Attachment **I**

Mitigation Plan

Attachment I—Mitigation Plan

K.1 WETLANDS AND WATER BODIES DELINEATIONS METHODOLOGY

Multiple consultants conducted a wetland/water body delineation and wetland function assessment for the proposed North Florida Resiliency Connection (NFRC) Project environmental survey area (ESA). The ESA generally consisted of a 100-foot-wide survey corridor along the length of the approximately176-mile transmission line route and an approximately 100-foot-wide survey corridor centered over the potential access roads and additional areas identified for workspace. The wetland delineation was performed using a combination of desktop review of existing data and maps as well as a field survey to verify these data. The following provides a description of the methods employed and the evaluation results.

K.1.1 METHODOLOGY—MAP AND LITERATURE REVIEW

Prior to instigation of the field survey, available maps, data, and literature were gathered and reviewed to determine the approximate extent of wetlands and waters. Relevant data sources included local plant lists, soil survey data, state and federal regulations, county ordinances, and existing reports prepared previously for the project study area. The following sources were examined:

- U.S. Geological Survey (USGS) topographic maps (Figure 3)
- Aerial photography (Google Earth®, Bing®, ESRI® ArcMap)
- County soil surveys (Figure 6)
- National Wetland Inventory (NWI) maps
- Land use/vegetation community maps (Figure 7)
- U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Consultation System (IPaC) report
- 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual
- Regional Supplement to the USACE Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region[1]
- Suwannee River Water Management District (SRWMD) website
- Northwest Florida Water Management District (NFWMD) website
- Florida Natural Areas Inventory (FNAI)

K.1.2 WETLAND DELINEATION

After reviewing the NWI; soils; and Florida Land Use, Cover and Classification System (FLUCCS) maps, ECT conducted wetland delineations for the linear corridor and additional workspaces where survey access was granted. These field surveys were completed between

[1] U.S. Army Corps of Engineers (USACE). 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). Wetlands Regulatory Assistance Program. Environmental Laboratory ERDC/EL TR-10-20. November. https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046490.pdf.

October 15, 2018, and March 30, 2019, by teams of qualified wetland scientists from Ecology and Environment, Golder Associates, and Environmental Consulting & Technology, Inc. (ECT). Additional wetlands were delineated in April 2019 once additional potential access roads and workspace areas were identified. Potentially jurisdictional wetlands/waters were identified using the currently accepted methods for the state of Florida and United States (i.e., Florida Department of Environmental Protection regulations; Sections 62-340, Florida Administrative Code (Delineation of the Landward Extent of Wetlands and Surface Waters), including the Florida Wetlands Delineation Manual [1995] and the Routine Onsite Determination Methods as described in the USACE 1987 Wetlands Delineation manual, the 2010 Regional supplement to the USACE Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region [Version 2.0], and the most current vegetative index, respectively). Both state and federal methodologies involve identification of three wetland criteria: a predominance of hydrophytic vegetation, the presence of hydric soil indicators, and evidence of wetland hydrology.

Typically, each wetland/water body would be flagged and sequentially numbered. Due to access permissions and the fact that at the time of the survey the applicant did not have legal control of the properties, wetland flagging could not occur in all locations. However, each wetland/upland data point for each wetland and water body was recorded using Trimble ® Geo XH global positioning system (GPS) units. Each wetland/upland data point was simultaneously recorded by a professionally registered land surveyor using a centimeter-accurate Trimble® R10 GPS Unit. Wetlands and water bodies were photographed, and the required USACE upland/wetland data forms were completed. In addition, the functional quality of each wetland was assessed using the Uniform Mitigation Assessment Methodology (UMAM). Data collection for UMAM scoring purposes included wetland type, location in relation to other wetlands or surface waters, structure, extent, and functional status. Functional attributes, such as value of wildlife habitat, water environment, location in the landscape, and community structure, were evaluated and documented for each wetland.

K.1.2.1 No Survey Access Parcels

A small portion of the corridor ESA corridor was assessed using a desktop evaluation rather than field survey. In limited areas, the baseline ecological characterization was performed using a combination of desktop survey (a review of maps/existing permits and existing reports and literature) and a visual inspection from the roadside or adjacent property where access was granted. However, for these parcels where survey access was denied, there were no wetlands.

K.1.2.2 Survey Results

Using a combination of desktop data verified by field surveys, numerous wetlands and water bodies were delineated along the length of the proposed transmission line route and along the roads identified for access. Figures 5 and 7 identify the location of wetlands and water bodies within the project ESA. Attachment L contains the UMAM datasheets for these features. For the purposes of this report, each wetland or water body polygon (based on FLUCCS type) was given a unique identification number. A total of 450 wetland and 151 water body distinct polygons were delineated within the ESA. The footprint of the project will encompass a subset of these polygons.

K.1.2.3 Wetlands

Overall, wetlands encompass approximately 232.04 acres or approximately 12.8 percent of the project footprint and are distributed throughout the project extent. A variety of wetland types are found present, as summarized in Table 4. Most of the wetlands are mixed wetland hardwoods, gum swamps, and bay swamps.

Wetland quality varies significantly. Those wetlands in existing linear corridors (i.e., roadside, transmission line) and agricultural areas tend to be of lower quality with weedy and invasive species, impacted hydrology, and lower location and landscape support. UMAM scores for those wetlands generally range between 0.3 and 0.5. The higher quality wetlands are primarily those forested areas associated with the rivers and the creek systems such as St. Marks River, Caney Branch, and others. These systems have higher UMAM scores generally between 0.6 and 0.7.

K.1.2.4 Water Bodies

The three environmental consultant teams delineated 151 water body polygons within the ESA. Table 3 lists and describes those potentially affected by the project limits. The types of water bodies identified include man-made ditches, canals, cattle ponds, lakes, other types of manmade ponds/reservoirs, and natural creeks.

The project traverses rivers, creeks or streams in multiple locations, including the Suwannee, Aucilla, St. Mark's, and Apalachicola rivers, as well as several named and unnamed creeks. A total of 151 water body polygons were delineated within the ESA. Table 3 lists and describes those potentially affected by the project limits. The types of water bodies identified include man-made ditches, lakes, other types of man-made ponds/reservoirs, and natural creeks. Prevalent wetland types include shrub wetlands, hydric pine, and mixed hardwood/conifer forested wetlands. Freshwater marshes are associated with roadside and agricultural swales and conveyances, wet pastures, and transmission line rights-of-way, as well as natural marshes. Wet prairies have developed in wetter agricultural areas. Forested wetlands are associated with creek systems, hydric hammocks, cypress domes, bay swamps, and wet pinelands. Tables 5 provides details on individual wetland locations along the alignment such as wetland type, size, and quality. Table 7 provides a summary of wetland impacts, and Table 8 provides an itemization of wetland impacts. Table 9 presents the calculations for the functional loss based on impact type.

Gulf Power Company (GPC) will employ two types of mitigation to compensate for unavoidable wetland and water body impacts – onsite restoration and the purchase of mitigation credits. Table 9 presents the functional loss of each wetland based on the UMAM.

K.2 IMPACTS AND MITIGATION

K.2.1 NONFORESTED WETLANDS AND SURFACE WATERS

K.2.1.1 Temporary Impacts

Onsite restoration will be used to mitigate for the temporary impacts to approximately 41.21 acres of nonforested wetlands and 13.62 acres of water bodies resulting from construction related activities both in the temporary construction area and permanent project footprint. These areas, once restored, are expected to return to their preconstruction functional condition within

one to two growing seasons. No UMAM functional loss has been assigned to these wetlands or water bodies.

K.2.1.2 Permanent Impacts

Mitigation for the permanent fill of 0.04 acres of nonforested wetlands associated with installation of transmission pole structures will be offset by purchasing credits from an approved mitigation bank. Functional loss will be calculated as follows:

(Pre-project UMAM score – with project UMAM score) × acreage of permanent impact

GPC calculates 0.04 UMAM units would be needed to offset the proposed functional loss associated with pole installation (refer to typical drawing in Attachment C).

K.2.2 FORESTED WETLANDS

Impacts to forested wetlands will be mitigated by using a combination of onsite restoration and purchase of mitigation bank credits as noted in the following paragraphs.

K.2.2.1 Temporary Impacts

Onsite restoration will be used to mitigate the temporary impacts to approximately 11.95 acres of forested wetlands, which are outside the permanent variable-width maintenance corridor. These areas will be allowed to reestablish to the preconstruction forested system type following construction. Mitigation credits may be purchased to offset functional loss while the forested wetlands are being restored.

The functional loss associated with temporary forested wetland impacts was calculated using UMAM as follows:

(Before project UMAM score – with project UMAM score) × acres of temporary construction impact = functional loss

([With restoration UMAM score – with project UMAM score] ÷ Time Lag) = functional gain

Functional loss – functional gain = number of mitigation credits needed

The "with project" UMAM score is the projected functions of the wetland after the project has been installed, ground surface is restored to preconstruction contours, and vegetation has started to establish (i.e., roughly time zero up to 1 year). The community structure UMAM score was lowered to 3 for all forested wetlands with temporary impacts to account for the loss of trees and structure. The scores for location and landscape support or water environment were not reduced, as these functions should be quickly restored following construction. The UMAM scores "after restoration" are expected to return to preconstruction condition following the appropriate time lag.

The time lag assigned to each wetland is based on the preconstruction community structure value as follows:

Preconstruction Community Structure Score	Time Lag Factor
1	1.03
2	1.10
3	1.14
4	1.25
5	1.68
6	1.92

As indicated in Table 9, GPC estimates a total loss of 0.62 functional UMAM units from temporary construction activities in forested wetlands.

K.2.2.2 Permanent Impacts (Fill)

Permanent impacts to forested wetlands will be minimal; however, 0.23 acres of forested wetlands will be displaced where transmission line structures are installed (typical drawing in Attachment C). Mitigation credits will be purchased from an approved wetland mitigation bank to offset functional loss associated with the permanent fill in these areas. Table 9 indicates the acreage of permanent impacts to forested wetlands.

K.2.2.3 Permanent Impacts (Conversion)

Minimal permanent wetland loss to forested wetlands will occur as a result of this project. However, approximately 178.26 acres of forested wetlands inside the permanent maintenance corridor will be converted to herbaceous wetlands.

To compensate for the functional loss resulting from the conversion of these wetlands during the time it takes them to reestablish, GPC will purchase forested wetland mitigation credits from an approved wetland mitigation bank. The functional loss associated with forested conversion wetland impacts was calculated as follows:

(Pre-project UMAM Score – With project UMAM Score) × acreage of permanent impact

The community structure UMAM score was lowered to 3 for all forested wetlands with conversion impacts to account for the loss of trees and structure they provide. No long-term impacts to location and landscape support or water environment are assumed.

As indicated in Table 9, GPC estimates a loss of 22.76 functional UMAM units for the conversion of approximately 178.26 acres of forested wetlands to nonforested wetland within the project's permanent maintenance easement.

Because the service area of no one mitigation bank covers the entire project footprint, GPC will work with the regulatory agencies to identify the most suitable mitigation bank available to purchase credits of the appropriate type and from the most appropriate watershed basin to offset impacts associated with the construction of this project. Figure 8 depicts the project in relation to

the service area for each of the currently accredited mitigation banks in the area. Gaps in the mitigation bank coverage are evident from the shaded polygons. Table 10 shows the current status of those mitigation banks, including availability of credits and types of credit available. GPC will work with agencies to secure the most appropriate mitigations credits available.