REVISED MITIGATION PLAN FOR THE GARDEN AND LEGEND SUBSTATIONS PROJECT MONTGOMERY COUNTY, TEXAS

Prepared for

Entergy Texas, Inc.
350 Pine Street
Beaumont, Texas 77701

Prepared by

SWCA Environmental Consultants
10245 W. Little York Road, Suite 600
Houston, Texas 77040
www.swca.com

SWCA Project No. 041872

December 2018

CONTENTS

APPENDICES

1. PROJECT INFORMATION

1.1. Project Information

Project Name: Legend Substation

Applicant: Entergy Texas, Inc.

Permit Number: SWG-2018-00077

Project Location:

Legend Substation is proposed to be constructed approximately 0.59 mile from the intersection of State Highway 73 and State Highway 82 west of Port Arthur, Jefferson County, Texas.

Mitigation Site Location: Pineywoods Mitigation Bank

Watershed: HUC 12040201

1.2. Project Description

Entergy Texas, Inc. (ETI) proposes to develop the Legend Substation in eastern Jefferson County, Texas to improve transmission reliability and accommodate peak uses in the region. The proposed project will measure approximately 1.8 acres with additional support structures (e.g., power poles, driveways, easements) to serve these substation (proposed project; Appendix A). The substation will connect to existing infrastructure and will provide relief for peak load and demand within the existing power grid while allowing for future domestic and industrial development west of project locations. Legend Substation is proposed to be constructed adjacent to an existing road but will require construction of driveways to be compliant with federal regulations.

On February 7 and 15, 2017, SWCA Environmental Consultants (SWCA) conducted a wetland delineation within the project area. SWCA identified one wetland vegetation community type within the project area consisting of palustrine emergent (PEM) wetlands totaling approximately 19.141 acres. Dominant vegetation in PEM wetlands include bushy bluestem (*Andropogon glomeratus*), lamp rush (*Juncus effusus*), and salt-meadow cord grass (*Spartina patens*) with scattered shrub species including eastern baccharis (*Baccharis halimifolia*) and Carolina desert-thorn (*Lycium carolinianum*), where present.

2. AVOIDANCE AND MINIMIZATION

Due to the location of existing infrastructure, the needs of the project, and the lack of available alternative sites, ETI is unable to locate the project outside of wetlands. Therefore, the design is focused on minimizing the required footprint and reducing the impact to the functional capacities of wetlands as much as practicable. Based on the design of the project, approximately 10.473 acres (3.521 acres of permanent fill and 6.952 acres of potential temporary impacts) of the 19.141 acres of wetlands delineated are proposed to be affected by the proposed project.

3. DETERMINATION OF CREDITS/IMPACTS

Despite the avoidance and minimization steps in the design, the infrastructure necessary to fulfill the

purpose and need of the proposed project will permanently impact wetlands. Therefore, ETI proposes compensatory mitigation for permanent impacts (Appendix B).

Based on the wetland delineation data, SWCA conducted an interim hydrogeomorphic (iHGM) functional assessment on one PEM wetlands (W02) within the proposed project area. The iHGM for riverine herbaceous/shrub wetlands was determined to be the appropriate model for project impacts. The iHGM uses multiple variables to evaluate three ecological functional capacity indices (FCI). In turn, these are used to calculate credits and debits for each Wetland Assessment Area (WAA) associated with a project. The FCIs quantify TSSW (Temporary Storage and Detention of Storage Water), MPAC (Maintain Plant and Animal Community), and RSEC (Removal and Sequestration of Elements and Compounds) values for each to determine the respective physical, biological, and chemical functions. FCI scores are multiplied by the acreage of the WAA to produce functional capacity units (FCU) which determine the wetland mitigation required for the impacts.

The functional assessment of proposed permanent impacts to PEM wetlands were calculated to result in the expected loss of 1.887, 1.761, and 1.831 TSSW, MPAC, and RSEC FCUs, respectively. The specific measured values for the assessed WAAs are provided in Appendix B.

4. MITIGATION

There are currently no mitigation banks capable of providing PEM wetland credits that have a service area covering the area of impacts associated with the proposed project. In fact, there are currently no banks capable of providing wetland credits for the entirety of the Sabine Lake watershed (HUC 12040201). However, Pineywoods Mitigation Bank (PMB) does have a secondary service area that transects a portion of the Sabine Lake watershed. Therefore, ETI proposes to mitigate for impacts to PEM wetlands associated with the project by purchasing mitigation credits from PMB using a 2:1 mitigation ratio.

Following the proposed mitigation strategy, ETI proposes to purchase a total of 3.8 TSSW, 3.6 MPAC, and 3.7 RSEC credits will be purchased from PMB to offset impacts to PEM wetlands associated with the Legend Substation site (Table 1).

Table 1. Summary of wetland impacts and mitigation credits required for the proposed construction of the Legend Substation.

Resource Type	Mitigation Source	Impact FCU			Ratio	Mitigation FCU		
		TSSW	MPAC	RSEC		TSSW	MPAC	RSEC
PEM	PMB	1.887	1.761	1.831	2	3.775	3.521	3.662