns expressed by the Gilchrist County BOCC; and, to address concerns regarding the proposed pipeline route's impact on karst terrain, known springs, its proximity to residences, and its impacts on landowners. The Gilchrist Pipeline Committee, a committee formed by residents of Gilchrist County, Florida, identified the Waccasassa Flats variation during the FERC Pre-Filing Process to address the Sabal Trail Project pipeline route through their county. The Waccasassa Flats variation deviates from the proposed route at MP 320.7 and extends south for approximately 5.3 miles, which relocates the pipeline alignment approximately 3.0 to 4.0 miles west of the proposed route. It continues in a southeasterly direction for approximately 6.1 miles, crossing wetland areas associated with Waccasassa Flats, and crosses State Road (SR) 26. After the alternative crosses SR 26, it turns south again for approximately 3.0 miles, then angles east-southeast for approximately 5.0 miles, crossing Levy County and rejoining the proposed route in Alachua County at MP 339.4 (reference the FEIS section 4.3.2.7 and Figure 4.3.2-6). The primary advantage of the Waccasassa Flats variation is that it would affect 51 fewer tracts of land. The primary disadvantages of this alternative are that it would not be collocated with existing ROWs (environmental impact), it would be 0.7 mile longer (cost), and affect 9.4 more acres during construction than the corresponding segment of the proposed route. The Waccasassa Flats variation would affect a total of 47.5 acres more wetlands (with the sub-set area of impacts to forested wetlands increasing by 44.6 acres); and, it would cross eight additional waterbodies than the corresponding segment of the proposed route (environmental impact) (reference the FEIS section 4.3.2.7 and Table 4.3.2-7). In consideration of the increased adverse effect upon the aquatic environment, including forested wetlands and stream systems, the Corps has determined that this alternate route is not the LEDPA.

(*hh*) Rails to Trails: The Rails to Trails variation would relocate the pipeline alignment to the west of the proposed route in an attempt to increase collocation along existing ROWs within the Green Swamp. The Rails to Trails variation deviates from the proposed route at MP 436.0, extends due south along the Sumter and Lake county line until it reaches an existing abandoned railroad corridor and the General James A. Van

Fleet State Trail. This trail is part of Florida's Statewide System of Greenways and Trails (one of the state's most rural, paved rail-trails; and, designated as a National Recreation Trail) and crosses the Green Swamp Area. The pipeline route would follow this corridor and trail in a southeasterly direction for approximately 15.1 miles and then turn east for approximately 7.0 miles along the Lake and Polk county lines and rejoin the proposed route at MP 456.5 (reference the FEIS section 4.3.2.10 and Figure 4.3.2-7. The primary advantages of the Rails to Trails variation are that it would be adjacent to existing ROWs for an additional 13.5 miles, cross 2 fewer waterbodies, affect 38 fewer tracts of land (environmental advantages), and would be located within 50 feet of five fewer residences (human environment). The primary disadvantages of this alternative are that it would be 1.6 miles longer and affect 19.3 more acres than the corresponding segment of the proposed route (costs). The Rails to Trails variation would affect 34.5 more acres of forest land and affect a total of 36.6 acres more wetlands (with the sub-set area of impacts to forested wetlands increasing by 43.5 acres) (environmental impact). It would cross 1.6 more miles of karst features (environmental risk) and 10.3 miles more recreation and special interest areas, including the Green Swamp Area (environmental impact) (reference the FEIS section 4.3.2.10 and Figure 4.3.2.7). In consideration of the significant additional adverse effect upon aquatic resources, including forested wetlands, the Corps has determined that this alternate route is not the LEDPA.

(*ii*) Sasser: In response to comments raised by landowners, Sabal Trail Transmission, LLC evaluated three separate variations (Sasser Variation 1, 2, and 3) in Terrell, Lee, and Dougherty counties, Georgia.

• Sasser Variation 1 diverges from the mainline route about 1.5 miles northeast of Sasser, Georgia, at MP 138.5 in Terrell County and extends southerly into Dougherty County. It is generally offset about 2.5 to 3.0 miles to the west of and parallel to the mainline route and rejoins the route near MP 159.4. Sasser Variation 1 is collocated with existing ROW for 5.7 percent more of its length, impacts 18.6 acres less of forested lands (environmental advantages), crosses 31 fewer tracts, is within 50 feet of 4 fewer residences (costs), and crosses environmental justice communities for 1.6 miles less (human environment). However, it is approximately 1 mile longer, impacts an additional 11.6 acres of land (costs), crosses 8 additional waterbodies (environmental impact), and requires a 1-mile-long inlet/outlet lateral to access the proposed West Oakridge Road Compressor Station site, increasing the land requirements and impacts (reference the FEIS section 4.3.2.2 and Table 4.3.2-2. The impacts associated with the proposed route and the Sasser Variation 1 route have only minor differences (e.g., respectively 34.3 acres versus 34.2 acres of wetlands affected; and, 30.0 acres versus 31.6 acres of

forested wetlands affected). However, the Sasser Variation 1 route would cross 8 additional waterbodies; and, therefore, includes a minor increase in work affecting aquatic resources. As such, the Corps determined that it is not the LEDPA.

• Sasser Variation 2 also diverges from the proposed route near MP 138.5 and extends southerly for about 6 miles on a route similar to Sasser Variation 1 and then southeasterly to rejoin the mainline route at approximate MP 150.0. Sasser Variation 2 is collocated with existing ROW for 21.7 percent of its length and impacts 28.5 acres less of forested lands (environmental advantages). However, the variation is approximately 1.1 mile longer, impacts an additional 13.4 acres of land (costs), an additional 12.9 acres of wetlands, an additional 15.1 acres of forested wetlands, crosses 13 more waterbodies (environmental impacts), crosses 18 more tracts, and affects 1.4 miles more of environmental justice communities (human environment). Reference the FEIS section 4.3.2.2 and Table 4.3.2-2. In comparison to the proposed route, the Sasser Variation 2 route, conversely, would significantly increase impacts to wetlands (i.e., respectively 12.2 acres versus 25.1 acres of wetlands affected; and, 9.1 acres versus 24.2 acres of forested wetlands affected). In addition, the Sasser Variation 2 route would cross 13 additional waterbodies. In consideration of this information, the Sasser Variation 2 has a significantly greater environmental impact to aquatic resources. Therefore, the Corps determined that it is not the LEDPA.

• Sasser Variation 3 is a minor offset from the proposed route that traverses Lee County rather than Terrell County between MPs 141.6 and MP 146.7. Reference the FEIS section 4.3.2.2 and Figure 4.3.2-1. Sasser Variation 3 crosses more agricultural land than the proposed route, impacting 20 acres less of forested land. It also crosses 4.1 miles less of environmental justice communities and crosses 3 fewer tracts, but impacts an additional 1.6 acres of wetlands and is within 50 feet of 1 additional residence than the mainline route (reference the FEIS section 4.3.2.2 and Table 4.3.2-2). In comparison to the proposed route, the Sasser Variation 3 route would slightly increase work affecting wetlands (i.e., respectively 1.0 acres versus 2.6 acres of wetlands affected; and, 1.0 acres versus 2.3 acres of forested wetlands affected). As such, the Sasser Variation 3 route includes a minor increase in work affecting aquatic resources. Therefore, the Corps determined that it is not the LEDPA.

• The Sasser Variations are in the same general area west of Albany and are similar lengths as the corresponding segments of the mainline route. As a result, land requirements and resource impacts are not significantly different than the corresponding mainline routes (reference the FEIS section 4.3.2.2 and Table 4.3.2-2). Because the impacts are generally similar, the variations would merely shift the impacts from the current set of landowners to a new set of landowners. The Corps has evaluated the

information within the FEIS and other reports. In consideration of this analysis and the information summarized above, the Corps has determined that none of these alternate routes (Sasser Variations) are the LEDPA.

(*jj*) Moultrie: Sabal Trail Transmission, LLC evaluated six separate variations (Moultrie Variations 1, 2, 3, 4, 5, and 6) in Colquitt County, Georgia, to avoid impacts on a Georgia Department of Natural Resources Centennial farm, residence, and other properties in the area. Sabal Trail Transmission, LLC expressed an opinion that the primary disadvantages of the Moultrie Variations 1 through 6 are that they are longer (costs), are less collocated with existing ROWs (environmental impacts), and subsequently result in greater land disturbance, environmental impacts, and/or impact other landowners that would not be affected when compared to the proposed SMP Project (reference the FEIS section 4.3.2.3 and Figure 4.3.2.2). The Corps examined the similarities and differences between these routes. Table 4.3.2-4 in the FEIS provides a comparison summary of the various impacts associated with the proposed route and the Moultrie routes. That table indicates that the Moultrie Variations 1 through 4 significantly increase the area of work affecting wetlands and forested wetlands; and, all include additional crossings of waterbodies. Therefore, the adverse effects to aquatic resources associated with Moultrie Variations 1 through 4 are substantially greater; and, as such, these potential routes are not the LEDPA. As also noted in that table, Moultrie Variation 5 would slightly increase the area of wetlands and forested wetlands affected (1.2 acres versus 2.2 acres of wetlands affected; and, 1.2 acres versus 2.2 acres of forested wetlands affected); and, increase the crossed waterbodies by one. As such, although to a lesser extent than the Moultrie Variations 1 through 4, Moultrie Variation 5 is not the LEDPA. Finally, as noted in that table, Moultrie Variation 6 affects 0.1 acre less wetlands and forested wetlands; and, crosses the same number of waterbodies. Therefore, the impacts upon aquatic resources for the proposed route and Moultrie Variation 6 are basically equivalent. However, the construction land requirements and operation land requirements for proposed route in comparison to the Moultrie Variation 6 are lower (i.e., respectively 5.8 acres versus 8.4 acres for construction; and, 4.2 acres versus 2.9 acres for operation). As such, the logistics associated with the Moultrie Variation 6 are greater and render this route impractical. Therefore, considering the lack of significant environmental advantages, the Corps concludes that the Moultrie Variation 6 is not the LEDPA. In summary, in consideration of this information and other information within the FEIS, the Corps has determined that none of the Moultrie Variation alternate routes are the LEDPA.

(*kk*) Audubon: Working with Audubon Florida, Sabal Trail Transmission, LLC evaluated variations in Lake and Polk Counties, Florida, to avoid state owned lands (including the Halpata Tastanaki Preserve).

• The Highway 474/27 Variation was identified to avoid crossings of wetlands, state lands, and conservation easements between MPs 454 and 464 in Lake County, Florida (environmental advantages). It diverges from the mainline route at approximately MP 454.4 and extends eastward along the south side of State Highway 474 for approximately 6 miles, then turns south and travels along the west side of U.S. Highway 27 for approximately 3.8 miles until it rejoins the proposed route at MP 464.3 (reference the FEIS section 4.3.2.10 and Figure 4.3.2-7). The Highway 474/27 Variation is very similar in length and land disturbance compared to the corresponding mainline route. The variation is collocated with other ROW for 58 percent of its length, compared to 12 percent for the corresponding mainline route, and it crosses two fewer waterbodies, 3.9 acres less forested land, and about 1.5 miles less of recreation and special interest areas (e.g., the Jahna Conservation Easement), which provide several environmental advantages. The disadvantages of this variation are that it affects a total of 20.5 acres more wetlands (with the sub-set area of impacts to forested wetlands increasing by 2.3 acres), 5 additional tracts of land, and crosses a portion of Hilochee Wildlife Management Area, which is not crossed by the corresponding mainline route. In addition, Sabal Trail Transmission, LLC stated that where this variation is offset from developed areas along Highway 27, there is standing water averaging 4 feet deep, which eliminates the ability to use conventional upland construction techniques and, due to the depth of water and soil conditions, requires a 140-foot-wide construction ROW to excavate the trench, keep it open while the pipe is pushed into it, and keep the excavated material from filling back into the trench before the pipeline is installed (a substantial environmental impact). In addition, several areas along Highway 474 are similarly saturated (reference the FEIS section 4.3.2.10). As such, this potential route alternative would affect a significantly larger amount (area) of wetlands and include substantial logistical challenges. In consideration of this information and other information within the FEIS, the Corps has determined that this alternate route is not the LEDPA.

• The State Road 33/Deen Still Road Variation diverges from the mainline route at approximately MP 451.8 and extends south along the east side of SR 33 for approximately 9.6 miles, then turns east along the south side of Deen Still Road, which becomes Ronald Reagan Expressway (after crossing U.S. Highway 27), for approximately 12.8 miles, and then turns to the northeast to follow the south side of the Osceola/Polk County Line Road for about 4.5 miles into the proposed CFH/Reunion Compressor Station at MP 474.4 (reference the FEIS section 4.3.2.10 and Figure 4.3.2-7). The Highway 33/Deen Still Road Variation is collocated with other ROW for 89 percent of its length compared to 25 percent for the corresponding mainline route and crosses 4.2 miles less recreation and special interest areas (environmental advantages). The variation would impact less non-forested and forested wetlands

(environmental advantages). However, it is about 3.5 miles longer, impacts an additional 42.5 acres of land during construction (costs), is within 50 feet of 28 more residences (human environment), and crosses 2 more waterbodies (environmental impact) and 78 more tracts compared to the corresponding mainline route (reference the FEIS section 4.3.2.10). This route, though, would pass through densely populated areas; and, as noted, affect 28 more residences. In addition to the potential increased disturbance to residents (i.e., noise, dust, restricted access, and the potential for temporary relocation), the proximity of the route to residences and businesses creates technological and logistical concerns that would render this route impractical. Specifically, in order to maintain the required set-back distance from residences and businesses, this route would necessitate the use of specialized construction and restoration techniques (e.g., stove pipe construction, drag sections, bores, HDD, and/or additional commercial and/or residential landscaping). The additional work, requiring additional laborers, would likely increase the time necessary to install the pipeline by approximately 1 month (which, concurrently, increases the secondary impacts to residences and businesses previously noted). In addition, construction within this densely populated area would require additional relocation of utilities (e.g., water/sewer lines, electrical/communication conduits, septic systems, and water wells). Sabal Trail Transmission, LLC estimates that the construction of this alternative, due to the need to purchase additional land, would increase the project costs by a minimum of $9 million dollars. In addition, the route would likely require additional compression, which would require an additional unit at one of the planned compressor stations (which would increase air emissions). The need for an additional unit at a compressor station would also increase the costs of the project associated with this route. In full consideration of the additional costs, Sabal Trail Transmission, LLC estimates that this route alternative would increase the project costs by a minimum of $14.4 million dollars. In consideration of the information within the FEIS; and, the technological, logistical, and costs considerations identified by the applicant, the Corps has determined that this alternate route is not the LEDPA.

(*ll*) Greenlaw Routes: Sabal Trail Transmission, LLC evaluated 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. The GreenLaw Route alternatives would require relocating the Dunnellon Compressor Station to a new site near I-75, and extending the CCL to the new compressor station. The analysis contained herein includes anticipated impacts associated with constructing a 15.5-mile-long extension of the CCL in each GreenLaw Route Alternative analysis (reference the FEIS section 4.3.1.7). The GreenLaw routes propose the placement of the pipeline within the existing ROW of the Interstate highway system.

• GreenLaw Route Alternative 1 (MP 142.7 to MP474.4): The GreenLaw Route Alternative 1 deviates from the proposed route at MP 142.7 where the pipeline intersects with Route 82/Highway 520 at the Terrell and Lee County border in Georgia. From this point, the GreenLaw Route Alternative 1 continues in a southeasterly direction along Route 82 and other existing ROW in a southeasterly direction, staying north of the City of Albany until reaching Interstate 75 near Tifton, Georgia. The alternative then follows I-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 ROW until it rejoins the proposed route near MP 471.4, just north of the CFH/Reunion Compressor Station (reference the FEIS section 4.3.1.7 and Figure 4.3.1-1). GreenLaw Route Alternative 1 would be collocated almost entirely along major highways and pass 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 affect 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 (cost) but is collocated with other existing ROW for 97 percent of its length (environmental advantage), compared to 65 percent for the corresponding mainline route. Constructing the alternative would impact 66.6 acres more land; however, affect a total of 89.9 acres less wetlands (with the sub-set area of impacts to forested wetlands decreasing by 135.6 acres) (environmental advantages). This route also crosses 59.2 miles less of areas designated as environmental justice communities than the proposed route (human environment). However, the alternative also crosses 715 more tracts (cost), is within 50 feet of 115 more residences (human environment), and requires crossing 141 more miles of high consequence areas (HCAs) than the corresponding mainline route (reference the FEIS section 4.3.1.7 and Table 4.3.1-8). HCAs include areas with high population; and, specifically include areas adjacent to a proposed route that contain 20 or more structures intended for human occupancy, buildings housing populations of limited mobility, buildings that would be difficult to evacuate (e.g., nursing facilities and schools), or buildings and/or open areas occupied by more than 20 people on a specified number of days each year (reference 49 C.F.R. Part 192.903). As noted, this route would require work within/through several densely populated areas that are not directly affected by the proposed route. Densely populated areas present logistical impediments that affect the project schedule, constructability, and reliability; and, create safety risks for construction personnel, local traffic, and local residents. For example, as provided by Sabal Trail Transmission, LLC

large over-sized trucks (approximately 100 feet in length) hauling pipe from temporary storage areas to the ROW are specialized vehicles designed to carry 80-foot-long pipe sections (as a point of comparison, the maximum length of semi-trailers on the highway today is 48 feet, or 53 feet in certain conditions allowed by the state under Federal Highway Administration rules); and, due to the size and weight of the pipe sections, only a few pieces can be hauled on each truck, thereby causing a significant number of truck runs through urbanized areas to haul all of the oversized equipment and material. In addition, the GreenLaw Route Alternative 1 would require seven additional HDD drills, 149 additional road crossings, and, at a minimum, five additional mainline valves. In total, the additional HDDs would impose increased construction costs of $3 to $5 million each and require approximately 8 to 10 weeks of additional HDD construction duration. The additional road crossings would result in approximately $11 million in additional construction costs and would extend road bore construction by approximately 11 weeks. This alternative would also include 212.58 miles of additional developed land and would require acquisition of 715 additional parcels at an estimated cost of $80 million. These additional facilities and construction requirements would require up to three additional months for construction and entail additional construction costs of approximately $202 million. This alternative would also cross Paynes Prairie Reserve State Park and Sanchez Prairie / San Felasco Hammock State Park (approximately 2.5 miles of impact for each park). Finally, it would require use of additional water sources for mainline hydrostatic testing as a result of the increased number of test sections required due to terrain, populated areas, additional mileage, and additional HDDs. In consideration of the technological, logistical, and cost considerations summarized above, other information within the FEIS, and other information submitted to the Corps regarding the various alternatives, the GreenLaw Route Alternative 1 is not a practicable alternative. As such, the Corps has determined that this alternate route is not the LEDPA.

- GreenLaw Route Alternative 2 (MP 0.0 to MP474.4): The GreenLaw Route Alternative 2 deviates from the proposed route at MP 0.0, at the proposed Alexander City Compressor Station site, and proceeds west-southwest paralleling four existing Transcontinental Gas Pipe Line Company, LLC pipelines and intersects with Route 280. From that point, the alternative turns southeast to parallel Route 280 toward the City of Opelika, Alabama and Columbus, Georgia. It then turns southwest and continues south along State Road 520 to Sasser, Georgia. At approximate MP 142.7, the GreenLaw Route Alternative 2 intersects with Route 82/Highway 520 along the Terrell and Lee county line in Georgia and follows the same route described above for the GreenLaw Route Alternative 1, to its terminus at the proposed Reunion Compressor Station site at MP 474.4 (reference the FEIS section 4.3.1.7 and Figure 4.3.1-1). GreenLaw Route Alternative 2 is 19.9 miles longer than the corresponding mainline route (cost) but is collocated with existing ROW for 97 percent of its length (environmental advantage),

compared to 72 percent for the corresponding mainline route. GreenLaw Route Alternative 2 would impact 241.2 acres more land; however, it would affect a total of 143.6 acres less wetlands (with the sub-set area of impacts to forested wetlands decreasing by 184.7 acres) than the corresponding mainline route (environmental advantages). It crosses 54.3 miles less of environmental justice communities (human environment) but would affect 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 (human environment). 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 (human environment). As previously noted, work within densely populated areas incorporates logistical, technological, and safety concerns/issues not associated with work in rural or undeveloped areas. The GreenLaw Route Alternative 2 would require four additional HDD crossings, 348 additional road crossings, and at least eight additional mainline valves to accommodate the alternative's location in more densely populated areas. Sabal Trail Transmission, LLC estimates that the additional HDDs would impose increased construction costs of $3 to $5 million each and require approximately 8 to 10 weeks of additional HDD construction duration. The additional road crossings would result in approximately $25 million in additional construction costs and would extend road bore construction by approximately 17 weeks. This route would also require additional compression, in the form of an additional unit at one of the planned compressor stations, given the overall length and hydraulics of the pipeline under this alternative. This alternative would also include 287.9 miles of additional developed land and would require acquisition of 1,347 additional parcels at an estimated cost of $150 million. These additional facilities and construction requirements would require up to 4 additional months for construction and entail additional construction costs of approximately $314 million. This alternative would also cross Paynes Prairie Reserve State Park and Sanchez Prairie / San Felasco Hammock State Park (approximately 2.5 miles of impact for each park). Finally, it would require use of additional water sources for mainline hydrostatic testing as a result of the increased number of test sections required due to terrain, populated areas, additional mileage, and additional HDDs. In consideration of the technological, logistical, and cost considerations summarized above, other information within the FEIS, and other information submitted to the Corps regarding the various alternatives, the GreenLaw Route Alternative 2 is not a practicable alternative. As such, the Corps has determined that this alternate route is not the LEDPA.

• GreenLaw Route Alternative 3 (MP142.7 to MP474.4): Similar to GreenLaw Route Alternative 1, GreenLaw Route Alternative 3 starts at mainline MP 142.7 and follows existing road ROW 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 ROW 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 I-75 in Suwannee County, Florida. From there it follows the same route as GreenLaw Alternative 1 (reference the FEIS section 4.3.1.7 and Figure 4.3.1-1). GreenLaw Route Alternative 3 is 21.0 miles longer than the corresponding mainline route (cost) but is collocated with existing ROW for 96 percent of its length (environmental advantage), compared to 65 percent for the corresponding mainline route. This route would affect 254.5 acres more land and affect a total of 47.8 acres more wetlands; however, the affect to forested wetlands would decrease by 51.2 acres. The alternative also crosses 17 miles less of areas designated as environmental justice communities (human environment). Where GreenLaw Route Alternative 3 crosses the same areas as GreenLaw Route Alternative 1, it would traverse all or new portions of seven cities not affected by the corresponding mainline route (human environment). GreenLaw Route Alternative 3 also crosses developed areas 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 (human environment). The route would also affect Gainesville and Ocala, Florida. 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 (human environment). As previously noted, work within densely populated areas incorporates logistical, technological, and safety concerns/issues not associated with work in rural or undeveloped areas. The GreenLaw Route Alternative 3 would require six HDD crossings, 207 additional road crossings, and at least five additional mainline valves to accommodate the alternative's location in more densely populated areas. Sabal Trail Transmission, LLC estimates that the additional HDDs would impose increased construction costs of $3 to $5 million each and require approximately 8 to 10 weeks of additional HDD construction duration. The additional road crossings would result in approximately $15 million in additional construction costs and would extend road bore construction by approximately 15 weeks. It would also require additional compression, in the form of one additional compressor station and an additional unit at one of the planned compressor stations, given the overall length and hydraulics of the pipeline under this alternative. As previously noted, the additional compression requirements would increase noise and air pollution near the compression site. This alternative would also affect 156.3 miles of additional developed land and would require acquisition of 1,336 additional parcels at an estimated cost of $149 million. These

additional facilities and construction requirements would require up to 4 additional months for construction and entail additional construction costs of approximately $372 million. This alternative would also cross Paynes Prairie Reserve State Park and Sanchez Prairie / San Felasco Hammock State Park (approximately 2.5 miles of impact for each park). Finally, it would require use of additional water sources for mainline hydrostatic testing as a result of the increased number of test sections required due to terrain, populated areas, additional mileage, and additional HDDs. In consideration of the technological, logistical, and cost considerations summarized above, other information within the FEIS, and other information submitted to the Corps regarding the various alternatives, the GreenLaw Route Alternative 3 is not a practicable alternative. As such, the Corps has determined that this alternate route is not the LEDPA.

• GreenLaw Route Alternative 4 (MP 104.3 to MP 474.4): The GreenLaw Route Alternative 4 deviates from the proposed route at MP 104.3 and turns east to follow Route 280 to the Town of Americus, Georgia. It then turns south-southeast, intersects with a Georgia Power corridor, and parallels this corridor to an intersection with I-75 near Philipsburg, Georgia. From this point, the GreenLaw Route Alternative 4 follows the same route as described for the GreenLaw Route Alternative 1 above, to its terminus at the proposed Reunion Compressor Station site at MP 474.4 (reference the FEIS section 4.3.1.7 and Figure 4.3.1-1). GreenLaw Route Alternative 4 is 9.5 miles longer than the corresponding mainline route (cost), but is collocated with existing ROW for 97 percent of its length (environmental advantage), compared to 68 percent for the corresponding mainline route. Constructing the alternative would affect a total of 41.0 acres less wetlands (with the sub-set area of impacts to forested wetlands decreasing by 152.7 acres). 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 (human environment). GreenLaw Route Alternative 4 also crosses developed areas of Richland, Preston, Plains, Americus, and Tifton, Georgia, not affected by the corresponding mainline route (human environment). Furthermore, this alternative crosses 851 more tracts, is within 50 feet of 104 more residences, and requires crossing 129.3 more miles of HCAs than the corresponding mainline route (human environment) (reference the FEIS section 4.3.1.7 and Table 4.3.1-8). As previously noted, work within densely populated areas incorporates logistical, technological, and safety concerns/issues not associated with work in rural or undeveloped areas. The GreenLaw Route Alternative 4 would require eight additional HDD crossings, 169 additional road crossings, and at least four additional mainline valves to accommodate the alternative's location in more densely populated areas. Sabal Trail Transmission, LLC estimates that the additional HDDs would impose

increased construction costs of $3 to $5 million each and require approximately 8 to 10 weeks of additional HDD construction duration. The additional road crossings would result in approximately $12 million in additional construction costs and would extend road bore construction by approximately 10 weeks. This alternative would also include 210.8 miles of additional developed land and would require acquisition of 851 additional parcels at an estimated cost of $95 million. These additional facilities and construction requirements would require up to 3 additional months for construction and entail additional construction costs of approximately $230 million. This alternative would also cross Paynes Prairie Reserve State Park and Sanchez Prairie / San Felasco Hammock State Park (approximately 2.5 miles of impact for each park). Finally, it would require use of additional water sources for mainline hydrostatic testing as a result of the increased number of test sections required due to terrain, populated areas, additional mileage, and additional HDDs. In consideration of the technological, logistical, and cost considerations summarized above, other information within the FEIS, and other information submitted to the Corps regarding the various alternatives, the GreenLaw Route Alternative 4 is not a practicable alternative. As such, the Corps has determined that this alternate route is not the LEDPA.

(*mm*) Albany Northeast: Sabal Trail Transmission, LLC evaluated an alternative pipeline route that would follow the existing SONAT pipeline ROW and continue northeast of the City of Albany, Georgia rather than deviating southwest around the city. The Albany Northeast alternative deviates from the proposed route at MP 141.6 and heads in a southeasterly direction following the SONAT pipeline ROW for approximately 1.0 mile. It then follows the Oglethorpe Power Corporation ROW for approximately 7.0 miles towards the Terrell and Dougherty county line and then east and southeast for approximately 1.8 miles to Old Leesburg Road (SR 133). The alternative would follow this road for approximately 0.8 mile and then follow U.S. Route 82/19 for approximately 9.5 miles staying northeast and east of the City of Albany. The Albany Northeast alternative rejoins the proposed route at MP 165.4 (reference the FEIS section 4.3.2.2 and Figure 4.3.2-1). The primary advantages of the Albany Northeast alternative are that it would be 2.6 miles shorter (cost), collocated with existing ROWs for 13.2 more miles, and affect 43.4 acres less land during construction and operation, respectively (environmental advantages). It would also affect 85 less acres of forest land and 33 less acres of forested wetland than the corresponding segment of the proposed route (environmental advantages). The primary disadvantages of this alternative are that it would be within 50 feet of eight more residences (human environment) and cross 16 more roadways (logistics and cost). The disadvantages of this alternative are that it is routed through substantially more congested residential, industrial, and commercial areas in northern and eastern Albany; along the Liberty Expressway, a 4-lane divided highway; and through approximately 11.8 miles more of HCAs (human environment,

logistics, and costs). This variation also would require several crossovers of U.S. Highway 19 and two crossings of Kinchafoonee Creek, a major waterbody, in north Albany, in addition to a crossing of the Flint River. Implementing this variation would also require relocating the proposed Albany Compressor Station to the southeast of Albany where it could impact environmental justice communities and raise concerns similar to those currently raised for the original site (human environment) (reference the FEIS section 4.3.2.2 and Table 4.3.2-3). As noted, this route alternative would involve work within the limits of the City of Albany, including densely developed areas. Again, as previously indicated, work within densely populated areas incorporates logistical, technological, and safety concerns/issues not associated with work in rural or undeveloped areas. The Albany Northeast alternative would require two additional HDD crossings and 18 additional road crossings. The additional HDDs would impose an estimated increased construction costs of $3 to $5 million each and require approximately four weeks of additional HDD construction duration. Similarly, the additional road crossings would result in approximately $1.3 million in additional construction costs and would extend road bore construction by approximately four weeks. Sabal Trail Transmission, LLC estimates that the total additional costs associated with implementing Albany Northeast alternative would be $11.3 million. In consideration of the technological, logistical, and cost considerations summarized above, other information within the FEIS, and other information submitted to the Corps regarding the various alternatives, the Albany Northeast alternative is not a practicable alternative. As such, the Corps has determined that this alternate route is not the LEDPA.

(*nn*) Lowndes County: Sabal Trail Transmission, LLC evaluated a pipeline route identified by affected landowners, which might avoid or minimize Sabal Trail Project effects on the environment. The Lowndes County alternative deviates from the proposed route at MP 232.5 and heads south for approximately 3.5 miles. It then turns southeast and south for approximately 1.9 and 1.4 miles. At this point, the alternative turns due east for approximately 4.3 miles and rejoins the proposed route at MP 241.3. Sabal Trail Transmission, LLC considered following the SONAT pipeline ROW along its proposed route between MP 232.5 and 241.3; however, it deviated from the ROW to minimize effects on residences and agricultural areas, such as areas near Philips Road. Reference the FEIS section 4.3.2.5 and Figure 4.3.2-4. The primary advantages of the Lowndes County alternative are that it would affect 23 fewer tracts of land (environmental advantage). However, the variation is about 2.1 miles longer (cost), not collocated with any existing ROWs, and affects an additional 25.2 acres of land, 25.3 acres of forested upland, 15.2 acres of wetlands (including 15.1 acres of forested wetlands), and 4 additional waterbodies compared to the corresponding proposed route (multiple environmental impacts) (reference the FEIS section 4.3.2.5 and Table 4.3.2-5).

This potential route alternative would affect a significantly larger amount (area) of wetlands and require additional crossings of waterbodies. In addition, this potential route would include substantial logistical challenges. In consideration of the information associated with this alternative, the Corps determined that this route generates greater adverse effects upon wetlands, aquatic resources, and other environmental features; and, therefore, is not the LEDPA.

(*oo*) Withlacoochee River: Sabal Trail Transmission, LLC evaluated route alternatives to avoid or reduce impacts on sensitive springs and mature trees located adjacent to the Withlacoochee River and/or avoid crossing the Withlacoochee River.

• Withlacoochee Route Alternative 1 (MP 252.4 to MP 270.4): The Withlacoochee Route Alternative 1 deviates from the proposed route at MP 252.4 and turns in a southeasterly direction for approximately 5.5 miles, paralleling a SONAT pipeline corridor that is east of the corresponding segment of the proposed route. It then turns south for approximately 11.6 miles and would be located along Northwest 40th Avenue, 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. Reference the FEIS section 4.3.2.6 and Figure 4.3.2-5). The primary advantages of the Withlacoochee Route Alternative 1 as compared to the corresponding segment of the proposed route are that it would be about 2.2 miles shorter (cost), 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 (environmental advantages) (reference the FEIS section 4.3.2.6 and Table 4.3.2-6). The most significant disadvantage 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 (human environment and cultural resources). 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 (environmental impact), 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 (environmental impact). Within additional information submitted to the Corps, Sabal Trail Transmission, LLC also indicates that this variation would require routing the pipeline in proximity (within 50 feet) to four additional residences and would require the acquisition of 11 additional parcels at an estimated cost of $1.2 million. In consideration of the technological, logistical, and cost considerations summarized above, other information within the FEIS, and other information submitted to the Corps, the Withlacoochee Route

Alternative 1 includes substantial additional adverse effects on the overall environment; and, is not a practicable alternative. As such, the Corps has determined that this alternate route is not the LEDPA.

• Withlacoochee Route Alternative 2 (MP 256.7 to MP 269.1): The Withlacoochee Route Alternative 2 deviates from the proposed route at MP 256.7 and turns west and extends across the Withlacoochee River along an existing Duke Energy Florida (DEF) 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. Reference the FEIS section 4.3.2.6 and Figure 4.3.2-5. The primary advantages of the Withlacoochee Route Alternative 2 as compared to the corresponding segment of the proposed route are that it would be collocated with existing ROWs for 7.2 more miles and is within 0.5 mile of six fewer springs than the proposed route (environmental advantages). However, the variation is 5.6 miles longer (cost) and adversely affects an increased area of forested uplands (environmental impact). The variation also requires an additional HDD crossing of the Withlacoochee River, which is avoided by the proposed route (environmental risk) (reference the FEIS section 4.3.2.6 and Table 4.3.2-6). Sabal Trail Transmission, LLC indicates that this variation would require routing the pipeline in proximity (within 50 feet) to 10 additional residences and would require the acquisition of three additional parcels at an estimated cost of $0.3 million. Sabal Trail Transmission, LLC also indicates that the additional HDD would impose increased construction costs of $3 to 5 million and require approximately 2 to 4 weeks of additional construction time. Finally, in consideration of all of the additional logistical and technological measures associated with this alternative, Sabal Trail Transmission, LLC indicates that the total additional costs associated with implementing the Withlacoochee Route Variation 2 is estimated to be $14 million. As such, the Withlacoochee Route Variation 2 presents significant land use effects that are avoided by the proposed route, including the potential for increased effects to a potentially eligible cultural site that the applicant's team discovered during field investigations. This alternative would also require use of additional water use for mainline hydrostatic testing as a result of the increased number of test sections required due to terrain, additional mileage, and the additional HDD. In consideration of the technological, logistical, and cost considerations summarized above, other information within the FEIS, and other information submitted to the Corps regarding the various alternatives, the Withlacoochee Route Variation 2 is not a practicable alternative. As such, the Corps has determined that this alternate route is not the LEDPA.

(*pp*) Echo Plantation Alternative: The mainline route in this area crosses Echo Planation (the Warner/Harrell Conservation Easement), which is located on the east side of the Suwannee River north of 24th Street. Echo Plantation encompasses about

912 acres. The FEIS indicates that an environmental assessment report provided to the FERC identified the biological, geological, and water resources within the property; and, that the land owner conveyed concerns that the proposed route would affect endangered species, springs, caves, and the underlying Floridan Aquifer. In response, the FERC considered 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 Echo Plantation. However, the FEIS notes that Suwannee River State Park in that area is completely forested, as compared to the corresponding proposed route which is sparsely forested. The Corps examined aerial imagery of the route; and, determined that the proposed route would parallel an existing trail road, affect land apparently managed for silviculture and agriculture and natural lands that appear to be a combination of moderately forested uplands and wetlands. The alternate route, within the Suwannee River State Park, would affect land that appears to be moderately to densely forested uplands and wetlands with a higher area of wetlands based on an interpretation of infrared aerial imagery. Therefore, shifting the route west into the Suwannee River State Park would affect a greater area (acres) of forested lands and affect a greater area of forested wetlands. As such, this alternative would have a greater environmental adverse effect; and, is not the LEDPA.

(*qq*) Halpata Tastanaki Preserve: Sabal Trail Transmission, LLC consulted with the Southwest Florida Water Management District (SWFWMD), Audubon-Florida, and FDEP regarding the proposed pipeline crossing of the Halpata Tastanaki Preserve in Marion County, Florida; and, evaluated numerous route alternatives across this area, including Audubon Variation 1 discussed above. As a result of those discussions, Sabal Trail Transmission, LLC eventually proposed a route where the mainline would cross the Halpata-Tastanaki Preserve using standard upland construction methods (open cut), affecting a mixture of wetlands, open land, and forest land (reference the FEIS section 4.3.2.8, Appendix D, and Table 4.3.2-1). Construction activities would affect 19.6 acres and operations activities would affect 9.3 acres of land within the preserve. To minimize impacts on the Halpata-Tastanaki Preserve, the Sabal Trail Project would be located adjacent to existing utility rights-of-way within the preserve for much of its length. However, similar to other features crossed using the standard construction methods, recreational users would be temporarily affected by project-related noise, dust, traffic, and visual impacts. The Corps reviewed the information associated with the proposed route through the Halpata Tastanaki Preserve, which affects less wetlands than other routes evaluated; and, concludes that the proposed route is the LEDPA.

(*rr*) Green Swamp Transmission Line: Sabal Trail Transmission, LLC evaluated an alternative pipeline route that would deviate from the proposed route near MP 436.0, collocate the proposed pipeline with an existing powerline ROW (near the crossing of Highway 50), and rejoin the proposed route at approximate MP 447.1. Once the Green Swamp Transmission Line Route Alternative deviates from the proposed route, it extends south along an existing power line corridor for about 9 miles, and then east primarily along an existing two-track road for about 5 miles. Reference the FEIS section 4.3.2.10 and Figure 4.3.2-7. The primary advantages of the Green Swamp Transmission Line Route alternative are that it would be collocated with existing ROWs for a greater percentage than the corresponding mainline route, crosses 6 fewer waterbodies, crosses 41 fewer tracts (environmental advantages), and is located within 50 feet of 6 fewer residences (human environment). However, the total length of pipeline required is approximately 2.9 miles longer (cost), and it adversely affects an additional 34.9 acres of land, 24.3 acres of wetlands (including a sub-set increase of 37.1 acres of forested wetlands), and 9.7 miles more of recreation and special interest areas (environmental impacts) (reference the FEIS section 4.3.2.10 and Table 4.3.2-9). Because this alternative would generate significant additional adverse effects to the aquatic environment, including wetlands, the Corps determined that it is not the LEDPA.

(ss) Happy Trails Reroute: Sabal Trail Transmission, LLC evaluated two alternative pipeline routes to address comments received by landowners in the Happy Trails Community in Osceola County, Florida; and, to determine if the SMP Project effects on residences, forests, and wetlands could be further avoided or minimized.

- The first alternative would be located generally north and east (Happy Trails Route Alternative 1) and the second alternative would be located generally south and west (Happy Trails Route Alternative 2) of the community. After Sabal Trail Transmission, LLC conducted additional field work, it adopted the route variation to the north and east of its originally proposed route (Happy Trails Route Alternative 1) as the proposed route through this area (i.e., this is the route incorporated into the SMP Project final route). Reference the FEIS section 4.3.2.11 and Figure 4.3.2-8.

- Happy Trails Route Alternative 2 (MP 467.1 to MP 474.4): The Happy Trails Alternative 2 deviates from the proposed route at MP 467.1 and heads in a southerly direction for approximately 3.8 miles and then heads east near the Champions Gate Golf Resort. At this point the alternative turns east for approximately 5.5 miles crossing golf resort and I-4 before it rejoins the proposed route at MP 474.4 at the proposed Reunion Compressor Station site. Reference the FEIS section 4.3.2.11 and Figure 4.3.2-8. The primary advantages of the Happy Trails Alternative 2 are that it would affect 13 acres less wetlands (including a sub-set of 16.9 acres less forested wetlands)

(environmental advantages); and, crosses 20 fewer tracts (cost). However, it is about 1.2 miles longer than the proposed route (cost), is less collocated with existing ROWs, crosses 3 more waterbodies, and impacts 14.6 acres more land compared to the corresponding mainline route (environmental impacts), including additional habitat that supports red-cockaded woodpecker, Florida scrub jay, crested caracara, and snail kite. Based on aerial and infrared aerial imagery the wetlands along this variation appear to be more mature and higher-functioning forested and/or saturated wetlands in comparison to the wetlands crossed by the proposed route; and, subsequently, even though the total area of wetlands affected is less, this variation could generate a greater loss of wetland functions and have a greater adverse effect on wildlife habitats. As this alternative would be 1.2 miles longer than the certificated route, Sabal Trail Transmission, LLC conveyed a position that this route may require additional compression, in the form of an additional unit at one of the planned compressor stations, given the overall length and hydraulics of the pipeline associated with this alternative. This alternative would also require two additional HDD crossings, as well as sufficient workspace for the equipment to construct the pull-back section of the pipe. In consideration of the heavily populated areas that this alternative traverses, Sabal Trail Transmission, LLC indicated that there is not sufficient land available to accommodate the necessary HDD workspace. As such, Sabal Trail Transmission, LLC indicated that specialized construction resources would also be required and that these resources may not be available within the planned construction timeframe. Therefore, the applicant indicated the additional HDDs would impose increased construction costs of $3 to $5 million each and require approximately 2 to 4 weeks of additional HDD construction duration. In consideration of the additional land, specialized equipment, and other factors associated with this potential route, Sabal Trail Transmission, LLC indicated that the total additional costs associated with implementing the Happy Trails Route Variation would be $11.9 million. In consideration of the technological, logistical, and cost considerations summarized above, other information within the FEIS, and other information submitted to the Corps regarding the various alternatives, the Happy Trails Route Alternative 2 is not a practicable alternative. As such, the Corps has determined that this alternate route is not the LEDPA.

(*tt*) Hall Route Variation: In response to comments received on the DEIS, the FERC evaluated a route variation between approximately MP 148.4 to 148.7 to minimize impacts on a forested wetland and a karst feature in Dougherty County, Georgia. The route variation is parallel to and about 150 feet east of the proposed route in this area and located just east of an existing north-south oriented dirt road on an adjacent landowner's western property line. Both routes are similarly about 2,000 feet long and affect similar amount of land except that one pipeline bend will be eliminated, reducing the need for additional temporary workspaces (ATWS). While this variation

increases the impact on the adjacent landowner (human environment), who is already affected by the proposed route, it avoids crossing about 500 feet of the karst feature and associated forested wetland (environmental advantage), and crosses about 1,300 feet of land with sparse trees that have been selectively cut (environmental advantage), compared to the proposed route which crosses about 1,800 feet of dense forested vegetation. The Corps has determined that this route variation is the LEDPA and should be implemented.

(*uu*) AZ Ocala Route Variation: At the time of the circulation of the DEIS, Sabal Trail Transmission, LLC was still working with the owners of the AZ Ocala Ranch to route the pipeline across their ranch immediately east of Halpata-Tastanaki and Sabal Trail Transmission, LLC subsequently adopted a greenfield route, recommended by the adjoining Drake Ranch, that follows AZ Ocala's southwestern property line and then bisects a central segment of AZ Ocala's property. In comments provided on the DEIS, AZ Ocala requested that the proposed route across their property be moved to collocate with existing rights-of-way, rather than the proposed greenfield route. In particular, AZ Ocala's preferred route starts at the Dunnellon Compressor Station near MP 392.5R and extends due east along the south side of the existing Duke Energy powerline corridor for about 0.9 mile, then turns due south to follow the west side of SW 120th Avenue for about 0.3 mile, then turns due east to follow the south side of SW 152nd Place for about 1 mile, and then turns due south again to follow the west side of SW 110th Avenue for about 0.7 mile before rejoining the proposed route at approximately MP 392.8RR. The variation would be entirely located on AZ Ocala property and collocated with electric transmission and distribution lines, paved and unpaved road rights-of-way, and buried fiber optic line, and is equivalent to the proposed route in terms of length and environmental setting in that both Sabal Trail Transmission, LLC proposed route and AZ Ocala's preferred route cross primarily open grazing land. Approximately 44 tracts lie adjacent to the opposite side of the road rights-of-way that the route variation would follow, about half of which contain residences. However, the route would cross none of those tracts and all would be buffered by their setback from the existing state road rights-of-way, the road surfaces, and the offset of the pipeline from the construction ROW boundary. In addition, AZ Ocala provided documentation that the Sabal Trail Transmission, LLC proposed route would negatively affect on-going developments plans for the AZ Ocala property, in which significant investment has already occurred and is planned. The Corps has determined that this route variation is the LEDPA and should be implemented.

(*vv*) Deerfield Road Variation: Sabal Trail Transmission, LLC incorporated a modification for the Hunters Creek Line along Deerfield Road to address comments received from the FDEP. In general, this alternative reduces work affecting wetlands

and reduces work affecting a Southwest Florida Water Management District conservation easement, which encompasses wetlands. Sabal Trail Transmission, LLC provided a revised alignment sheet depicting these workspace adjustments in the Sabal Trail Project Supplemental III, Volume I, Appendix D. In consideration of the reduction to work affecting aquatic resources, the Corps has determined that this route variation is the LEDPA and should be implemented.

(*iii*) FSC Project:

(aa) 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 ROW northeast around Kissimmee, Florida, before turning south and east until it intersects with an existing FPL 500 kV transmission line ROW. From there it follows the FPL ROW south to FPL's Martin Plant. Reference the FEIS section 4.3.1.8. FSC Route Alternative 1 is collocated with other existing rights-of-way for 94 percent of its length (environmental advantage), compared to 81 percent for the proposed route. However, the alternative is 18 miles longer (cost) and would impact an additional 218 acres of land. This route would affect a total of 64.5 acres more wetlands (including 11.6 acres more forested wetlands) compared to the proposed route (environmental impact). 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 (environmental impacts), and is located within 50 feet of an additional 80 residences (human environment) (reference the FEIS section 4.3.1.8). In consideration of the substantial additional area of aquatic environment, including wetlands, affected by this potential route; and, in consideration of the information within the FEIS, the Corps has determined that this alternative is not the LEDPA.

(*bb*) FSC Route Alternative 2: The FSC Route 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 Project 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 ROW toward Avon Park and then follows the Gulfstream pipeline in a southeasterly direction to the Martin Clean Energy Center. Reference the FEIS section 4.3.1.9). 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 (environmental advantages). However, the alternative is 21.5 miles longer (cost) and would impact 260.6 acres more land and 22.7 acres more non-

forested wetlands than the corresponding proposed route (environmental impacts). The alternative would also cross an additional 6.1 miles of recreation and special interest areas (environmental impact), 13.9 miles of wood stork and Florida scrub jay habitats (listed species), and 160 waterbodies (environmental impact), and is within 50 feet of an additional 11 residences (human environment). Based on these factors, the FERC determined that this alternative does not offer a significant environmental advantage and is not preferable to the proposed action (reference the FEIS section 4.3.1.9). In consideration of the additional area of land (both uplands and wetlands), waterbodies, and listed species habitat affected by this potential route; and, in consideration of the information within the FEIS, the Corps has determined that this alternative is not the LEDPA.

(*iv*) Aboveground Facility Locations: The Corps and the FERC evaluated several alternative aboveground facility locations. The factors considered for an aboveground facility are different than those considered for a pipeline route because an aboveground facility is a fixed location rather than a linear facility and because, unlike a pipeline, an aboveground facility is visible during operations and, in most cases, generates noise and air emissions. In evaluating these locations, the Corps considered the amount of available land; current land use, as well as adjacent land use; location accessibility; engineering requirements; and impacts on the natural and human environments. However, the Corps and the FERC did not evaluate alternative locations for the proposed modifications at existing compressor stations because the modifications are largely determined by hydraulic modeling to meet the contracted capacity of the SMP Project and occur within the boundaries of existing facilities. The Corps and the FERC also did not evaluate alternative locations for M&R stations or Transcontinental Gas Pipe Line Company, LLC's Compressor Station 84 because the locations of those facilities are largely determined by interconnections with other pipeline systems and delivery points and the facilities have a relatively small footprint. Similarly, the locations of proposed mainline valves (MLVs) are based in part on the Federal Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations; and, MLVs and other appurtenant aboveground facilities occupy a small footprint within existing or proposed pipeline rights-of-way. Based on a review of the information associated with these facilities, the Corps concluded that there were no practicable off-site alternatives.

(6) Minimization Alternatives – Route Variations (On-site Alternatives): There are no on-site configurations that were evaluated due to the linear nature of the proposed project. However, within the overall route corridor, the applicants shifted the location of the actual pipe placement, to the extent practicable in consideration of the limited ability to multiply shift the specific location of linear pipeline within the narrow corridor, to

reduce the work area directly affecting wetlands. In addition, where the pipeline corridor traverses wetlands, the applicant will narrow the ROW of the corridor to a maximum of 75 feet (a 25-foot reduction to the standard corridor ROW). In addition, in all areas where upland areas were available, the applicants proposed staging sites outside of wetland areas and would transport equipment and materials into the wetland work areas. In consideration of this information, the Corps determined that the project includes measures to minimize work affecting aquatic resources within the project corridor to the maximum extent practicable.

(7) LEDPA: In consideration of the information noted above, the Corps has determined that, with the incorporation of the Hall Route Variation, the AZ Ocala Route Variation, and the Deerfield Road Variation, the proposed SMP Project route is the LEDPA that would achieve the overall project purpose. This determination considers cost, existing technology, and logistics, in addition to the consideration of impacts to the environment.

8. Evaluation of the CWA Section 404(b)(1) Guidelines – *(40 C.F.R. 230)* For each of the below listed evaluation criterion, this section describes the potential impact, any minimization measures that will be required to be used to reduce the level of impact, and the resultant impact level. For the purpose of this evaluation, the fill associated with this project is wetland soils retained from excavated areas, which will be required to be placed back into the excavated area after the placement of pipe; and/or, clean fill from an appropriate upland source.

a. Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem (40 C.F.R. Part 230, Subpart C):

(1) Physical Substrate (40 C.F.R. § 230.20):

(a) The FEIS Section 3.1 (Geology) and Section 3.2 (Soils) identify the characteristics of the geology and soils within the SMP Project corridors and at the locations of the proposed associated facilities. The SMP Project traverses two physiographic provinces, which are the Piedmont Province in east-central Alabama and the Coastal Plain Province in southern Alabama, Georgia, and Florida. The Hillabee Expansion Project would have both pipeline and compressor station construction; and, operation located within the Coastal Plain and the Piedmont Provinces of Alabama. Specifically, the Rock Springs, Butler, Billingsley, Autauga, and Verbena Loops as well as a portion of the Proctor Creek Loop, Compressor Stations 84, 95, and 100 would be or are currently located within the Coastal Plain Province. The remaining portion of Proctor Creek Loop, Hissop Loop, and Alexander City Loops along with a portion of the

Sabal Trail Project (the mainline pipeline approximately between MPs 0 to 55) would be located in the Piedmont Province. The remainder of the SMP Project (approximately commencing from MP 55 and including all other work proposed) would be located in the Coastal Plain Province.

(b) In general, the SMP Project only would temporarily alter the substrate of the wetlands affected by the work proposed, as the installation of the proposed pipeline would remove (excavate) and then return (place) hydric soils; and, such work will be required to be consistent with the 2013 FERC Wetland and Waterbody Construction Procedures or previously approved modifications to these procedures (reference section 2.f.(6) above), which are the basis for the applicants' respective construction and maintenance plans. However, this work could minimally alter the substrate elevation and contours, which could alter onsite subsurface hydrologic circulation. In addition, the work proposed likely would eliminate bottom-dwelling organisms within the work areas, either through the smothering of immobile organisms or the temporary displacement of mobile organisms. Transcontinental Gas Pipe Line Company, LLC's baseline environmental construction, restoration, and mitigation plans are contained in its Construction Best Management Practices Plan (CBMPP); Sabal Trail Transmission, LLC's baseline environmental plans are contained in its Erosion and Sediment Control Plan (E&SCP); and FSC, LLC's baseline environmental plans are contained in its Plan and Procedures (reference the FEIS, section 2.3; and, Sabal Trail E&SCP, section 1.3).

(c) The SMP Project would cross waterbodies using wet open cut, dry open cut, conventional bore, or HDD methods. The degree of adverse environmental effect on the substrate of these waterbodies would depend on the type of substrate affected, the method of work implemented, and, potentially, the flow volume in the waterbodies during construction. If construction occurs during a dry period, most of the adverse effects on substrate associated with wet open cut or dry open cut would be minimal. Similarly, conventional bore or HDD generally limits any effect to the drilled pathway; and, avoids and substantially minimizes effects to the waterbodies resulting from erosion, sedimentation, and/or excess turbidity, by limiting the surface disturbance in and immediately adjacent to the waterbody. Reference the FEIS section 3.3.2.4.

(d) Blasting may be required to excavate the pipeline trench in areas where bedrock cannot be removed by other mechanical means (e.g., rock trenchers, rock saws, jack hammers). Hard bedrock occurs near the surface along approximately 10.1 miles of the 43.5-mile-long pipeline loops in Alabama although, based on previous construction in these areas, Transcontinental Gas Pipe Line Company, LLC expects that blasting would not actually be necessary in the majority of these areas. Transcontinental Gas Pipe Line Company, LLC identified 1.6 miles of hard bedrock

outcrops in the Piedmont Province along the Proctor Creek, Hissop, and Alexander City Loops where blasting would likely be required. Sabal Trail Transmission, LLC estimates that blasting may be required along about 13.9 miles of the mainline route in Alabama and along about 12.7 miles of the mainline route in Georgia. Sabal Trail Transmission, LLC does not expect blasting to be required south of mainline MP100. FSC, LLC does not anticipate the need to conduct blasting for construction of the FSC Project but, if necessary, blasting will be required to be conducted in accordance with site-specific plans and state and local regulations. With respect to any potential blasting, Transcontinental Gas Pipe Line Company, LLC has provided a blasting plan that describes the precautions and pre-blast planning that will be implemented to minimize impacts; and, Transcontinental Gas Pipe Line Company, LLC would develop site-specific plans where needed (reference the FEIS section 3.3.2.5). If in-stream blasting is necessary for the Sabal Trail Project, the pipeline contractor will be required to develop a specifically detailed blasting plan for that location that would comply with regulatory requirements. Implementation of these measures would reduce the potential for adverse impacts on waterbodies in conjunction with any necessary blasting (reference the FEIS section 3.3.2.5). The Corps will require the applicants to submit, for evaluation, potential modification, and approval, blasting plans for any areas affecting aquatic resources.

(e) The FEIS Section 3.1.2.3 conveys specific information regarding the presence of karst geology, a component of the physical substrate within portions of the proposed SMP Project corridor. The Corps received numerous comments during the public notice comment period specifically related to the construction and operation of the SMP Project in karst sensitive areas of Georgia and Florida. The majority of these issues concerned potential direct and indirect (secondary) effects associated with the impairment of cave systems, springs, and wells; construction methods triggering sinkhole development; and operational safety in karst areas. The potential for the SMP Project to trigger sinkhole development; and, the safety of operating the proposed facilities in karst sensitive areas is discussed in the FEIS Section 3.1.2.3. The primary geologic impact that could affect the proposed pipeline and aboveground facilities in karst sensitive areas is the sudden development of a sinkhole that damages the facilities and poses a safety risk. The Sabal Trail Project and the FSC Project would be constructed near sinkholes and closed topographic depressions; and, could encounter unknown subsidence features within the construction workspace. Sabal Trail Transmission, LLC and FSC, LLC developed Karst Mitigation Plans to address karst features encountered during construction and further reduce the potential to initiate sinkhole development during construction and operation of the facilities (reference the FEIS appendix F).

(f) All earthwork activities would employ best management practices as the substrate is moved, graded, excavated, and/or filled, thereby lessoning the potential for erosion of material from construction areas. Any authorization of the project would be specifically conditioned to require the implementation of erosion controls. Additionally, the various State Section 401 Water Quality Certifications, as well as any required National Pollutant Discharge Elimination System (NPDES) permits, for the SMP Project require the implementation of erosion, sediment controls, and monitoring. Compliance with the conditions of the Section 401 Water Quality Certifications and any NPDES permits would be incorporated as special conditions of any Corps authorization for the project. Therefore, the applicants would be required to implement and maintain erosion and sediment control best management practices to retain sediment on-site and to prevent violations of state water quality standards.

(g) In consideration of the information within the FEIS and supplemental information provided by the applicants, the Corps has determined that the SMP Project would not substantially affect the physical substrate or other geologic resources in the region of the proposed pipeline corridor and that geologic hazards, including karst activity, would not pose a significant risk to the proposed action. Secondary effects are not expected; however, could occur within karst areas. The Corps reviewed the Karst Plans (FEIS, Appendix F) and expects that any unanticipated secondary effects upon the physical substrate would be rectified during installation operations. Furthermore, the Corps has determined that any effect upon the physical substrate within the project corridors or at locations for associated facilities would be minor and temporary (short term).

(2) Suspended particulate/turbidity (40 C.F.R. § 230.21):

(a) Most of the fill discharge would be temporary and would occur in palustrine wetlands, contained within the fill areas, and would have nominal effects on suspended particulates in the water column. However, especially where work would occur within wetland systems contiguous to stream systems or channelized flow, the project incorporates erosion prevention measures to avoid the discharge of particulate material into local waterways and downstream waters. Regardless, some unexpected suspended particulates may escape into local and/or downstream waters. Any unexpected suspended particulates could temporarily slightly reduce light penetration and temporarily slightly lower the rate of photosynthesis of downstream organisms.

(b) With the exception of the initial clearing equipment, only equipment necessary for in-stream excavation and backfilling would be allowed in a stream channel. In addition, where access roads would be in close proximity to a waterbody, the applicants

would install silt fence and other erosion prevention measures, which are required by the various CWA Section 401 State permits, along the edge of the access road to avoid effects to the waterbody and minimize any sedimentation through unexpected erosion/discharges. Constructing and operating the pipelines would have minor, short-term impacts on surface waters. Construction activities including clearing and grading of adjacent land, in-stream trenching, trench dewatering, and backfilling would temporarily increase sedimentation and turbidity rates. The degree of impact would depend, in part, on the flow volume in the streams during construction and the waterbody substrate that would be affected at the crossing. If construction occurs during a dry period, most of the potential effects on streams would be avoided. Moreover, the HDD method generally avoids and substantially minimizes surface water impacts resulting from erosion, sedimentation, and/or excess turbidity. Following installation and backfilling of the pipeline, suspended sediments and turbidity within waterbodies would decline to pre-construction levels. Waterbody banks would be stabilized as soon as possible after construction, in compliance with the requirements of the CWA Section 401 State permits and the Major Waterbody Crossing Plans, to prevent indirect impacts such as sloughing. Permanent erosion control structures would be installed in accordance with the applicants' construction plans (reference the FEIS section 3.3.2.4).

(c) With respect to the withdrawal and use of hydrostatic test water for the SMP Project, discharge rates would be regulated to decrease the potential for erosion and low flow conditions would be avoided. After hydrostatic testing is complete, the discharges would be directed to dewatering structures located in well-vegetated upland areas. No significant water quality impacts are anticipated as a result of discharge from hydrostatic testing (reference the FEIS section 3.3.3.2). In addition, during discharges the rate would be controlled and water would be directed into energy dissipation devices to avoid potential secondary effects such as erosion (reference the FEIS section 3.3.3.4). All of these measures are required by the various CWA Section 401 State permits or would be required by authorizations for water withdrawals. Prior to water use, Sabal Trail Transmission, LLC would obtain necessary state authorizations to appropriate surface waters and discharge test waters; and, would comply with applicable requirements, which are noted above. Similar to Transcontinental Gas Pipe Line Company, LLC Sabal Trail Transmission, LLC would submit beneficial use notifications for planned surface water uses in Alabama and would report uses that exceed 100,000 gpd to the Office of Water Resources. Discharges of hydrostatic test water would be authorized under the ADEM NPDES General Permit for Discharge of Hydrostatic Test Water Number ALG670000. In Georgia, Sabal Trail Transmission, LLC would obtain a GEPD Surface Water Withdrawal Permit for surface water withdrawals, and would discharge hydrostatic test water under NPDES General Permit

for Storm Water Discharges Associated with Industrial Activity (hydrostatic test waters) Number GAR100002. Approvals to withdraw surface water in Florida would be requested from Water Management Districts, who would ensure no conflicts would be created with existing, authorized withdrawals. Sabal Trail Transmission, LLC has identified several authorized withdrawals that have the potential to be affected by the project. In the event that one of these permits does require modifications, Sabal Trail Transmission, LLC would work with the permit holder to ensure that the modification does not adversely affect the landowner's intended use for the water. Discharges in Florida would be subject to an Individual NPDES Permit to be issued by the FDEP.

(d) In consideration of the information within the FEIS and supplemental information provided by the applicants, the Corps has determined that the SMP Project would not substantially increase suspended particulates or turbidity. Furthermore, the Corps has determined that any effect upon these parameters within the project corridors or at locations for associated facilities would be minor and temporary (short term).

(3) Water (40 C.F.R. § 230.22):

(a) As noted in the regulations, water is the part of the aquatic ecosystem in which organic and inorganic constituents are dissolved and suspended. It constitutes part of the liquid phase and is contained by the substrate. Therefore, the work proposed could affect the physical and/or chemical composition of water within the project corridor; or, affect water that traverses the project corridor during the implementation of work, immediately after the implementation of work, or for a variable period of time after the completion of work. The FEIS, section 3.3, thoroughly analyzes potential direct and indirect (secondary) effects upon water resources.

(b) As identified in table 3.3.2-4 of the FEIS, the SMP Project pipelines would require 699 waterbody crossings. Table 3.3.2-4 of the FEIS also summarizes the number of minor, intermediate, and major waterbodies, and the perennial, intermittent, ephemeral, and ponds or other open water waterbodies, crossed by the SMP Project pipelines. Based on information presented in the FEIS, as well as supplemental information supplied by the applicants, six stream reaches would be affected by aboveground facilities, including two perennial stream reaches and four intermittent stream reaches at Transcontinental Gas Pipe Line Company, LLC's Compressor Station 84; and, one pond would be affected at Sabal Trail Transmission, LLC's Citrus County M&R Station. In addition, access roads would cross 78 waterbodies during construction of the SMP Project including three waterbodies that would be permanently crossed by Transcontinental Gas Pipe Line Company, LLC's new access road for Compressor Station 84. In addition, Sabal Trail Transmission, LLC identified 10 access

roads; and, FSC, LLC identified one access road which would be adjacent to or in close proximity to waterbodies, but would not be crossed. Waterbody and wetland crossings would generally be temporary in nature and construction/restoration would be consistent with the 2013 FERC Wetland and Waterbody Construction Procedures, which are the basis for the applicants' respective construction and maintenance plans. Permanent impacts from Compressor Station 84 for the Hillabee Expansion Project would be mitigated. Transcontinental Gas Pipe Line Company, LLC's baseline environmental construction, restoration, and mitigation plans are contained in its CBMPP; Sabal Trail Transmission, LLC's baseline environmental plans are contained in its E&SCP; and FSC, LLC's baseline environmental plans are contained in its Plan and Procedures (reference the FEIS, section 2.3).

(c) Many of the individual wetlands traversed by the SMP Project are small and fall into three types (depression, slope, and riverine). Water within depression systems typically pools or ponds within the topological depression and does not readily flow out of the system except, potentially, during storm events or through shallow sub-surface flow if geological conditions are conducive to such flow. Sloped wetlands generally occur in higher gradient areas and gain hydrology through groundwater return flow. Within riverine wetlands hydrologic exchange occurs primarily through overbank flooding in response to regular seasonal flooding events. Considering the limited footprint and temporary duration of the proposed work, as well as the proposed restoration of wetland habitat associated with the pipeline installation procedures, any effect on water would be short term and minor.

(d) Construction activities associated with the SMP Project near or within waterbodies (including streams), including clearing and grading of adjacent land, in-stream trenching, trench dewatering, and backfilling could produce direct and indirect (secondary) effects such as a temporary increase in sedimentation and turbidity rates, a decrease in dissolved oxygen concentrations, the loss and/or modification of aquatic habitat, and an increase in the potential for the introduction of fuels and oils from accidental spills. The degree of effect would depend, in part, on the flow volume in the streams during construction and the waterbody substrate that would be affected by the crossing. Crossings utilizing the HDD method would generally avoid and substantially minimize surface water effects potentially resulting from erosion, sedimentation, and/or excess turbidity, by limiting the surface disturbance in and immediately adjacent to the waterbody. Following installation and backfilling of the pipeline, suspended sediments and turbidity within waterbodies would decline to pre-construction levels (reference the FEIS section 3.3.2.4). In addition, where in-stream blasting is necessary, the pipeline contractor would develop a specifically detailed blasting plan for that location that would

comply with regulatory requirements; and, the implementation of those measures would reduce the potential for adverse blasting impacts on waterbodies (reference the FEIS section 3.3.2.5).

(e) Withdrawal of hydrostatic test water has the potential to temporarily affect the physical, chemical, and biological nature of surface water sources (direct and indirect/secondary effects) if the diversion constitutes a large percentage of the source water flow. Effects may include an increase in water temperature, a reduction of dissolved oxygen levels, and entrainment of aquatic species. To minimize impacts associated from water uses, low flow conditions would be avoided during any withdrawal of hydrostatic test water. No significant water quality impacts are anticipated as a result of discharge from hydrostatic testing (reference the FEIS section 3.3.3.2). In addition, prior to water use, the applicants would obtain necessary state authorizations to appropriate surface waters and discharge test waters; and, would comply with applicable requirements, including any requirements associated with the maintenance of State water quality standards.

(f) In consideration of the information within the FEIS and supplemental information provided by the applicants, the Corps has determined that the SMP Project would not substantially affect the physical or chemical nature of water. Furthermore, the Corps has determined that any effect upon water within the project corridors or at locations for associated facilities would be minor and temporary (short term).

(4) Current patterns and water circulation (40 C.F.R. § 230.23):

(a) Work proposed within wetlands that are not contiguous to stream systems is not expected to directly or indirectly affect current patterns or water circulation of any stream system or downstream waterways affiliated with the overall SMP Project.

(b) The SMP Project, however, also would cross numerous waterbodies using flume construction, temporary dam and pump construction, wet open cut, dry open cut, conventional bore, or HDD methods (reference the FEIS section 2.3.2). All work will be completed in accordance with the applicant's plans as summarized within the FEIS; and, in accordance with Federal, state, and local permits. The waterbodies that would be crossed and the applicants' proposed crossing methods for each are listed in the FEIS, Appendix D, Table 3.3.2-1. The degree of adverse environmental effect (direct and/or indirect effect) on current patterns and water circulation of these waterbodies would depend on the method of work implemented and, potentially, the flow volume in the waterbodies during construction. If construction occurs during a dry period, most of the adverse effects on these parameters associated with wet open cut or dry open cut

would be minimal. Similarly, conventional bore or HDD generally limits any effect to the drilled pathway; and, avoids and/or substantially minimizes effects to the waterbodies resulting from erosion, sedimentation, and/or excess turbidity, by limiting the surface disturbance in and immediately adjacent to the waterbody. Any work associated with traversing wetlands or waterbodies would be consistent with the 2013 FERC Wetland and Waterbody Construction Procedures and any previously approved modifications to those procedures. Where in-stream blasting is necessary, the pipeline contractor would develop a specifically detailed blasting plan for that location that would comply with regulatory requirements. Implementation of these measures would reduce the potential for adverse blasting impacts on waterbodies (reference the FEIS section 3.3.2.5).

(c) With the exception of the initial clearing equipment, only equipment necessary for in-stream excavation and backfilling would be allowed in a stream channel. Disruption to water flow would be limited to only that necessary to construct the crossing and would reduce the suspension and deposition of sediments downstream of the crossing location. Adequate flow rates would be maintained in streams to limit direct and/or indirect (secondary) potential impacts on aquatic life. Any necessary trench dewatering would be monitored and directed into appropriate receiving structures for filtration prior to release, and water would be directed into well vegetated areas and allowed to infiltrate (reference the FEIS section 3.3.2.4). In addition, the applicants would restore any affected waterbodies to preconstruction contours and ensure flow is maintained (reference the FEIS section 3.9).

(d) Withdrawal of hydrostatic test water has the potential to temporarily affect current patterns and water circulation of surface waters if the diversion constitutes a large percentage of the source water flow. Additional direct and indirect (secondary) effects may include an increase in water temperature, a reduction of dissolved oxygen levels, and entrainment of aquatic species. To minimize effects associated from water uses, low flow conditions would be avoided. However, no significant water quality effects are anticipated as a result of discharge from hydrostatic testing (reference the FEIS section 3.3.3.2). In addition, prior to water use, the applicants would obtain necessary state authorizations to appropriate surface waters and discharge test waters; and, would comply with applicable requirements.

(e) In consideration of the information within the FEIS and supplemental information provided by the applicants, the Corps has determined that the SMP Project would not substantially affect current patterns or water circulation within the project corridor or within downstream receiving waters. Furthermore, the Corps has determined that any effect upon these parameters within the project corridors or at locations for associated facilities would be minor and temporary (short term).

(5) Normal water fluctuations (40 C.F.R. § 230.24):

(a) The SMP Project would cross numerous waterbodies using flume construction, dam and pump construction, wet open cut, dry open cut, conventional bore, or HDD methods (reference the FEIS section 2.3.2.1). Waterbody crossings would be completed in accordance with the measures described in the applicants' construction plans as summarized within the FEIS; and, in accordance with Federal, state, and local permits. The waterbodies that would be crossed and the applicants' proposed crossing methods for each are listed in the FEIS, Appendix D, Table 3.3.2-1. The degree of adverse environmental effect on normal water fluctuations of these waterbodies would depend on the method of work implemented and, potentially, the flow volume in the waterbodies during construction. If construction occurs during a dry period, most of the adverse effects on water fluctuations associated with wet open cut or dry open cut would be minimal. Conversely, conventional bore or HDD would avoid effects on water fluctuations by circumventing surface disturbance in and immediately adjacent to the waterbody. Moreover, any work associated with traversing wetlands or waterbodies would be consistent with the 2013 FERC Wetland and Waterbody Construction Procedures and any previously approved modifications to those procedures. Where in-stream blasting is necessary, the pipeline contractor would develop a specifically detailed blasting plan for that location that would comply with regulatory requirements. Implementation of these measures would reduce the potential for adverse blasting impacts on waterbodies (reference the FEIS section 3.3.2.5).

(b) Withdrawal of hydrostatic test water has the potential to temporarily affect water fluctuations if the diversion constitutes a large percentage of the source water flow. Additional effects may include an increase in water temperature, a reduction of dissolved oxygen levels, and entrainment of aquatic species. To minimize effects associated from water uses, low flow conditions would be avoided. However, no substantial effects to water fluctuations are anticipated as a result of discharge from hydrostatic testing (reference the FEIS section 3.3.3.2). In addition, prior to water use, the applicants would obtain necessary state authorizations to appropriate surface waters and discharge test waters; and, would comply with applicable requirements.

(c) In consideration of the information within the FEIS and supplemental information provided by the applicants, the Corps has determined that the SMP Project would not substantially affect normal water fluctuations within waterbodies traversed by the project corridor or within downstream receiving waters. Furthermore, the Corps has determined that any effect upon water fluctuations within the project corridors or at locations for associated facilities would be minor and temporary (short term).

(6) Salinity gradients (40 C.F.R. § 230.25): Not applicable. The SMP Project would not affect marine or estuarine waters.

b. Potential Impacts on Biological Characteristics of the Aquatic Ecosystem (40 C.F.R. Part 230, Subpart D):

(1) Threatened and endangered species (40 C.F.R. § 230.30):

(a) The FERC is the lead Federal agency for the coordination and conduct of environmental reviews under the ESA. Through a review of various resources, numerous federally listed species (including proposed, petitioned, or candidate species) and species protected at only the state level could occur within the SMP Project area. The FEIS, section 3.8, conveys specific information regarding special status species, including federally listed threatened or endangered species.

(b) The FWS prepared a Biological Opinion (BO), dated 25 February 2016 (Service Log Number 04EF1000-2014-F-0319), evaluating the potential effect of the Hillabee Expansion Project and the Sabal Trail Project on federally listed species, including the eastern indigo snake (*Drymarchon corais couperi*), Florida sand skink (*Plestiodon reynoldsi*), blue-tailed mole skink (*Eumeces egregious lividus*), Florida scrub-jay (*Aphelocoma coerulescens*), and longspurred mint (*Dicerandra cornutissima*). A copy of the BO is provided as Appendix 1. According to the BO, the FWS determined that the Hillabee Expansion Project would not adversely affect any federally listed species. The FWS also determined that the Sabal Trail Project would not adversely affect numerous species; however, determined that the Sabal Trail Project would likely adversely affect the eastern indigo snakes, Florida sand skinks, blue-tailed mole skinks, Florida scrub-jays, and longspurred mint but would not result in jeopardy of any of these species. Furthermore, the BO noted that the FWS has not designated or proposed critical habitat for any of these species; and, therefore, the BO did not analyze adverse modification to critical habitat. General conservation measures and species-specific conservation measures are detailed in the BO; and, according to FWS, implementing the conservation measures would result in ameliorating, minimizing, or eliminating potential adverse effects. Some adverse effects would occur, but conservation measures focused on design, timing, machinery operation, and associated natural revegetation are expected to significantly reduce the potential adverse effects from construction. The BO did indicate that the incidental take of species would occur; and, that the majority of incidental take would be in the form of death, injury, or temporary harassment (via displacement). The BO also conveyed reasonable and prudent measures; and, terms and conditions that must be implemented. The Corps would

incorporate the FWS BO into any authorization granted; and, incorporate a special condition requiring the implementation of any measures noted by the FWS as reasonable and prudent measures or specific terms and conditions.

(c) The FWS prepared a BO, dated 25 May 2016 (Service Log Number 04EF2000-2014-F-280), evaluating the potential effect of the FSC Project on federally listed species, including blue-tailed mole skink, Florida sand skink, Florida bonamia (*Bonamia grandiflora*), Lewton's polygala (*Polygala lewtonii*), papery whitlow-wort (*Paronychia chartacea* spp. *Chartacea*), sandlace (*Polygonella myriophylla*), scrub buckwheat (*Eriogonum longifoilum* var.*gnaphalifolium*), and scrub mint (*Dicerandra frutescens*). A copy of the BO is provided as Appendix 2. The FWS determined that the FSC Project would not adversely affect numerous species; however, determined that the FSC Project would likely adversely affect blue-tailed mole skinks, Florida sand skinks, Florida bonamia, Lewton's polygala, papery whitlow-wort, sandlace, scrub buckwheat, and/or scrub mint but would not result in jeopardy of any of these species. Minimization measures and species-specific measures are detailed in the BO. The BO did indicate that the incidental take of species would occur; and, that the majority of incidental take would be in the form of death, injury, or temporary harassment (via displacement). The BO also conveyed reasonable and prudent measures; and, terms and conditions that must be implemented. The Corps would incorporate the FWS BO into any authorization granted; and, incorporate a special condition requiring the implementation of any measures noted by the FWS as reasonable and prudent measures or specific terms and conditions.

(d) The Center for Biodiversity expressed an opinion that potential effects upon West Indian (Florida) manatee, Gulf sturgeon, and Shinyrayed pocketbook had not been thoroughly addressed in the FEIS. In addition, the Center for Biodiversity expressed an opinion that the Corps must conduct ESA formal consultation with the FWS for eastern indigo snake in the Sabal Trail Project portion of the SMP Project.

(*i*) In response to the comments submitted by the Center for Biodiversity, the Corps separately evaluated potential effects upon manatee associated with the SMP Project, including, but not limited to, effects that could occur through the migration of pollutants through karst geology from the proposed pipeline work sites to waters occupied by manatee (including waters associated with the Crystal River and/or Kings Bay, Citrus County, Florida, which the Center for Biodiversity specifically identified). The Corps acknowledges that, in general, a potential exists for karst geology to be uniquely configured such that particulates or other pollutants introduced into the groundwater within a specific region of karst geology could reach down-gradient waters associated with a spring or waters associated with a river (or other waterbody).

However, karst geology in general is not entirely (100 percent) interconnected; and, as such, a presumption that any particulate or other pollutant introduced into a specific point/area of karst geology would inherently or automatically reach a spring or other waterbody is speculative and/or purely theoretical (i.e., some regions of karst geology are self-contained with respect to any subterranean aquatic component). The Center for Biodiversity did not submit any specific geotechnical or geophysical reports/investigations (e.g., dye studies, core samplings, etc.) documenting that the karst geology within the SMP Project corridor is integrally or fundamentally interconnected to the springs and other waterbodies identified by that organization. Separately, any unexpected limited quantity of pollutants (e.g., minor components of HDD drilling fluid or unexpected/accidental fluid discharges from excavation equipment or other project-related equipment) inadvertently introduced within karst geology that is improbably interconnected to down-gradient springs or other waterbodies would be diluted by the flow within such interconnected geology and/or the flow of the springs or waterbodies; and, would be in such nominal quantity/proportion that the potential for adverse direct effects to manatee or indirect effects to manatee due to direct effects upon vegetation consumed by manatee is negligible. Further, because of the numerous non-point source inputs in the vicinity of the general project corridor, the necessity for any pipeline inputs to be directly tied to a decrease in water quality that in turn causes some measurable and quantifiable harm to manatees, and the requirement for a proximal causation when trying to prove take and the reasonable certainty standard with respect to take under Section 7 of the ESA, the Corps concludes that there is no plausible route of effect from any unexpected pollutants associated with the project that could be documented as affecting manatee. Therefore, the Corps concludes that work proposed in conjunction with the SMP Project would have no effect on manatee.

(*ii*) The Sabal Trail Transmission, LLC “Resource Report 10” indicates that the Sabal Trail Project would cross designated critical habitat for gulf sturgeon at the Suwanee River and Withlacoochee River in Florida, both of which would be crossed using the HDD method; and, that information reviewed indicates that gulf sturgeon have been identified within three miles of the Sabal Trail Project corridor at those river crossings. The FEIS, Appendix K (the Biological Assessment), section 5.3.2, confirms that the project would cross designated critical habitat for gulf sturgeon using HDD; and, indicates that that 2.2 million gallons of water would be withdrawn from the Suwannee River during HDD activities, however, no hydrostatic test water would be withdrawn. Also, this section of Appendix K indicates that Sabal Trail Transmission, LLC would implement measures to minimize entrainment or impingement of aquatic species and would not discharge any water into or adjacent to the Suwannee River without approval from the FWS or state permitting agencies. Based on historical stream flow data compiled by the U.S. Geologic Survey, this section of Appendix K indicates that the

volume of water that would be appropriated from the Suwannee River would not affect the rivers flow regime or water quality, which are constituent elements of the species critical habitat. Because Sabal Trail Transmission, LLC would cross the Suwannee River by using the HDD crossing method, would implement its construction and restoration plan and HDD Contingency Plan, and would comply with state and Federal permitting requirements at this river crossing, the FERC, as the lead Federal agency for ESA compliance, concluded that the proposed waterbody crossing methods and water use requirements are not likely to adversely affect the gulf sturgeon or its designated critical habitat. Table 3.8.1-1 of the FEIS conveys the FERC determination that the Hillabee Expansion Project would have no effect on gulf sturgeon; and, that the Sabal Trail Project was not likely to adversely affect gulf sturgeon and would not adversely affect critical habitat for gulf sturgeon. The Corps recognizes the inconsistency between the FEIS Appendix K and the main text of the FEIS (as noted by the Center for Biodiversity). However, as the FEIS Appendix K, which was provided to the FWS for review and evaluation, does acknowledge the potential withdrawal of water in conjunction with the proposed HDD crossing of the Suwannee River, the Corps concludes that an appropriate coordination/evaluation with the FWS of potential effects on gulf sturgeon has been implemented by the FERC; that the FERC determination of not likely to adversely affect gulf sturgeon and/or critical habitat for gulf sturgeon is appropriate; and, that additional ESA action by the Corps regarding gulf sturgeon is not required. In summary, as the FWS was provided all of the necessary and appropriate information; and, as the FWS did not contradict or contravene the FERC determination of not likely to adversely affect gulf sturgeon or critical habitat for gulf sturgeon, the Corps has determined that the information provided by the Center for Biodiversity is not new information that warrants additional action under the ESA.

(*iii*) The correspondence from the Center for Biodiversity alleges that the biological assessment (FEIS, Appendix K) does not reference a proposed withdrawal of 845,000 gallons of water from Uchee Creek for the proposed HDD crossing. However, Table 3.1.6-1 of Appendix K identifies both the withdrawal of 6,290,000 gallons of water from Uchee Creek at a location at/near milepost 71.0 and a discharge of water into Uchee Creek at a location at/near milepost 55.0 for the mainline; and, the withdrawal of 845,000 gallons of water from Uchee Creek at a location at/near milepost 70.9 for the mainline HDD. Therefore, contrary to the statements by the Center for Biodiversity, the FERC, within Appendix K (the biological assessment) provided the FWS information identifying both of the withdrawals of water from Uchee Creek. In summary, as the FWS was provided all of the necessary and appropriate information; and, as the FWS did not contradict or contravene the FERC determination of not likely to adversely affect

Shinyrayed pocketbook or critical habitat for Shinyrayed pocketbook, the Corps has determined that the information provided by the Center for Biodiversity is not new information that warrants additional action under the ESA.

(*iv*) The Center for Biodiversity was apparently unaware of the FWS BOs submitted to the Corps for the SMP Project. Specifically, the FWS submitted a BO that reviewed the Sabal Trail Project (reference section 8.b.(1)(b), above), which evaluated potential effects to eastern indigo snake. In consideration of the FWS BO, the Corps has determined that the information provided by the Center for Biodiversity is not new information that warrants additional action under the ESA.

(2) Fish, crustaceans, mollusks, and other aquatic organisms in the food web (40 C.F.R. § 230.31):

(a) The FEIS, section 3.7, conveys a detailed analysis of potential direct and indirect (secondary) effects upon fisheries and aquatic resources. Waterbody and wetland crossings would generally be temporary in nature and construction/restoration would be consistent with the 2013 FERC Wetland and Waterbody Construction Procedures, which are the basis for the applicants' respective construction and maintenance plans. Permanent impacts from Compressor Station 84 for the Hillabee Expansion Project would be mitigated. Transcontinental Gas Pipe Line Company, LLC's baseline environmental construction, restoration, and mitigation plans are contained in its CBMPP; Sabal Trail Transmission, LLC's baseline environmental plans are contained in its E&SCP; and FSC, LLC's baseline environmental plans are contained in its Plan and Procedures (reference the FEIS, section 2.3).

(b) Increased sedimentation and turbidity from in-stream and adjacent construction activities could affect fisheries resources. Sedimentation could smother fish eggs and other benthic biota and alter stream bottom characteristics, such as converting sand, gravel, or rock substrate to silt or mud substrate. These habitat alterations could reduce juvenile fish survival, spawning habitat, and benthic community diversity and health. Fish and other stream biota would be displaced to similar habitat upstream or downstream of the pipeline crossing, which could lead to increased competition for habitat and food sources, which could affect fish survival and health. Reference the FEIS section 3.7.2.1.

(c) Increased turbidity could temporarily reduce dissolved oxygen levels in the water column and reduce respiratory functions in stream biota, which could temporarily displace fish to unaffected stream segments, reduce fish health, or increase fish mortality. Turbid conditions could also reduce the ability for biota to find food sources or

avoid prey. The extent of impacts from sedimentation and turbidity would depend on sediment loads, stream flows, stream bank and stream bed composition, sediment particle size, and the duration of the disturbances. Reference the FEIS section 3.7.2.1.

(d) The wet open-cut crossing method would generate the greatest amount of sediment and turbidity, but the elevated levels would be short-term and occur over short distances downstream of the crossing. Furthermore, the warm water species found in these streams are typically resilient to turbid conditions. According to the construction plans, which would be incorporated into any Corps authorization, the applicants would complete all in-stream work in less than 24 hours for minor streams (less than 10 feet across) and less than 48 hours for intermediate streams (between 10 and 100 feet across). Trench spoil would be stored above the banks of waterbodies and would be protected with erosion control devices that prevent, or significantly reduce, sediment runoff from entering the waterbody. Reference the FEIS section 3.7.2.1.

(e) The dry open-cut crossing methods (e.g., fluming, dam, and pump) would further reduce sedimentation and turbidity impacts on fisheries. The HDD method would eliminate sedimentation and turbidity impacts on fisheries, but could inadvertently release drilling fluid, a naturally-occurring clayey material called bentonite, into a waterbody. The applicants would implement HDD contingency plans to prevent, minimize, or mitigate inadvertent losses of drilling fluid. Overall, the impact of construction on fish and stream biota is expected to be localized and short-term because in-stream conditions and suspended sediment concentrations would return to background condition levels soon after in-stream construction has been completed. Reference the FEIS section 3.7.2.1.

(f) Stream bank vegetation and structure such as logs, rocks, and undercut banks provide important habitat for fish and stream biota. Open-cut construction through waterbodies would temporarily remove this habitat, which could displace fish and other stream biota to similar habitat upstream or downstream of the pipeline crossing. Displacement would result in increased competition for habitat and food sources, which could affect fish health and survival. Once construction is complete, streambeds and banks would be restored to preconstruction conditions to the fullest extent possible. Structure such as rock and gravel would be returned to the stream. Stream bank vegetation is expected to recover over several months to a year. Reference the FEIS section 3.7.2.2.

(g) An inadvertent release of fuel or equipment related fluids could impact water quality. The chemicals released during spills could have acute fish impacts, such as altered behavior, changes in physiological processes, or changes in food sources. Fish

could also experience greater mortality if a large volume of hazardous liquid is spilled into a waterbody. Furthermore, ingestion of large numbers of contaminated fish could impact fish predators in the food chain. Reference the FEIS section 3.7.2.3. The applicants have developed and would implement spill plans which include preventive measures such as personnel training, equipment inspection, and refueling procedures to reduce the likelihood of spills, as well as mitigation measures such as containment and cleanup to minimize potential impacts should a spill occur. Adherence to the spill plans should prevent a large spill from occurring near surface waters because construction equipment fueling would be prohibited within 100 feet of the waterbody banks (except for water pumps, which would be placed in secondary containment structures) and hazardous material storage would be prohibited within 100 feet of waterbodies. If a small spill were to occur, adherence to measures in the spill plan would decrease the response time for control and cleanup, thus avoiding or minimizing the effects of a spill on aquatic resources. Additionally, the spill plans require adequate supplies of suitable absorbent material and any other supplies and equipment necessary for the immediate containment and cleanup of inadvertent spills be available at all construction areas. Training and lines of communication to facilitate the prevention, response, containment, and cleanup of spills during construction activities also are described in the spill plans. Reference the FEIS section 3.7.2.3.

(h) The applicants would utilize surface waters for dust control and/or hydrostatic testing of the pipeline. Surface water withdrawals could reduce stream flows and water levels and entrain or impinge stream biota. Hydrostatic test water discharges to surface waters could change water temperature, dissolved oxygen levels, increase turbidity and stream flows, and contribute to stream bank and substrate scour. Additionally, the discharge of hydrostatic test water to different water basins could potentially transfer nuisance exotic organisms between watershed basins. These impacts could reduce fish and biota health or result in injury or mortality. Reference the FEIS section 3.7.2.4. Water withdrawal effects, however, would be minimized by adhering to the measures in the applicants' construction and restoration plans, which prevent water withdrawal from (and discharges to) exceptional value waters or waters that provide habitat for federally listed threatened and endangered species, unless approved by applicable resource and permitting agencies; screening and positioning water intakes at the water surface to prevent the entrainment of fish and other biota; maintaining adequate flow rates to protect aquatic species; placing water pumps in secondary containment devices to minimize the potential for fuel spills or leaks; regulating discharge rates; and using energy dissipating devices and sediment barriers to prevent erosion, streambed scour, and sedimentation. The applicants also would be required to obtain and comply with state water withdrawal and discharge permits. Reference the FEIS section 3.7.2.4. To minimize the potential spread of nuisance exotic organisms between watershed basins,

the applicants propose to discharge hydrostatic test water to upland areas and prevent the discharged water from reaching receiving waters. The discharged water would infiltrate into the ground and any potential water-dependent exotic organisms would succumb to dry conditions. This procedure, however, would not be required where water is discharged back to the source from which it was obtained. Reference the FEIS section 3.7.2.4.

(i) Construction of aboveground facilities should not affect fisheries. The applicants would implement construction and restoration plans to prevent sediment from entering adjacent waterbodies. Access road use and the placement of temporary or permanent bridges could temporarily impact waterbodies by increasing sedimentation and turbidity, reducing available stream habitat, and limiting fish passage. These impacts would displace fish and other stream biota to similar habitat upstream or downstream of the bridges, which could lead to increased competition for habitat and food sources, which could affect fish survival and health. However, the applicants do not propose to utilize access roads that would cross substantial fisheries. Reference the FEIS section 3.7.2.5.

(j) As proposed, the applicants do not anticipate that blasting would be required at any waterbody crossing. In the event in-water blasting is required, the applicants would implement the procedures in their blasting plans to reduce potential impacts on waterbodies and fisheries (reference the FEIS section 3.7.2.6).

(k) In consideration of the information within the FEIS and supplemental information provided by the applicants, the Corps has determined that the SMP Project would not substantially affect fish, crustaceans, mollusks, or other aquatic organisms in the food web within the project corridor or within downstream receiving waters. Furthermore, the Corps has determined that any direct or indirect (secondary) effect upon these parameters within the project corridors or at locations for associated facilities would be minor and temporary (short term).

(3) Other wildlife (40 C.F.R. § 230.32):

(a) The FEIS, section 3.6, conveys a detailed analysis of potential direct and indirect (secondary) effects upon wildlife. In consideration of potential effects upon wildlife, construction within, and the restoration of, uplands would be consistent with the 2013 FERC Upland Erosion Control, Revegetation, and Maintenance Plan, which has been fully integrated into the Project Erosion and Sediment Control Plan.

(b) SMP Project effects on wildlife species are dependent on the species' ability to leave the project work areas and successfully utilize adjacent habitats during the implementation of project construction and restoration activities. Much of the wildlife that would be displaced by construction would relocate to similar adjacent habitats; however, if there were a lack of adequate territorial space, inter- and intra-specific competition, lower reproductive success, and lower survival success may result. Where similar adjacent habitat is present, displacement effects would generally be short-term for species that utilize herbaceous habitats and longer-term for species that utilize scrub or forested habitats, as the complete restoration of wooded areas would require a greater amount of time. Upon successful restoration, wildlife would be expected to return and colonize habitats that were affected by construction. Reference the FEIS section 3.6.3.

(c) Construction of the SMP Project may result in mortality of less mobile animals such as small rodents, reptiles, amphibians, and invertebrates, which may be unable to escape the immediate construction area; and, disruption of bird courting, breeding, or nesting behaviors on and adjacent to construction work areas. These effects would primarily occur during construction but may also occur during restoration activities. Reference the FEIS section 3.6.3.

(d) The temporary loss of habitat would reduce protective cover and foraging habitat in the immediate project area. Changes to wildlife habitat, whether by vegetation removal, conversion of one type to another, or degradation, also effect wildlife populations. The degree of effect would depend on the type and quantity of habitat affected and the rate at which vegetation regenerates after construction. Habitat that is either converted to an aboveground facility, maintained as the 50-foot-wide permanent pipeline ROW, or permanently impacted by the construction of access roads would be permanently affected. Reference the FEIS section 3.6.3.

(e) Based on FERC's restoration monitoring efforts along previous pipeline ROW, wetland and upland herbaceous open land cover types typically return to a preconstruction structural condition in a relatively short time. Effects on species that utilize agricultural land would be minor and temporary, as these areas are regularly disturbed and would be replanted during the next growing season. The effect to forest-dwelling wildlife species would be greater because forest habitat would take a comparatively longer time to regenerate and would be prevented from reestablishing along maintained portions of the pipeline ROW. Restoring the temporary construction areas to forest habitats could take 30 years or longer, depending on site-specific conditions such as rainfall, elevation, grazing, and weed introduction. The impacts on

shrub-dwelling species would be comparable to impacts on forest-dwelling species due to the lengthy regeneration timeframes of these habitats. Reference the FEIS section 3.6.3.

(f) During construction activity, there is nominal potential for wildlife and/or livestock (within ranching areas) to be injured by falling into the open trench (an indirect/secondary effect). The applicants would consult with ranchers to determine if temporary fencing should be installed, if livestock crossings could be utilized, or if alternate feeding arrangements could be utilized during construction activity. Environmental inspectors would examine the trench daily prior to construction commencement for wildlife (or livestock) that may have fallen into the trench. Where wildlife activity is anticipated, the applicants would install trench ramps at regular intervals to provide an exit for wildlife. Applicants also would place gaps in the temporary trench spoil piles and pipe stringing to allow wildlife migration through the construction corridor. Temporary fencing, exit ramps, and migration gaps would all be assessed on a site-specific basis with the landowner; and, would be applied based on the presence or absence of livestock and the amount of wildlife activity in a given area. Reference the FEIS section 3.6.3.

(g) In consideration of the information within the FEIS and supplemental information provided by the applicants, the Corps has determined that the SMP Project would not substantially affect wildlife within the project corridor or within downstream receiving waters. Furthermore, the Corps has determined that any direct or indirect (secondary) effect upon wildlife within the project corridors or at locations for associated facilities would be minor and temporary (short term).

c. Potential Impacts on Special Aquatic Sites (40 C.F.R. Part 230, Subpart E):

(1) Sanctuaries and refuges (40 C.F.R. § 230.40):

(a) Hillabee Expansion Project: Land use impacts associated with the Hillabee Expansion Project would include the disturbance of existing land uses within the construction ROW, including ATWS, during construction and retention of a new permanent ROW for operation of the pipeline loops. However, based on consultations with local agencies and review of public databases and maps, the Hillabee Expansion Project would not cross any recreational or special interest areas, including designated wilderness areas; national wildlife refuges; national, state, or local parks; national or state forests; designated scenic highways or byways; protected rivers or waterbodies; or coastal zones. Also, no state-owned or managed properties or public lands open to hunting would be crossed by, or are located within, 0.25 mile of the project.

(b) Sabal Trail Project:

(*i*) The Georgia Land Conservation Program (GLCP) works to preserve a statewide network of land and water resources through partnerships between cities and counties in Georgia, state and Federal agencies, landowners, and other private sector partners. Based on a review of the GLCP database, the mainline would cross three conservation easements that are part of this program and managed by the Georgia Land Trust in Georgia: TC2008034, TC008053, and TC2010063 (reference the FEIS section 3.9.2.5). The section of conservation easement TC2008034 that the mainline would cross consists of agricultural and forest land; and, is managed for biodiversity and closed to public access. Construction activities would affect 4.8 acres of the easement. To minimize effects associated with vegetation clearing and the creation of a new ROW, the pipeline would be collocated with an existing pipeline ROW. Sabal Trail Transmission, LLC would maintain irrigation systems; work with the landowner to maintain access during the construction; and, compensate the landowner for the value of trees removed by construction and operation of the project. Permanent impacts totaling 1.8 acres would occur as a result of the conversion of forested land to open land within the operational ROW. Conservation easement TC2008034 also is part of the Georgia Forest Stewardship Program. Following construction, special uses of the conservation easement would continue throughout project operation (reference the FEIS section 3.9.2.5). The section of conservation easement TC008053 that the mainline would cross consists of privately owned forest land. Due to information lacking in the GLCP database, public access and the primary conservation purpose of the easement information is unknown. Project-related impacts and mitigation measures Sabal Trail Transmission, LLC would implement would be similar to those described for forested land. Construction would affect 11.3 acres of the easement. To minimize impacts associated with vegetation clearing and the creation of a new ROW, the pipeline would be collocated with an existing power line ROW. Sabal Trail Transmission, LLC would work with the landowner to maintain access during construction and would compensate the landowner for the value of trees removed by construction and operation of the project. Permanent impacts on the conservation easement (4.8 acres) would occur as a result of the conversion of forested land to open land within the operational ROW. Following construction, special uses of the conservation easement would continue throughout project operation (reference the FEIS section 3.9.2.5). The section of conservation easement TC2010063 that the mainline would cross consists of privately owned center-pivot irrigated agricultural land. Construction would affect 8.7 acres of the easement and operations would affect 3.4 acres. Impacts on this property would be similar to those described for general agricultural and irrigation system areas. Sabal Trail Transmission, LLC would not affect lands managed for biodiversity within the easement and, similar to the mitigation

measures described for these land uses, would maintain irrigation systems and landowner access. To minimize impacts associated with vegetation clearing and the creation of a new ROW, the pipeline would be partially collocated with an existing pipeline ROW. Following construction, special uses of the conservation easement would continue throughout project operation (reference the FEIS section 3.9.2.5).

(*ii*) The mainline would cross the privately owned Carlton Farms Tall Timbers Land Conservancy easement in Colquitt County. The 1,175-acre parcel is managed by the Dougherty County Board of County Commissioners for biodiversity and is closed to public access. Construction would affect 8.0 acres and operations would affect 3.1 acres of the easement. To minimize impacts on this tract, the pipeline would be collocated with an existing pipeline ROW. Construction and operation of the mainline would result in the conversion of forest land to open land in the permanent ROW. Sabal Trail Transmission, LLC would work with the landowner to maintain access and would compensate the landowner for the value of trees removed by construction and operation of the Project. Following construction, special uses of the conservation easement would continue throughout project operation (reference the FEIS section 3.9.2.5).

(*iii*) Within Florida, there are no areas crossed by the project that are designated under State and Federal laws or local ordinances to be managed principally for the preservation and use of fish and wildlife resources. However the project does cross a number of conservation easements including, the Circle Pines Farm Conservation Easement, Halpata-Tastanaki Preserve, Warner/Harrell Conservation Easement/Echo Plantation, the Chinquapin Farm Conservation Easement (both owned by the Suwannee River Water Management District) and the Southwest Florida WMD Green Swamp Conservation Easements, which are all created pursuant to and subject to Section 704.06, Florida Statutes (reference the FEIS section 3.9.2.5).

(*aa*) Circle Pines Farm Conservation Easement: The Sabal Trail Project would cross the Circle Pines Farm Conservation Easement, which is a privately owned 81-acre tract located in Gilchrist County enrolled in the Rural and Family Lands Protection Program managed by the Florida Forest Service (reference the FEIS section 3.9.2.5). The mainline would cross the Circle Pines Farm Conservation Easement using standard upland construction methods (open cut). Construction would affect 3.4 acres and operations would affect 1.7 acres of the easement, which is primarily forested land. Sabal Trail Transmission, LLC would work with the landowner to maintain access to the easement and develop the project in a manner consistent with the terms of the conservation easement. To reduce impacts on the easement resulting from the creation of a new ROW the project would be collocated with an existing power line ROW. Tree

clearing and vegetation maintenance would convert forest land to open land within the permanent ROW; however, following construction, special uses of the easement would be allowed to continue (reference the FEIS section 3.9.2.5).

(*bb*) Halpata-Tastanaki Preserve: The Sabal Trail Project would cross a small portion of the Halpata-Tastanaki Preserve in Marion County, which is located within a patchwork of public lands that include the adjacent Marjorie Harris Carr Cross Florida Greenway, Two-Mile Prairie, and Ross Prairie State Forest. The Halpata-Tastanaki Preserve contains several Special Designation Areas meant to preserve habitat for sensitive species while also providing high-quality recreation opportunities. The mainline would cross the Halpata-Tastanaki Preserve using standard upland construction methods (open cut), affecting a mixture of wetlands (open land), open land, and forest land. Construction activities would affect 19.6 acres and operations activities would affect 9.3 acres of land within the preserve. To minimize impacts on the Halpata-Tastanaki Preserve, the majority of the pipeline route within Halpata is located adjacent to Highway 200. Sabal Trail Transmission, LLC has negotiated with the SWFWMD to develop the project in a manner consistent with the terms of the Halpata-Tastanaki Preserve Management Plan. Similar to other features crossed using the standard construction methods, recreational users would be temporarily affected by project-related noise, dust, traffic, and visual impacts. These impacts would be limited to the time of construction. Tree clearing and vegetation maintenance within the permanent ROW would result in the conversion of forest land to open land within the permanent ROW; however, recreational uses within the Halpata-Tastanaki Preserve following construction would be allowed to continue throughout operation of the project (reference the FEIS section 3.9.2.5).

(*cc*) Warner/Harrell Conservation Easement, also known as the Echo Plantation: The Sabal Trail Project would cross the Warner/Harrell Conservation Easement in Suwannee County, across the Suwannee River from the Suwannee River State Park. This easement covers approximately 912 acres within the Upper Suwannee River watershed and is not accessible to the public. The mainline would partially cross the Warner/Harrell Conservation Easement in conjunction with the HDD for the Suwannee River State Park, Florida National Scenic Trail, Suwannee River, and Santa Fe River Trail. The HDD entry point and associated additional temporary workspace would be on open land on the easement. The remaining easement area would be crossed using upland construction methods (open cut), partially adjacent to an existing road on the western border of the easement. Construction would affect 10.8 acres and operations would affect 4.0 acres of land within the easement. The pipeline crossing would require tree clearing during construction and result in the conversion of forest land to open land within the permanent ROW during operation. Sabal Trail Transmission, LLC would

compensate the land managing agency for the value of trees removed by construction and operation of the project. Following construction, special uses of the easement would be allowed to continue (reference the FEIS section 3.9.2.5).

(*dd*) Chinquapin Farm Conservation Easement: The Sabal Trail Project would cross the Chinquapin Farm Conservation Easement, which encompasses approximately 6,350 acres in Suwannee and Columbia Counties; and, is privately owned and held by the Suwannee River Water Management District. According to the National Conservation Easement Database, the easement is permanent and closed to public use. The easement is used primarily for quail hunting, although a few selected trees are harvested. Chinquapin Farm is the site of various field trial and quail hunting events. The mainline would cross the Chinquapin Farm Conservation Easement using standard upland construction methods (open cut). The crossing consists of forested and open land adjacent to an existing cleared electric transmission line and pipeline ROW. Construction would affect about 37.9 acres and operations would affect 19.6 acres of land within the easement. The pipeline crossing would require tree clearing during construction and result in the conversion of forest land to open land within the permanent ROW during operation. Construction activities would also temporarily affect hunting on the easement. To reduce impacts on the easement resulting from creating a new ROW, the project would be collocated with existing power line and pipeline ROW. Also, Sabal Trail Transmission, LLC would compensate the landowner for the removal of forest land associated with construction and operation of the project. Following construction, permanent tree removal within the operational ROW would convert forested land to open land; however, special uses of the easement, including hunting events, would be allowed to continue (reference the FEIS section 3.9.2.5).

(*ee*) FDEP Conservation Easements, Green Swamp Land Authority Land Protection Agreements, and SWFWMD Conservation Easements: The Sabal Trail Project would cross the Green Swamp Area of Critical State Concern, which occurs in Sumter, Lake, and Polk Counties. The Green Swamp Area of Critical State Concern contains a mix of public lands managed by various state and regional agencies and private lands protected by conservation easements. The FDEP or the SWFWMD manages these easements. Managed areas also include several privately owned conservation easements that are part of the Green Swamp Land Authority Land Protection Agreements, Green Swamp Conservation Easements, the Green Swamp – Pine Island Recharge Area, the Green Swamp Wilderness Preserve, the Hilochee Wildlife Management Area, and the Jahna Ranch Conservation Easement. Recreation uses include hunting and fishing, hiking, bicycling, horseback riding, and canoeing. The mainline would cross the FDEP-managed conservation easements using standard upland construction methods (open cut). Installation of the pipeline would require

creation of a new ROW, affecting agricultural land, forested land, and open land. Construction would affect 14.7 acres and operation would affect 6.3 acres of land within the FDEP Green Swamp Conservation Easements. The mainline would cross the Green Swamp Land Authority Land Protection Agreements using standard upland construction methods (open cut). Installation of the pipeline would require creation of a new ROW, affecting primarily open land, though the route would be partially collocated with County Road 565's ROW. Construction would affect 9.6 acres and operation would affect 5.1 acres of land within the Green Swamp Land Authority Land Protection Agreements. The Sabal Trail Project would cross Green Swamp Conservation Easements in Lake County, which are privately owned parcels managed by the SWFWMD. The mainline would cross the easements using standard upland construction methods (open cut). Installation of the pipeline would require creation of a new ROW, affecting primarily open land containing wetlands. Construction would affect 27.4 acres and operations would affect 18.2 acres of land within the easement. Hunting would be temporarily disrupted during construction activities. However, Sabal Trail Transmission, LLC would work with the private landowners and the FFWCC, the Land Protection Agreement managing agency, to avoid or mitigate effects, maintain access to the tracts during the construction of the pipeline, and if necessary, compensate the landowners for the value of any lost resources. Further, Sabal Trail Transmission, LLC would negotiate with the landowner(s) to develop the project in a manner consistent with the terms of the Land Protection Agreement. Similar to other features crossed using the standard construction methods, special uses would be temporarily affected by project-related noise, dust, traffic, and visual impacts. These impacts would be limited to the time of construction and recreational uses of the area following construction would be allowed to continue throughout operation of the project. Sabal Trail Transmission, LLC also would negotiate with the landowner(s) and the SWFWMD to develop the project in a manner consistent with the terms of the conservation easement. Similar to other features crossed using the standard construction methods, special uses would be temporarily affected by project-related noise, dust, traffic, and visual impacts. These impacts would be limited to the time of construction and special use of the easement following construction would be allowed to continue throughout operation of the project. The Sabal Trail Project would cross the Jahna Ranch Conservation Easement, which is a privately owned tract that consists of discontinuous but connected parcels east of the Green Swamp in Polk County. The easement is managed by the FDEP Division of Water Resource Management and is monitored by the Bureau of Mining and Minerals Regulation due to the presence of an active sand mine that is intended to be restored to a natural state. There is no public use of the easement. The mainline would cross the easement using standard upland construction methods (open cut). Installation of the pipeline would require creation of a new ROW, affecting primarily open land and forest land containing wetlands. Construction would affect 44.6

acres and operations would affect 26.1 acres of land within the easement. Construction-related and operation-related effects would be similar to those described in the FEIS, section 3.9.2.2, depending on the specific land use type affected at each crossing. Sabal Trail Transmission, LLC would develop the project consistent with the terms of the conservation easement. Similar to other features crossed using the standard construction methods, special uses would be temporarily affected by project-related noise, dust, traffic, and visual impacts. These impacts would be limited to the time of construction. Tree clearing and vegetation maintenance within the new ROW would result in the conversion of forest land to open land within the permanent ROW; however, special uses of the easement following construction would be allowed to continue throughout operation of the project (reference the FEIS section 3.9.2.5).

(c) FSC Project: The Lake Wales National Wildlife Refuge (NWR) and Everglades Headwaters NWR are within 0.25 mile of the FSC Project. Though the FSC Project would not directly affect these refuges, the FWS is in the process of acquiring additional lands for the refuges that may be affected by the FSC Project. More specifically, the FSC Project appears to abut the Snell Creek Unit of the existing Lake Wales NWR at MP 10.9 and cross two units identified for acquisition into the Lake Wales NWR (the Horse Creek Unit between approximate MPs 9 and 10; and, the Flaming Arrow Unit between approximate MPs 35 and 37). Also, the FSC Project appears to cross areas proposed for NWR status in the Everglades Headwaters Conservation Area. While pipeline easements would not preclude lands from NWR acquisition, the FWS has indicated that lands without easements are preferred, though factors such as resource availability and habitat quality are more significant considerations. FSC, LLC is currently pursuing easements from landowners in areas that are on the acquisition list for both Lake Wales and Everglades Headwaters NWR. As FSC, LLC's pipeline easements would transfer with the land, any purchase by FWS (or other party) after easements are issued would be bound by the terms of the easement. FSC, LLC would coordinate with the new landowner to negotiate mutually acceptable conditions (reference the FEIS, section 3.9.3.5). Additionally, any effects to these areas would be temporary and limited to the timing of construction.

(2) Wetlands (40 C.F.R. § 230.41):

(a) The FEIS, section 3.4, specifically evaluates potential direct and indirect (secondary) effects to wetlands. The applicants routed the pipeline and sited the associated aboveground facilities to avoid wetlands to the extent practicable and consistent with the SMP Project's purpose and need (reference section 7 of this document). Several factors influence pipeline routing and, therefore, wetland and other environmental impacts. First, the most direct route between receipt and delivery points

generally reduces environmental impacts. Second, collocation of new pipeline facilities with existing linear infrastructure generally reduces impacts by using existing disturbed areas during construction and incrementally expanding existing ROW for operation. Several major route alternatives were considered (reference section 7, above). In addition, the applicants implemented several revisions to the originally proposed route in response to input from the FERC, the Corps, Federal and State agencies, non-government agencies/organizations, affected landowners, and other stakeholders to avoid or minimize impacts on environmental resources including, in many cases, wetlands. Therefore, based on the pipeline routes and amount of collocation, and configuration of aboveground facilities, wetland impacts have been avoided to the extent practicable. In addition to the routing principals, alternatives review, and typical construction mitigation measures noted within the FEIS and this document, the applicants would implement certain specialized construction methods, including the HDD method, to avoid effects on local resources including wetlands; and, has adjusted workspace boundaries along pipeline routes and at aboveground facilities to avoid wetlands. Reference the FEIS, section 3.4.2.1.

(b) Constructing and operating the SMP Project would temporarily and permanently impact wetlands. Construction activities would temporarily and permanently effect wetland vegetation and habitats; and, could temporarily effect wetland soils characteristics, hydrology, and water quality. The effects on wetland vegetation would be greatest during and immediately following construction. In general, wetland vegetation would eventually transition back into a community with a function similar to that of the wetland before construction. The Corps expects that emergent wetlands would recover to their pre-existing vegetative conditions in a relatively short period, typically within 1 to 2 years. Scrub-shrub wetlands could take 2 to 4 years to reach functionality similar to preconstruction conditions, depending on the age and complexity of the system. The affect upon forested wetlands would be much longer due to the time needed to regenerate a forest community (in consideration of the species that dominate the forested wetlands crossed by the SMP Project, regeneration to preconstruction conditions may take 30 years or longer); and, within directly over the pipeline and within a setback corridor, forested wetlands would be replaced by herbaceous systems (a permanent conversion). Effects on the vegetative communities may also include changes in the density, type, and biodiversity of vegetation, including invasive species. Effects on habitats also may occur due to fragmentation, loss of riparian vegetation, and/or microclimate changes associated with gaps in the canopy vegetation associated with the implementation of work. Reference the FEIS section 3.4.2.2.

(c) As previously noted, soils within wetlands would be restored to their original profile to the extent possible. However, during construction, any failure to adequately segregate topsoil could result in the mixing of the topsoil with the subsoil. This disturbance could result in reduced biological productivity or modified chemical conditions in wetland soils that could affect the reestablishment and natural recruitment of native wetland vegetation. In addition, inadvertent compaction and rutting of soils during construction could result from the movement of heavy machinery and the transportation of pipe sections. The resulting alteration of the natural hydrologic patterns of the wetlands could inhibit seed germination and regeneration of vegetative species. The discharge of stormwater, trench water, or hydrostatic test water could also increase the potential for sediment-laden water to enter wetlands and cover native soils and vegetation. Finally, construction clearing activities and disturbance of wetland vegetation could also temporarily affect the wetland's capacity to buffer flood flows and/or control erosion. Wetland hydrology would be maintained by installation of trench breakers at the wetland/upland boundary, and by restoring wetlands to original contours without adding new drainage features that were not present prior to construction. As also previously noted, effects on water quality may include changes in temperature, biochemistry, or water chemistry; sedimentation or release of hazardous materials (e.g., fuels, lubricants); addition of nutrients; and turbidity. However, the applicants' construction and maintenance plans include measures to avoid and minimize wetland impacts and eliminate or reduce the potential for adverse conditions. Transcontinental Gas Pipe Line Company, LLC's baseline environmental construction, restoration, and mitigation plans are contained in its Construction Best Management Practices Plan (CBMPP); Sabal Trail Transmission, LLC's baseline environmental plans are contained in its Erosion and Sediment Control Plan (E&SCP); and FSC, LLC's baseline environmental plans are contained in its Plan and Procedures (reference the FEIS, section 2.3; and, Sabal Trail E&SCP, section 1.3).

(d) The Corps expects that the overall project could generate secondary and/or indirect effects, such as the sedimentation of water resources down-gradient of disturbed areas or habitat loss due to microclimate changes following clearing of forested vegetation that could result from the principal pipeline construction activities. The applicants propose construction and restoration plans to prevent/reduce secondary and indirect impacts on adjacent wetland areas. These include such measures as minimizing the length of open trench at any given time, using HDD installation methods in sensitive areas, installing trench breakers, employing erosion and sediment control measures to prevent discharge of sediment into adjacent wetlands and waterbodies, and limiting refueling and storage of hazardous materials. In addition, where secondary and indirect effects cannot be avoided or minimized, they would be mitigated as part of applicable Corps and state wetland compensatory mitigation requirements.

(e) Operating the SMP Project would require periodic vegetation maintenance over the pipeline centerline. The applicants would conduct annual vegetative maintenance of a 10-foot-wide strip centered over the pipeline in forested wetlands, but herbaceous wetland vegetation would not generally be mowed or otherwise maintained, and therefore would not be permanently affected. Scrub-shrub wetlands would be allowed to regenerate but would be affected by maintenance of the 10-foot-wide strip. Most of the permanent impacts on wetland vegetation would be in forested wetlands (reference the FEIS section 3.4.2.2. The applicants would selectively cut and remove woody vegetation located within 15 feet of the pipeline that produces roots that could compromise the integrity of the pipeline coating. This activity would result in the conversion of any forested wetland within 15 feet of the pipeline to either scrub shrub or herbaceous cover (reference the FEIS section 3.4.2.2. Therefore, by maintaining the ROW and limiting revegetation of a portion of scrub shrub and forested wetlands, some of the functions (primarily habitat) of these wetlands would be permanently altered by conversion to scrub shrub and/or emergent wetlands. However, any such loss of functional value would be offset by the compensatory mitigation requirements associated with the project.

(f) The Corps determined the compensatory mitigation requirements using appropriate methodologies, which included pre-construction (i.e., existing) and post-construction (i.e., presumed) Wetland Rapid Assessment Procedure (WRAP) or Uniform Mitigation Assessment Method (UMAM) functional assessment methodologies, the Ratio Method, wetland type indicators, acreage of impact, and secondary or indirect impacts to adjacent resources, as applicable (reference section 11, below).

(g) The SMP Project would temporarily affect several hundred acres of wetlands. After the installation of the pipeline, a majority of the affected wetlands would return to pre-construction conditions. Based on the types and amounts (area) of wetlands that would be affected, and considering the applicant's mitigative measures including avoidance, minimization, and compensation of adverse effects to wetlands, the Corps expects that the overall adverse effect upon wetlands would be minor and short term.

(3) Mud flats (40 C.F.R. § 230.42): Not applicable – the SMP Project would not affect mud flats.

(4) Vegetated shallows (40 C.F.R. § 230.43): Not applicable – the SMP Project would not affect vegetated shallows.

(5) Coral reefs (40 C.F.R. § 230.44): Not applicable – the SMP Project would not affect coral reefs.

(6) Riffle and pool complexes (40 C.F.R. § 230.45): Waterbody crossings would be temporary in nature and construction/restoration would follow the guidelines of the FERC Procedures which have been fully integrated into the Project Erosion and Sediment Control Plan. Therefore, any affect upon riffle and pool complexes would be minor and short term.

d. Potential Impacts on Human Use Characteristics (40 C.F.R. Part 230, Subpart F):

(1) Municipal and private water supplies (40 C.F.R. § 230.50):

(a) Hillabee Expansion Project: Transcontinental Gas Pipe Line Company, LLC proposes to withdraw approximately 16.6 million gallons of surface water in aggregate from eight surface water sources to test the new pipeline loops. All water withdrawn would be discharged back to the same watershed, where possible. Prior to water use, Transcontinental Gas Pipe Line Company, LLC would submit a beneficial use notification to the Alabama Department of Conservation and Natural Resources to appropriate from the surface waters. Transcontinental Gas Pipe Line Company, LLC would also apply for coverage under the ADEM General Hydrostatic Discharge Permit for test water discharges, and would comply with applicable requirements. Transcontinental Gas Pipe Line Company, LLC has indicated that the water sources identified as hydrostatic test water sources may also be used for dust control along with municipal water. Transcontinental Gas Pipe Line Company, LLC's January 2016, *Response to Public Comments Joint Public Notice for a U.S. Army Corps of Engineers Section 404 of the Clean Water Act Permit and Alabama Department of Environmental Management Section 401 of the Clean Water Act Permit*, Table 1 identifies the planned sources, descriptions, watersheds, volumes, and discharge locations and rates that Transcontinental Gas Pipe Line Company, LLC would use for each pipeline loop. Based on Transcontinental Gas Pipe Line Company, LLC's proposed measures, the FEIS indicates that the Hillabee Expansion Project would not significantly affect any surface water resources due to its planned water uses (reference the FEIS, section 3.3.3.3). Based on the preceding discussion the Corps concurs with the FEIS determination.

(b) Sabal Trail Project: A one-time use of approximately 115 million gallons of water would be used to construct the Sabal Trail Project. Sabal Trail Transmission, LLC would use 15 water withdrawal sources for hydrostatic testing of the pipeline facilities, including 5 private ponds, 3 wells, and 7 surface water resources. A total of 19 water sources would be used for HDD construction, including 4 private ponds, 6 municipal sources, and 9 surface water resources. Eleven water sources would be used for testing aboveground facilities, including 9 municipal water supplies, one private water

well, and one private pond. There are 35 hydrostatic test sections along the Project route. Eleven of these 35 test sections will reuse water that has been used in other test sections. Public water sources would be utilized for dust control. Sabal Trail Transmission, LLC estimates the volume of water necessary for dust control at approximately 1,500,000 gallons per construction spread (reference the FEIS, section 3.3.3.4). Sabal Trail Transmission, LLC would submit beneficial use notifications for planned surface water uses in Alabama and would report uses that exceed 100,000 gallons per day to the Office of Water Resources. Discharges of hydrostatic test water would be authorized under the ADEM NPDES General Permit for Discharge of Hydrostatic Test Water Number ALG670000. In Georgia, Sabal Trail Transmission, LLC would obtain a Georgia Environmental Protection Division Surface Water Withdrawal Permit for surface water withdrawals and would discharge hydrostatic test water under NPDES General Permit for Storm Water Discharges Associated with Industrial Activity (hydrostatic test waters) Number GAR100002. Approvals to withdraw surface water in Florida would be requested from the various Water Management Districts, who would ensure no conflicts would be created with existing, authorized withdrawals. Sabal Trail Transmission, LLC has identified several authorized withdrawals that have the potential to be affected by the project. In the event that one of these permits does require modifications, Sabal Trail Transmission, LLC would work with the permit holder to ensure that the modification does not adversely affect the landowner's intended use for the water. Discharges in Florida would be subject to an Individual NPDES Permit issued by the FDEP. During water withdrawal, Sabal Trail Transmission, LLC would screen water intake hoses and control the uptake rate to avoid entrainment and impacts on aquatic species. During discharges, the rate would also be controlled and water would be directed into energy dissipation devices to avoid erosion. Reference the FEIS, section 3.3.3.4.

(c) FSC Project: FSC, LLC would use approximately 29,036,000 gallons of water to conduct hydrostatic testing of the pipeline and 1,119,702 gallons for testing the HDD pullback pipe strings. FSC, LLC has stated that municipal water would be used when feasible and surface water would be used where municipal water is not a viable option for dust control. In addition, FSC, LLC stated it would not use groundwater as a water source. FSC, LLC expects to use various commercial, municipal, and surface water sources including Lake Kissimmee (MP 53) and C-23 Canal (MP 115) for testing the pipeline. FSC, LLC would obtain authorization for water uses as part of the permit approval process from Florida WMDs and FDEP. Reference the FEIS, section 3.3.3.5.

(d) In consideration of the information within the FEIS and discussed herein, the Corps expects that the any adverse effect upon municipal or private water supplies would be minor and temporary.

(2) Recreational and commercial fisheries (40 C.F.R. § 230.51):

(a) The SMP Project would not affect commercial, saltwater marine, or estuarine fisheries; however, the overall project would cross many waterbodies that could support recreational warm water fisheries. Fish species commonly found in the waterbodies crossed by the SMP Project are listed in the FEIS, Table 3.7-1. Constructing and operating the SMP Project could result in temporary and permanent impacts on fisheries and aquatic resources. Sedimentation and turbidity, alteration or removal of instream and stream bank cover, stream bank erosion, introduction of water pollutants, water depletions, and entrainment of small fishes during water withdrawals resulting from project activities would increase stress, injury, and mortality of stream biota. The degree of impact on fisheries from construction activities would depend on the waterbody crossing method, the existing conditions at each crossing location, the restoration procedures and mitigation measures employed, and the timing of construction. Reference the FEIS, section 3.7.

(b) Hillabee Expansion Project: The Hillabee Expansion Project would affect 166 waterbodies. Under Alabama Water Quality Standards (Alabama Administrative Code 335-11-.02), all waterbodies in the state are managed for fish and wildlife use. While there are no exceptional waters or special fisheries crossed by the Hillabee Expansion Project, perennial and intermittent streams could support fish and other biota (reference the FEIS, section 3.7.2.7).

(c) Sabal Trail Project: The Sabal Trail Project would cross 363 waterbodies. All of the affected waterbodies in Alabama are managed for fish and wildlife use. All of the affected waterbodies in Georgia are managed under GDNR Rule 391-3-6-.03 as fishing resources. All of the affected waterbodies in Florida have a Florida Class III classification, which requires management for recreation and maintenance of a healthy and well-balanced fish population. In addition to these management goals, eleven waterbodies that would be crossed by the Sabal Trail Project have been given additional state or Federal designations. Sabal Trail Transmission, LLC would not withdrawal or discharge water into these waters unless approval is granted by state or Federal agencies. Additionally, the Sabal Trail Project would not adversely affect designated critical habitat for mussels or Gulf sturgeon (*Acipenser oxyrhynchus desotoi*). Further, Sabal Trail Transmission, LLC would be required to comply with state water quality standards, such as the requirements by the FDEP that turbidity levels cannot exceed 29 nephelometric turbidity units or background turbidity levels in Outstanding Florida Waters (reference the FEIS, section 3.7.2.8). The FERC received comments from the Lake Martin Resource Association that construction of the Sabal Trail Project could impact the waters, fisheries, and recreational uses of Lake Martin

and its main tributaries, specifically Hillabee Creek and the Tallapoosa River. The Sabal Trail Project would cross Hillabee Creek and the Tallapoosa River using the HDD method; therefore, effects on these waterbodies and their fisheries, including redeye bass (*Micropterus* coosae) and shoal bass (*Micropterus* cataractae) populations, would be avoided (reference the FEIS, section 3.7.2.8).

(d) FSC Project: The FSC Project would cross 43 waterbodies. All of the affected waterbodies in Florida have been assigned a Florida Class III classification, which requires management for recreation and maintenance of a healthy and well-balanced fish population. Lake Kissimmee provides recreational and sport fishing opportunities, along with other smaller perennial waterbodies that would be crossed by the project. No Federal or state sensitive species are known to occur within waterbodies that would be crossed by the FSC Project. Further, the FSC Project would comply with state water quality standards, such as the requirements by the FDEP that turbidity levels cannot exceed 29 nephelometric turbidity units or background turbidity levels in Outstanding Florida Waters (reference the FEIS, section 3.7.2.9).

(e) The applicants have proposed several measures to avoid or minimize direct and indirect effects on fisheries; and, would be required to implement construction, mitigation, and restoration measures required by the Corps and other permitting agencies that would further minimize effects. Based on the FEIS, section 3.7, the FERC concluded that the measures that the applicants would implement would not substantially effect fisheries of special concern, which are more sensitive to the construction effects or are held to a higher level of value or protection by state agencies. In consideration of the information within the FEIS and discussed herein, the Corps expects that any adverse direct or indirect effect upon fisheries would be minor and temporary.

(3) Water-related recreation (40 C.F.R. § 230.52):

(a) Hillabee Expansion Project: Transcontinental Gas Pipe Line Company, LLC would cross all waterbodies using dry open cut crossing methods except for two (Hillabee Creek at MP 945.0 and Town Creek at MP 944.9), which would be crossed by the wet open-cut crossing method. Transcontinental Gas Pipe Line Company, LLC also provided site-specific plans for each major waterbody crossing (reference the FEIS, Appendix J). Based on these factors, the use of these crossing methods would result in minor and temporary impacts.

(b) Sabal Trail Project: Sabal Trail Transmission, LLC proposes to use a dry crossing method, conventional bore, or HDD at navigable (Section 10, RHA) waterbody crossings. Additionally, construction and restoration at these waterbodies would be conducted in accordance with the Erosion and Sedimentation Control Plan which incorporates all the requirements of the FERC Procedures. The Sabal Trail Project would cross or be located within 0.25-mile of multiple public and private lands that support recreation or special interests. Features directly affected include trails, conservation and recreation areas, sports facilities, state forests, wildlife management areas and preserves, and parks, as listed in the FEIS, Table 3.9.2-8. No National Parks or Forests, landmarks, wilderness areas, urban parks and recreation recovery areas, or designated wild and scenic rivers were identified within 0.25 mile of the Sabal Trail Project. Sabal Trail Transmission, LLC would work with the landowners of the recreational and special interest areas to avoid, minimize, or mitigate impacts on these areas, as requested. Sabal Trail Transmission, LLC would attempt to maintain access to the areas during construction of the pipeline; and, if necessary, would compensate the landowner(s) for the value of any lost resources. The Sabal Trail Project would cross the Walter F. George Lake (Chattahoochee River) and the Alabama Scenic River Trail (Tallapoosa River) using the HDD crossing method. Direct impacts on the lake and rivers would be avoided; however, recreational users may experience temporary visual and noise impacts associated with construction personnel and equipment and HDD activities. Recreational uses of the lake would not be affected by operations. By crossing with the HDD method, tree clearing and vegetation maintenance within the permanent ROW on either side of the crossing would not be necessary, thus avoiding permanent visual impacts on recreational users. For the Tallapoosa River, impacts associated with the project would be incremental to and consistent with these existing features. The Sabal Trail Project mainline would cross the Santa Fe River Paddling Trail using the HDD crossing method, which is described in the FEIS, section 2.3.2. Construction-related and operation-related impacts associated with the Sabal Trail Project would be the same as those previously described for other features that would be crossed using the HDD method. Recreational uses of the trail would not be affected by operations. The Sabal Trail Project could cross the Withlacoochee South Paddling Trail in Marion County at the south boundary of the Halpata-Tastanaki Preserve using the HDD crossing method. Construction and operation-related impacts would be the same as those previously described using the HDD method. To further reduce impacts at this crossing location, the Sabal Trail Project would also be collocated with an existing power line ROW. Recreational uses of the trail would not be affected by operations. Based on the impacts identified and mitigation measures Sabal Trail Transmission, LLC would implement, the FEIS concluded the Sabal Trail Project would not result in significant impacts on recreational or special interest areas (reference the FEIS, section 3.9.2.5).

(c) FSC Project: The FSC Project would cross one navigable waterway (Lake Kissimmee). FSC, LLC proposes to use a dry crossing method, conventional bore, or HDD at sensitive waterbody crossings; and, would utilize HDD at the Lake Kissimmee crossing. Additionally, construction and restoration at these waterbodies would be conducted in accordance with the FSC Project Erosion and Sedimentation Control Plan, which incorporates all the requirements of the FERC Procedures (reference the FEIS, section 3.3.2).

(d) In consideration of the information within the FEIS and discussed herein, the Corps expects that the any adverse direct or indirect effect upon water-related recreation would be minor and temporary.

(4) Aesthetics (40 C.F.R. § 230.53):

(a) Hillabee Expansion Project: With the exception of constructing and operating aboveground facilities, which would result in permanent impact on the surrounding existing visual character of the Hillabee Expansion Project area, most visual and aesthetic effects associated with the project would be temporary and limited to the period of active construction, in which the landscape would be characterized by areas of cleared or flattened vegetation, trench excavation, grading, and spoil storage. The removal of existing vegetation and the exposure of bare soils would diminish the visual character of the areas crossed by the pipelines. Other visual effects could result from the removal of large individual trees that have intrinsic aesthetic value; the removal or alteration of vegetation that may currently provide a visual barrier; or landform changes that introduce contrasts in visual scale, spatial characteristics, form, line, color, or texture. The degree of visual impact would depend on the type of vegetation crossed; the existing visual quality of the affected area; the width of the construction ROW; the number of potential viewers affected; the presence or absence of other utility corridors; and the length of time the landscape is visually affected. The visual impact of the Hillabee Expansion Project pipeline itself would not have a long-term visual impact because it would be installed below ground, adjacent to existing rights-of-way, and would revegetate within one to two growing seasons. The impact of vegetation clearing on the aesthetic value of the project area would be shortest in areas consisting of short grasses and scrub-shrub vegetation and in open and agricultural areas, where the re-establishment of vegetation following construction to previous conditions would be relatively fast (generally less than 3 years). The greatest potential visual impact in forested lands would result from the removal of large specimen trees, which would take longer than other vegetation types to regenerate and would be prevented from re-establishing on the permanent ROW. The installation of the pipeline would generally incrementally widen the existing utility corridors. These existing rights-of-way are

maintained periodically on different schedules, using different methods of maintenance. As a result, along the majority of the project, visual resources have been previously affected by other activities.

(b) Sabal Trail Project: One of the primary concerns when crossing recreation and special interest areas is the impact of construction on the purpose for which the area was established (e.g., the recreational activities, public access, and resources the area aims to protect). Construction would alter visual aesthetics by removing existing vegetation and temporarily disturbing soils. Construction would also generate dust and noise, which could be a temporary nuisance to recreational users. Construction could also interfere with or diminish the quality of the recreational experience by temporarily affecting wildlife movements or disturbing trails. In general, the Sabal Trail Project effects on recreational and special interest areas occurring outside of forest land would be minor and temporary (limited to the period of active construction), which typically would last only several days to several weeks in any one area. These impacts would be minimized by implementing the project Erosion & Sedimentation Control Plan. Following construction, most open land uses would be able to revert to their former uses. Forest land affected by the temporary construction ROW and ATWS areas, however, would experience long-term effects because of the time required to restore the woody vegetation to its preconstruction condition. Further, the placement of aboveground facilities and permanent access roads, as well as forest land within the operational ROW, would experience permanent effects because it would be precluded from being reestablished at the site or within the maintained portion of the ROW. The project incorporates crossing methods that would minimize or mitigate effects on these areas; and, the applicant would maintain access to these areas during construction of the pipeline. Sabal Trail Transmission, LLC also has proposed general mitigation measures for linear trails which may involve a temporary detour, but would allow access to the areas temporarily blocked by construction. With respect to impacts on visual resource, pipe/contractor yards, storage areas, and modifications to existing roads and the creation of new roads for access as a result of the Sabal Trail Project would not result in substantial adverse effects and generally would be temporary. Visual impacts on recreational and special interest areas that are designated for their scenic value are discussed in the FEIS, section 3.9.2.6.

(c) FSC Project: In general, the visual impact of the FSC Project would be relatively minor and short term (limited to the period of active construction), which typically would last only several days to several weeks in any one area. These impacts would be minimized by implementing the Erosion & Sedimentation Control Plan. Following construction, most open land uses would be able to revert to their former uses. Open land is the most common land use crossed by the project and

approximately 65 percent of the FSC Project would be constructed adjacent to existing rights-of-way. The pipeline generally would not have a long-term visual impact since it would be installed below ground and the ROW would be revegetated within one to two growing seasons. FSC, LLC would reduce the visual impact of the pipelines by overlapping a portion of the construction ROW with existing cleared rights-of-way where possible. Consequently, the installation of the pipeline would generally only incrementally widen the existing corridors. Forest land affected by the temporary construction ROW and ATWS areas, however, would experience long-term effects because of the time required to restore the woody vegetation to its preconstruction condition. Further, the placement of aboveground facilities and permanent access roads, as well as forest land within the operational ROW, would experience permanent effects because it would be precluded from being reestablished at the site or within the maintained portion of the ROW. Most of the recreational and special use areas identified offer scenic opportunities related to wildlife viewing, photography, and/or unique vistas or features. Although the Florida National Scenic Trail (FNST) connectors affected by the project assist in providing access to the designated segments of FNST, they are not officially established segments of the trail and have not been specifically designated for their visual quality. The trail connectors would be crossed using the bore crossing method. Visual impacts on these features as a result of the project would be the same as those associated with general pipeline construction, including ROW and workspace clearing, trenching, etc. The proposed aboveground facilities should have relatively minor visual impacts due to their location and size.

(d) The analysis of aesthetic impacts or benefits is extraordinarily subjective. Several organizations and individuals within the United States are vociferous in their objection to any development and/or the loss of any natural ecosystem. Other organizations and individuals observe beauty in developed areas (e.g., building architecture). In consideration of the information within the FEIS and discussed herein, the Corps expects that any adverse direct or indirect effect upon aesthetics would be minor and, in general, temporary.

(5) Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves (40 C.F.R. § 230.54):

(a) Hillabee Expansion Project: The Hillabee Expansion Project would not cross any recreational or special interest areas, including designated wilderness areas; national wildlife refuges; national parks; national, state, or local parks; national or state forests; designated scenic highways or byways; protected rivers or waterbodies; or coastal zones. Two recreational and/or special land use areas are within 0.25 mile of the Hillabee Expansion Project, which include Zach Rogers Park (or City Park) at MP

792.0 along the Butler Loop, and a Wildlife Management Area at MP 911.9 along the Proctor Creek Loop. Disruption, dust, noise, and visual impacts during construction could be a nuisance to individuals using recreation areas, and could cause a disturbance to wildlife, especially in protected areas. The duration of the impact in any one area, however, would be minor and short-term, lasting only several days to weeks.

(b) Sabal Trail Project: Features directly affected include trails, conservation and recreation areas, sports facilities, state forests, wildlife management areas and preserves, and parks, as listed in the FEIS, Table 3.9.2-8. No National Parks or Forests, landmarks, wilderness areas, urban parks and recreation recovery areas, or designated wild and scenic rivers were identified within 0.25 mile of the Sabal Trail Project. Reference sections 8.c.(1) and 8.d.(3)(b), above, and the FEIS, section 3.9.2.5.

(c) FSC Project: The FSC Project would cross or be within 0.25 mile of multiple public and private lands that support recreation or special interests. Features directly affected include trails, conservation areas, state forests, lakes, and wetland mitigation banks, as listed in table 3.9.3-4. However, no national parks, urban parks, national landmarks, wilderness areas, or designated wild and scenic rivers were identified within 0.25 mile of the FSC Project (reference the FEIS, section 3.9.2.5).

(d) In consideration of the information within the FEIS and discussed herein, the Corps expects that the any adverse direct or indirect effect upon parks, etc., would be minor and, in general, temporary.

e. Contaminant Evaluation and Testing (40 C.F.R. Part 230, Subpart G):

(1) General evaluation of dredged and fill material (40 C.F.R. § 230.60): The specific locations associated with the discharge of fill material are identified in the FEIS and/or supplemental information provided by the applicants. For the purpose of this evaluation, the fill associated with the SMP Project is wetland soils obtained/retained from excavated areas, which would be returned to the excavated area after the placement of pipe; and/or, clean fill from an appropriate upland or commercial source. Material used during pipe installation or construction of aboveground facilities would be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act. Any permit issued for the project would include a special condition stipulating the use of clean fill. There is no indication that the proposed fill sites have been subjected to industrial uses that could increase the potential presence of unsuitable fill material (the excavated material).

(2) Chemical, Biological, and Physical Evaluation and Testing: In consideration of the existing land uses within the proposed project ROW, there is no indication that contaminants are present. Therefore, testing is not warranted.

f. Actions to minimize adverse effects (40 C.F. R. Part 230, Subpart H): *Actions to be undertaken in response to 40 C.F.R. Section 203.10(d) to minimize the adverse effects of discharges of dredged or fill material are partially incorporated into the discussions in section 7 above. Additional actions to minimize adverse effects are discussed below.*

(1) The applicants applied routing criteria to avoid and minimize construction and operation effects; and, developed a number of project-specific plans (where relevant) to do the same. The FEIS includes, for example, the applicants' respective HDD Construction and Contingency Plans (FEIS Appendix E), Karst Plans (FEIS Appendix F), Residential Construction Plans (Appendix G), Spill Plans (FEIS Appendix I), and Major Waterbody Crossing Plans (FEIS Appendix J). The applicants also developed a number of additional plans not appended to the FEIS including, but not limited to, Transcontinental Gas Pipe Line Company, LLC's Construction Best Management Practice Plan (Stormwater Pollution Prevention Plan); and, Sabal Trail Transmissions, LLC's E&SCP and Wetland Restoration Plan. Any Corps authorization of the SMP Project would incorporate special conditions requiring the implementation of the plans specifically incorporated into the FEIS; and, the additional plans noted.

(2) Actions concerning the location of the discharge (40 C.F.R. § 230.70): Reference section 7.b.(3)(a-c), section 7.b.(5)(b), and section 7.b.(5)(c) of this document. The FEIS, Table 3.4.1-1 summarizes the wetland types crossed by the SMP Project. The FEIS, Table 3.4.1-2 in appendix D details each wetland crossing. In addition, the Sabal Trail Project Supplemental III presents changes that occurred since the 26 October 2015 Supplemental II filing through 23 February 2016 and reflects the facilities and routes that were approved in the FERC Certificate. The discharge of fill material into waters of the United States, including wetlands, associated with the SMP Project is limited to the specific work areas associated with the installation of pipe and the establishment of requisite and attendant features (e.g., pig launch/retrieval, compressor stations, etc.). Within the overall route corridor, the applicants shifted the location of the actual pipe placement, to the extent practicable, to reduce the work area directly affecting wetlands. In addition, as practicable, the applicants established staging areas outside of wetland areas and would transport equipment and materials into the wetland work areas. In consideration of this information, the applicant implemented measures to minimize work affecting aquatic resources within the project corridor to the maximum extent practicable.

(3) Actions concerning the material to be discharged (40 C.F.R. § 230.71): The fill associated with the majority of this project is wetland soils retained from wetland excavated areas, which would be placed back into the excavated area after the placement of pipe. The use of this material, which has the same general substrate composition of the contiguous areas, should reduce the disruption of subsurface flow and inundation patterns.

(4) Actions controlling the material after discharge (40 C.F.R. § 230.72): The FEIS, section 2.3; section 2.5; and, section 2.6 convey specific information regarding the control of fill material after the placement of that material. In addition, the HDD Construction and Contingency Plans (FEIS Appendix E) and Major Waterbody Crossing Plans (FEIS Appendix J) contain site-specific measures to control discharge material.

(5) Actions affecting the method of dispersion (40 C.F.R. § 230.73): The applicants would utilize silt screens and other appropriate methods to confine discharged material and prevent secondary/indirect effects (e.g., HDD Construction and Contingency Plans – FEIS, Appendix E; Major Waterbody Crossing Plans – FEIS, Appendix J; and, the FEIS, section 2.3). Work associated with the installation of pipe incorporates specific measures at the various fill sites to restore wetland functions and services to the maximum extent practicable (reference the FEIS, sections 3.2.3, 3.4.2, 3.4.3, and 3.5.4).

(6) Actions related to technology (40 C.F.R. § 230.74): Work associated with the SMP Project incorporates current pipeline technology and modern equipment, best suited for the work proposed (reference the FEIS, sections 2.3 and 2.6; the Typical ROW Construction Drawings – FEIS, Appendix C; the HDD Construction and Contingency Plans – FEIS, Appendix E; the Karst Plans – FEIS, Appendix I; and, the Major Waterbody Crossing Plans – FEIS, Appendix J).

(7) Actions affecting plant and animal population (40 C.F.R. § 230.75): The SMP Project avoids and minimizes work affecting plant and animal populations to the maximum extent practicable. The applicants would implement specific measures to minimize the interruption of stream flow during stream crossings (reference the HDD Construction and Contingency Plans – FEIS, Appendix E; and, the Major Waterbody Crossing Plans – FEIS, Appendix J) and other measures to limit/reduce effects upon flora and fauna (reference the FEIS, sections 3.2.3, 3.4.3, 3.5.4, 3.5.5, 3.5.6, 3.6.2, 3.6.3, 3.6.4, 3.7.2, 3.8, and 5.1).

(8) Actions affecting human use (40 C.F.R. § 230.76): The SMP Project avoids and minimizes work adversely affecting general aesthetics (reference section 8.d.(4)(a-d), above) and use of recreational lands (reference sections 8.d.(3)(a-d) and 8.d.(5)(a0c), above). Moreover, within parks and other recreational areas, work would be conducted in a manner to limit the disruption of the use of such areas; and, alternate paths/routes to access such areas would be provided as needed during construction activity. The SMP Project also minimizes work affecting municipal and private water supplies (reference section 8.d.(1)(a-d), above).

(9) Other actions (40 C.F.R. § 230.77): As noted, the SMP Project incorporates actions that would control runoff and contain the fill material; and, with respect to the crossing of streams or other waterways, accommodate the needs of fish and wildlife (e.g., the HDD Construction and Contingency Plans – FEIS, Appendix E; and, the Major Waterbody Crossing Plans – FEIS, Appendix J).

g. Cumulative and secondary effects on the aquatic ecosystem: Constructing and operating the SMP Project would temporarily and, at scattered locations, minimally permanently affect the aquatic ecosystem, as the SMP Project would affect, to some degree, geology, soils, water resources, vegetation, wetlands, wildlife, and some land uses. The Corps, though, expects that nearly all of the project-related effects would be contained within, or adjacent to, the temporary construction ROW and ATWS. The FEIS evaluates potential cumulative effects associated with the work proposed (reference the FEIS, section 3.14). The Corps reviewed the FEIS cumulative effect analysis and concurs with the determinations of that analysis. Specifically, with regard to the aquatic environment, in consideration of the temporary duration of the majority of the effects proposed and the compensatory mitigation for work affecting aquatic resources that is associated with the project, the Corps does not expect any measurable adverse cumulative effect to the local or regional aquatic environments along the project corridors. Separately, potential indirect/secondary effects on the aquatic ecosystem that are associated with the SMP Project are referenced and evaluated within this document in previous sections (reference section 8.a-f, above); and, as the majority of those effects would be temporary, the Corps does not expect that any of those indirect/secondary effects would be substantial.

h. Restrictions on discharges (40 C.F.R. § 230.10).

(1) It has been demonstrated in Paragraph 7 that there are no less environmentally-damaging practicable alternatives which could satisfy the project's basic purpose. The activity is located in a special aquatic site (e.g., wetlands). The activity does not need to be located in a special aquatic site to fulfill its basic purpose.

(2) The proposed activity does not violate applicable State water quality standards or Section 307 prohibitions or effluent standards. The proposed activity does not jeopardize the continued existence of federally listed threatened or endangered species or adversely modifies designated critical habitat. The proposed activity does not violate the requirements of a federally designated marine sanctuary.

(3) The activity would not cause or contribute to significant degradation of waters of the United States, including adverse effects on human health; life stages of aquatic organisms' ecosystem diversity, productivity and stability; and recreation, aesthetic, and economic values.

(4) Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (reference section 7 for a description of avoidance/minimization actions; and, section 9 for a description of compensatory mitigation actions).

i. Factual determinations (40 C.F. R. Part 230, Subpart B) – The determinations below are based on the determinations of effects described in detail in the preceding sections (sections 8.a-h):

(1) Physical Substrate (40 C.F.R. § 230.11(a)): Minor Effect (short term)

(2) Water circulation, fluctuation, and salinity (40 C.F.R. § 230.11(b)): Minor Effect (short term)

(3) Suspended particulate/turbidity (40 C.F.R. § 230.11(c)): Minor Effect (short term)

(4) Contaminant Availability (40 C.F.R. § 230.11(d)): Minor Effect (short term)

(5) Aquatic Ecosystem Effects (40 C.F.R. § 230.11(e)): Minor Effect (short term)

(6) Proposed Disposal Site (40 C.F.R. § 230.11(f)): Minor Effect (short term)

(7) Cumulative Effects (40 C.F.R. § 230.11(g)): Minor Effect (short term)

(8) Secondary Effects (40 C.F.R. § 230.11(h)): Minor Effect (short term)

9. Public Interest Review (33 C.F.R. § 320.4): The Corps reviewed all of the public interest factors. The Corps considers the public interest factors identified below as relevant to this proposal. The Corps considered both cumulative and secondary impacts on these public interest factors within the geographic scope as described in section 4, above; and, within the FEIS, section 1.2. For the analysis of the public interest review factors the Corps has used information as provided in the FEIS to the maximum extent, as appropriate. Additional information evaluated by the Corps in its determination for any of the specific public interest review factors, is described below in the section for the specific factor.

a. Wetlands (33 C.F.R. § 320.4(b); Corps' Wetland Policy): The FEIS thoroughly documents and evaluates work affecting waters of the United States, including wetlands (reference the FEIS, sections 3.4 and 5.1.4). The SMP Project avoids and minimizes effects to wetlands to the maximum extent practicable; and, the vast majority of unavoidable effects would be temporary. Further, permanent unavoidable adverse effects upon wetlands, which mainly consist of the conversion of forested wetlands to herbaceous or scrub/shrub wetlands (i.e., general wetland functions and services would remain), would be compensated through the purchase of mitigation bank credits (reference section 11, below). The Corps has reviewed the proposed mitigation plan and determined that the plan provides sufficient wetland functional replacement to compensate the loss of wetland functions associated with the implementation of the work proposed. In consideration of the information within the FEIS and this document; and, with the inclusion of special conditions requiring the implementation of the HDD Construction and Contingency Plans (FEIS, Appendix E), the Karst Plans (FEIS, Appendix F), the Spill Plans (FEIS, Appendix I), the Major Waterbody Crossing Plans (FEIS, Appendix J), the Site-specific Crossing Plans for Recreation Areas (FEIS, Appendix L), and the proposed compensatory mitigation, the Corps concludes that the effect of the proposed project on wetlands is minor and short term. After considering U.S. Army Corps of Engineers' wetland policy; information contained within the FEIS; other documents reviewed by the Corps; and, this document, the Corps has determined that the benefits of the project outweigh the potential detrimental effects.

b. Fish and wildlife (33 C.F.R. § 320.4(c)): The FEIS thoroughly documents and evaluates work potentially affecting fish and wildlife (reference the FEIS, sections 3.6, 3.7, 3.8, 5.1.6, and 5.1.7). Waterbody and wetland crossings would be temporary in nature and construction/restoration would be consistent with the FERC procedures, which are the basis for the applicants' respective construction and maintenance plans. Construction/restoration of uplands would be consistent with the 2013 FERC Upland Erosion Control, Revegetation, and Maintenance Plan, which is part of the basis for the applicants' respective construction and maintenance plans. With the inclusion of

special conditions requiring the implementation of the HDD Construction and Contingency Plans (FEIS, Appendix E), the Karst Plans (FEIS, Appendix F), the Spill Plans (FEIS, Appendix I), the Major Waterbody Crossing Plans (FEIS, Appendix J), the Site-specific Crossing Plans for Recreation Areas (FEIS, Appendix L), and the proposed compensatory mitigation, the Corps concludes that the effect of the proposed project on fish and wildlife is neutral.

c. Water quality (33 C.F.R. § 320.4(d)): The FEIS thoroughly documents and evaluates work affecting water resources (reference the FEIS, sections 3.3 and 5.1.3). The State of Alabama, the State of Georgia, and the State of Florida have all issued Section 401 Water Quality Certification for the SMP Project components encompassed by each jurisdiction (reference section 10.a, below). Section 8.d.(1), above, also conveys additional information regarding municipal and private water supplies. In consideration of the information within this document and the FEIS, and in consideration of the issuance of Section 401 Water Quality Certification for all portions of the SMP Project, the Corps concludes that any potential effect of the proposed project on water quality would be minor and short term.

d. Historic, cultural, scenic, and recreational values (33 C.F.R. § 320.4(e)): The FEIS documents and evaluates work potentially affecting historic or cultural resources (reference the FEIS, section 3.11); and, section 10.f, below, conveys additional coordination initiated or received by the Corps after the publication of the FEIS. The FERC coordinated potential historic/cultural effects with the various State Historic Preservation Offices (or the appropriate State agency); and, the Corps has not been advised of any adverse effect to sites listed, or eligible for listing, in the *National Register of Historic Places* (NRHP). Therefore, the Corps concurs with the FEIS determination that the project would not adversely affect historic or cultural resources. The FEIS thoroughly documents and evaluates potential aesthetic/scenic effects (e.g., FEIS, section 3.9.2.6). In addition, this document (reference section 8.d.(4), above) reviewed and evaluated potential effects on aesthetics (scenic effects). The FEIS also thoroughly documents and evaluates work potentially affecting recreational resources (including, but not limited to, sanctuaries, refuges, parks, Section 8.c.(1), above, conveys additional information associated with potential effects upon sanctuaries and refuges; section 8.d.(2), above, conveys additional information associated with potential effects upon recreational fisheries; section 8.d.(3), above, conveys additional information associated with potential effects upon water-related recreation; section 8.d.(4), above, conveys additional information associated with potential effects upon aesthetics (scenic values); and, section 8.d.(5), above, conveys additional information associated with potential effects upon parks. In consideration of the information within

the FEIS, additional information submitted to the Corps, and information within this document, the Corps concludes that any adverse effect upon this general public interest factor would be minor and temporary.

e. Effects on limits of the territorial sea (33 C.F.R. § 320.4(f): The SMP Project would not affect any territorial sea.

f. Consideration of property ownership (33 C.F.R. § 320.4(g): The FEIS, sections 3.3 (water resources), 3.9 (land use and visual resources) and 3.10 (socioeconomics) thoroughly documents and evaluates work potentially affecting land owners. 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 the FERC issues Certificates for the SMP Project and easement negotiations are unsuccessful between the respective applicant and property owner, fair compensation for the easement would be determined through legal proceedings and the eminent domain process. Therefore, landowners whose property is crossed by the SMP Project would be compensated for the temporary and permanent easements on their land and, with exception of growing trees directly over the trench line, the landowner would generally be allowed to continue with the pre-project land uses on any permanent easement(s). Temporary construction easements would revert back to the landowner at the conclusion of construction. In consideration of the measures that would be implemented to avoid and minimize any potential effect to water resources, land use and visual resources, and socioeconomics; the compensation provided to landowners for temporary and/or permanent easements; and other information within the FEIS and this document, the Corps concludes that the effect upon this public interest factor would be neutral with the incorporation of those mitigative actions.

g. Activities affecting coastal zones (33 C.F.R. § 320.4(h): The SMP Project would not be located in designated coastal zones in Alabama or Georgia. However, the SMP Project would traverse areas designated as coastal zone, as associated with the Coastal Zone Management Act (CZMA) within Florida. The FEIS, section 3.9, reviews and evaluates compliance with coastal zone regulations/restrictions. Separately, the FDEP issued Environmental Resource Permits (ERP) on 22 January 2016 for the Florida segment of the Sabal Trail Project; and, 18 November 2014 for the FSC Project (with a modification issued on 24 September 2015), which convey CZMA coastal zone consistency determination.

h. Activities in marine sanctuaries (33 C.F.R. § 320.4(i)): The SMP Project would not affect any marine sanctuaries.

i. Other Federal, state, or local requirements (33 C.F.R. § 320.4(j)):

(1) On 21 April 2016, the Corps approved plans for work associated with the FSC Project at C-23, which would result in the installation of a 30-inch carbon steel natural gas transmission pipeline underneath canal C-23 using HDD. The Corps noted that the approval of the modifications to the Central and Southern Florida Project was in accordance with 33 U.S.C. 408.

(2) Sabal Trail Transmission, LLC must separately obtain a consent-to-easement from SAM Real Estate due to Federal land interests parallel to the Chattahoochee River in Alabama. Any DA permit issued by the Corps would contain a special condition advising Sabal Trail Transmission, LLC of the need to obtain the consent-to-easement prior to the initiation of any work within Federal rights-of-way or land under Federal easement.

(3) The Corps is not aware of other Federal, state, or local requirements or restrictions (pending or denied).

j. Safety of impoundment structures (33 C.F.R. § 320.4(k)): The FEIS, section 2.3, conveys information regarding special pipeline construction procedures, including waterbody crossings, flume construction methodology, dam and pump construction methodology, and wet open-cut construction methodology, which would incorporate various structures that would temporarily impound or divert water. With the inclusion of special conditions requiring the implementation of the HDD Construction and Contingency Plans (FEIS, Appendix E), the Karst Plans (FEIS, Appendix F), the Spill Plans (FEIS, Appendix I), the Major Waterbody Crossing Plans (FEIS, Appendix J), and the Site-specific Crossing Plans for Recreation Areas (FEIS, Appendix L), the Corps concludes that the SMP Project does not incorporate any unsafe temporary impoundment structures.

k. Floodplain management (33 C.F.R. § 320.4(l)):

(1) Executive Order 11988 (EO 11988) directs Federal agencies to demonstrate a comprehensive approach to floodplain management and establishes avoidance of actions within the 100-year floodplain as the preferred method for complying with EO 11988. The FEIS, specifically section 3.3.2.3 – Designated Flood Zones, identifies work affecting flood zones. Based on a review of Federal Emergency Management Agency

(FEMA) flood hazard maps, Transcontinental Gas Pipe Line Company, LLC's proposed pipeline facilities would cross 16 Special Flood Hazard Areas (SFHAs) and 30 areas of minimal flood hazard; and, all four compressor stations and two contractor yards would be within areas of minimal flood hazard. Sabal Trail Transmission, LLC's proposed pipeline facilities would cross 369 SFHAs; a portion of the Alexander City Compressor Station, the Dunnellon Compressor Station, and DEF Citrus County M&R Station would be within SFHAs; and, the Reunion Compressor Station (and associated CFH facilities) would be within an area of minimal flood hazard. FSC, LLC's proposed pipeline facilities would cross 85 SFHAs; and, two MLVs would be located within SFHAs. Details on the flood zones crossed, including the FEMA flood zone designations and locations, are provided in the FEIS, Appendix D, Table 3.3.2-6. In consideration of the work proposed, though, all work within the 100-year floodplain would comply with the applicable FEMA-approved state and/or local floodplain management requirements.

(2) The FEIS, section 3.3.2.4, stipulates that the applicants, to prevent pipeline buoyancy in floodplains, would conduct buoyancy studies prior to construction; and, pipeline segments with particular buoyancy concerns would be fitted with concrete coating, concrete weights, or geotextile saddlebag weights to control buoyancy, thereby avoiding any permanent effect to the floodplain. Further, if the pipeline were to float, remediation would be required to return the pipeline to the appropriate depth of cover. Separately, Sabal Trail Transmission, LLC also verified that where its aboveground facilities would be located in SFHAs, the facilities would not cause a stage increase in FEMA flood elevations. Similarly, the two FSC, LLC MLVs in SFHAs are minor in nature and are not expected to increase flood potential. The FEIS, though, acquiesces that the construction of the SMP Project would result in minor modifications to floodplains. Although the installation/construction of the pipeline would not result in a reduction in flood storage capacity within the floodplain, the construction of the proposed aboveground facilities could result in a reduction in flood storage capacity; however, any potential loss would be negligible based on the overall storage capacity of the affected floodplains. Based on the applicants' construction and restoration measures; and, based on the minor modifications that would occur to floodplains, the FEIS concludes that constructing and operating the SMP Project would not conflict with the intent of EO 11988. The Corps concurs with that determination; and, in consideration of the information within the FEIS and this document, concludes that any effect upon floodplain management would be negligible. The Corps also concludes that any potential effect regarding flood hazards is negligible.

l. Water supply and conservation (33 C.F.R. § 320.4(m)): The FEIS thoroughly documents and evaluates work affecting water resources (FEIS, section 3.3), including work that could affect water supplies and/or water conservation. The FEIS, section

5.1.3, conveys conclusions and recommendations associated with water resources. The Corps reviewed and evaluated the information in the FEIS; and, concurs with the determinations therein. In consideration of the information within the FEIS and this document, the Corps concludes that any effect upon water supply and conservation associated with the SMP Project would be minor and temporary in nature.

m. Energy conservation and development (33 C.F.R. § 320.4(n)): The SMP Project directly benefits energy development. In response to interest from the Municipal Gas Authority of Georgia, Sabal Trail Transmission, LLC would install two side-taps in Georgia to facilitate future connection to the Sabal Trail Project pipeline (reference the FEIS, section 2.1.2.2). Therefore, citizens within the State of Georgia would benefit from the SMP Project, as additional energy development in that area could occur. Separately, the Florida Public Service Commission concluded that additional natural gas transportation capacity is necessary to help meet Florida Power and Light's future electric generation needs; and, the applicants have entered into long-term precedent agreements for 93 percent of the project capacity. Sabal Trail Transmission, LLC also has referenced 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 Department of Energy, Energy Information Administration 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 Transmission, LLC also has referenced 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. Therefore, the SMP Project benefits energy development in Florida. In consideration of the information within the FEIS and this document, the Corps concludes that the project would benefit this public interest factor.

n. Navigation (33 C.F.R. § 320.4(o)): The Hillabee Expansion Project does not traverse navigable waters. The Sabal Trail Project mainline would cross five navigable waters (the Chattahoochee River at the Alabama/Georgia border, the Flint River and Withlacoochee River in Georgia, and the Santa Fe River and Suwannee River in Florida). Additionally, the Sabal Trail Project CCL would cross the Withlacoochee River (Citrus County, Florida), which is a navigable waterway. The FSC Project traverses the southern terminus of Lake Kissimmee, which is a navigable waterway. The Sabal Trail Project and the FSC Project would traverse these waterways utilizing HDD. An HDD crossing places the pipeline below the waterway and avoids direct effects on the waterway, including any direct effect upon navigation. The applicants also would

implement the HDD Construction and Contingency Plans (FEIS, Appendix E). In consideration of the information within the FEIS and this document; and, with the implementation of the HDD Construction and Contingency Plans (FEIS, Appendix E) as a special condition of any authorization granted by the Corps, the Corps concludes that the SMP Project would not adversely affect navigation.

o. Environmental benefits (33 C.F.R. § 320.4(p)) – general environmental concerns: Multiple sections of the FEIS and this document identify, review, and evaluate potential direct, indirect/secondary, and cumulative effects to the general environment within the overall SMP Project corridors and associated work areas. The FEIS and this document support the Corps' determination that the vast majority of any effects upon the general environment would be negligible or minor in degree and temporary in duration due to the implementation of the various plans within the FEIS appendices. Moreover, the FEIS and this document (reference section 11, below) support the Corps' determination that the implementation of the proposed compensatory mitigation plans would offset any unavoidable adverse effects to waters of the United States, including wetlands. Separately, the construction of the SMP Project pipeline does not generate direct environmental benefits. However, the use of natural gas as an energy source from any access point along the SMP Project corridor could diminish the general emission of carbon dioxide compared to other energy fuels (e.g., fuel oil or coal). It also is anticipated that the consumption of the distributed gas to any converted power plants would reduce current greenhouse gas emissions; and, thereby potentially providing some overall environmental benefits, as (per EPA, 2014c) greenhouse gas emission are a primary cause of climate change (reference the FEIS, section 3.14.4). In consideration of the information within the FEIS and this document, the Corps concludes that the SMP Project could generate a minor environmental benefit.

p. Economics (33 C.F.R. § 320.4(q)): Several socioeconomic factors could be affected in the states, counties, and communities in proximity to the SMP Project during construction and, to a lesser extent, operation of the proposed pipeline. These include alteration of population levels or local demographics, increased employment opportunities, increased demand for housing and public services, tourism and transportation effects, and an increase in government revenue associated with sales and payroll taxes. The FEIS thoroughly documents and evaluates socioeconomic factors affecting the applicants, end users, and communities associated with the construction and operation of the SMP Project (reference the FEIS, sections 3.10 and 5.19). The Hillabee Expansion Project, Sabal Trail Project, and FSC Project would all result in similar socioeconomic impacts including generally temporary and minor impacts on tourism and transportation, temporary and minor or minor to moderate housing demand from construction workers, and negligible impacts on public services

(reference the FEIS, section 3.10). The SMP Project would result in revenue from construction workers and locally procured goods and services. The SMP Project would provide tax revenue to those entities crossed by the SMP Project. Indirect economic effects would be provided by the competitively priced natural gas brought to the project area as well as the attraction to new industries to the SMP Project area due to the availability of a lower cost supply of natural gas. The FEIS, Table 3.10-1, summarizes the potential economic benefits associated with the SMP Project. Therefore, in consideration of the information within the FEIS and this document, the Corps concludes that the SMP Project would benefit this public interest factor.

q. Mitigation (33 C.F.R. § 320.4(r)): The SMP Project avoids and minimizes work affecting waters of the United States, including wetlands, to the maximum extent practicable (reference numerous sections of the FEIS; and, section 7, above). In addition, the SMP Project incorporates compensatory mitigation for unavoidable adverse effects to wetlands (reference section 11, below). In consideration of the information within the FEIS and this document, the Corps concludes that the SMP Project satisfies the parameters of this public interest factor.

r. Conservation:

(1) During the selection of the SMP Project routes by the applicants, the applicants sought to avoid existing conservation easements. If a particular easement could not be avoided, the applicants graded avoidance (greatest to least significance) in the order of regulatory, proprietary, and land protection agreements.

(2) The SMP Project, however, does effect several conservation areas (reference sections 8.c.(1)(b), 8.c.(1)(c), and 8.d.(5), above; and, the FEIS, section 3.9.2.5. Adverse permanent effects to conservation lands (i.e., any conversion of forested wetlands to herbaceous or scrub/shrub wetlands) would be compensated through the purchase of mitigation bank credits. However, any such conversion could generate a minor aesthetic impact to the conservation land(s) affected. However, in consideration of the information within the FEIS and discussed herein, the Corps expects that any adverse direct or indirect effect upon conservation would be neutral in consideration of the proposed compensatory mitigation and, in general, temporary.

s. Shore erosion and accretion:

(1) Waterbody and wetland crossings would be temporary in nature and construction/restoration would be consistent with the 2013 FERC Wetland and Waterbody Construction Procedures which are the basis for the applicants' respective

construction and maintenance plans. Construction/restoration of uplands would be consistent with the 2013 FERC Upland Erosion Control, Revegetation, and Maintenance Plan, which is part of the basis for the applicants' respective construction and maintenance plans. Transcontinental Gas Pipe Line Company, LLC's baseline environmental construction, restoration, and mitigation plans are contained in its Construction Best Management Practices Plan (CBMPP); Sabal Trail Transmission, LLC's baseline environmental plans are contained in its Erosion and Sediment Control Plan (E&SCP); and FSC, LLC's baseline environmental plans are contained in its Plan and Procedures (reference the FEIS, section 2.3; and, Sabal Trail E&SCP, section 1.3).

(2) The SMP Project would cross waterbodies using wet open cut, dry open cut, conventional bore, or HDD methods. The degree of adverse environmental effect on the substrate of these waterbodies would depend on the type of substrate affected, the method of work implemented, and, potentially, the flow volume in the waterbodies during construction. If construction occurs during a dry period, most of the adverse effects on substrate associated with wet open cut or dry open cut would be minimal. Similarly, conventional bore or HDD generally limits any effect to the drilled pathway; and, avoids and substantially minimizes effects to the waterbodies resulting from erosion, sedimentation, and/or excess turbidity, by limiting the surface disturbance in and immediately adjacent to the waterbody. Reference the FEIS section 3.3.2.4.

(3) All earthwork activities would employ best management practices as the substrate is moved, graded, excavated, and/or filled, thereby lessening the potential for erosion of material from construction areas. Any authorization of the project would be specifically conditioned to require the implementation of erosion controls. Additionally, the various State Section 401 Water Quality Certifications for the SMP Project require the implementation of erosion and sediment controls. The conditions of the Section 401 Water Quality Certification would be incorporated as special conditions of any Corps authorization for the project. Therefore, the applicants would be required to implement and maintain erosion and sediment control best management practices to retain sediment on-site and to prevent violations of state water quality standards.

(4) Most of the fill discharge would occur in palustrine wetlands, contained within the fill areas, and would not affect stream systems in the vicinity of the work. However, especially where work would occur within wetland systems contiguous to stream systems or channelized flow, the project incorporates erosion prevention measures to avoid the discharge of particulate material into local waterways and downstream waters. Waterbody banks would be stabilized as soon as possible after construction to prevent indirect impacts such as sloughing. Permanent erosion control structures would be installed in accordance with the applicants' construction plans (reference the FEIS

section 3.3.2.4). With respect to the withdrawal and use of hydrostatic test water for the SMP Project, discharge rates would be regulated to decrease the potential for erosion and low flow conditions would be avoided. After hydrostatic testing is complete, the discharges would be directed to dewatering structures located in well-vegetated upland areas. In addition, during discharges the rate would be controlled and water would be directed into energy dissipation devices to avoid potential secondary effects such as erosion (reference the FEIS section 3.3.3.4).

(5) In consideration of the information within the FEIS and this document, the Corps concludes that the project would not adversely affect shore erosion or accretion.

t. Safety (general):

(1) The FEIS, section 3.13, conveys extensive information regarding safety concerns/issues associated with the SMP Project. The Corps recognizes that the transportation of natural gas by pipeline involves some incremental risk to the public due to the potential for an accidental release of natural gas. The greatest hazard is a fire or explosion following a major pipeline rupture. Methane is buoyant at atmospheric temperatures and disperses rapidly in air. An unconfined mixture of methane and air is not explosive; however, it may ignite if there is an ignition source. Also, a flammable concentration within an enclosed space in the presence of an ignition source can explode.

(2) The PHMSA develops safety regulations and other approaches to risk management that ensure safety in the design, construction, testing, operation, maintenance, and emergency response of pipeline facilities; and, the SMP Project would comply with the PHMSA requirements. The pipeline and aboveground facilities associated with the SMP Project must be designed, constructed, operated, and maintained in accordance with Federal Department of Transportation *Minimum Federal Safety Standards* in 49 C.F.R. Part 192. The regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures. The general construction methods that the applicants would implement to ensure the safety of the project are described in the FEIS, section 2.3, including welding, inspection, and integrity testing procedures.

(3) The FEIS, section 3.1.2.3, includes a discussion of the potential for geological activity within karst areas to damage SMP Project facilities; and, conveys information regarding measures that would be implemented in response to karst geology (also reference the FEIS, Appendix F, Karst Plans). The FEIS, section 4.3.2, conveys information pertinent to the SMP Project and the SONAT pipeline; and, route variations

considered and/or implemented to reduce the instances of pipeline crossings. In consideration of unavoidable crossings, Sabal Trail Transmission, LLC committed to work with SONAT on the design and construction methods for the 47 proposed crossings, cathodic protection systems, and future maintenance activities. As such, the applicants have documented and will be required to adhere to extensive safety precautions associated with karst geology and pipeline crossings.

(4) The Corps has thoroughly reviewed the information regarding safety in the FEIS and carefully considered the comments associated with the safe construction and operation of the SMP Project pipeline submitted in response to the circulation of the Corps' public notice and the DEIS. In consideration of the information reviewed and evaluated, the Corps believes that any effect on general public safety would be minor but long term.

u. Food and fiber production: The FEIS, section 3.2.2.6, conveys information pertinent to the potential effects that the SMP Project may have on farmland. About 3,778.9 acres of prime farmland and state classified farmland would be affected by constructing the SMP Project, including about 247.5 acres for the Hillabee Expansion Project, 2,694.6 acres for the Sabal Trail Project, and 836.8 acres for the FSC Project. Operating the aboveground facilities and permanent access roads would affect about 154.8 acres of prime farmland and state classified farmland. An additional 1,219.3 acres of prime and state classified farmland would be within the operating ROW of the pipeline facilities; however agricultural use would be allowed to continue within the ROW in most cases (reference the FEIS, section 3.9). In agricultural areas, short-term impacts would include the disruption of farming operations for the growing season during the year of construction and interruptions to irrigation systems affected by pipeline construction activities. If irrigation lines are damaged during construction, temporary repairs would be conducted immediately and permanent repairs would be completed following construction. In consideration of the information within the FEIS and this document, the Corps concludes that the adverse effect on food and fiber production would be minor but long term.

w. Mineral needs: The FEIS, section 3.1.3, conveys information regarding mineral resources. The applicants used aerial photographs, U.S. Geological Survey topographic maps, state and Federal on-line databases, and other publically available information to identify mineral resources within at least 0.25 mile of the SMP Project. Specific mineral resources, potential project-related impacts, and the measures that each applicant would implement to avoid or reduce impacts are discussed within the FEIS, section 3.1.3. Based on that information, the Corps concludes that the SMP Project would not adversely affect mining activity or other mineral-related activities.

x. Needs and welfare of the people: The FEIS, sections 3.9 and 5.1.8 (land use and visual resources), 3.10 and 5.1.9 (socioeconomics), 3.12 and 5.1.11 (air quality and noise), 3.13 and 5.1.12 (reliability and safety), 3.14.3 (Cumulative Impacts on Air Quality), and 3.14.4 (Cumulative Impacts on Climate Change) convey diverse information on the potential effects on the needs and welfare of the people associated with the SMP Project. The SMP Project likely would generate short term effects to occupants of residences/businesses in proximity to the pipeline construction; however, any effect is expected to be minor and of relatively short duration (3 months on average) as the pipeline construction moves through the area in an assembly line manner. The Corps does not expect any direct adverse effects during the operation of the SMP Project, as the particular components of the SMP Project (e.g., the compressor stations), which would have air and noise emissions, have been sited and designed to comply with applicable state air quality permit requirements and with the FERC operating noise requirements. As previously noted, the SMP Project is expected to generate economic benefits for most communities along the project corridor during construction; and, additional economic and energy benefits at locations associated with, or accessing, side-taps or distribution end-points. In consideration of the information within the FEIS, additional supplemental information within the administrative record, and information within this document, the Corps expects the project to provide long-term benefits associated with the general needs and welfare of the people.

10. Other Federal, State, and Local Requirements:

a. Section 401 of the Clean Water Act (33 U.S.C. 1341) – Water Quality Certification (WQC):

(1) Hillabee Expansion Project: The Alabama Department of Environmental Management issued WQC with Special Conditions dated 19 May 2016, for the Hillabee Expansion Project. A copy of the WQC is provided as Appendix 3.

(2) Sabal Trail Project:

(a) Alabama: The ADEM issued WQC with Special Conditions dated 19 May 2016, for the Alabama segment of the Sabal Trail Project. A copy of the WQC is provided as Appendix 4.

(b) Georgia: The Georgia Department of Natural Resources, Environmental Protection Division issued WQC with Special Conditions dated 28 June 2016, for the Georgia segment of the Sabal Trail Project. A copy of the WQC is provided as Appendix 5.

(c) Florida: The FDEP issued WQC with Special Conditions dated 22 January 2016 (ERP 0328333-001) for the Florida segment of the Sabal Trail Project. A copy of the WQC is provided as Appendix 6.

(3) FSC Project: The FDEP issued a conceptual WQC with Special Conditions dated 19 November 2014 (ERP 49-324813-002). The FDEP issued a modification, authorizing minor re-routes and additional construction, dated 24 September 2015 (ERP 49-0324813-003). Copies of these documents are provided as Appendix 7.

b. Section 307(c) of the Coastal Zone Management Act – Coastal Zone Consistency:

(1) Hillabee Expansion Project: Coastal Zone Consistency is not required for the Hillabee Expansion Project.

(2) Sabal Trail Project:

(a) Alabama: Coastal Zone Consistency is not required for the portion of the Sabal Trail Project located in Alabama.

(b) Georgia: Coastal Zone Consistency is not required for the portion of the Sabal Trail Project located in Georgia.

(c) Florida: On 22 January 2016, the FDEP issued ERP, which conveys CZMA coastal zone consistency.

(3) FSC Project: On 19 November 2014, the FDEP issued a conceptual ERP (49-324813-002), which conveys CZMA coastal zone consistency. On 24 September 2015, the FDEP modified the ERP (49-0324813-003), which authorized minor re-routes and additional construction.

c. Fish and Wildlife Act of 1956, Migratory Marine Game-Fish Act, Fish and Wildlife Coordination Act, and other acts protecting fish and wildlife resources: The FERC, as the lead agency evaluating the SMP Project, implemented all appropriate coordination under these laws. The FEIS incorporates numerous sections identifying, reviewing, and evaluating potential effects to fauna (e.g., FEIS, sections 3.6, 3.7, 3.8, and 5.1.7). The Corps has reviewed the information within the FEIS and the BOs authored by the FWS. The Corps concludes that the SMP Project complies with the various laws protecting fish and wildlife resources; and, concurs with the conclusions conveyed within the FEIS regarding fish and wildlife resources.

d. National Historic Preservation Act of 1966 (NHPA):

(1) Hillabee Expansion Project:

(a) At the closing of the public comment period the Corps noted that there were still unresolved issues related to compliance with Section 106 of the NHPA of 1966. Specifically, Transcontinental Gas Pipe Line Company, LLC stated during a 1 March 2016, meeting that additional work had been completed (i.e. since the publication of the FEIS) at two sites (1Cn 340 and 1Au 477), which resulted in the sites being considered ineligible for listing on the NRHP. The Corps informed Transcontinental Gas Pipe Line Company, LLC that since eligibility determinations can only be made by the Federal agency, the FERC, as lead Federal agency, would need to supply its opinion on the matter.

(b) An additional concern discussed during the meeting, and in subsequent electronic mail messages, pertained to site 1Cw 332, which was shown as eligible for listing on the NRHP in the FEIS and would be adversely affected by the proposed work. The Corps informed Transcontinental Gas Pipe Line Company, LLC that all matters related to the Section 106 process would need to be resolved in order for the Corps to complete its final evaluation. Specifically, the Corps indicated that Transcontinental Gas Pipe Line Company, LLC would need to execute any necessary procedures or plans (e.g. avoidance plan, memorandum of agreement, etc.) or show compliance prior to the Corps final review of the project.

(c) The Corps reiterated its specific concerns regarding project compliance with Section 106 of the NHPA in an electronic mail message dated 8 March 2016; and, more generally in correspondence dated 10 March 2016. In correspondence dated 16 March 2016, Transcontinental Gas Pipe Line Company, LLC acknowledged the Corps concerns and indicated that Transcontinental Gas Pipe Line Company, LLC was proposing a minor project re-route and modified construction methodology to avoid affecting the sensitive resource (1Cw 332). In a subsequent electronic message dated 27 April 2016, Transcontinental Gas Pipe Line Company, LLC informed the Corps that the proposed re-route and modified construction methodology (avoidance plan) had been reviewed and approved by the Alabama State Historic Preservation Officer (21 April 2016).

(d) Finally, in correspondence date 2 June 2016, Transcontinental Gas Pipe Line Company, LLC provided the Corps and the FERC with a final accounting of compliance efforts with Section 106 of the NHPA. The FERC responded via electronic message

dated 6 June 2016, that based on the FERC's review of the submitted documentation the project would have "no adverse effect on any properties listed in, eligible for listing in, the National Register of Historic Places."

(2) The FEIS documents and evaluates work potentially affecting historic or cultural resources (reference the FEIS, section 3.11). The FERC coordinated potential historic/cultural effects with the various State Historic Preservation Offices (or the appropriate State agency); and, the Corps concurs with the FEIS determination that the project would not adversely affect historic or cultural resources.

e. Endangered Species Act (ESA):

(1) The FERC is the lead Federal agency associated with compliance of this legislation. Reference the FEIS, section 3.8; and, the FWS BOs associated with the SMP Project. The Corps would incorporate the FWS BOs into any authorization granted; and, incorporate special conditions requiring the implementation of the measures noted by the FWS as reasonable and prudent measures or specific terms and conditions.

(2) The Center for Biodiversity expressed an opinion that potential effects upon West Indian (Florida) manatee, Gulf sturgeon, and Shinyrayed pocketbook had not been thoroughly addressed in the FEIS. In addition, the Center for Biodiversity expressed an opinion that the Corps must conduct ESA formal consultation with the FWS for eastern indigo snake in the Sabal Trail Project portion of the SMP Project. The Corps addressed the concerns expressed by the Center for Biodiversity in section 8.b.(1)(d), above.

f. Marine Mammal Protection Act of 1972: The FERC implemented all necessary coordination associated with this legislation; and, the FEIS conveys specific information associated with that coordination (reference the FEIS, section 3.8 and Appendix K). The FERC is the lead Federal agency associated with compliance of this legislation. However, the Corps is not aware of any work or actions associated with the SMP Project regulated by this legislation.

g. Section 7(a) of the Wild and Scenic Rivers Act: The FERC is the lead Federal agency associated with compliance of this legislation. However, the Corps is not aware of any work or actions associated with the SMP Project regulated by this legislation. The SMP Project would not cross any component of the National Wild and Scenic River System or any river officially designated by Congress as a "study river" for possible inclusion in the system.

h. Section 402 of the Clean Water Act: The FEIS (section 1.7) indicates that all of the applicants have indicated that they have or would obtain NPDES permits from the appropriate agency in each affected state. Compliance with the conditions of any NPDES permits would be incorporated as special conditions of any Corps authorization for the project.

i. Magnuson-Stevens Fishery Conservation and Management Act (MSA):

(1) The NMFS does not manage any waterbodies that would be crossed by the SMP Project, nor do the crossed waterbodies support essential fish habitat as defined under the MSA (Public Law 94-265 as amended through 12 January 2007). In addition, no commercial, saltwater marine, or estuarine fisheries would be affected by the SMP Project (reference the FEIS, section 3.7).

(2) Alabama: In an electronic mail message dated 23 September 2015, the NMFS Habitat Conservation Division (HCD) indicated that the NMFS had reviewed the DA public notice for the SMP Project; and, specifically examined work proposed within the State of Alabama. The NMFS indicated that the work reviewed would not affect resources for which the NMFS HCD is responsible; and, therefore, the NMFS HCD had no comment to provide regarding the issuance of a permit.

(3) Georgia: The portion of the SMP Project located in Georgia would not affect resources for which the NMFS HCD is responsible.

(4) Florida: In an electronic mail message dated 11 September 2015, the NMFS, Southeast Region, HCD indicated that the NMFS had reviewed the DA public notice for the SMP Project; and, specifically examined work proposed within the State of Florida. The NMFS indicated that the work reviewed would not affect resources for which the NMFS HCD is responsible; and, therefore, the NMFS HCD had no comment to provide regarding the issuance of a permit.

j. Migratory Bird Treaty Act:

(1) The FEIS, section 3.6.4, conveys information regarding potential effects to migratory birds. A variety of migratory birds, including forest-interior birds, birds of conservation concern, and waterfowl use or could use the wildlife habitats affected by the SMP Project. These birds use these habitats for resting (stopover), sheltering, foraging, breeding, and nesting. The SMP Project's construction schedule would overlap with the migratory bird nesting season (generally between February and August). The temporary loss of approximately 2685.0 acres of upland forest and 562.3

acres of forested wetlands associated with pipeline and aboveground facility construction would present a long-term impact for migratory birds that depend on forests. Vegetation clearing and other construction activities could affect egg and young survival. Bird displacement could impact bird migration, nesting, foraging, and mating behaviors. Behavior changes could increase the amount of stress, injury, and mortality experienced by migratory birds. Construction would also reduce the amount of habitat available for foraging and predator protection and would temporarily displace birds into adjacent habitats, which could increase the competition for food and other resources. This in turn could increase stress, susceptibility to predation, and negatively impact reproductive success. Migratory birds, including *Birds of Conservation Concern* listed birds, could also be affected during project operation, which would permanently convert 980.7 acres of upland forest and 228.4 acres of forested wetland to an herbaceous state. The reduction in forest habitat could result in increased competition, parasitic bird species, edge effects, and fragmentation resulting from ROW maintenance activities.

(2) To address FWS concerns about migratory birds, the applicants met with the FWS in 2014 to discuss potential migratory bird habitat in the SMP Project area and developed mitigation measures to avoid or adequately minimize impacts on migratory birds. As a result of these discussions, the applicants cooperatively developed a *Migratory Bird Conservation Plan*, which has been reviewed and approved by the FWS; and, which the FWS would enforce. In the FEIS, the FERC concluded that constructing and operating the SMP Project would not result in population-level impacts or significant measureable negative impacts on birds of conservation concern or migratory birds. The Corps concurs with the FERC determination.

k. Archaeological Resources Protection Act: This legislation governs the excavation of archaeological sites on Federal and Indian lands in the United States, and the removal and disposition of archaeological collections from those sites. The FEIS, section 3.11.4, conveys information regarding the FERC consultations with various federally recognized tribes. The FERC is the lead Federal agency associated with compliance of this legislation. However, the Corps is not aware of any work or actions associated with the SMP Project regulated by this legislation.

l. Native American Graves Protection and Repatriation Act: The FEIS, section 3.11.4, conveys information regarding the FERC consultations with various federally recognized tribes. The FERC is the lead Federal agency associated with compliance of this legislation.

m. Significant issues of overriding national importance: On 2 February 2016, the FERC issued by Order a certificate of public convenience and necessity to the Applicants to construct and operate the SMP Project upon conditions. The FERC found the benefits to the market from the Hillabee Expansion Project, Sabal Trail Project, and FSC Project outweighed any adverse effects on other pipelines and captive customers; and, on landowners and surrounding communities.

11. Compensation and other mitigation actions:

a. Description of impacts:

(1) Hillabee Expansion Project: Proposed impacts to wetlands and streams are generally outlined in the FEIS; however, subsequent to the release of the FEIS adjustments were made to the proposed impact tallies. The differences between the published information and the information presented here are due primarily to the completion of the design process (i.e. and the receipt of finalized construction plans for Compressor Station 84), proposed project re-routes, and proposed modified construction methodologies. A summary of the Transcontinental Gas Pipe Line Company, LLC's proposed wetland and stream impacts are detailed in Table 4 and Table 5.

Table 4 – Summary of Wetland Impacts for the Hillabee Expansion Project

Wetland Type	Temporary Impact (acres)	Permanent Conversion (PFO to PEM/PSS) (acres)	Permanent Fill (acres)
PEM	33.69	0.00	0.13
PFO	45.43	17.99	0.96
PSS	4.32	0.00	0.00
Total	**83.44**	**17.99**	**1.09**

Table 5 – Summary of Waterbody Impacts for the Hillabee Expansion Project

Waterbody Type	Temporary Impact (linear feet)	Permanent Impact (culvert or riprap) (linear feet)	Number
Ephemeral/Intermittent	9887.46	437.00	90
Perennial	8588.54	502.86	63
Pond	512.64	0.00	13
Total	**18988.64**	**939.86**	**166**

(2) Sabal Trail Project:

(a) Alabama: Sabal Trail Transmission, LLC did not request authorization for permanent filling activities associated with the Alabama segment of the Sabal Trail Project. However, a total of 24.73 acres of wetlands would be affected during the project's construction phase. Permanent project impacts are limited to permanent conversion (i.e., loss of vertical habitat) of forested (PFO) wetlands to either a scrub/shrub (PSS) or herbaceous (PEM) wetland state. The project would convert 2.19 acres of PFO wetlands to PEM and 4.12 acres to PSS for a total of 6.31 acres of PFO conversion. The project would temporarily affect 18.42 acres of wetlands; however, these areas would be allowed to return to their pre-construction state following post-construction restoration activities. Approximately 3,838 feet of waterbodies would be crossed during construction. The HDD method would be used to cross under 1,653 feet of waterbodies, thereby avoiding direct surface impacts. The effects to the remaining 2,185 linear feet of waterbody crossings will be temporary and conducted in accordance with the project's Erosion and Sediment Control Plan which complies with the FERC's 2013 Wetland and Waterbody Construction Procedures.

(b) Georgia: Sabal Trail Transmission, LLC did not request authorization for permanent filling activities associated with the Georgia segment of the Sabal Trail Project. However, a total of approximately 129 acres of wetlands/open waters would be affected during the project's construction phase. Permanent project impacts would be limited to permanent conversion (i.e., loss of vertical habitat) of forested (PFO) wetlands to either a scrub/shrub (PSS) or herbaceous (PEM) wetland state. The project would convert 41.25 acres of PFO wetlands to PEM. The project would temporarily affect 81.87 acres of wetlands; however, these areas will be allowed to return to their pre-construction state following post-construction restoration activities. Approximately 33,769 feet of streams would be impacted by the project. The effects to these streams will be temporary and conducted in accordance with the project's Erosion and Sediment Control Plan which complies with the FERC's 2013 Wetland and Waterbody Construction Procedures.

(c) Florida: Proposed impacts to wetlands and waterways are generally outlined in the FEIS; however, subsequent to the release of the FEIS adjustments were made to the work proposed. The differences between the FEIS information and the information presented here are due primarily to the inclusion of the AZ Ocala Route Variation and a reroute along the Hunters Creek Line near Deerfield Road, which were determined to be the LEDPA. The project would result in the placement of fill (permanent loss of wetlands) over 2.99 acres of wetlands. The project also would result in the permanent conversion (i.e., loss of vertical habitat) of 104.50 acres of forested (PFO) wetlands to

either a scrub/shrub (PSS) or herbaceous (PEM) wetland state. The project would temporarily affect 298.03 acres of wetlands; however, these areas will be allowed to return to their pre-construction state following post-construction restoration activities. Numerous streams would be impacted by the project; however, the effects to these streams would be temporary and conducted in accordance with the project's Erosion and Sediment Control Plan which complies with the FERC's 2013 Wetland and Waterbody Construction Procedures. HDD crossings of several rivers/streams would be employed (as previously discussed)

(3) FSC Project: Proposed impacts to wetlands and waterways are outlined in the FEIS. Neither the FERC nor the Corps requested alterations to the proposed FSC Project route after the publication of the FEIS; and, FSC, LLC did not propose any alterations to the route.

b. Mitigative Actions (33 C.F.R. Part 320.4(r) and 40 C.F.R. Part 230, Subpart F):

(1) SMP Project:

(a) The majority of the mitigative actions (avoidance and minimization) associated with the SMP Project are conveyed in the FEIS. However, the Corps believes that specific actions must be implemented to assure the avoidance and minimization of impacts to aquatic resources and federally listed species.

(b) Transcontinental Gas Pipe Line Company, LLC would implement its Construction Best Management Practices Plan (CBMPP); Sabal Trail Transmission, LLC would implement its Erosion and Sediment Control Plan (E&SCP); and, FSC, LLC would implement its Plan and Procedures to minimize work affecting aquatic resources. The Corps would include within the associated permit(s) special conditions requiring the implementation of these plans into any DA permits issued.

(c) All of the applicants would implement the various plans evaluated and approved by the FERC and the Corps (reference the FEIS, Appendix K, Biological Assessment, Table 3.1-1, *Construction and Restoration Plans for the Southeast Market Pipelines Project*) to minimize potential adverse effects on aquatic resources associated with the project. These plans include the HDD Construction and Contingency Plans (FEIS, Appendix E), Karst Plans (FEIS, Appendix F), Residential Construction Plans (Appendix G), Spill Plans (FEIS, Appendix I), Major Waterbody Crossing Plans (FEIS, Appendix J), and Site-specific Crossing Plans for Recreation Areas (FEIS, Appendix L). The HDD Construction and Contingency Plans (FEIS, Appendix E) also includes a specific sub-section (*Sabal Trail Project and Florida Southeast Connection Project Site-*

Specific HDD Crossing Plans), which stipulates specific locations for HDD waterway crossings. The implementation of these HDD crossings would further avoid and minimize effects on the waterways at those specific locations. The Corps would include special conditions requiring the implementation of all of the specifically noted plans into any DA permits issued.

(d) In order to ensure project impacts were indeed temporary in areas designated to undergo restoration the Corps would require annual monitoring. Specifically, the permittee would provide annual monitoring reports for a period of 5years post-construction to demonstrate that wetlands and streams are being returned to pre-impact elevation, contours, and ecological condition. The Corps would be responsible for evaluating the success of restoration areas in returning to pre-impact condition. If the temporary impacts to wetlands and streams are not demonstrating achieving this goal, the permittee shall provide an alternative mitigation strategy, which may include the purchase of mitigation credits from an approved wetland mitigation bank.

(e) To minimize adverse effects upon federally listed species, the applicants would be required to implement the measures noted by the FWS as reasonable and prudent measures or specific terms and conditions in the BOs associated with the SMP Project. The Corps would include special conditions requiring the implementation of the appropriate FWS BOs into any DA permits issued.

(2) Hillabee Expansion Project: In addition to the general measures noted above (1), the Hillabee Expansion Project would incorporate the previously discussed modification of Transcontinental Gas Pipe Line Company, LLC's *Wetland and Waterbody Construction and Mitigation Procedures*. The proposed modifications would be utilized in high gradient (steep) wetlands and should result in a lesser degree of impact than would traditional crossing methodologies. Specifically, the modified construction methodology would help to reduce negative hydrologic effects (draining) in areas identified for implementation. For example, the plan calls for the construction of trench breakers at the wetland boundaries and/or seal the trench bottom as necessary to maintain the original wetland hydrology.

(3) Sabal Trail Project: In addition to the general measures noted above (1), the Corps would include special conditions requiring that the Sabal Trail Project incorporate the Hall Route Variation, the AZ Ocala Route Variation, and the Deerfield Road Variation, which were determined to be LEDPAs.

(4) FSC Project: In addition to the general measures noted above (1), the Corps would include a special condition requiring the use of HDD for the work associated with the C-23 crossing (the Section 408 crossing). Use of HDD at this location would avoid adverse effects to the aquatic resource and the Federal project.

c. Compensatory Mitigation for Unavoidable Impacts to Aquatic Resources (33 C.F.R. Part 332): The 2008 Mitigation Rule enumerates (33 C.F.R. 332 - Compensatory Mitigation for Losses of Aquatic Resources; Final Rule) establishes a hierarchy for proposed compensatory mitigation plans. The 2008 Mitigation Rule further explains that the preferred mitigation sequence (hierarchy) is based on the likelihood of a mitigation project to be both successful and sustainable. The compensatory mitigation sequence – in order of Federal preference- is as follows: 1. Mitigation bank credits, 2. In-lieu fee program credits, 3. Permittee-responsible mitigation under a watershed approach, 4. Permittee responsible through on-site and in-kind mitigation, 5. Permittee responsible mitigation through off-site and/or out-of-kind mitigation. In addition to this referenced hierarchy the 2008 Mitigation rule opines that, generally, mitigation should be provided within the impact watershed. However, the agencies, writing in the preamble provided additional clarification when considering linear projects: "For linear projects, such as roads and utility lines, district engineers may determine that consolidated compensatory mitigation projects provide appropriate compensation for the authorized impacts, and are environmentally preferable to requiring numerous small permittee-responsible compensatory mitigation projects along the linear project corridor" (FR Vol. 73, No. 70, page 19605). In the case of the SMP Project, the applicants have proposed to mitigate for unavoidable impacts to waters of the U.S. by purchasing the appropriate number and type of mitigation credits from Corps approved mitigation banks. Therefore, when considering the Federal preference for mitigation banks, and the additional linear project specific guidance, the Corps has determined that the applicant's compensatory mitigation proposal complies with the Federal preference for compensatory mitigation as discussed at 33 CFR 332.3 (b), and would be considered both environmentally and programmatically preferable to other mitigation alternatives in the hierarchy. Additional information related to each applicant's proposal is detailed in the following discussion.

(1) Hillabee Expansion Project: As noted in the FEIS, a finalized mitigation plan had not been submitted at the time of publication. Therefore, per the FERC's recommendation, Transcontinental Gas Pipe Line Company, LLC submitted details of their finalized compensatory mitigation proposal to the Corps in electronic mail correspondence dated 13 May 2016. Transcontinental Gas Pipe Line Company, LLC is proposing to purchase the required compensatory mitigation credits from an approved mitigation bank to compensate for unavoidable impacts to waters of the United States,

including wetlands. Base wetland compensatory mitigation requirements were determined using the WRAP functional assessment method. Similarly, the 2012 iteration of the Mobile District Stream Compensatory Mitigation Procedures and Guidelines (2012 SOP) document was utilized to determine base stream mitigation requirements. In addition to these base mitigation calculations, Transcontinental Gas Pipe Line Company, LLC utilized the *2009 Mobile District Proximity Factor Method* to calculate the appropriate proximity factor to apply to out of watershed (i.e., 8-digit Hydrologic Unit Code (HUC)) mitigation credit purchases. Details of Transcontinental Gas Pipe Line Company, LLC's final mitigation plan are shown in Table 6.

Table 6 – Final Wetland and Stream Mitigation Plan for the Hillabee Expansion Project

Project Segment	HUC-8 Sub-Basin	Proposed Mitigation Banks	Out-of-Basin Multiplier	Proximity Factor Multiplier	Total Multiplier	Total Credits Required	Credits Available According to Bank as of 2015-09-24	Mitigation Bank Credit Type
Phase I								
Compressor Station 84	Middle Tombigbee-Chickasaw (03160201)	Alabama River Mitigation Bank (03150203)	1.50	1.11	1.67	1.32	168.98	Bottomland Hardwood
						3,553.00	23,414	Stream
Billingsley Loop	Upper Alabama (03150201)	McLemore Mitigation Bank (03150203)	0.00	1.12	1.12	1.48	83.62	Bottomland Hardwood
Proctor Creek Loop	Lower Coosa (03150107)	Canoe Creek Mitigation Bank (03150106)	0.00	1.10	1.10	0.21	17.03	Bottomland Hardwood
Hissop Loop	Lower Coosa (03150107)	Canoe Creek Mitigation Bank (03150106)	0.00	1.10	1.10	0.02	17.03	Bottomland Hardwood
Alexander City Loop	Middle Tallapoosa (03150109)	Canoe Creek Mitigation Bank (03150106)	0.00	1.09	1.09	0.09	17.03	Bottomland Hardwood
					Total Phase I	**3.12**		Bottomland Hardwood
						3,553.00		Stream
Phase II								
Rock Springs Loop	Middle Tombigbee-Chickasaw (03160201)	Alabama River Mitigation Bank (03150203)	1.50	1.11	1.67	2.59	168.98	Bottomland Hardwood
Verbena Loop	Lower Coosa (03150107)	Canoe Creek Mitigation Bank (03150106)	0.00	1.10	1.10	0.97	17.03	Bottomland Hardwood
					Total Phase II	**3.56**		Bottomland Hardwood
						0.00		Stream

Phase III								
Butler Loop	Middle Tombigbee-Chickasaw (03160201)	Alabama River Mitigation Bank (03150203)	1.50	1.11	1.67	1.21	168.98	Bottomland Hardwood
Autauga Loop	Upper Alabama (03150201)	McLemore Mitigation Bank (03150203)	0.00	1.12	1.12	0.77	83.62	Bottomland Hardwood
					Total Phase III	**1.98**		Bottomland Hardwood
						0.00		Stream
					Project Total	**8.66**		Bottomland Hardwood
						3,553.00		Stream

(2) Sabal Trail Project:

(a) Alabama: The FEIS provides an overview of Sabal Trail Transmission, LLC's proposed compensatory mitigation strategy; however, as noted in the FEIS, a finalized mitigation plan had not been submitted at the time of publication. Therefore, per the FERC's recommendation, Sabal Trail Transmission, LLC worked with SAM to develop an acceptable compensatory mitigation plan to address unavoidable, permanent impacts resulting from the Alabama segment of the Sabal Trail Project (FEIS 3.4.3.2). Consequently, Sabal Trail Transmission, LLC submitted a final compensatory mitigation strategy to SAM as *Revision 1* of the *Sabal Trail Project Mitigation Assessment,* in April 2016. In the referenced mitigation assessment Sabal Trail Transmission, LLC reaffirmed their intention to provide compensatory mitigation through the purchase of mitigation credits from an approved mitigation bank, thus complying with the Federal compensatory mitigation preference stipulated in §332.3(b)(2)-(6). Base wetland compensatory mitigation requirements were determined using the WRAP functional assessment method. In addition to these base mitigation calculations, Sabal Trail Transmission, LLC utilized the *2009 Mobile District Proximity Factor Method* to calculate the appropriate proximity factor to apply to out of watershed (8-digit HUC) mitigation credit purchases. Sabal Trail Transmission, LLC purchased mitigation credits prior to the Corps completing its review of the proposed mitigation plan, which resulted in the purchase of mitigation credits beyond what was required in the impacts and mitigation analysis (unsolicited applicant provided additional mitigation is allowed by §320.4(r)(2)); and, the Corps would separately evaluate any potential use of those additional credits for any potential future work identified (e.g., a modification to the project). A summary of Sabal Trail Transmission, LLC's compensatory mitigation proposal is summarized in Table 3-1, copy next page, of the referenced Sabal Trail Project mitigation assessment document.

Sabal Trail Project Mitigation Assessment Revision 1 – Table 3-1 Sabal Trail Project – USACE Mobile District Mitigation Credit Summary							
Impact Watershed	**Sum of Credits Needed**	**Mitigation Bank Watershed**	**Proximity Factor**	**Total Credits Needed**	**Mitigation Bank Selected for Purchase**	**Credits Purchased to Date**	**Extra Credits Purchased**
Middle Tallapoosa (03150109)	0.3440	Lower Tallapoosa (03150110)	1.11	0.38	McLemore Mitigation Bank	0.46	0.078
Middle Chattahoochee-Lake Harding (03130002)	0.4322	Middle Chattahoochee-Walter F. George R (03130003)	1.07	0.46	Martin Creek Mitigation Bank	0.56	0.098
Middle Chattahoochee-Walter F. George R (03130003)	1.0506	Middle Chattahoochee-Walter F. George R (03130003)	1.00	1.05	Martin Creek Mitigation Bank	1.19	0.14
Total	**1.8268**	**n/a**	**n/a**	**1.89**	**n/a**	**2.2100**	**0.31**

(b) Georgia: The FEIS provides an overview of Sabal Trail Transmission, LLC's proposed compensatory mitigation strategy; however, as noted in the FEIS, a finalized mitigation plan had not been submitted at the time of publication. Therefore, per the FERC's recommendation, Sabal Trail Transmission, LLC worked with SAS to develop an acceptable compensatory mitigation plan to address unavoidable, permanent impacts resulting from the Georgia segment of the Sabal Trail Project (FEIS 3.4.3.2). Consequently, Sabal Trail Transmission, LLC submitted a final compensatory mitigation strategy to SAS as *Sabal Trail Project Mitigation Assessment,* in March 2016. In the referenced mitigation assessment Sabal Trail Transmission, LLC reaffirmed their intention to provide compensatory through the purchase of mitigation credits from an approved mitigation bank, thus complying with the Federal compensatory mitigation preference stipulated in §332.3(b)(2)-(6). Base wetland compensatory mitigation requirements were determined using the March 2004 Savannah District Standard Operating Procedure for Compensatory Mitigation and the November 2009 Bank Credit Purchase Guide. Table 7, next page, conveys a summary of the compensatory mitigation requirements.

Table 7
Sabal Trail Project – Corps Savannah District Mitigation Credit Summary

Impact Watershed	Sum of Wetland Credits Needed	Mitigation Bank Selected for Purchase	Primary Service HUCs	Credits Per Bank
Upper Ochlockonee (03120002), Withlacoochee (03110203), and Little (03110204)	324.69	Cecil Bay Mitigation Bank	03110204 03110203 03120002	324.69
Middle Chattahoochee-Walter F. George R. (03130003)	32.17	Bradley Farms Mitigation Bank	03130003	32.17
Ichawaynochaway (0313009), Kinchafoonee (03130007), and Lower Flint (03130008)	224.20	Magnolia Swamp Mitigation Bank	03130007 03130008 03130009	140
		Kolomoki Mitigation Bank		33.58
		Bradley Farms Mitigation Bank		50.61

(c) Florida:

(*i*) The FEIS provides an overview of Sabal Trail Transmission, LLC's proposed compensatory mitigation strategy; however, as noted in the FEIS, a finalized mitigation plan had not been submitted at the time of publication. Therefore, per the FERC's recommendation, Sabal Trail Transmission, LLC worked with SAJ to develop an acceptable compensatory mitigation plan to address unavoidable, permanent impacts resulting from the Florida segment of the Sabal Trail Project (FEIS 3.4.3.2). Consequently, Sabal Trail Transmission, LLC submitted a final compensatory mitigation strategy to SAJ as *Sabal Trail Project Mitigation Assessment,* in March 2016. In the referenced mitigation assessment Sabal Trail Transmission, LLC reaffirmed their intention to provide compensatory through the purchase of mitigation credits from approved mitigation banks, thus complying with the Federal compensatory mitigation preference stipulated in §332.3(b)(2)-(6).

(*ii*) The 2008 Mitigation Rule (33 C.F.R. 332 - Compensatory Mitigation for Losses of Aquatic Resources; Final Rule) provides guidance to the effect that permittee-responsible mitigation is the only option in those cases where the permitted impacts are not located in the service area of an approved mitigation bank or in-lieu fee program. However, for linear projects, such as roads and utility lines, the 2008 Mitigation Rule makes note that district engineers have the authority to make a determination that consolidated compensatory mitigation would provide appropriate compensation for the authorized impacts associated with the linear project since that would be environmentally preferable to requiring numerous small permittee-responsible compensatory mitigation projects along the linear project corridor. In this case, the utilization of credits from an approved mitigation banks would be considered very preferable to the establishment of up to 118 individual permittee-responsible mitigation sites spread out along more than 100 miles of the proposed pipeline corridor. The

mitigation banks proposed to be utilized to address the out-of-service area impacts (e.g., within the Lower Suwanee River HUC where there is no complete service area coverage from a federally approved mitigation banks) are Bayfield Mitigation Bank and Upper Coastal Mitigation Bank.

(*iii*) Based on this guidance and SAJ's review of the associated impacts for this project, SAJ has made a determination that the applicant may go to the proposed approved mitigation banks to address their compensatory mitigation needs. However, SAJ also recognizes that the relevance of a mitigation effort is diminished as the primary watersheds of the mitigation site and impact site become further removed. Since SAJ has not established a methodology to calculate the appropriate compensatory value associated with this diminishing relevance, SAJ utilized the method established by SAM which was public noticed on 12 April 2009, which generally increases the amount of credits purchased for work proposed outside of an established service area relative the distance from the established service area.

(*iv*) For Bayfield Mitigation Bank, 14 of the impact sites lie within the Withlacoochee sub-basin (HUC 03110203), 4 lie within the Lower Suwannee sub-basin (HUC 03110205) and an additional 34 impact sites lie within the Santa Fe sub-basin (HUC 03110206). Both the Lower Suwannee and the Santa Fe sub-basins are located adjacent to the Upper Suwannee sub-basin (HUC 03110201), which is where the Bayfield Mitigation Bank is located. While the Withlacoochee sub-basin is adjacent to a portion of the Upper Suwannee sub-basin, there is another sub-basin (the Alapaha) which nearly severs the western end of the Upper Suwannee. The SAM Proximity Factor method addresses the increased "diminishing relevance" of the mitigation bank site to these impacts. For Upper Coastal Mitigation Bank, all 66 impact sites lie within the Waccasassa sub-basin (HUC 03110101). This sub-basin is separated from the Crystal-Pithlachascotee sub-basin (location of the Upper Coastal Mitigation Bank) by a small segment of the Withlacoochee sub-basin (HUC 03100208).

(*v*) Sabal Trail Transmission, LLC purchased mitigation credits prior to the Corps completing its review of the proposed mitigation plan, which generally resulted in the purchase of mitigation credits beyond what was required in the impacts and mitigation analysis (unsolicited applicant provided additional mitigation is allowed by §320.4(r)(2)). Therefore, Table 7 includes the extra credits purchased; and, the Corps would separately evaluate any potential use of those additional credits for any potential future work identified (e.g., a modification to the project). However, for work proposed within the Waccasassa and Crystal-Pithlachascotee sub-basins, Sabal Trail Transmission, LLC did not purchase sufficient credits to fully compensate the work proposed (with the

inclusion of the proximity factor). Therefore, Table 8 notes the additional credits from the Upper Coastal Mitigation Bank that would be needed to fully compensate work proposed within those sub-basins, including the necessary proximity factor calculations.

Table 8 – Sabal Trail Project Wetland Mitigation Assessment
SAJ Mitigation Credit Summary

Impact Sub-Basin	Mitigation Bank Sub-Basin	Sum of Credits Needed	Proximity Factor	Credits Needed USACE	Total Credits Needed USACE	Mitigation Bank Selected for Purchase	Credits Purchased to Date	Difference of Credits Purchased
Withlacoochee (03110203)	Upper Suwannee (03110201)	0.2774	1.4583	0.4045	2.83	Bayfield	2.9	0.07
Lower Suwannee (03110201)	Upper Suwannee (03110201)	0.0588	1.0894	0.0641				
Santa Fe (03110205)	Upper Suwannee (03110201)	2.1785	1.0824	2.3571				
Waccasassa (03110306)	Crystal-Pithlachascotee (03100207)	1.2428	1.4520	1.8061	2.14	Upper Coastal	1.8	(0.34)
Crystal-Pithlachascotee (03100207)	Crystal-Pithlachascotee (03100207)	0.3364	-	0.3364				
Withlacoochee (03100208)	Withlacoochee (03100208)	4.48	-	4.48	4.48	Green Swamp	4.48	0
Withlacoochee (03100208)	Withlacoochee (03100208)	9.05	-	9.05	9.05	Withlacoochee	11.64	2.59
Ocklawaha (03080102)	Withlacoochee (03100208)	2.19	-	2.19	2.19	Withlacoochee	2.19	0
Ocklawaha (03080102)	Ocklawaha (03080102)	1.78	-	1.78	1.78	Hammock Lake	1.89	0.11
Kissimmee (03080102)	Kissimmee (03080102)	18.46	-	18.46	18.46	Southport Ranch	21	2.54
TOTAL					**40.93**		**45.9**	

(3) FSC Project:

(a) The FEIS provides an overview of FSC, LLC's proposed compensatory mitigation strategy; however, as noted in the FEIS, a finalized mitigation plan had not been submitted at the time of publication. Therefore, per the FERC's recommendation, FSC, LLC worked with SAJ to develop an acceptable compensatory mitigation plan to address unavoidable, permanent impacts resulting from the FSC Project. FSC, LLC affirmed their intention to provide compensatory through the purchase of mitigation credits from approved mitigation banks, thus complying with the Federal compensatory mitigation preference stipulated in §332.3(b)(2)-(6).

(b) The 2008 Mitigation Rule (33 C.F.R. 332 - Compensatory Mitigation for Losses of Aquatic Resources; Final Rule) provides guidance to the affect that permittee-responsible mitigation is the only option in those cases where the permitted impacts are not located in the service area of an approved mitigation bank or in-lieu fee program. However, for linear projects, such as roads and utility lines, the 2008 Mitigation Rule

makes notes that district engineers have the authority to make a determination that consolidated compensatory mitigation would provide appropriate compensation for the authorized impacts associated with the linear project since that would be environmentally preferable to requiring numerous small permittee-responsible compensatory mitigation projects along the linear project corridor. In this case, the utilization of credits from an approved mitigation bank would be considered very preferable to the establishment of numerous individual permittee-responsible mitigation sites spread out along the proposed pipeline corridor. The mitigation banks proposed to be utilized to address the out-of-service area impacts for the FSC project are Southport Ranch Mitigation Bank and Bluefield Ranch Mitigation Bank. As additional information, certain impacts sites along the FSC Project corridor lie within the service areas for one or more of the following mitigation banks: Collany, Three Lakes Wildlife Management Area, and Tosohatchee. These mitigation banks are not part of this discussion because at the time the applicant assessed the potential compensatory mitigation options available to them Collany was not an authorized mitigation bank; and, Three Lakes Wildlife Management Area and Tosohatchee are both single-client mitigation banks for the Florida Department of Transportation.

(c) Based on this guidance and SAJ's review of the associated impacts for this project, SAJ has made a determination that the applicant may go to the proposed approved mitigation banks to address their compensatory mitigation needs. However, SAJ also recognizes that the relevance of a mitigation effort is diminished as the primary watersheds of the mitigation site and impact site become further removed. Since SAJ has not established a methodology to calculate the appropriate compensatory value associated with this diminishing relevance, SAJ utilized the method established by SAM which was public noticed on 12 April 2009.

(d) With respect to the use of the Southport Ranch Mitigation Bank, of the 48 impact sites identified as utilizing credits from Southport mitigation bank, 15 are identified as lying outside of the Southport Mitigation Bank service area. Fourteen of the 15 impact sites lie within the service area of the Reedy Creek Mitigation Bank, however, the majority (9) of these 14 sites are located at or less than 0.5 mile outside the Southport Mitigation Bank service area boundary. Since these boundaries are not surveyed, some level of inaccuracy is expected and it is possible that these sites may actually be included within the range of the Southport Mitigation Bank service area. Five other sites range in distance outside the service area boundary from 0.9 mile to 1.91 miles. The 1 remaining impact site is located 5.56 miles outside the Southport Mitigation Bank service area and is not covered by any existing approved mitigation banks. While utilization of Reedy Creek Mitigation Bank may have been more appropriate for 14 of the 15 impacts, the Corps has determined that, since the applicant

had already purchased the full complement of credits required for all of these small impact sites and since all of the impact sites (including the one located 5.56 miles outside the Southport Mitigation Bank service area) are located in the same sub-basin as the Southport Mitigation Bank site, which is the Kissimmee sub-basin (HUC 03090101), the purchase of credits from Southport Mitigation Bank would provide sufficient compensation for the approved impacts occurring outside the Southport Mitigation Bank service area. Since the impact sites are located in the same sub-basin as the mitigation bank site, no proximity factor utilization was required.

(e) With respect to the use of the Bluefield Mitigation Bank, of the 84 impact sites identified as utilizing credits from the Bluefield Mitigation Bank, 24 are identified as lying outside of the Bluefield Mitigation Bank service area. One of the 24 impact sites is located 0.86 mile outside the Bluefield Mitigation Bank service area boundary. Since these boundaries are not surveyed, some level of inaccuracy is expected and it is possible that this site may actually be included within the range of the Bluefield Mitigation Bank service area. The other 23 impact sites range in distance outside the service area boundary from 2.87 miles to 17.79 miles. All 23 of these impact sites lie within the service area of the Mary A Mitigation Bank. The applicant inquired as to the availability of Palustrine Forested credits at Mary A Mitigation Bank and was informed by the bank representative that they did not have any unallocated Federal Palustrine Forested credits available at that time. Without the availability of the Mary A Mitigation Bank service area, all 23 impact sites were not covered any existing approved mitigation bank. While the service areas for East Central Florida Mitigation Bank or TM Econ Phase I-III may have been closer to some of the 23 impact sites, the Corps has determined that, since the applicant had already purchased the full complement of credits required for all of these small impact sites to cover the compensatory mitigation requirements of both the State and Federal permits, it would not make sense to require the applicant to provide additional compensatory mitigation through the purchase of additional credits at either East Central Florida Mitigation Bank or TM Econ Phase I-III to address only the Federal impacts. The 23 impact sites are located in the Upper St. Johns sub-basin (HUC 03080101) while the Bluefield Ranch Mitigation Bank is located partially within the adjacent Northern Okeechobee Inflow sub-basin (HUC 03090102). Because the selected mitigation bank and impact sites are not in the same sub-basin, the Mobile Proximity Factor method was used to address the increased "diminishing relevance" of the mitigation bank site to these impacts. Additionally, since 15 of the impact sites lie outside of the HUC-6 basin containing Bluefield Ranch Mitigation Bank, in accordance with the Mobile Proximity Factor method, an additional multiplier of 1.5 was applied to the calculation of credits required to offset the listed impacts.

(f) FSC, LLC purchased mitigation credits prior to the Corps completing its review of the proposed mitigation plan, which resulted in the purchase of mitigation credits from Southport Ranch Mitigation Bank beyond what was required in the impacts and mitigation analysis (unsolicited applicant provided additional mitigation is allowed by §320.4(r)(2)). Therefore, Table 8 includes the extra credits purchased; and, the Corps would separately evaluate any potential use of those additional credits for any potential future work identified (e.g., a modification to the project). However, for work proposed within the Upper St. Johns sub-basin, FSC, LLC did not purchase sufficient credits to fully compensate the work proposed (with the inclusion of the proximity factor). Therefore, Therefore, Table 9 notes the additional credits from the Bluefield Ranch Mitigation Bank that would be needed to fully compensate work proposed within that sub-basin, including the necessary proximity factor calculations.

Table 9 – FSC Project Wetland Mitigation Assessment
SAJ Mitigation Credit Summary

Impact Sub-Basin	Mitigation Bank Sub-Basin	Sum of Credits Needed	Proximity Factor	Out of Basin Multiplier	Credits Needed USACE	Total Credits Needed USACE	Mitigation Bank Selected for Purchase	Credits Purchased to Date	Difference of Credits Purchased
Upper St. Johns (03080101)	Florida Southeast Coast (03090206) Northern Okeechobee Inflow (03090102)	0.718	1.130862823	1.5	1.218	3.016	Bluefield Ranch	2.407	(0.609)
Upper St. Johns (03080101)	Florida Southeast Coast (03090206) Northern Okeechobee Inflow (03090102)	0.478	1.130862823		0.541				
Upper St. Johns (03080101)	Florida Southeast Coast (03090206) Northern Okeechobee Inflow (03090102)	0.126			0.126				
Vero Beach (03080203)	Florida Southeast Coast (03090206) Northern Okeechobee Inflow (03090102)	0.350			0.350				
Florida Southeast Coast (03090206)	Florida Southeast Coast (03090206) Northern Okeechobee Inflow (03090102)	0.781			0.781				
Kissimmee (03090101)	Kissimmee (03090101)	1.325			1.325	4.356	Southport Ranch	4.934	0.578
Kissimmee (03090101)	Kissimmee (03090101)	3.031			3.031				
TOTAL						**7.372**		**7.341**	

d. Special Conditions:

(1) Special Conditions Required for All Southeast Markets:

(a) The Corps determined that the Hillabee Expansion Project, Sabal Trail Project, and FSC Project are connected actions and evaluated them as one continuous and complete project referred to as the SMP Project. The FERC FEIS and this document evaluate the entire SMP Project. However, each Corps district has individual compliance and enforcement oversight for their respective geographic areas of review. Therefore, the Corps determined that any authorization of the overall SMP Project would be implemented through the composition and issuance of five separate standard individual permits. SAM would compile and issue separate permits to Transcontinental Gas Pipe Line Company, LLC for the Hillabee Expansion Project; and, to Sabal Trail Transmission, LLC for the portion of the Sabal Trail Project in Alabama. SAS would compile and issue a permit to Sabal Trail Transmission, LLC for the portion of the Sabal Trail Project in Georgia. SAJ would compile and issue separate permits to Sabal Trail Transmission, LLC for the portion of the Sabal Trail Project in Florida; and, to FSC, LLC for the FSC Project.

(b) To ensure consistency and ease of execution by the applicants; and, compliance by the Corps, the majority of the special conditions associated with the noted permits would be identical. Such conditions include, but may not be limited to, the submission of notification of the commencement of work, the implementation of the various SMP Project plans noted within this document, the actions to be implemented regarding the discovery of unexpected historic and/or cultural resources, and/or similar conditions. The significant difference between the special conditions of the various permits would be the specific compensatory mitigation requirements (the mitigation banks utilized and the number of mitigation bank credits purchased). Additional differences between the special conditions of the actions include the incorporation of the respective WQC permits for each of the projects; and, the requirements of the two separate FWS BOs (the Hillabee Expansion Project and the Sabal Trail Project are associated with the FWS 25 February 2016 BO; and, the FSC Project is associated with the FWS 25 May 2016 BO). Any additional unique special conditions for the various projects are noted below.

(2) Unique Special Conditions:

(a) Hillabee Expansion Project (SAM):

(*i*) Prior to the commencement of any permitted work in waters of the United States, the Transcontinental Gas Pipe Line Company, LLC shall purchase 5.12 wetland mitigation credits and 3,553 stream mitigation credits from the Alabama River Mitigation Bank and submit documentation of these credits purchase to the Corps. The credit purchase documentation must reference the Corps file number assigned to the permitted project. If all or a portion of the required credits are not available from the above referenced banks, the permittee shall obtain written approval from the Corps prior to purchasing credits from an alternate mitigation bank.

(*ii*) Prior to the commencement of any permitted work in waters of the United States, the Transcontinental Gas Pipe Line Company, LLC shall purchase 2.25 wetland mitigation credits from the McLemore Mitigation Bank and submit documentation of these credits purchase to the Corps. The credit purchase documentation must reference the Corps file number assigned to the permitted project. If all or a portion of the required credits are not available from the above referenced banks, the permittee shall obtain written approval from the Corps prior to purchasing credits from an alternate mitigation bank.

(*iii*) Prior to the commencement of any permitted work in waters of the United States, the Transcontinental Gas Pipe Line Company, LLC shall purchase 1.29 wetland mitigation credits from the Canoe Creek Mitigation Bank and submit documentation of these credits purchase to the Corps. The credit purchase documentation must reference the Corps file number assigned to the permitted project. If all or a portion of the required credits are not available from the above referenced banks, the permittee shall obtain written approval from the Corps prior to purchasing credits from an alternate mitigation bank.

(*iv*) Transcontinental Gas Pipe Line Company, LLC shall implement the approved avoidance (routing) plan for cultural site 1Cw332 as depicted in drawing F-AS-ROCK-F-04 on the Hillabee Expansion Project final alignment sheets.

(*v*) Transcontinental Gas Pipe Line Company, LLC shall implement their approved Modified Wetland and Waterbody Construction and Mitigation Procedures, dated May 25, 2016, for the Hillabee Expansion Project.

(*vi*) In lieu of Proctor Creek, Transcontinental Gas Pipe Line Company, LLC shall use the Coosa River as source water for the Proctor Creek Loop.

(b) Sabal Trail Project:

(*i*) Alabama (SAM):

• Prior to the commencement of any permitted work in waters of the United States, the Sabal Trail Transmission, LLC shall purchase 0.38 wetland mitigation credits from the McLemore Mitigation Bank and submit documentation of these credits purchase to the Corps. The credit purchase documentation must reference the Corps file number assigned to the permitted project. If all or a portion of the required credits are not available from the above referenced banks, the permittee shall obtain written approval from the Corps prior to purchasing credits from an alternate mitigation bank.

• Prior to the commencement of any permitted work in waters of the United States, the Sabal Trail Transmission, LLC shall purchase 1.51 wetland mitigation credits Martin Creek Mitigation Bank and submit documentation of these credits purchase to the Corps. The credit purchase documentation must reference the Corps file number assigned to the permitted project. If all or a portion of the required credits are not available from the above referenced banks, the permittee shall obtain written approval from the Corps prior to purchasing credits from an alternate mitigation bank.

(*ii*) Georgia (SAS):

• Sabal Trail, LLC (the Permittee) shall implement the Hall Route Variation between approximately MP 148.4 to 148.7 to minimize impacts on a forested wetland and a karst feature in Dougherty County, Georgia.

• Prior to the commencement of any permitted work in waters of the United States, the Permittee shall purchase 324.69 wetland mitigation credits from Cecil Bay Mitigation Bank, 82.78 wetland mitigation credits from Bradley Farms Mitigation Bank, 140.00 wetland mitigation credits from Magnolia Swamp Mitigation Bank, and 33.58 wetland mitigation credits from Kolomoki Mitigation Bank and provide documentation to the Savannah District that the purchased have been made. The credit purchase documentation must reference the Corps file number assigned to the permitted project, SAS-2013-00942. If all or a portion of the required credits are not available from the above referenced banks, the permittee shall obtain written approval from the Corps prior to purchasing credits from an alternate mitigation bank.

• All work conducted under this permit shall be located, outlined, designed, constructed and operated in accordance with the minimal requirements as contained in the Georgia Erosion and Sedimentation Control Act of 1975, as amended. Utilization of plans and specifications as contained in the "Manual for Erosion and Sediment Control, (Latest Edition)," published by the Georgia Soil and Water Conservation Commission or their equivalent, will aid in achieving compliance with the aforementioned minimal requirements.

• The Permittee shall obtain and comply with all appropriate Federal, state, and local authorizations required for this type of activity. A stream buffer variance may be required. Variances are issued by the Director of the Georgia Environmental Protection Division (EPD), as defined in the Georgia Erosion and Sedimentation Control Act of 1975, as amended. It is our understanding that you may obtain information concerning variances at the Georgia EPD's website at https://epd.georgia.gov/, or by contacting the Watershed Protection Branch at (404) 463-1511.

• A copy of this permit, including the approved drawings and plans; special conditions; and any amendments shall be maintained at the work site(s) whenever work is being performed. The Permittee shall assure that all contractors, subcontractors, and other personnel performing the permitted work are fully aware of the permit's terms and conditions.

• Within 60 days of the date of this permit and prior to the commencement of any permitted work in waters of the United States within the State of Georgia, the Permittee shall develop and submit a draft Construction Status Plan to the Savannah District for review and approval, by which the status of construction activities within waters of the United States will be reported. Compliance with the approved Plan will become a condition of this permit.

• Prior to the commencement of any permitted work in waters of the United States within the State of Georgia, the Permittee shall schedule a pre-construction meeting between its representatives, the contractor’s representatives and the appropriate Savannah District Project Manager to ensure that there is a mutual understanding of all terms and conditions contained within the Department of the Army permit. The Permittee shall notify the Savannah District Project Manager a minimum of fourteen (14) days in advance of the scheduled meeting in order to provide that individual with ample opportunity to schedule and participate in the required meeting.

(*iii*) Florida (SAJ): SAJ also would include a special condition requiring the implementation of the AZ Ocala Route Variation and the Deerfield Road Variation pipeline routes.

(c) FSC Project (SAJ):

(i) SAJ also would include a special condition requiring the implementation of HDD at the C-23 crossing; and, the submittal of as-built drawings for the work associated with the C-23 HDD crossing (the Section 408 crossing).

(ii) SAJ also would include a special condition requiring the implementation of HDD at the Lake Kissimmee crossing.

(3) The pages of special conditions from the respective proffered permit for the action associated with this specific document (i.e., SAJ-2013-03030, SAJ-2013-03099, SAM-2014-00238, SAM-2014-00655, or SAS-2013-00942) are attached; and, are incorporated into this document by reference.

12. General evaluation criteria under the public interest review:

a. Relative extent of the public and private need for the proposed structure or work: The SMP Project would transport price competitive natural gas from Alabama to Florida to help meet the growing demand for natural gas by the electric generation, distribution, and end use markets in Florida and the Southeast United States. Therefore, the SMP Project addresses a general public need for, and directly benefits, energy development. General improvements to the environment and actions that potentially address climate change are common public needs. The use of natural gas as an energy source from any access point along the SMP Project corridor could diminish the general emission of carbon dioxide as compared to other energy fuels (e.g., fuel oil or coal). It also is anticipated that the consumption of the distributed gas to any converted power plants would reduce greenhouse gas emissions; and, thereby provide an overall environmental benefit. In addition, the SMP Project is expected to provide employment and tax revenue benefits to local communities during construction; and, to a lesser extent, during operation of the pipeline and associated facilities (reference the FEIS, Table 3.10-1, which summarizes the potential economic benefits associated with the SMP Project).

b. Practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed work where there are unresolved conflicts as to the resource use: The Corps received correspondence from numerous and diverse

individuals and/or organizations requesting the Corps to deny the SMP Project; or, at a minimum, require additional actions to further minimize potential effects to the environment and/or communities (reference section 6.b., above). The FERC also received correspondence from numerous and diverse individuals and/or organizations expressing concerns/objections to the project (reference the FEIS, Appendix O; and, transcripts of public meetings available at the FERC Internet site). During the evolution of the SMP Project, in response to coordination with the FERC and the Corps, the applicants revised the project, as practicable, to address those concerns/objections. In consideration of the unresolved concerns/objections, the FEIS and this ROD document that less environmentally damaging practicable alternatives are not available (reference the FEIS, Executive Summary ES-7 and sections 4.0 and 5.1.14; and, ROD section 7).

c. Extent and permanence of beneficial and/or detrimental effects, which the proposed work is likely to have on the public and private uses to which the area is suited: Beneficial effects associated with the SMP Project (partially noted in 12.a, above) include long-term energy production alternatives, temporary and long-term economic benefits, and long-term decreases in greenhouse gases. A summary of economic benefits associated with the SMP Project is conveyed in the FEIS, Table 3.10-1. The SMP Project would permanently limit public and/or private uses of some upland areas; however, private land owners/users would be compensated for any loss of use. Wetlands affected by the SMP Project are not generally directly “used” by the public or by private individuals, due to the environmental condition(s) of such sites. However, any effect on the “use” of these areas generally would be limited and temporary, as the majority of these areas would be restored to pre-construction conditions. Specifically, detrimental effects to wetlands (and any “uses” of such) would generally be temporary or limited to the conversion of PFO wetlands to PSS or PEM wetland systems. The SMP Project, though, does include limited permanent loss of wetland habitat (permanent wetland fill). Environmental effects associated with the permanent conversion of PFO wetlands and permanent loss of wetlands would be mitigated through the purchase of mitigation bank credits; therefore, the net loss to the general environment would be transitory. The permanent conversion of wetlands (PFO to PSS or PEM systems) should not preclude any prior “uses” of such systems, as the areas affected along the pipeline corridor generally are limited in size and dispersed along the project length; and, the overall habitat of these areas, from the perspective of human “use” would not significantly change. Conversely, several waterbodies and waterways affected by the SMP Project are routinely used by members of the public (or by private owners) for recreational activities. However, the effect upon such uses would be minimal and temporary.

13. Determinations:

a. Public Hearing Evaluation (33 C.F.R. § 327.4(b)):

(1) Prior to the circulation of the Corps public notice, the FERC held numerous public meetings that conveyed information about the SMP Project and solicited public commentary (reference section 6.a., above; and, the FEIS, section 1.3). The Corps public notice advised the public of the availability of the DEIS, provided additional information associated with the Corps' evaluation of the SMP Project, and solicited public commentary. The Corps extended the initial comment period of the public notice an additional 60 days beyond the required 30 days to allow the public adequate time to review the documents associated with the proposed project. During the comment period the Corps received comments from members of the general public, non-governmental organizations, and Federal and State agencies. During the extended comment period, the FERC hosted numerous additional public meetings; and, specifically visited certain areas that could be affected by the SMP Project to meet with various groups and landowners (reference section 6.a., above; and, the FEIS, section 1.3). A transcript of each meeting and copies of each written comment are part of the public record for the SMP Project. FERC responses to relevant comments are provided in the FEIS, Appendix O. A subject index is provided in the FEIS, Appendix P. In consideration of the extent of public meetings hosted by, or attended by, the FERC; and, in consideration of the diverse topics discussed at the public meetings held, the Corps did not independently host public meetings for the SMP Project.

(2) During the extended public notice comment period, two organizations (WWALS and Greenlaw) requested that the Corps hold a public hearing (reference section 6.b., above). In accordance with 33 C.F.R. § 327.3, a public hearing is a proceeding conducted for the purpose of acquiring information or evidence which would be considered in evaluating a proposed Department of the Army permit action. The Corps has reviewed the transcripts and comments associated with the numerous public meetings hosted by, or attended by FERC; and, the extensive correspondence submitted in conjunction with the circulation of the DEIS and the Corps' public notice. In consideration of that review, the Corps (SAJ, SAM, and SAS District Engineers) has determined that the issues raised in the requests for a public hearing are insubstantial and that there is no valid interest to be served by a hearing. The Corps advised WWALS and GreenLaw of this decision (reference section 6.c., above).

b. Section 176(c) of the Clean Air Act General Conformity Rule Review: The operational emissions from the SMP Project would not be expected to cause or significantly contribute to a national ambient air quality standards exceedance and the

other notable and reasonably foreseeable stationary source projects in the region would either result in notable emissions reductions, insignificant emission increases, or be required to comply with applicable air quality regulations. The most notable of these would be the net emission reductions for all pollutants except for volatile organic compounds and greenhouse gases at the DEF Citrus Plant, where two coal-fired units would be replaced with higher-efficiency natural gas units (reference the FEIS, section 3.14.3). The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit would not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 C.F.R. § 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons a conformity determination is not required for this permit action.

c. Relevant Presidential Executive Orders (EO).

(1) EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians: The FERC, as the lead agency, consulted with numerous federally recognized tribes (reference the FEIS, section 3.11.4). In conjunction with that consultation, the FERC determined appropriate action that would be implemented by the applicant; and, the applicants prepared state-specific plans for unanticipated discoveries that would be implemented in the event that cultural resources or human remains are encountered during construction (reference the FEIS, Table 2.3-2).

(2) EO 11988, Floodplain Management: The FEIS notes that Transcontinental Gas Pipe Line Company, LLC's proposed pipeline facilities would cross 16 Special Flood Hazard Areas (SFHAs) and 30 areas of minimal flood hazard, and all four compressor stations and two contractor yards would be within areas of minimal flood hazard. Sabal Trail Transmission, LLC's proposed pipeline facilities would cross 369 Special Flood Hazard Areas; a portion of the Alexander City Compressor Station, the Transcontinental Gas Pipe Line Company, LLC Hillabee Meter Station, the Dunnellon Compressor Station, and DEF Citrus County M&R Station would be within SFHAs; and the Reunion Compressor Station (and associated CFH facilities) would be within an area of minimal flood hazard. FSC, LLC's proposed pipeline facilities would cross 85 SFHAs; and, 2 MLVs would be located within SFHAs. Details on the flood zones crossed, including the FEMA flood zone designations and locations are provided in the FEIS, Appendix D, Table 3.3.2-6. Alternatives to location within the floodplain, minimization, and compensation of the effects were considered above. Any resulting

Corps permit would include a special condition directing the permittee to contact the community's designated responsible officials to obtain necessary permits and to ensure all floodplain ordinances and safety precautions are met.

(3) EO 12898, Environmental Justice: The FEIS concludes that minority and low-income populations exist in the SMP Project area; the SMP Project impacts would not be high and adverse; and, the SMP Project impacts would not disproportionately fall on environmental justice populations (FEIS, section 3.10.4.5). The FEIS further indicates that proximity to, and potential to affect, environmental justice communities was considered during the alternatives analysis for the SMP Project (FEIS, section 4.4) Therefore, in accordance with Title III of the Civil Right Act of 1964 and Executive Order 12898, it has been determined that the project would not directly, or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities.

(4) EO 13112, Invasive Species: The FEIS includes discussion of invasive species concerns in the analysis of the SMP Project (FEIS, section 3.5.5). The FEIS notes that noxious weed and invasive species lists have been developed for Alabama, Georgia, and Florida; and, that the applicants have identified areas of concern along the construction ROW. In order to comply with the measures stipulated in this EO, as well as other state regulations and requirements, each applicant developed an invasive species management plan (ISMP). The implementation of these ISMPs would be required by special condition of any authorization granted. The Corps concurs with the FEIS conclusion that with the implementation of the applicants' ISMPs the spread of noxious and invasive species should be adequately prevented and controlled.

(5) EO 13212 and 13302, Energy Supply and Availability: The FERC is the lead Federal agency coordinating action associated with the SMP Project. The Corps, as a cooperating agency for the FEIS, actively participated in efforts to evaluate the SMP Project in a timely and efficient manner; and, finalize action as quickly as practicable. The Corps review was expedited and/or other actions were taken to the extent permitted by law and regulation to accelerate completion of this energy related project while maintaining safety, public health, and environmental protections.

(6) EO 13547, Stewardship of the Ocean, Our Coasts, and the Great Lakes: The SMP Project would not adversely affect the protection, maintenance, and/or restoration of the health of ocean, coastal, and/or Great Lakes ecosystems and resources; the sustainability of ocean and coastal economies; the preservation of our maritime

heritage; sustainable uses and access; adaptive management to enhance our understanding of, and capacity to respond to, climate change and ocean acidification; or, our national security and foreign policy interests.

(7) EO 13045, Protection of Children: This EO requires that “consistent with the agency's mission, each Federal agency: (1) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and, (2) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks." This EO defines "environmental health risks and safety risks" to mean risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air people breathe, the food people eat, the water people drink or use for recreation, the soil people live on, and the products people use or are exposed to). The FEIS notes that the SMP Project would comply with National Ambient Air Quality Standards, which are protective of human health, including children, the elderly, and sensitive populations (FEIS, Executive Summary ES-5 and section 3.12.1.1). The project as currently proposed should not cause any environmental health risks or safety risks that would disproportionately affect children and is therefore in compliance with the EO.

d. Compliance with NEPA: The Corps acted as a Cooperating Agency in the preparation of the FEIS for this project. The FERC was the Lead Agency in the preparation of the FEIS. The Corps has adopted FERC’s FEIS pursuant to 40 C.F.R. § 1506.3(c). All practicable means to avoid or minimize environmental harm from the alternative selected have been adopted.

e. Compliance with 404(b)(1) guidelines. Having completed the evaluation in section 8 above, the Corps has determined that the proposed discharges comply with the 404(b)(1) guidelines.

f. Public Interest Determination: I find that issuance of DA permit applications SAJ-2013-03030, SAJ-2013-03099, SAS-2013-00942, SAM-2014-00238, and SAM-2014-00655 is not contrary to the public interest.

14. Effective Date: This Record of Decision shall become effective on the date executed by the District Engineers for Jacksonville District, Savannah District, and Mobile District.

CESAJ-RD-NJ, CESAM-RD-N, CESAS-RD-C
SUBJECT: Department of the Army Record of Decision and Statement of Findings (ROD-SOF) for Permit Applications SAJ-2013-03030, SAJ-2013-03099, SAM-2014-00238, SAM-2014-00655, and SAS-2013-00942.

FOR SAM:

PREPARED BY:

Date: August 3, 2016

JAMES S. CHERRY, II
Project Manager, Mobile District

REVIEWED BY:

Date: August 3, 2016

SHANNON L. JOHNSON
Chief, North Branch
Regulatory Mobile District

APPROVED BY:

Date: 5 AUGUST, 2016

JAMES A. DELAPP
Colonel, U.S. Army
Mobile District Commander

CESAJ-RD-NJ, CESAM-RD-N, CESAS-RD-C
SUBJECT: Department of the Army Record of Decision and Statement of Findings (ROD-SOF) for Permit Applications SAJ-2013-03030, SAJ-2013-03099, SAM-2014-00238, SAM-2014-00655, and SAS-2013-00942.

FOR SAS:

PREPARED BY:

Date: August 3, 2016

for: TERRY C. KOBS
Project Manager, Savannah District

REVIEWED BY:

Date: 8/3/16

DAVID M. LEKSON
Chief, Regulatory Savannah District

APPROVED BY:

Date: 3 AUG 2016

MARVIN L. GRIFFIN
Colonel, U.S. Army
Savannah District Commander

CESAJ-RD-NJ, CESAM-RD-N, CESAS-RD-C
SUBJECT: Department of the Army Record of Decision and Statement of Findings (ROD-SOF) for Permit Applications SAJ-2013-03030, SAJ-2013-03099, SAM-2014-00238, SAM-2014-00655, and SAS-2013-00942.

FOR SAJ:

PREPARED BY:

Date: 3 AUG 2016

Mark R. Evans
Project Manager, Jacksonville District

REVIEWED BY:

Date: 8/3/16

DONALD W. KINARD
Chief, Regulatory Jacksonville District

APPROVED BY:

Date: 3 AUG 2016

JASON A. KIRK, P.E.
Colonel, U.S. Army
Jacksonville District Commander

CESAJ-RD-NJ, CESAM-RD-N, CESAS-RD-C
SUBJECT: Department of the Army Record of Decision and Statement of Findings (ROD-SOF) for Permit Applications SAJ-2013-03030, SAJ-2013-03099, SAM-2014-00238, SAM-2014-00655, and SAS-2013-00942.

Appendices

Appendix 1 – U.S. Fish and Wildlife Service Biological Opinion dated 25 February 2016 (Hillabee Expansion Project and Sabal Trail Project)

Appendix 2 – U.S. Fish and Wildlife Service Biological Opinion dated 25 May 2016 (FSC Project)

Appendix 3 – Alabama Department of Environmental Management WQC with Special Conditions dated 19 May 2016, for the Hillabee Expansion Project

Appendix 4 – Alabama Department of Environmental Management WQC with Special Conditions dated 19 May 2016, for the Alabama segment of the Sabal Trail Project

Appendix 5 – Georgia Department of Natural Resources, Environmental Protection Division WQC with Special Conditions dated 28 June 2016, for the Georgia segment of the Sabal Trail Project

Appendix 6 – Florida Department of Environmental Protection WQC with Special Conditions dated 22 January 2016, for the Florida segment of the Sabal Trail Project

Appendix 7 – Florida Department of Environmental Protection conceptual WQC with Special Conditions dated 19 November 2014, for the FSC Project; and, associated modification dated 24 September 2015

Appendix 8 – Pages of special conditions from the respective proffered permit for the action associated with this specific document (i.e., SAJ-2013-03030, SAJ-2013-03099, SAM-2014-00238, SAM-2014-00655, or SAS-2013-00942)