

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY OF THE STAFF'S ENVIRONMENTAL ANALYSIS OF THE PROPOSED ACTION AND ALTERNATIVES

The conclusions and recommendations presented in this section are those of the environmental staff of the FERC. These conclusions and recommendations are based on input from the COE as a cooperating agency in the preparation of this EIS. However, the COE will present its own conclusions and recommendations in its Record of Decision.

We have determined that construction and operation of the Cypress Pipeline and FGT Expansion Projects would result in limited adverse environmental impacts based on information provided by Southern and FGT and further developed from information requests; field investigations; scoping; literature research; alternatives analysis; contacts with federal, tribal, state, and local agencies; and input from public groups and organizations. These limited impacts would be most significant during the period of construction.

As part of our analysis, we developed specific mitigation measures that we believe are appropriate and reasonable for the construction and operation of the projects. We believe environmental impacts would be minimized if the projects are constructed and operated in accordance with applicable laws and regulations, Southern's and FGT's proposed mitigation, and our additional mitigation measures. We are, therefore, recommending that our mitigation measures be attached as conditions to any authorization issued by the Commission. A summary of the project impacts and our conclusions is presented below by resource.

5.1.1 Geology

Construction and operation of the Cypress Pipeline and FGT Expansion Projects would not materially alter the geologic conditions of the project area. No impacts on mining resources are anticipated during construction and operation of the pipeline facilities. No significant geologic hazards would be crossed by the projects. Karst features, particularly sinkhole formations, are common in the area of the FGT pipeline loops. FGT would monitor for karst features during construction and has identified potential mitigation measures it would implement in the event these features are identified during construction or operation of the pipeline facilities. We believe FGT's measures would adequately address the potential hazards associated with karst terrain.

5.1.2 Soils

Pipeline construction activities such as clearing, grading, trench excavation, and backfilling, as well as the movement of construction equipment along the rights-of-way may result in adverse impacts on soil resources. Impacts on soils can be effectively minimized through the use of the proposed erosion control and revegetation measures. Southern and FGT would implement the mitigation measures contained in our Plan with approved modifications in order to control erosion and sedimentation during construction and to ensure revegetation to prevent erosion following construction.

5.1.3 Water and Wetland Resources

Groundwater serves as a water source to a majority of the population in the Cypress Pipeline and FGT Expansion Project areas. Surficial aquifers are generally used in rural areas of both projects and are considered supplemental water supplies. None of the aquifers are designated as sole-source aquifers in the areas crossed by the Cypress Pipeline and FGT Expansion Projects. To ensure that potential impacts on

groundwater resources from spills and leaks of hazardous materials are prevented and minimized to the extent possible, Southern and FGT would implement a SPCC Plan that would be consistent with the requirements in our Procedures with approved modifications.

The Cypress Pipeline Project would cross within 150 feet of seven water wells and three groundwater seeps/springs. The construction work area for the FGT Expansion Project would be located within 150 feet of 12 private water wells and within 270 feet of 8 public water wells. No springs have been identified along FGT's pipeline routes. Both Southern and FGT would continue to investigate for the presence of wells and springs during civil and engineering surveys and landowner negotiations. Southern and FGT would prohibit refueling and storage of hazardous materials within 150 feet of wells. Because Southern and FGT have an ongoing effort to identify and protect these water resources, we have recommended that Southern and FGT provide the FERC with information about additional wells or springs before construction begins, and to provide information about any wells that are damaged and repaired as a result of construction.

The Cypress Pipeline and FGT Expansion Projects would cross a combined total of 108 waterbodies (101 and 7, respectively). None of the waterbodies are classified as a source of drinking water or potable water supply and all waterbodies are considered warmwater fishery resources. Only two of the waterbodies that would be crossed by FGT's pipeline facilities are classified as perennial, and neither is designated major (i.e., wider than 100 feet) or sensitive. Fifty-four of the streams crossed by Southern's pipeline facilities are perennial waterbodies, of which six are major waterbodies and one is a canal listed on the NRHP.

Southern would cross the six major waterbodies and the historic canal using the HDD crossing method. Southern would cross the remaining waterbodies using other dry or wet open cut. FGT would cross waterbodies using wet or dry open cut methods. Waterbody crossings would be constructed by both Southern and FGT in accordance with applicable permits and our Procedures with approved modifications, which would minimize impacts to the maximum extent practicable.

Southern proposes to use surface waters for hydrostatic testing its pipeline facilities, including water from the Ogeechee River, Peacock Creek, Altamaha River, Satilla River, and St. Marys River. FGT would use water from wells to hydrostatically test its pipeline facilities. Both Southern and FGT would minimize the potential effects of hydrostatic testing on surface water and wetland resources by adhering to the measures in our Procedures with approved modifications.

Southern's loop and mainline centerline would cross 315 wetlands with a total crossing length of about 68.4 miles, or about 40 percent of the total pipeline length. About 60 percent of the wetlands crossed are forested wetlands, 32 percent are emergent wetlands, and 7 percent are scrub-shrub wetlands. Of the forested wetlands affected by the Cypress Pipeline Project, about 15 percent are identified as hydric plantation pine, which are generally considered to be low quality wetlands due to periodic disturbance and the limited vegetation diversity. Based on COE wetland quality assessments, 35 wetlands crossed by Southern's mainline would be considered high quality. No high quality wetlands were identified along the loop. The GADNR identified seven sensitive wetlands that would be crossed by Southern's mainline.

FGT's pipeline facilities would not cross any wetlands on Loops J and G. Loop K would cross 42 wetlands for a total distance of about 9.9 miles, of which about 95 percent are scrub-shrub and emergent wetlands and the remaining 5 percent are forested. Based on COE wetland quality assessments, two of the wetlands crossed by FGT's Loop K are rated as high quality. However, none of the wetlands were identified by the state as sensitive.

The installation of pipeline facilities would result in temporary impacts on the scrub-shrub and palustrine emergent wetlands, which are expected to return to preconstruction conditions within a few years. Impacts on forested wetlands would be longer due to the time it would take for forested vegetation to return to preconstruction conditions. Given the species that dominate the forested wetlands crossed by both projects, regeneration to preconstruction conditions may take up to 30 years. In addition, wetland vegetation impacts would be permanent where vegetation would be maintained in a herbaceous state over the pipeline centerline to facilitate pipeline inspections.

Both Southern and FGT would limit wetland impacts by reducing the width of the construction right-of-way in some areas, by implementing our Procedures with approved modifications, and by complying with the conditions of applicable authorizations, such as from the COE under section 404 and the FLDEP's Environmental Resource Permit. Southern and FGT would also minimize impacts on forested wetlands by overlapping its temporary construction right-of-way, including temporary extra workspaces, on adjacent maintained and cleared powerline corridor, where possible. To mitigate remaining impacts on wetlands, we have recommended that Southern and FGT develop respective compensatory wetland mitigation plans.

5.1.4 Vegetation

Of the vegetation communities that would be crossed by Southern's pipeline facilities, upland vegetation comprises about 60 percent while wetland vegetation accounts for about 40 percent. For FGT's pipeline facilities, upland vegetation comprises about 87 percent while wetland vegetation accounts for about 13 percent. The primary upland vegetation cover type that would be crossed by Southern's pipeline facilities (about 48.4 miles) is planted pine. The next two most prevalent vegetation cover types are the upland forest (about 34.9 miles) and herbaceous (about 19.8 miles) cover types. The remaining vegetation cover types would be agriculture (5.9 miles) and landscape (0.1 mile). The FGT Expansion Project loops would primarily affect the herbaceous cover type (31.3 miles), followed by agricultural (0.5 mile) and industrial (0.3 mile).

To reduce impacts on vegetation within the temporary and permanent rights-of-way and improve revegetation potential, Southern and FGT would utilize a portion of previously disturbed, existing pipeline and powerline corridors. By using existing rights-of-way during construction, long term impacts on upland forest, planted pine, and landscape cover types would be lessened and shifted to impacts on the herbaceous cover types (which would be considered a short term impact), and impacts on previously undisturbed and old growth vegetation would be minimized.

5.1.5 Special Status Species

Based on consultations with the FWS, 20 federally listed or proposed listed species were determined to potentially occur in the general vicinity of the proposed Cypress Pipeline and FGT Expansion Projects. Southern and FGT conducted surveys of their pipeline routes and project work areas to identify the presence of listed species in the project areas. After completing the field surveys, Southern prepared a Sensitive Species Mitigation Plan and FGT prepared an Endangered & Threatened Species Field Reconnaissance Report, which were both submitted to the FERC and the FWS for review and comment. On the basis of these field survey reports, analysis of the potential effects of the proposed actions, and informal consultations with the FWS, we conclude that with the implementation of Southern's and FGT's proposed construction and mitigation plans, and our recommendations, the projects would have no effect on 10 species, are not likely to adversely affect 9 species, and may adversely affect the eastern indigo snake for the FGT Expansion Project. Additional surveys are scheduled to occur prior to construction for six of these species; however, the results of these surveys would not alter our

determinations of effect as Southern and FGT would still be required to adhere to their proposed or our recommended conservation measures.

The draft EIS (which served as a Biological Assessment) was sent to the FWS and NOAA Fisheries along with a letter that initiated formal consultation under section 7 of the ESA regarding the eastern indigo snake. We have not received a BO or concurrence letters from the FWS and NOAA Fisheries on our determinations. Neither Southern nor FGT would be allowed to begin construction until we receive concurrence letters from these agencies.

Based on consultations with the GADNR and Florida Fish and Wildlife Commission, 19 state-listed threatened or endangered species potentially occur in the project areas. Of these 19 species, 8 are also federally listed and are addressed in our determinations of effect discussed above. Of the remaining 11 species, no impacts would occur to 1 species and 10 species are not expected to be adversely affected.

5.1.6 Land Use, Recreation, and Visual Resources

Land use crossed by the centerline of the Cypress Pipeline Project would be primarily forested (about 44 percent), silvicultural (27 percent), and open (about 25 percent). For FGT's project, the land use the centerline would primary cross is open (consisting mostly of the herbaceous cover type, about 88 percent), industrial (about 5 percent), and forested (about 3 percent). Visual impacts associated with the pipeline would be greatest where the pipeline route parallels or crosses roads, trails, or prominent off-site observation points, and other places where the rights-of-way may be seen by passing motorists or other recreationists. These visual impacts would not be a significant change from the existing visual characteristics at these observation points because the majority of each pipeline route would be constructed within or directly adjacent to existing utility corridors.

Southern's proposed aboveground facilities would be new features in the landscape. Southern's new compressor stations, meter stations, block valves, launcher/receivers, and interconnects would be within or adjacent to existing utility corridor areas, and collocated with each other or with other existing facility sites where possible, which would minimize their visual impact. Southern would further minimize the visual impact of the new compressor station facilities by leaving vegetative buffers between the facility sites and nearby observation points. We have recommended that Southern develop a visual screening plan for its proposed South Georgia Meter Station to screen the facility from nearby residences. FGT's aboveground facility modifications would occur primarily at existing facility sites or be buffered by existing vegetation or within existing utility corridor areas. Therefore, FGT's aboveground facilities would not affect the surrounding visual landscape.

5.1.7 Cultural Resources

Cultural resources inventories have been conducted for the majority of Southern's pipeline route, access roads, and ancillary facilities in Georgia (except for about 8.7 miles due to denied access) and in Florida (except for about 6.2 miles of the mainline due to denied access). Southern identified 32 cultural resources sites and 5 standing structures more than 50 years old in Georgia. Of these, one site (the Savannah Ogeechee Canal) is listed on the NRHP, and one standing structure (the Wayfarer Church/Hardshell Church) is recommended as potentially eligible for the NRHP. The potential eligibility of three sites could not be determined because two were previously recorded but could not be relocated during survey, and access was denied to the third. The remaining 28 sites and 4 structures are recommended as not eligible for the NRHP. Southern's construction plans would avoid the Savannah Ogeechee Canal by the HDD method, and would avoid the Wayfarer Church/Hardshell Church. Both the Georgia SHPO and the FERC staff concur that the project would have no adverse effect on these properties. Southern identified four cultural resources sites in Florida, but none are recommended as

eligible for the NRHP. Both the Florida SHPO and the FERC staff concur that the project would have no effect on NRHP properties for the surveyed areas.

All of FGT's pipeline route, access roads, and ancillary facilities have been inventoried for cultural resources. Twenty cultural resources sites and nine historic-period structures were identified. None were recommended as eligible for the NRHP. The Florida SHPO has not yet commented on FGT's cultural resources survey report. Southern has not yet completed survey and evaluations for the area of potential effect, and FGT has not received SHPO comments on its cultural resource survey report. Therefore, at this time, the FERC has not completed the process of complying with section 106 of the NHPA for Southern's or FGT's proposed facilities. Once cultural resources surveys and evaluations are completed, if any historic properties would be adversely affected, treatment plans would be prepared.

5.1.8 Socioeconomics and Transportation

Construction of the projects would result in a temporary increase in population, traffic, and demand for temporary housing and public services. Due to the temporary and limited nature of these impacts, they are not considered significant. Construction and operation of the projects would have a beneficial impact on local tax revenues and economies. The operation and maintenance of the pipeline, aboveground facilities, and the permanent staff associated with them would permanently contribute to each state's property and sales tax revenues, although the contributions would be negligible compared to the overall tax revenues generated in each state.

5.1.9 Air Quality and Noise

Construction of the proposed pipeline and aboveground facilities would result in intermittent and short-term fugitive emissions. Emissions from construction of the pipeline and aboveground facilities are not expected to cause or significantly contribute to a violation of an applicable ambient air quality standard. Southern's proposed new compressors would operate on natural gas. FGT's compressor station modifications would include replacing one existing natural gas powered compressor with an electric driven compressor, and upgrading the horsepower on an existing gas powered compressor. Both Southern's and FGT's emissions for criteria pollutants associated with each compressor station would be less than applicable thresholds. Therefore, the Cypress Pipeline and FGT Expansion Projects would be considered as "minor sources" and would not require best available control technology or prevention of significant deterioration air quality modeling.

Noise would be generated during construction of the pipeline and during the construction and operation of the aboveground facilities. Construction activities in any one area could last from several weeks to several months on an intermittent basis. Construction equipment would be operated on an as-needed basis during this period. While individuals in the immediate vicinity of the construction activities would experience an increase in noise, this effect would be temporary and local. Nighttime noise is not expected to increase during construction because most construction activities would be limited to daytime hours. The compressor stations that Southern proposes to install and the upgrades that FGT proposes to install would generate noise on a continuous basis once operating. The noise attributable to these new and modified facilities would comply with the FERC noise standards and neither project would result in significant noise impacts.

5.1.10 Safety

Southern and FGT would comply with DOT pipeline materials and construction standards for natural gas pipeline facilities. Following construction, Southern and FGT would initiate a pipeline integrity management plan to ensure public safety during operation of the proposed facilities.

5.1.11 Cumulative Impacts

We identified existing and foreseeable projects that overlap or could overlap with the Cypress Pipeline Project or the FGT Expansion Project throughout the length of the pipeline facilities. The major existing projects are the existing pipelines and powerlines that the projects would parallel over nearly the entire length of the projects. The foreseeable projects consist mainly of housing subdivision construction and road widening.

The majority of cumulative impacts would be temporary and minor. However, long-term cumulative impacts on vegetation and land uses in forested areas could occur if the other reasonably foreseeable future projects would be constructed and affect similar vegetation/land uses. Similarly, a number of wetlands could experience long-term cumulative impacts due to either maintenance activities, cutting trees, or filling of wetlands for constructing aboveground facilities. Alternatively the projects could have some benefits such as a boost to the local economy associated with tax revenues or short-term benefits from jobs and wages and purchases of goods and materials.

5.1.12 Alternatives Considered

The No Action or Postponed Action Alternative was considered. While the No Action or Postponed Action Alternative would eliminate or delay the environmental impacts identified in this EIS, the stated objectives of the Southern and FGT proposals would not be met. The new supply source of natural gas from the Elba Island LNG Terminal would not be made available to the proposed service areas. Under this scenario, the existing natural gas transportation systems in Georgia and Florida would continue to provide natural gas service to this region. Denying or postponing a decision on Southern's and FGT's applications could limit access to new supplies of natural gas in the future, which could in turn contribute to higher natural gas prices, and could potentially result in customers conserving or reducing the use of natural gas. Denying or postponing action on Southern's and FGT's applications would more than likely force their customers into seeking natural gas from other sources, using alternative energy sources, or using alternative fuels.

Alternatives involving the use of other existing transmission systems were evaluated. We did not identify any existing pipeline systems between the Elba Island LNG Terminal and northern Florida, or any pipeline system whose expansion would be environmentally preferable to Southern's proposed facilities. FGT's proposed looping and compression appears to maximize use of FGT's existing facilities and would minimize construction of new facilities. Other FGT system alternatives, such as less looping and greater compression, would reduce system reliability due to downtime for maintenance and repairs, and would result in increased noise and emissions. As a result, no system alternatives to FGT's proposed project are considered environmentally preferable. Therefore, we eliminated pipeline system alternatives from further consideration.

We evaluated two major route alternatives to Southern's proposed route, including one that would be shorter but also closer to the coastline and more congested areas, and one that would avoid terrestrial impacts by being located primarily offshore in the Atlantic Ocean. However, neither of these routes were environmentally preferable to the proposed route and were dropped from further consideration. In order to address specific issues or sensitive features identified during scoping or environmental review, several route variations were evaluated for Southern's proposed mainline. This included a collocation variation that would place Southern's entire proposed mainline within existing powerline corridors, rather than adjacent to the powerline corridors. Based on our review, the collocation variation was not considered practical due to concerns about worker safety in proximity to the high voltage powerlines and associated facilities, and due to the presence of other physical constraints such as guy wires and other foreign utilities. However, we determined that about 9 miles of the proposed route located within Effingham

County, Georgia, could be collocated within the existing powerline corridor, and we recommended in the draft EIS that Southern shift its right-of-way into the powerline corridor in that segment. Since the issuance of the draft EIS, Southern has agreed to the collocation variation along this 9-mile-long segment, which would reduce the amount of forestland cleared.

Several route variations were also evaluated to avoid land use and residential impacts, and to minimize forest clearing and fragmentation. Of those route variations, none were determined to be preferable to Southern's proposed route or more practicable, except for one minor variation, which we recommended in the draft EIS that Southern adopt to minimize forest clearing. Since the issuance of the draft EIS, Southern agreed to this route variation.

We considered site alternatives for each of Southern's new compressor stations but none were found to be environmentally preferable to Southern's proposed compressor station sites. Since the issuance of the draft EIS, Southern has agreed to an alternative site for its Rincon Gate Meter Station that would avoid permanently filling a pond. FGT has agreed to an alternative site for its remote blowdown valve that would avoid permanently filling a wetland. At other aboveground facility sites, we concluded that relocating these facilities to other sites offered no environmental advantages and we eliminated them from further consideration. Because FGT's proposed compressor station modifications and upgrades would occur within existing aboveground facility sites, we evaluated no alternative compressor station sites.

5.2 FERC STAFF'S RECOMMENDED MITIGATION

If the Commission authorizes the Cypress Pipeline and FGT Expansion Projects, we recommend that the following measures be included as specific conditions in the Commission's Order. Conditions 1 through 15 apply to both Southern and FGT, conditions 16 through 26 apply to Southern only, and conditions 27 through 36 apply to FGT only. We believe that these measures would further mitigate the environmental impacts associated with the construction and operation of the proposed project.

Conditions Applicable to both Southern and FGT

1. Southern Natural Gas Company (Southern) and Florida Gas Transmission Company (FGT) shall follow the construction procedures and mitigation measures described in their applications, supplemental filings (including responses to staff information requests), and as identified in the environmental impact statement (EIS), unless modified by the Commission Order. Southern and FGT must:
 - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);
 - b. justify each modification relative to site-specific conditions;
 - c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
 - d. receive approval in writing from the Director of the Office of Energy Projects (OEP) **before using that modification.**
2. The Director of OEP has delegation authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the project. This authority shall allow:
 - a. the modification of conditions of this Order; and

- b. the design and implementation of any additional measures deemed necessary (including stop work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction and operation.
3. **Prior to any construction** of the respective projects, Southern and FGT shall file affirmative statements with the Secretary for its project, certified by a senior company official, that all company personnel, environmental inspectors (EIs), and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs before becoming involved with construction and restoration activities.
4. The authorized facility locations shall be as shown in the EIS, as supplemented by filed alignment sheets and shall include the staff's recommended facility locations. **As soon as they are available, and prior to the start of construction**, Southern and FGT shall respectively file with the Secretary revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by this Order for each project. All requests for modifications of environmental conditions of this Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

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

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

This requirement does not apply to route variations recommended herein or minor field realignments per landowner needs and requirements that do not affect other landowners or sensitive environmental areas such as wetlands.

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

- a. implementation of cultural resources mitigation measures;
- b. implementation of endangered, threatened, or special concern species mitigation measures;
- c. recommendations by state regulatory authorities; and

- d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.
6. **At least 60 days before the start of construction**, Southern and FGT shall each file an initial Implementation Plan with the Secretary for the review and written approval by the Director of OEP describing how Southern and FGT will implement the mitigation measures required by this Order. Southern and FGT must file revisions to their respective plans as schedules change. The plans shall identify:
- a. how Southern or FGT will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;
 - b. the number of EIs assigned per spread and aboveground facility site, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
 - c. company personnel, including EIs and contractors, who will receive copies of the appropriate materials;
 - d. what training and instructions Southern or FGT will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change), with the opportunity for OEP staff to participate in the training session(s);
 - e. the company personnel (if known) and specific portion of Southern's or FGT's organizations having responsibility for compliance;
 - f. the procedures (including use of contract penalties) Southern or FGT will follow if noncompliance occurs; and
 - g. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
 - i. the completion of all required surveys and reports;
 - ii. the mitigation training of onsite personnel;
 - iii. the start of construction; and
 - iv. the start and completion of restoration.
7. Southern and FGT shall each file updated status reports with the Secretary on a **biweekly** basis **until all construction-related activities, including restoration, are complete for each phase of the respective projects**. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:
- a. the current construction status of each spread, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;
 - b. a listing of all problems encountered and each instance of noncompliance observed by the EI(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
 - c. a description of corrective actions implemented in response to all instances of noncompliance, and their cost;
 - d. the effectiveness of all corrective actions implemented;
 - e. a description of any landowner/resident complaints that may relate to compliance with the requirements of this Order, and the measures taken to satisfy their concerns; and

- f. copies of any correspondence received by Southern or FGT from other federal, state, or local permitting agencies concerning instances of noncompliance, and Southern's or FGT's response, as applicable.
8. Southern and FGT must receive written authorization from the Director of OEP **before commencing service** for each phase of the projects. Such authorization will only be granted following a determination that rehabilitation and restoration of the right-of-way is proceeding satisfactorily.
9. **Within 30 days of placing the certificated facilities in service**, Southern and FGT shall each file an affirmative statement with the Secretary, certified by a senior company official for the respective projects:
 - a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
 - b. identifying which of the certificate conditions Southern or FGT has complied with or will comply with. This statement shall also identify any areas affected by the projects where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
10. Southern shall employ a team of EIs per construction spread and FGT shall employ at least one EI per spread. The EIs shall be:
 - a. responsible for monitoring and ensuring compliance with all environmental mitigative measures required by this Order and other grants, permits, certificates, or other authorizing documents;
 - b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;
 - c. empowered to order correction of acts that violate the environmental conditions of this Order, and any other authorizing document;
 - d. a full-time position separate from all other activity inspectors;
 - e. responsible for documenting compliance with the environmental conditions of this Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
 - f. responsible for maintaining status reports.
11. Southern and FGT shall each develop and implement an environmental complaint resolution procedure that remains active for at least 3 years following the completion of construction for the respective projects. The procedures shall provide landowners with clear and simple directions for identifying and resolving their environmental mitigation problems/concerns during construction of the projects and restoration of the rights-of-way. **Prior to construction**, Southern and FGT shall mail the environmental complaint resolution procedures to each landowner whose property would be crossed by the respective projects.
 - a. In the letter to affected landowners, Southern and FGT shall:
 - i. provide a local contact that the landowners should call first with their concerns; the letter should indicate how soon to expect a response;

- ii. instruct the landowners that, if they are not satisfied with the response, they should call Southern's or FGT's Hotline; the letter should indicate how soon to expect a response; and
 - iii. instruct the landowners that, if they are still not satisfied with the response from Southern's or FGT's Hotline, they should contact the Commission's Enforcement Hotline at (888) 889-8030, or at hotline@ferc.gov.
 - b. In addition, Southern and FGT shall respectively include in its biweekly status reports a table that contains the following information for each problem/concern:
 - i. the identity of the caller and the date of the call;
 - ii. the identification number from the certificated alignment sheets of the affected property and appropriate location by milepost (MP);
 - iii. a description of the problem/concern; and
 - iv. an explanation of how and when the problem was resolved, will be resolved, or why it has not been resolved.
12. Southern and FGT shall file the locations of all springs, seeps, and wells identified within 150 feet of their respective construction rights-of-way with the Secretary **prior to construction**. **(Section 4.3.1.3)**¹
13. Southern and FGT shall each file a report with the Secretary, within 30 days of placing their respective pipeline facilities in service, identifying all water supply wells/systems damaged by construction and how they were repaired. The report shall include a discussion of any complaints concerning the well yield or quality and how each problem was resolved. **(Section 4.3.1.3)**
14. Southern and FGT shall strictly follow the U.S. Fish and Wildlife Service's (FWS) Habitat Management Guidelines for the Wood Stork in the Southeast Region for any portion of their respective projects that are located near a wood stork rookery. Additionally, as recommended by the FWS, Southern and FGT shall delay or halt daily construction operations if foraging or roosting storks are encountered at a work site and work could begin once storks leave the area on their own. **(Section 4.7.1)**
15. Southern and FGT shall not begin construction for the respective projects until:
- a. the FERC staff receives survey comments from the FWS or state agencies regarding their respective proposed actions;
 - b. the FERC staff completes formal consultation with the FWS for the eastern indigo snake for the FGT Expansion Project; and
 - c. Southern and FGT have received written notification from the Director of OEP that construction or use of mitigation may begin. **(Section 4.7.4)**

Conditions Applicable to Southern Only

16. **Prior to construction**, Southern shall file with the Secretary for review and written approval by the Director of OEP access road information specifying the locations and dimensions of the road improvements relative to the existing road configuration; documentation that necessary wetland, cultural resource, and protected species surveys have been completed for the road improvements;

¹ The section number in parenthesis at the end of a recommended measure corresponds to the section number in which the measure and related resource impact analysis appears in the EIS.

and documentation that necessary permits and landowner approvals, have been obtained for the road improvements. **(Section 4.3.2)**

17. Southern shall consult with the U.S. Department of Army, Corps of Engineers (COE), the Florida Department of Environmental Protection (FLDEP), the Georgia Department of Natural Resources (GADNR), the National Oceanic Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries), and other applicable agencies and organizations to finalize its compensatory wetland mitigation plan. The plan shall include details regarding the amount, location, and types of mitigation proposed; specific performance standards to measure the success of the mitigation; and remedial measures, as necessary, to ensure that compensatory mitigation is successful. Southern shall file the compensatory wetland mitigation plan with the Secretary for the review and written approval by the Director of OEP **prior to construction.** **(Section 4.4.4)**
18. Southern shall not begin an open-cut crossing of the Ogeechee, Altamaha, Satilla, or St. Marys Rivers until it files an amended horizontal directional drill (HDD) Crossing Plan with the Secretary for review and written approval by the Director of OEP. The amended HDD Crossing Plan shall include site-specific drawings identifying all areas that would be disturbed by construction using an alternate crossing method. Southern shall provide its amended HDD Crossing Plan with the COE, FWS, NOAA Fisheries, National Park Service (NPS), GADNR, Florida Fish and Wildlife Commission (FLFWC), as applicable, and other agencies responsible for issuing permits to implement this plan. **(Section 4.3.3)** Any open-cut crossing plan for the Ogeechee, Altamaha, Satilla, or St. Marys Rivers shall include: **(Section 4.7.1)**
 - a. the *Manatee Protection Construction Guidelines* in Georgia and the *Standard Manatee Construction Conditions* in Florida as directed by the FWS (undated); and
 - b. the *Shortnose Sturgeon Protection Construction Guidelines*. Southern shall also consult with the appropriate agencies to determine the need for additional measures to avoid or minimize adverse effects on the shortnose sturgeon.
19. **Prior to construction in Bryan and Glynn Counties, Georgia,** Southern shall file with the Secretary, for the review and written approval by the Director of OEP, its consultation with the FWS regarding survey methodology and mitigation for the flatwoods salamander. **(Section 4.7.1)**
20. **Following surveys for pondberry,** Southern shall contact the FWS if pondberry is identified within the survey corridor to obtain guidance from the FWS regarding a course of action to be taken to avoid or minimize impact on this species during construction. **(Section 4.7.1)**

Prior to construction, Southern shall file the completed survey report with the Secretary, that contains the following information:

 - a. Name(s) and qualifications of the person(s) conducting the survey;
 - b. Method(s) used to conduct the survey;
 - c. Date(s) of the survey;
 - d. Area surveyed (include the mileposts surveyed); and
 - e. Proposed mitigation that would substantially minimize or avoid the potential impacts.
21. **Prior to construction,** Southern shall file with the Secretary for review and written approval by the Director of OEP, a site-specific mitigation plan that identifies the specific measures that Southern would implement to minimize tree clearing to the maximum extent practicable in the residential area located between MPs 99.1 and 99.3 of its proposed pipeline loop. **(Section 4.8.2.1)**

22. **Prior to construction**, Southern shall file with the Secretary for review and approval by the Director of OEP a visual screening plan for the proposed South Georgia Meter Station at MP 143.7, mainline valve (MLV) 6 at MP 57.4, MLV 10 at MP 99.9, and MLV 11 at MP 119.2. **(Section 4.8.7)**
23. **Prior to construction**, Southern shall file with the Secretary documentation of concurrence from the GADNR that its project is consistent with the Georgia Coastal Management Plan. **(Section 4.8.8)**
24. **Prior to construction**, Southern shall file with the Secretary documentation of concurrence from the FLDEP that its project is consistent with the Florida Coastal Management Program. **(Section 4.8.8)**
25. Southern shall defer construction of facilities and use of all staging, storage, or temporary work areas and new or to-be-improved access roads until:
 - a. Southern conducts surveys and any required evaluations for the denied access areas and any other areas that remain to be surveyed, files with the Secretary the remaining cultural resources survey reports; any required evaluation reports and treatment/avoidance plans; and the Georgia and Florida State Historic Preservation Officer's (SHPO) comments on the reports and plans;
 - b. The Advisory Council on Historic Preservation (ACHP) is afforded an opportunity to comment, if historic properties would be adversely affected; and
 - c. The Director of OEP reviews all cultural resources survey reports and plans, and notifies Southern in writing that treatment plans may be implemented or construction may proceed.

All material filed with the Commission containing location, character, and ownership information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: "CONTAINS PRIVILEGED INFORMATION - DO NOT RELEASE." **(Section 4.10.4)**

26. Southern shall conduct noise surveys to verify that the noise from the proposed new compressor stations operated at full load do not exceed a day night sound level (L_{dn}) of 55 decibels on the A-weighted scale (dBA) at any noise sensitive areas (NSAs), and file the results of the noise survey with the FERC **no later than 60 days** after placing the compressor stations in service. If the noise attributable to the operation of the compressor stations at full load exceeds a L_{dn} of 55 dBA at any nearby NSAs, Southern shall file a report on what changes are needed and shall install additional noise controls to meet that level **within 1 year of the in-service date**. Southern shall confirm compliance with the L_{dn} of 55 dBA requirement by filing a second noise survey with the FERC **no later than 60 days** after it installs the additional noise controls. **(Section 4.11.2.2)**

Conditions Applicable to FGT Only

27. FGT shall prepare a Plan for the Discovery and Management of Contaminated Soils and Groundwater. This plan shall comply with applicable state and federal regulations and shall include procedures for the identification and management of unknown contaminants if any are encountered. **Prior to construction**, the plan shall be filed with the Secretary for review and approval by the Director of OEP. **(Section 4.2.3)**

28. FGT shall continue to consult with the COE, the FLDEP, and other applicable agencies and organizations to finalize its compensatory wetland mitigation plan. The plan shall include details regarding the amount, location, and types of mitigation proposed; specific performance standards to measure the success of the mitigation; and remedial measures, as necessary, to ensure that compensatory mitigation is successful. FGT shall file the compensatory wetland mitigation plan with the Secretary for review and written approval by the Director of OEP **prior to construction.** (Section 4.4.4)
29. **Prior to construction,** FGT shall file with the Secretary for the review and approval by the Director of OEP its Nuisance Species Plan developed in consultation with the FLDEP. This plan shall include measures to prevent the spread of invasive weeds during construction and to control invasive weeds that may develop post construction. (Section 4.5.5)
30. **Prior to construction along Loop K,** FGT shall file with the Secretary permits issued by the state of Florida relating to time-of-year waterbody crossing restriction. (Section 4.6.2.4)
31. **Prior to constructing within 1,500 feet of an active bald eagle nest,** FGT shall implement the Bald Eagle Monitoring Guidelines (FWS, 2005) and file with the Secretary for review and approval by the Director of OEP the results of its consultation with the FWS regarding site-specific construction plans within the nest buffer for bald eagles. (Section 4.7.1)
32. **Prior to construction along Loop G,** FGT shall file with the Secretary for review and approval by the Director of OEP the results of its consultation with the FWS regarding survey methodology, results of new surveys (if necessary), and avoidance or minimization of impacts measures for the red-cockaded woodpecker. (Section 4.7.1)
33. **Prior to construction,** FGT shall file with the Secretary for review and approval by the Director of OEP its eastern indigo snake protection plan utilizing the *Standard Protection Measures for the Eastern Indigo Snake* developed by the North Florida Field Office of the FWS and the results of its consultation with the FWS regarding the eastern indigo snake. (Section 4.7.1)
34. **Prior to construction,** FGT shall file with the Secretary documentation of concurrence from the FLDEP that its project is consistent with the Florida Coastal Management Program. (Section 4.8.8)
35. FGT shall defer construction of facilities, and use of all staging, storage, or temporary work areas and new or to-be-improved access roads **until**
 - a. FGT files with the Secretary the Florida SHPO's comments on the survey report and the need for additional surveys;
 - b. FGT files any additional required survey reports and any required treatment plans, and the SHPO's comments on the reports and plans;
 - c. The ACHP is afforded an opportunity to comment, if historic properties would be adversely affected; and
 - d. The Director of OEP reviews all cultural resources survey reports and plans, and notifies FGT in writing that construction may proceed.

All material filed with the Commission containing location, character, and ownership information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: "CONTAINS PRIVILEGED INFORMATION - DO NOT RELEASE." (Section 4.10.4)

36. FGT shall conduct noise surveys to verify that the noise from Compressor Stations 24 and 26 operated at full load do not exceed an L_{dn} of 55 dBA at any NSAs, and file the results of the noise survey with the FERC **no later than 60 days** after placing the compressor stations in service. If the noise attributable to the operation of the compressor stations at full load exceeds an L_{dn} of 55 dBA at any nearby NSAs, FGT shall file a report on what changes are needed and shall install additional noise controls to meet that level **within 1 year of the in-service date**. FGT shall confirm compliance with the L_{dn} of 55 dBA requirement by filing a second noise survey with the FERC **no later than 60 days** after it installs the additional noise controls. **(Section 4.11.2.2)**