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Acronyms and Abbreviations

AEP	American Electric Power
APLIC	Avian Power Line Interaction Committee
BEG	Bureau of Economic Geology
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practice
CCN	Certificate of Convenience and Necessity
CFR	Code of Federal Regulations
CWA	Clean Water Act
EA	Environmental Assessment
EMST	Ecological Mapping Systems of Texas
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ETT	Electric Texas Transmission
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FEMA	Federal Emergency Management Agency
FIRM	Federal Insurance Rate Map
FVZ	Foreground Visual Zone
GLO	General Land Office
HPA	High Probability Area
Hwy	Highway
IPaC	Information, Planning and Conservation
ISD	Independent School District
kV	Kilovolt
MBTA	Migratory Bird Treaty Act
ME	Miscellaneous Easement
Msl	Mean Sea Level
MW	Megawatt
NDD	Natural Diversity Database
NEPA	National Environmental Policy Act
NERC	American Electric Reliability Corporation
NESC	National Electric Safety Code
NHD	National Hydrography Dataset
NOI	Notice of Intent
NOT	Notice of Termination
NRCS	Natural Resources Conservation Service

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NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWP	Nationwide Permit
OTHM	Official Texas Historical Markers
PUC	Public Utility Commission of Texas
PURA	Public Utility Regulatory Act
ROW	Right-of-way
RRC	Railroad Commission of Texas
RTHL	Recorded Texas Historical Landmarks
SAL	State Antiquities Landmark
SCS	Soil Conservation Service
STDC	South Texas Development Council
SWPPP	Storm Water Pollution Prevention Plan
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
THC	Texas Historical Commission
TORP	Texas Outdoor Recreation Plan
TPDES	Texas Pollution Discharge Elimination Systems
TPWD	Texas Parks and Wildlife Department
TWDB	Texas Water Development Board
TxDOT	Texas Department of Transportation
US	United States
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USIBWC	U.S. International Boundary Water Commission

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1. DESCRIPTION OF THE PROPOSED PROJECT

1.1. Scope of Project

Electric Transmission Texas, LLC (ETT) is proposing to design and construct the proposed Reloj del Sol 345-kilovolt (kV) transmission line in Zapata County, Texas (Project), to interconnect a new wind generation facility. The proposed transmission line will be constructed as a single-circuit 345-kV transmission line using tangent monopole structures. The proposed transmission line to be constructed begins at a tap point to one of the 345-kV circuits on the existing ETT Lobo to North Edinburg 345-kV transmission line near Structure 251 A, which is located at the north end of Los Potreritos Road approximately 1.76 mile northeast of this road's intersection with U.S. Hwy 83. The proposed transmission line would end at a deadend structure just outside the transmission customer's Reloj del Sol Wind Farm substation located approximately 3,700 feet northwest of Farm-to-Market (FM) Road 3169 approximately 4 miles northeast of where FM 3169 crosses under the ETT Lobo to North Edinburg 345-kV northeast of San Ygnacio. The proposed project will be approximately 5.4 miles long routed along a single route that has been worked out with the landowner's crossed by the proposed transmission line (Consensus Route) and will require a 150-foot right-of-way (ROW). Figure 1-1 shows the Project location; the Study Area is described in Section 2.3.1. and shown on Figure 2-1.

ETT retained Quanta Environmental Solutions (Quanta Environmental) to prepare an Environmental Assessment (EA) to support its application for a Certificate of Convenience and Necessity (CCN) to be submitted to the Public Utility Commission of Texas (PUC) for the Project. This document has been prepared to provide information and address requirements of Sections 37.056 (c)(4)(A-D) of the Texas Public Utilities Code, the PUC's CCN application form, and PUC Texas Administrative Code (TAC) § 25.101, and the PUC's policy of "prudent avoidance." This document is intended to provide information and address issues concerning the natural, human, and cultural environment within the Study Area. This document may also be used in support of any additional Federal, State, or local permitting activities that may be required for ETT's proposed Project.

1.2. Purpose and Need

A new transmission service customer, Reloj del Sol Wind Farm, LLC, has requested ETT to interconnect its proposed 209-megawatt (MW) wind generating facility and an Interconnect Agreement has been executed. This proposed 345-kV transmission Project is designed to directly interconnect the new wind development into an ETT existing transmission line. 16 TAC 25.191(d)(3) requires a Transmission Service Provider to interconnect a generator once the other conditions are completed for transmission service as defined in 16 TAC 25.191(c).

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Figure 1-1 Project Location

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1.3. Description of Proposed Design and Construction

The following information presents the proposed design and construction of facilities for the single-circuit 345-kV transmission line.

1.3.1. Transmission Line Design

ETT is proposing to use direct embedded concrete pole tangents and self-supporting tubular steel monopole structures as shown in Figure 1-2. Design criteria will be per American Electric Power (AEP) standard design specifications and will comply with applicable statutes, the appropriate edition of the National Electrical Safety Code (NESC), and applicable engineering design practice. Geotechnical considerations will include soil borings and in situ soil testing to provide parameters of foundation design and embedment depth of the structures. Structures will be supported by foundations that are appropriate and compatible to the structure design. Structures are anticipated to be direct embedded and base-plated monopoles on drilled shaft foundations. The structure height above ground will range from 100 to 140 feet. These heights will vary depending upon terrain, span requirements and engineering constraints. Span distance between the structures will vary from 300 feet to 1,200 (typically 800 feet), with some exceptions due to individual site conditions or engineering requirements.

1.3.2. Right-of-Way Requirements

The proposed ROW width for this Project will be approximately 150 feet. The proposed transmission line will be located along the centerline of the ROW. Additional temporary workspace may be required at line angles and deadend structures.

1.4. Construction Considerations

Projects of this type require surveying and ROW clearing, foundation installation, structure assembly and erection, conductor and shield wire installation and cleanup when the Project is completed. Construction operations will be conducted with attention to the preservation of the natural habitat.

1.4.1. Clearing and Right-of-Way Preparation

After regulatory approval and design of the transmission line is finalized, ROW will be acquired and then cleared according to ETT's clearing specifications. Clearing will be accomplished to comply with North American Electric Reliability Corporation (NERC) reliability standards. Any required clearing of the ROW will be performed by a contractor under the direction of ETT. Available methods of disposal are mulching, brush piling, and salvaging. The option often selected by landowners requires that cleared brush or trees be stacked and left for use as wildlife habitat adjacent to, but off, the ROW. Trees and brush in the ROW are initially cleared to permit safe construction of the line.

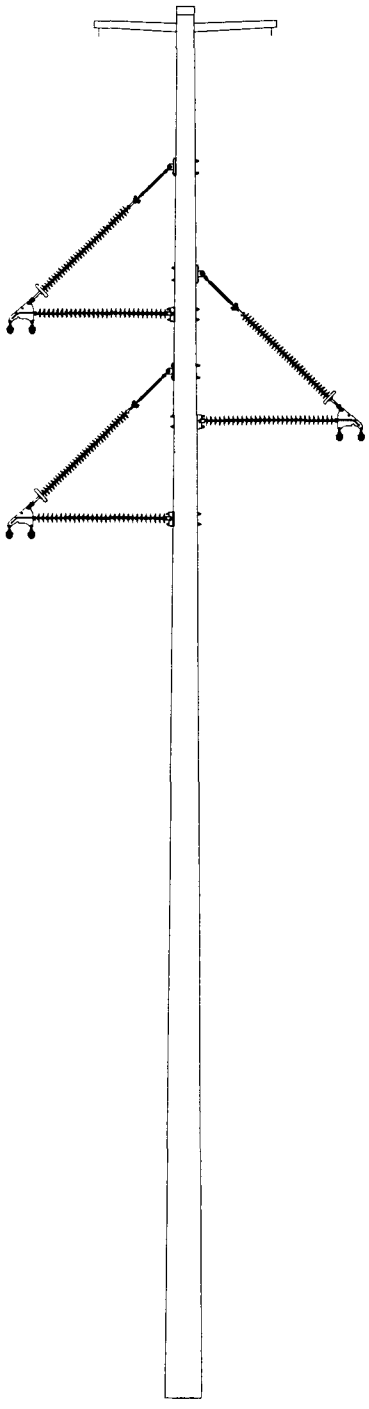

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FIGURE 1-2
TYPICAL SINGLE CIRCUIT
TANGENT MONOPOLE STRUCTURE
CENIZO (251HJK) - RELOJ DEL SOL WIND FARM
345KV TRANSMISSION LINE PROJECT
ZAPATA COUNTY, TEXAS

H:\803191T\FIGURE 1-1 SINGLE CIRCUIT.dwg saved by: johnathan diggs at 12/23/2019 04:38:31PM

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The ROW will be utilized for access during construction operations, with ingress and egress through private property procured as necessary to access the ROW. In these cases, existing private roads will be used where possible. Public roads will also be used for access to the ROW where feasible.

Clearing plans, methods, and practices are extremely important for success in any program designed to minimize the adverse effects of electric transmission lines on the natural environment. The following measures, appropriately implemented to this Project, will help meet this goal:

1. Clearing will be performed in a manner that will maximize the preservation of the natural habitat and the conservation of natural resources and minimize impacts to waters in the vicinity of the Project.
2. The ROW clearing method will consider soil stability, the protection of natural vegetation, sensitive habitats, the protection of adjacent resources such as natural habitat for plants and wildlife, and the prevention of silt deposition in waters.
3. Contractors will use efficient and effective methods to remove vegetation within the ROW.
4. If deemed appropriate, U.S. Environmental Protection Agency (EPA) - approved herbicides will be applied and handled in accordance with the product manufacturers' published recommendations and specifications and as directed by qualified staff.

1.4.2.Structure Assembly and Erection

Survey crews will stake structure locations. Depending on soil type, crews will place foundations utilizing augured circular holes, rebar cages, and anchor bolts. Crews will transport and assemble the structures and related hardware. The usual procedure is to assemble each structure on its side, lifting the structure and setting it on its base. However, taller structures may need to have sections assembled in the air. Sections are either jacked together or connected using bolts, which will be torqued to the manufacturer's recommendation. Once anchor bolt foundations have cured, crews will set the structures and install the conductor and shield wire suspension assemblies. Although vehicular traffic is a large part of this Project, construction crews will take care to minimize damage to the ROW by reducing the number of pathways traveled and using timber mats where applicable.

1.4.3.Conductor and Shield Wire Installation

The conductors and shield wires will be installed via a tensioning system. A pilot (pulling) line is first threaded through the stringing blocks or travelers for each conductor and shield wire. Conductor and shield wires are then pulled by the pilot line and held tight by a tensioner to keep the wires from contacting the ground and other objects that could be damaging to the wire. In addition, guard structures (temporary wood-pole structures) will be installed where the transmission line crosses overhead electric

power lines, overhead telephone lines, roadways, or other areas requiring an additional margin of safety during wire installation. When the wire is tensioned to the required sag, the wire is taken out of the blocks and placed in the suspension and deadend clamps for permanent attachment.

1.4.4.Construction Operations

Construction operations will be conducted with attention to the preservation of the natural habitat and the conservation of natural resources. The following criteria will be used to attain these goals.

1. Disturbance of construction areas and laydown yards will be minimized. These areas will be graded in a manner that will minimize erosion and conform to the natural topography.
2. Soil excavated during construction and not used for other purposes will be evenly backfilled onto a cleared area. Backfilled soil will be sloped gradually to conform with the terrain and adjacent land. No waters of the U.S. will be backfilled with excavated soils.
3. Erosion control devices will be constructed where necessary to reduce soil erosion in the ROW.
4. If access roads are found to be necessary, they will not be constructed on unstable slopes. Where feasible, service and access roads will be constructed jointly.
5. Clearing and construction activities near streams will be performed in a manner that will minimize damage to the natural condition of the area. Stream banks will be restored as necessary to their pre-construction condition and stabilized to minimize erosion.
6. Concerted and diligent efforts will be made to prevent accidental petroleum spills and other types of pollution, particularly when conducting work near streams and sensitive ecosystems.
7. Precautions will be taken to prevent the possibility of accidental brush fires.
8. Tension stringing of conductors will be employed, which may reduce the amount of vegetation clearing necessary.
9. Precautions will be taken to protect natural features and cultural resources along the ROW, if any are found.
10. If federally protected species or habitat is present, guidance from the U.S. Fish and Wildlife Service (USFWS) will be obtained prior to clearing or construction activities.
11. Soil disturbance during construction will be kept to a minimum, and restorative measures will be taken within the regulations set forth in the Texas Pollution Discharge Elimination Systems (TPDES) General Construction Stormwater Permit.

1.4.5.Cleanup

The cleanup operation involves the restoration of disturbed areas to grade, the removal of construction debris, and the restoration or compensation of any items damaged by the construction of the Project. The following criteria generally apply to the cleanup of construction debris and the restoration of the area's natural setting.

1. If site factors make it unusually difficult to establish a protective vegetative cover, other restorative procedures will be used, such as the use of gravel or rocks.
2. Sears, cuts, fills or other aesthetically degraded areas will be allowed to seed naturally or may be reseeded with native species to reduce erosion, restore a natural appearance, and to provide food and cover for wildlife. If the landowner desires to reseed, then steps will be taken to work with them.
3. If temporary access roads are removed after construction, the original slopes will be restored.
4. Construction equipment and supplies will be dismantled and removed from the ROW when construction is complete.
5. Construction debris will be removed prior to the completion of the Project.
6. Replacement of soil adjacent to water crossings for access roads will be at slopes less than the normal angle of repose for the soil type involved and will be stabilized/revegetated to avoid erosion.

1.5. Maintenance Considerations

Maintenance of the facilities will include periodic inspections of the transmission line and repair of damaged structures due to equipment failures, accidents, or natural occurrences, such as wind or lightning. In areas where treatment of vegetation within the ROW is required, mowing, pruning, or application of EPA-approved herbicides will be conducted as required to ensure proper clearance between the conductors and nearby vegetation. While maintenance patrols will vary, aerial, vehicle, and foot patrols will be performed periodically. In cropland areas and properly managed grazing lands and lawn areas, little or no vegetation control will be required, due to existing land-use practices. The major maintenance item will be the trimming of trees or brush that pose a potential danger to the conductors or structures to provide a safe and reliable transmission line.

AEP's maintenance of ETT's transmission ROW occurs through the implementation of a comprehensive, systematic, integrated vegetative management program designed to ensure that the vegetation along each transmission line is managed at the proper time and in the most cost effective and environmentally sound manner. Vegetation is managed on a prescriptive basis. Ongoing evaluation of the system through ground

and aerial inspections provides the basic information used by AEP to develop an annual plan. Circuit criticality, historical data, line voltage, location, vegetative inventory information, and land use are among the factors considered in developing the annual vegetation management plan. The plans are modified as required by vegetation patrols and changing conditions.

1.6. Agency Actions

Numerous Federal, State, and local regulatory agencies and organizations have promulgated rules and regulations regarding the routing and potential impacts associated with the proposed transmission line Project. This section lists the major regulatory agencies that are involved in project planning and permitting of transmission lines in Texas, and describes the permits or approvals required. Quanta Environmental solicited comments from various regulatory agencies and officials during the development of this document. A summary of agency responses is provided in Section 5.1 (Correspondence with Agencies and Officials) and copies of the responses received are included in Appendix A (Agency Correspondence). Construction documents and specifications will indicate any special construction measures needed to comply with the regulatory requirements listed below.

1.6.1.Public Utility Commission of Texas

The proposed transmission line Project will require ETT to file an application for a CCN with the PUC. This EA report has been prepared by Quanta Environmental in support of ETT's application for the CCN on this Project. This document is intended to provide information on certain environmental and land use factors contained in Public Utility Regulatory Act (PURA) § 37.056(c)(4), and PUC's Substantive Rule 16 TAC § 25.101(b)(3)(B), as well as to address relevant questions in the PUC's CCN application. This report may also be used in support of any Federal, State or local permitting requirements. ETT will obtain PUC approval of its CCN application prior to beginning construction of the Project.

1.6.2.Federal Aviation Administration

According to the Federal Aviation Administration (FAA) regulations (FAR), Part 77, the construction of a transmission line requires FAA notification if structure heights exceed 200 feet or the height of an imaginary surface extending outward and upward at one of the following slopes (FAA, 2010).

- A 100:1 slope for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of a public or a military airport having at least one runway longer than 3,200 feet
- A 50:1 slope for a horizontal distance of 10,000 feet from the nearest runway of a public or military airport where no runway is longer than 3,200 feet in length
- A 25:1 slope for a horizontal distance of 5,000 feet for heliports

Based on these guidelines, the need for FAA notification evaluated on the alignment of the approved route, structure locations, and structure designs will be determined. If necessary, a Notice of Proposed Construction or Alteration (Form 7460-1) will be filed with the FAA at least 30 days in advance of construction. The result of this notification and the subsequent coordination with the FAA could include changes in the design or potential requirements to mark or illuminate portions of the line.

1.6.3.U.S. Army Corps of Engineers

Under Section 404 of the Clean Water Act (CWA), activities in waters of the U.S., including wetlands, can be regulated by the U.S. Army Corps of Engineers (USACE), in conjunction with the EPA. Certain construction activities that potentially impact waters of the U.S. may be authorized by one of the USACE's Nationwide Permits (NWPs). Permits that may apply to placement of support structures and associated activities are NWP 25 (Structural Discharges) and NWP 12 (Utility Line Activities). NWP 25 generally authorizes the discharge of concrete, sand, rock, etc., into tightly sealed forms or cells where the material is used as a structural member for standard pile -supported structures (linear projects, not buildings or other structures).

NWP 12 generally authorizes discharges associated with the construction of utility lines and substations within waters of the U.S. and additional activities affecting waters of the U.S., such as those associated with the construction and maintenance of utility line substations; foundations for overhead utility line towers, poles, and anchors; and access roads for the construction and maintenance of utility lines. Construction of this transmission line Project will likely meet the criteria of NWP 12. However, if the impacts of the Project exceed the criteria established under General Condition 13 or other regional conditions listed under the NWP 12, then a Regional General Permit may be required. If necessary, coordination with the USACE prior to clearing and construction will be conducted to ensure compliance with the appropriate regulations associated with construction-related impacts to waterbodies and wetland features.

Under Section 10 of the Rivers and Harbors Act of 1899, 33 USC § 403, the USACE is directed by Congress to regulate all work and structures in, or affecting the course, condition, or capacity of navigable waters of the U.S., including tidal waters. No navigable waters occur within the Study Area that would require permitting under this Act.

1.6.4.U.S. Fish and Wildlife Service

The USFWS enforces Federal wildlife laws and provides comments on proposed projects under the jurisdiction of the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), and Bald and Golden Eagle Protection Act (BGEPA). Additionally, USFWS oversight includes review of projects with a Federal nexus under the National Environmental Policy Act (NEPA).

Upon PUC approval of the proposed Project, a survey may be necessary to identify any potential suitable habitat for federally protected species. If suitable habitat is noted, then informal consultation with the USFWS may be conducted to determine if permitting or other requirements associated with possible impacts to protected species under the ESA, MBTA, or BGEPA is necessary.

1.6.5.Federal Emergency Management Agency

Zapata County does participate in the Federal Emergency Management Agency's program. Floodplain information for the Study Area was available. The detail provided would allow for the placement of structures to minimize potential impacts to the floodplain.

1.6.6.Texas Parks and Wildlife Department

The Texas Parks and Wildlife Department (TPWD) is the State agency with the primary responsibility of protecting the State's fish and wildlife resources in accordance with Texas Parks and Wildlife Code Section 12.0011(b). Comments were solicited from the TPWD during the Project scoping phase and a copy of this EA will be provided to them once the CCN application is filed with the PUC. Once the PUC approves a route, additional coordination with the TPWD may be necessary to determine the need for additional surveys and to avoid or minimize potential adverse impacts to sensitive habitats, threatened or endangered species, and other fish and wildlife resources.

1.6.7.Texas Commission on Environmental Quality

The Project may require a TPDES General Construction Stormwater Permit as implemented by the Texas Commission on Environmental Quality (TCEQ) under the provisions of Section 402 of the CWA and Chapter 26 of the Texas Water Code. The TCEQ has developed a three-tier approach for implementing this permit that is dependent on the acreage of the disturbance. Permits are not required for land disturbances of less than 1 acre (Tier 1). Soil disturbances of more than 1 acre, but less than 5 acres, would require implementation of a Storm Water Pollution Prevention Plan (SWPPP) (Tier II). If more than 5 acres of land are disturbed, the requirements for Tier II are necessary and the submittal of a Notice of Intent (NOI) and Notice of Termination (NOT) to the TCEQ are also required (Tier III). Once a route is approved by the PUC, the amount of ground disturbance and the appropriate tier and conditions of the General Construction Permit will be determined.

1.6.8.Texas Department of Transportation

Permits and approvals will be obtained from the Texas Department of Transportation (TxDOT) for any crossing of, or access from, a State-maintained roadway. Best management practices (BMPs) will be used to minimize erosion and sedimentation resulting from the construction within TxDOT easements. Revegetation within TxDOT easements will occur as required under the "Revegetation Special Provisions" and contained in TxDOT Form 1023 (Rev 9-93).

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1.6.9. Texas Historical Commission

Cultural resources are protected by Federal and State laws if they have some level of significance under the criteria of the National Register of Historic Places (NRHP) (36 Code of Federal Regulations [CFR] Part 60) or under State guidance TAC, Title 13, Part 2, Chapter 26.7-8). Quanta Environmental contacted the Texas Historical Commission (THC) to determine if the agency recommends that the final route be surveyed by a professional archaeologist prior to initiating any ground disturbance. The results of that coordination are pending.

1.6.10. Texas General Land Office

The Texas General Land Office (GLO) requires a Miscellaneous Easement (ME) for any ROW crossing a State-owned riverbed, navigable stream, or tidally influenced water. It is anticipated that no GLO easement is needed for this project. However, correspondence from the GLO will confirm this.

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2. ROUTE EVALUATION METHODOLOGY

2.1. Objective of Study

The objective of this study was to evaluate the potential environmental and land use impacts for ETT's proposed 345-kV transmission line Project that complies with PURA § 37.056(c)(4)(A)-(D), 16 TAC § 22.52(a)(4), and 16 TAC § 25.101(b)(3)(B), including the PUC's policy of prudent avoidance. Quanta Environmental utilized a comprehensive and well-established evaluation methodology to assess potential impacts of the proposed transmission line route. Quanta Environmental utilizes a multiphase approach for completing such a Project; define the Study Area; obtain environmental information; map environmental and land use constraints; conduct environmental, engineering and cost analyses; and design and construct the transmission facility. The following sections provide a description of the process used in the development and evaluation of the proposed Consensus Route. The Consensus Route is shown on Figure 2-2.

2.2. Data Collection

Data used by Quanta Environmental in the evaluation of the Project was drawn from a variety of sources, including published literature (documents, reports, maps, aerial photography, etc.), information from local, State and Federal agencies, and site-specific studies and investigations performed by others. Recent aerial imagery (March 2018), Google Maps, U.S. Geological Survey (USGS) topographic maps (1:24,000), USFWS National Wetlands Inventory (NWI) maps, USFWS's Information, Planning, and Conservation (IPaC) system), TPWD's Natural Diversity Database (NDD), TPWD's Ecological Mapping Systems of Texas (EMST), and ground reconnaissance surveys were used throughout the evaluation of the Project. The data collection effort, although concentrated in the early stages of the Project, was an ongoing process.

2.3. Evaluation of the Route

2.3.1. Study Area Delineation

The first step in the assessment of the Project was to delineate a Study Area. The Study Area needed to encompass the endpoints of the proposed Project and include an area large enough to adequately evaluate the proposed transmission line Project in support of ETT's CCN application. The purpose of delineating a Study Area for the Project was to establish boundaries and limits in which to identify environmental and land use constraints during the information gathering process to properly identify and map various items included within the PUC's CCN application. The delineated Study Area encompasses approximately 18 square miles in Zapata County measuring approximately 3 miles from north to south and approximately 6 miles from west to east (Figure 2-1).

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Figure 2-1 Study Area Location

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Figure 2-2 Environmental and Land Use Constraints within the Study Area

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2.3.2.Constraints Mapping

To quantify potential impacts to sensitive environmental and land use features, a constraints mapping process was used in evaluating the Project. The geographic locations of environmentally sensitive and other restrictive areas within the Study Area were identified and considered during the evaluation process. These constraints were mapped onto an aerial base map created using Google Earth aerial imagery. Figure 2-2 shows the environmental and land use constraints within the Study Area.

2.3.3. Evaluation Factors

The evaluation of the Project involved studying a variety of environmental factors. The Project was examined in the field in December 2019. The field investigation of the Study Area and the Consensus Route was conducted from publicly accessible areas and private roads with the consent of the landowner. In evaluating the Consensus Route, 38 environmental criteria were considered. These criteria are presented in Table 2-1.

TABLE 2-1: ENVIRONMENTAL CRITERION

	Environmental Criterion
Land Use	
1	Length of Route
2	Number of habitable structures[A] within 500 feet of centerline
3	Length of ROW utilizing existing transmission line ROW
4	Length of ROW parallel to existing transmission line ROW
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc.)[B]
6	Length of ROW parallel to property lines (not following existing ROW)[C]
7	Length of ROW across parks/recreational areas[D]
8	Number of additional parks/recreational areas[D] within 1,000 feet of ROW centerline
9	Length of ROW across cropland
10	Length of ROW across pastureland/rangeland
11	Length of ROW across cropland or pastureland with mobile irrigation systems
12	Number of pipeline crossings
13	Number of transmission line crossings
14	Number of U.S. and State highway crossings
15	Number of FM/RM road crossings
16	Number of FAA-registered airfields within 20,000 feet of ROW centerline (with runway >3,200 feet)
17	Number of FAA-registered airfields within 10,000 feet of ROW centerline (with runway <3,200 feet)
18	Number of private airstrips within 10,000 feet of ROW centerline

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Environmental Criterion

19 Number of heliports within 5,000 feet of ROW centerline

20 Number of commercial AM radio transmitters within 10,000 feet of ROW centerline

21 Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline

Aesthetics

22 Estimated length of ROW within foreground visual zone[L] of U.S. and State highways

23 Estimated length of ROW within foreground visual zone[L] of FM/RM roads

24 Estimated length of ROW within foreground visual zone[L] of parks/recreational areas[D]

Ecology

25 Length of ROW through brushland/shrubland

26 Length of ROW through bottomland/riparian woodland

27 Length of ROW across potential wetlands[F]

28 Length of ROW across known habitat of endangered or threatened species

29 Number of stream crossings

30 Length of ROW parallel to (within 100 feet) streams

31 Length of ROW across open water (ponds, playa lakes[F] etc.)

32 Number of playa lake[F] crossings

33 Length of ROW across 100-year floodplains

Cultural Resources

34 Number of recorded cultural resource sites crossed by ROW

35 Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline

36 Number of National Register of Historic Places (NRHP)-listed or determined-eligible sites crossed by ROW

37 Number of additional NRHP-listed or determined-eligible sites within 1,000 feet of ROW centerline

38 Length of ROW crossing areas of high archeological/historical site potential

All length measurements in feet.
A Single-family and multi-family dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis.
B For purposes of this evaluation, pipelines were not considered a compatible corridor.
C Property lines created by existing road, highways, or railroad ROW are not "double-counted" in the "length of route parallel to property lines" criterion.
D Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church.
E 0.5 mile, unobstructed.
F As mapped by the U.S. Fish and Wildlife Service National Wetland Inventory.

The analysis of the Project involved the inventory and tabulation of the number or quantity of each environmental criterion located along the Consensus Route (e.g., number of habitable structures within 500 feet, amount of brushland/shrubland crossed, etc.). The number or amount of each criterion was determined by reviewing various maps and recent color aerial imagery (March 2018), and by field verification. Potential environmental impacts of the Consensus Route are addressed in Section 4.0 of this document.

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3. EXISTING ENVIRONMENT

3.1. Physiography

As shown in Figure 3-1, Zapata County is located within the Interior Coastal Plains Physiographic Province (Bureau of Economic Geology [BEG], 1996). This province is located in the southern portion of the State and lies north of the Coastal Prairies province, where its southern border mimics the Gulf of Mexico outline. The Interior Coastal Plains is bounded to the north by the Blackland Prairies, which extends from the Rio Grande River in southern Texas to San Antonio and then turns north-northeast to Dallas and extends to the northeastern part of the State.

The Interior Coastal Plains of Texas form parallel ridges (questas) and valleys tilted towards the Gulf of Mexico with elevations ranging from 300 to 800 feet above mean sea level (msl). The province consists of alternating belts of resistant uncemented sands among weaker shales that erode into long, sandy ridges. There are at least two down-to-the-coastline fault systems that trend nearly parallel to the coastline (BEG,1996). The Study Area elevations range from a high of 500 feet above msl in the northeast corner to a low of 350 feet above msl along the southern boundary at Arroyo San Francisco.

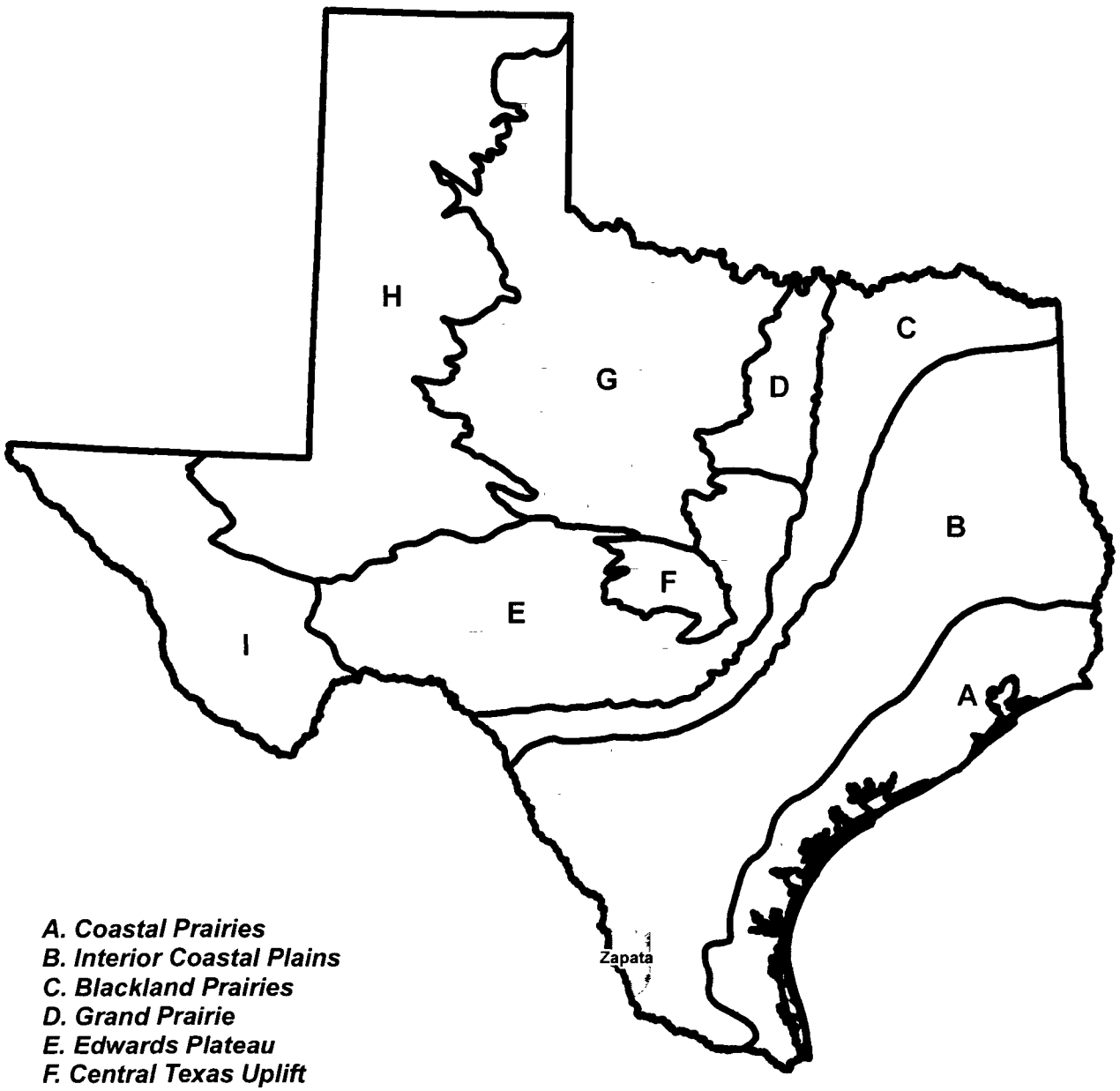
3.2. Geology

According to BEG (1976), the Study Area includes the following geologic units (from youngest to oldest): Quaternary-aged Windblown sand sheet deposits, Tertiary-aged Yegua Formation, and Tertiary-aged Laredo Formation. The Laredo Formation is located in the western portion of the Study Area and consists of sandstone and clay, with a total thickness of about 620 feet. The central portion of the Study Area is comprised of the Windblown sand sheet deposits. The Yegua Formation is found in the northeastern corner of the Study Area and consists of clay and sandstone, with a total thickness of about 400 feet.

The Laredo Formation is present in the western part of the Study Area and consists of thick sandstone that is very fine to fine grained in the upper and lower part that is dominantly red and brown, clay in the middle that weathers orange-yellow, and dark-gray limestone concretions. This formation contains an abundance of marine megafossils.

The majority of the Study Area is comprised of Windblown sand sheet deposits. These deposits have physical properties similar to those of "Stabilized sand dune deposits" and contain sparse grass.

The Yegua Formation is located in the northeast corner of the Study Area. This formation includes a clay dark-gray soil in the upper portion and a sandstone that produces a yellow-orange and reddish-brown soil in the lower portion. Some fossil wood may be found within this formation.



A. Coastal Prairies
B. Interior Coastal Plains
C. Blackland Prairies
D. Grand Prairie
E. Edwards Plateau
F. Central Texas Uplift
G. North-Central Plains
H. High Plains
I. Trans-Pecos Basin and Range

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Figure 3-1
Location of Zapata County in Relation to the Physiographic Provinces of Texas
Reloj del Sol 345-kV Interconnection Project
Zapata County, Texas

Source: ESRI, Bureau of Economic Geology, UT Austin (1996), QPSE

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3.3. Soils

The Study Area occurs within northwestern Zapata County. The general soil map of Zapata County published by the Soil Conservation Service (SCS) in 2009, was referenced for the following descriptions of the general soil map units within the Study Area.

3.3.1. Soil Associations

The SCS, now renamed as the Natural Resources Conservation Service (NRCS), defines a soil association as "a group of soils geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit." A soil association typically consists of one or more major soils, for which it is named, and some minor soils. Soils making up one unit can also occur in other units in a different pattern. According to the Zapata County soil survey (SCS, 2009), seven associations occur within the county.

The Maverick-Veleno-Catarina association is characterized by deep and moderately deep, nearly level to moderately sloping, saline and non-saline, clayey soils and makes up approximately 34 percent of the county. Slopes are 0 to 8 percent and contain approximately 42 percent Maverick soils, 19 percent Veleno soils, 13 percent Catarina soils, and 26 percent soils of minor extent. This association is used mostly as rangeland and wildlife habitat (SCS, 2009).

The Comitas-Falfurrias-Nueces-Sarita association consists of very deep, nearly level to gently sloping, non-saline, sandy soils, and encompasses approximately 16 percent of the county. Slopes range from 0 to 7 percent, and contains approximately 53 percent Comitas soils, 13 percent Falfurrias soils, 8 percent Nueces soils, and 7 percent Sarita soils, and 19 percent soils of minor extent. This association is used mostly as rangeland and wildlife habitat (SCS, 2009).

The Hebbronville-Brennan association consists of very deep, nearly level and very gently sloping, non-saline, loamy soils, and encompasses approximately 16 percent of the county. Slopes range from 0 to 3 percent, and contains approximately 60 percent Hebbronville soils, 30 percent Brennan soils, and 10 percent soils of minor extent. This association is used mostly as rangeland and wildlife habitat (SCS, 2009).

The Copita-Verick-Jimenez-Quemado association consists of shallow to moderately deep, very gently sloping to moderately sloping, non-saline, loamy and very gravelly soils, and encompasses approximately 8 percent of the county. Slopes range from 1 to 8 percent, and contains approximately 37 percent Copita soils, 25 percent Verick soils, 10 percent Jimenez and Quemado soils, and 28 percent soils or minor extent. This association is used mostly as rangeland and wildlife habitat. Jimenez and Quemado soils are also used as gravel sources (SCS, 2009).

The Brennan-Hebbronville association consists of very deep, nearly level and very gently sloping, non-saline, loamy soils, and encompasses approximately 6 percent of the county. Slopes range from 0 to 3 percent, and contains approximately 55 percent Brennan soils, 35 percent Hebbronville soils, and 10 percent soils of minor extent. This association is used mostly as rangeland and wildlife habitat (SCS, 2009).

The Maverick-Catarina-Monwebb association consists of very deep nearly level to moderately sloping, saline, clayey soils, and encompasses approximately 5 percent of the county. Slopes range from 0 to 8 percent, and contains approximately 45 percent Maverick soils, 22 percent Catarina soils, 15 percent Monwebb soils, and 18 percent soils of minor extent. This association is used mostly as rangeland and wildlife habitat (SCS, 2009).

The Copita-Brennan-Hebbronville association consists of moderately deep to very deep, nearly level to gently sloping, non-saline loamy soils, and encompasses approximately 5 percent of the county. Slopes range from 0 to 5 percent, and contains approximately 30 percent Copita soils, 25 percent Brennan soils, 20 percent Hebbronville soils, and 25 percent soils or minor extent. This association is used mostly as rangeland and wildlife habitat (SCS, 2009).

Zapata County does not have a map of associations. According to web soil survey, because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. There are 19 detailed soil map units within the Study Area; five of the soil map units comprise a total of 87.9 percent of the Study Area, with 12 soil map units totaling the remaining 12.1 percent. Table 3-1 contains the representative soils within the Study Area consisting of the soil map unit name, symbol, and percent within the Study Area.

TABLE 3-1: REPRESENTATIVE SOILS WITHIN THE STUDY AREA

Aguilares fine sandy loam, 0 to 3 percent slopes	AgB	0.3%
Brennan fine sandy loam, 0 to 3 percent slopes	BeB	11.0%
Brennan-Gullied land-Maverick association, 1 to 8 percent slopes, eroded	BGD	1.0%
Brundage fine sandy loam, 0 to 3 percent slopes, rarely flooded	BuB	1.2%
Catarina clay, 0 to 2 percent slopes	CaB	0.2%
Comitas loamy fine sand, 0 to 3 percent slopes	CoB	14.5%
Copita fine sandy loam, 0 to 3 percent slopes	CpC	4.7%
Escobas fine sandy loam, 1 to 3 percent slopes	EsB	0.1%
Falfurrias fine sand, 0 to 5 percent slopes	FaC	27.7%

[redacted]		
Hebbronville loamy fine sand, 0 to 3 percent slopes	HeB	23.7%
Jimenez-Quemado complex, 1 to 8 percent slopes	JQD	0.5%
Maverick soils, 1 to 8 percent	MaD	0.8%
Maverick-Nido complex, 1 to 20 percent slopes	MNE	0.3%
Nido-Rock outcrop complex, 3 to 15 percent slopes	NDE	0.1%
Nueces-Sarita complex, 0 to 3 percent slopes	NSC	11.0%
Pits	Pt	0.3%
Tela sandy clay loam, 0 to 1 percent slopes, occasionally flooded	TeB	1.8%
Veleno clay loam, 0 to 2 percent slopes, occasionally flooded	VeB	0.3%
Verick fine sandy loam, 1 to 5 percent slopes	VkC	0.4%

3.3.2. Prime Farmland Soils

The Secretary of Agriculture, in 7 United States Code (USC) 4201 (c)(1)(A), defines prime farmland soils as those soils that have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. They have the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. Additional potential prime farmlands are those soils that meet most of the requirements of prime farmland but fail because they lack sufficient natural moisture, or they lack the installation of water management facilities. Such soils would be considered prime farmland if these soil improvement practices were implemented.

According to the NRCS, prime farmland soils comprise approximately 7,488 acres or 1 percent within Zapata County (NRCS, 2019). The Study Area does not contain any detailed soil map units that constitute prime farmland.

3.4. Mineral and Energy Resources

No major mineral resources are mapped as occurring within the Study Area according to the USGS Mineral Data Resource System reports (USGS, 2011) or the BEG (1976), and no active mineral quarries or mines were observed during field reconnaissance or while reviewing USGS topographic maps.

Additionally, one gas field, Los Mogotes, is mapped within the Study Area (BEG, 1976). According to Railroad Commission of Texas (RRC) records, 90 producing, 13 abandoned, and 4 unknown status oil/gas wells are documented in the Study Area (RRC, 2019a). No additional oil or gas wells were observed during field reconnaissance or are visible on aerial photography.

3.5. Water Resources

3.5.1.Surface Water

For surface water planning purposes, Zapata County lies within the Rio Grande River Basin, which is the largest by area in Texas, draining a total area of approximately 182,215 square miles of which 49,387 square miles are within Texas. The headwaters of the Rio Grande River occur in Colorado, continues through New Mexico and forms the international boundary between the United States and Mexico from El Paso to the Gulf of Mexico. The average annual watershed yield is extremely low due to the arid and semiarid climate throughout the basin (Texas Water Development Board [TWDB], 2007). Surface water runoff within the Rio Grande River Basin varies with average rainfall from 10 inches annually near El Paso to 25 inches in South Texas, including the Study Area (TWDB, 2012).

According to USGS topographic maps and the National Hydrography Dataset (NHD), several intermittent streams occur within the Study Area, including the Arroyo San Francisco.

With the passage of Senate Bill 1 in 1997, regional planning groups began water planning in Texas. Planning groups may include ecologically significant stream segments as part of the process. Designation criteria is set forth under 31 TAC 357.43 and 358.2. When a planning group recommends a river or stream segment as being of unique ecological value they must include biological function, hydrological function, riparian conservation areas, water quality, aquatic life, aesthetic value, and the presence of threatened or endangered species or unique communities. No stream segments within the Study Area are designated as ecologically significant streams (TPWD, 2019a).

3.5.2.Floodplains

The Study Area is located within four FEMA Federal Insurance Rate Map (FIRM) panels: 48505C0150B, 48505C0175B, 48505C0275B, and 48505C0300B (FEMA, 2012). Four 100-year floodplains exist within the Study Area. The first floodplain is located on FIRM Panel 48505C0175B in the north corner of the Study Area. The second floodplain is found on FIRM Panel 48505C0300B and continues in a westerly direction to FIRM Panel 48505C0275B before exiting the Study Area. The third and fourth floodplains are located on FIRM Panel 48505C0275B and converge with the previously mentioned second floodplain (Figure 2-2).

3.5.3.Groundwater

Within the State of Texas, there are 9 major aquifers (aquifers that produce large amounts of water over large areas) and 21 minor aquifers (aquifers that produce minor amounts of water over large areas or large amounts of water over small areas) as recognized by the TWDB. Approximately 59 percent of the water used in Texas in 2003, was supplied by these major and minor aquifers. The groundwater they produce is used for household, municipal, industrial, and agricultural uses (TWDB, 2011).

Approximately 60 percent of the Study Area is located withing the Yegua-Jackson Aquifer. The Yegua-Jackson Aquifer, a minor aquifer, extends 10,904 square miles across 34 counties in southeast Texas. The aquifer consists of interbedded sand, silt, and clay layers, with a freshwater saturated thickness averaging 170 feet. Most groundwater is from the sand units of the aquifer because the water is fresh with 50-1,000 milligrams per liter of total dissolved solids; however, there is some saline water within the aquifer with total dissolved solids between 1,000 and 10,000 milligrams per liter.

Groundwater is used mainly for domestic and livestock purposes from shallow wells with some used by municipalities, industries and irrigation. TWDB has not noticed significant water level declines in wells measured (TWDB, 2011).

3.6. Vegetation

3.6.1. Regional Vegetation

As shown on Figure 3-2, Zapata County is located within the South Texas Plains vegetational area as delineated by Gould et al. (1960) and characterized by Hatch et al. (1990). The South Texas Plains topography is level to rolling and is dissected by arroyos or streams that flow to the Rio Grande River and the Gulf of Mexico. Soils are clays to sandy loams with a wide range of soil profiles lending to great differences in soil drainage, moisture holding capacities, and climax plant communities and successional patterns. While cultivated areas occur in the South Texas Plains, the landscape is dominated by large cattle ranches. The vast open areas are characterized by mesquite (*Prosopis* spp.), granjeno (*Celtis pallida*), various species of cacti, lotebush (*Ziziphus obtusifolia*), coyotillo (*Karwinskia humboldtiana*), guayacan (*Porlieria angustifolia*), white brush (*Aloysia gratissima*), brasil (*Condalia hookeri*), bisbirinda (*Castela texana*), cenizo (*Leucophyllum* spp.), huisache (*Acacia Farnesiana*), catclaw (*Acacia Greggii*), black brush (*Acacia rigidula*), and guajillo (*Acacia Berlandieri*). Sandy loam soils are dominated by grasses such as (*Schizachyrium* spp.), (*Setaria* spp.), (*Paspalum* spp.), (*Chloris* spp.), (*Trichloris* spp.), and coast sandbur (*Cenchrus incertus*). Dominates on clay and clay loams are silver bluestem (*Bothriochloa saccharoides*), Arizona cottontop (*Trichachne californica*), buffalo grass (*Bouteloua dactyloides*), curly mesquite (*Hilaria belangeri*), and various species of *Setaria*, and *Pappophorum*. Saline areas are dominated by gulf cordgrass (*Spartina spartinae*), seashore saltgrass (*Distichlis spicata*), and sacaton (*Sprobolus Wrightii*). Common grasses of the oak savannahs are seacoast bluestem (*Schizachyrium littorale*), Indian grass (*Sorghastrum nutans*), switchgrass (*Panicum virgatum*), crinkle-awn (*Trachypogon secundus*), and species of *Paspalum*.

3.6.2. Vegetation Community Types in the Study Area

According to TPWD's EMST vegetation cover types, approximately 45 percent of the Study Area consists of South Texas: Sandy Mesquite Woodland and Shrubland; 38 percent as South Texas: Sandy

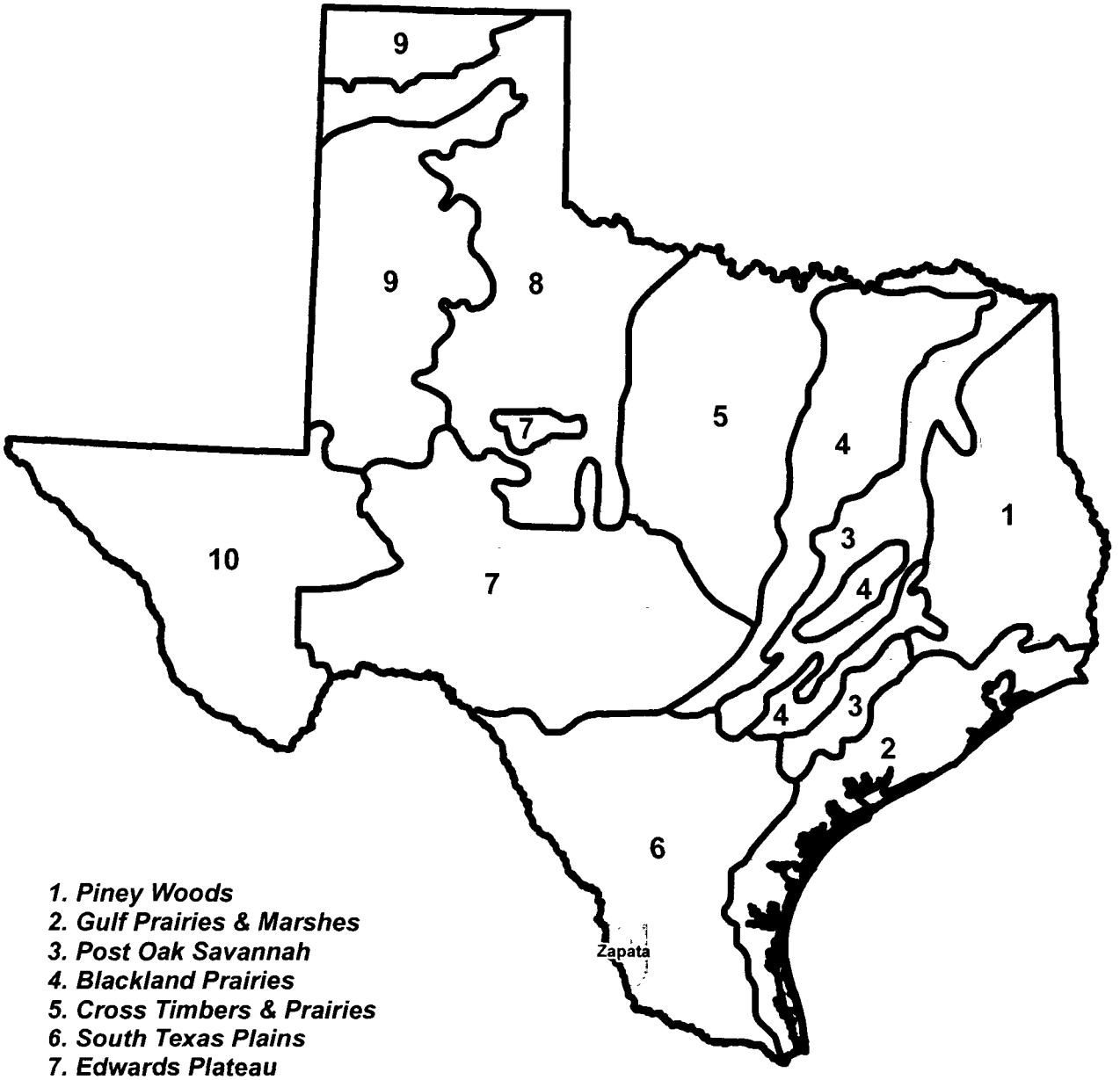

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Figure 3-2
Location of Zapata County in Relation to the Vegetational Areas of Texas
Reloj del Sol 345-kV Interconnection Project
Zapata County, Texas

Source: ESRI; Hatch et al (1990); QPSE

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Mesquite Savanna Grassland; 5 percent as South Texas: Clayey Mesquite Mixed Shrubland, and 4 percent as Row Crops. The remaining 8 percent consists of South Texas: Ramadero Shrubland; South Texas: Disturbance Grassland; South Texas: Sandy Mesquite Dense Shrubland; South Texas: Shallow Shrubland; South Texas: Ramadero Woodland; South Texas: Ramadero Evergreen Woodland; Urban Low Intensity; South Texas: Clayey Blackbrush Mixed Shrubland; Open Water; Barren; South Texas: Sandy Mesquite-Evergreen Woodland; South Texas: Ramadero Dense Shrubland; South Texas: Salty Thronscrub; and Urban High Intensity vegetation cover types (Elliott et al, 2014).

South Texas: Sandy Mesquite Woodland and Shrubland is characterized by relatively dense mesquite woodlands with highly variable shrub composition consisting of granjeno, blackbrush, Texas hogplum (*Colubrina texensis*), brasil, huisache, and Texas persimmon (*Diospyros texana*). Often sparse, the overstory may contain mesquite, huisache, Texas ebony (*Ebenopsis ebano*), and plateau live oak (*Quercus fusiformis*).

South Texas: Sandy Mesquite Savanna Grassland is dominated by King Ranch bluestem (*Bothriochloa ischaemum*), buffelgrass (*Cenchrus ciliaris*), Kleberg bluestem (*Dichanthium annulatum*), Bermudagrass (*Cynodon dactylon*), little bluestem (*Schizachyrium scoparium*), purple threeawn (*Aristida purpurea*), tanglehead (*Heteropogon contortus*), and hog croton (*Croton capitatus*). The grasslands are scattered with mesquite, granjeno, blackbrush, huisache, Colima, Texas hogplum, white brush, brasil, and Texas persimmon.

South Texas: Clayey Mesquite Mixed Shrubland is a discontinuous canopy of shrubs and small trees with species such as mesquite, blackbrush, huisace, granjeno, sugar hackberry (*Celtis laevigata*), brasil, guajillo, lotebush, prickly pear, and white brush. The dominant herbaceous is buffelgrass.

Row crops include all cropland where fields are fallow for some portion of the year. Some fields may rotate into and out of cultivation frequently, and year-round cover crops are generally mapped as grassland.

3.6.3. Waters of the U.S., Including Wetlands

Waters of the U.S. include, but are not limited to, territorial seas, lakes, rivers, streams, oceans, bays, ponds, and other special aquatic features, including wetlands. The USACE regulates waters of the U.S., including wetlands, under Section 404 of the CWA. The USACE and EPA jointly define wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include bogs, seeps, marshes, swamps, forested bottomland wetlands, and other similar areas (40 CFR 230.3[t]). Wetlands are defined in a broad sense as

transitional areas (ecotones) between terrestrial and aquatic systems where the water table is usually at or near the ground surface, or where shallow water covers the land (Cowardin et al., 1979).

The USFWS NWI maps encompassing the Study Area indicate the presence of wetland and open-water habitat features. Features in the Study Area are classified as palustrine and riverine. Palustrine systems include vegetated, freshwater wetlands and small (less than 20 acres), non-vegetated freshwater wetlands that are both shallow (deepest point less than 6.6 feet at low water) and lack an active wave-formed or bedrock shoreline (Cowardin et al., 1979). Within the Study Area are mapped freshwater emergent wetlands, freshwater forested/shrub wetlands, and freshwater ponds.

Riverine systems include all wetlands and deepwater habitats contained within a channel, except wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and habitats with water containing ocean-derived salts exceeding 0.5 percent (Cowardin et al., 1979).

Hydric and aquatic habitats may be considered regulatory wetlands by the USACE. Construction activities resulting in the discharge of dredged or fill materials within waters of the U.S. are subject to the regulations and restrictions outlined in Section 404 of the CWA and may require coordination with the USACE to ensure compliance.

3.7. Fish and Wildlife

3.7.1. Fish and Wildlife Habitat and Species

Blair (1950) delineated seven biotic provinces within Texas. As shown in Figure 3-3, Zapata County occurs within the Tamaulipan Biotic Province. The Tamaulipan Biotic Province in Texas extends south from the Balconian Biotic Province to the border with Mexico, extends east to the Texan Biotic Province, and is bounded to the southeast by the Gulf of Mexico. The Tamaulipan is comprised of predominantly thorny brush vegetation. A few species of plants account for the bulk of the brush vegetation and give it a characteristic aspect throughout the Tamaulipan of this state (Blair, 1950). Characteristic faunal species of the area are discussed below.

Aquatic habitats within the Study Area are minimal and include Arroyo San Francisco and other unnamed streams, wetlands, and ponds. Aquatic vegetation is limited by the intermittent nature of these features.

3.7.2. Fish

Fish species are likely absent in the Study Area due to a lack of permanent waterbodies. However, fish species that may occur in rivers, streams, or ponds in the region include the gizzard shad (*Dorosoma cepedianum*), threadfin shad (*Dorosoma petenense*), goldfish (*Carassius auratus*), grass carp (*Ctenopharyngodon idella*), red shiner (*Cyprinella lutrensis*), blacktail shiner (*Cyprinella venusta*), common carp (*Cyprinus carpio*), Rio Grande silvery minnow (*Hybognathus amarus*), speckled chub

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Figure 3-3
Location of Zapata County in Relation to the Biotic Provinces of Texas
Reloj del Sol 345-kV Interconnection Project
Zapata County, Texas

Source: ESRI Blair (1950) QPSE

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(*Macrhybopsis aestivalis*), golden shiner (*Notemigonus crysoleucas*), Tamaulipas shiner (*Notropis braytoni*), ghost shiner (*Notropis buchanani*), Rio Grande shiner (*Notropis jemezanus*), flathead minnow (*Pimephales promelas*), bullhead minnow (*Pimephales vigilax*), longnose dace (*Rhinichthys cataractae*), river carpsucker (*Carpiodes carpio*), blue sucker (*Cycleptus elongatus*), smallmouth buffalo (*Ictiobus bubalus*), Mexican tetra (*Astyanax mexicanus*), black bullhead (*Ameiurus melas*), yellow bullhead (*Ameiurus natalis*), blue catfish (*Ictalurus furcatus*), channel catfish (*Ictalurus punctatus*), flathead catfish (Pylodictis *olivaris*), rainbow trout (*Oncorhynchus mykiss*), mountain mullet (*Agonostomus monticola*), striped mullet (*Mugil cephalus*), inland silverside (*Menidia beryllina*), rough silverside (*Membras martinica*), western mosquitofish (*Gambusia affinis*), Amazon molly (*Poecilia formosa*), sailfin molly (*Poecilia latipinna*), gulf killifish (*Fundulus grandis*), rainwater killifish (*Lucania parva*), sheepshead minnow (*Cyprinodon variegatus*), white bass (*Morone chrysops*), striped bass (*Morone saxatilis*), redbreast sunfish (*Lepomis Auritus*), green sunfish (*Lepomis cyanellus*), warmouth (*Lepomis gulosus*), orangespotted sunfish (*Lepomis humilis*), bluegill (*Lepomis macrochirus*), redspotted sunfish (*Lepomis miniatus*), longear sunfish (*Lepomis megalotis*), redear sunfish (*Lepomis microlophus*), largemouth bass (*Micropterus salmoides*), white crappie (*Pomoxis annularis*), black crappie (*Pomoxis nigromaculatus*), freshwater drum (*Aplodinotus grunniens*), Rio Grande cichlid (*Cichlasoma cyanoguttatum*), and blue tilapia (*Oreochromis aurea*) (Thomas et al., 2007).

3.7.3. Amphibians and Reptiles

A representative list of amphibian and reptile species of potential occurrence in the Study Area is included as Table 3-2.

TABLE 3-2: REPRESENTATIVE LIST OF REPTILE AND AMPHIBIAN SPECIES OF POTENTIAL OCCURRENCE[A] IN THE STUDY AREA

Frogs and Toads	
Burrowing toad	*Rhinophrynus dorsalis*
Couch's spadefoot	*Scaphiopus couchii*
Eastern green toad	*Bufo debilis debilis*
Gulf coast toad	*Bufo (Incilius) nebulifer*
Hurter's spadefoot	*Scaphiopus hunterii*
Marine toad	*Bufo (Rhinella) marinus*
Rio Grande leopard frog	*Rana (Lithobates) berlandieri*
Texas toad	*Bufo (Anaxyrus) speciosus*
Western narrow-mouthed toad	*Gastrophryne olivacea*
Lizards	
Barred tiger salamander	*Ambystoma mavortium mavortium*
Blue spiny lizard	*Sceloporus cyanogenys*
Common spotted whiptail	*Cnemidophorus (aspidoscelis) gularis*

Eastern six-lined racerunner	*Cnemidophorus sexlineatus sexlineatus*
Graphic spiny lizard	*Sceloporus grammicus*
Great plains skink	*Eumeces (Plestiodon) obsoletus*
Keeled earless lizard	*Heloderma propinqua*
Laredo striped whiptail	*Cnemidophorus (Aspidoscelis) laredoensis*
Mediterranean gecko	*Hemidactylus turcicus*
Prairie lizard	*Sceloporus consobrinus*
Reticulate collared lizard	*Crotaphytus reticulatus*
Rose-bellied lizard	*Sceloporus variabilis*
Round-tailed horned lizard	*Phrynosoma modestum*
Texas banded gecko	*Coleonyx brevis*
Texas greater earless lizard	*Cophosaurus texanus texanus*
Texas horned lizard	*Phrynosoma cornutum*
Texas spiny lizard	*Sceloporus olivaceus*
Texas tree lizard	*Urosaurus ornatus ornatus*
Snakes	
Bullsnake	*Pituophis catenifer sayi*
Central American indigo snake	*Drymarchon melanurus*
Checkered garter snake	*Thamnophis marcianus*
Chihuahuan nightsnake	*Hypsiglena jani*
Desert kingsnake	*Lampropeltis getula splendida*
Diamond-backed watersnake	*Nerodia rhombifer*
Flat-headed snake	*Tantilla gracilis*
Long-nosed snake	*Rhinocheilus lecontei*
Mexican hog-nosed snake	*Heterodon kennerlyi*
Mexican milksnake	*Lampropeltis triangulum annulata*
Plains black-headed snake	*Tantilla nigriceps*
Southern Texas groundsnake	*Sonora semiannulata taylori*
Southwestern ratsnake	*Elaphe emoryi meahllmorum*
Tamaulipan hook-nosed snake	*Ficimia streckeri*
Texas coralsnake	*Micrurus tener*
Texas glossy snake	*Arizona elegans Arenicola*
Texas patch-nosed snake	*Salvadora grahamiae lineata*
Texas threadsnake	*Leptotyphlops (Rena) dulcis*
Western coachwhip	*Coluber flagellum testaceus*
Western diamond-backed rattlesnake	*Crotalus atrox*
Western ribbonsnake	*Thamnophis Proximus*
Turtles	
Texas tortoise	*Gopherus berlandieri*
Ornate box turtle	*Terrapene ornate*
Pond slider	*Trachemys scripta*
Red-eared slider	*Trachemys scripta elegans*
Rio Grande cooter	*Pseudemys gorzugi*
Texas spiny softshell	*Apalone spinifera emoryi*
Texas tortoise	*Gopherus berlandieri*
Yellow mud turtle	*Kinosternon flavescens*

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A According to Werler and Dixon (2000) and Dixon (2013)
B Nomenclature follows Crother et al. (2012)

3.7.4.Birds

Avian species of potential occurrence in the Study Area include many year-round residents, migrants/summer residents, and migrants/winter residents. A representative list of bird species of potential occurrence in the Study Area is included as Table 3-3.

TABLE 3-3: REPRESENTATIVE LIST OF AVIAN SPECIES OF POTENTIAL OCCURRENCE[A] IN THE STUDY AREA

American Avocet	*Recurvirostra americana*	M
American Coot	*Fulica Americana*	R
American Goldfinch	*Spinus tristis*	M, WR
American Kestrel	*Falco sparverius*	M, WR
American Robin	*Turdus migratorius*	M, WR
American White Pelican	*Pelecanus erythrorhynchos*	M
Baltimore Oriole	*Icterus galbula*	R
Barn Owl	*Tyto alba*	R
Barn Swallow	*Hirundo rustica*	M, SR
Belted Kingfisher	*Megaceryle alcyon*	M, WR
Bewick's Wren	*Thryomanes bewickii*	R
Black Phoebe	*Sayornis nigricans*	R
Black Vulture	*Coragyps atratus*	R
Black-bellied Plover	*Pluvialis squatarola*	M
Black-chinned Hummingbird	*Archilochus alexandri*	M, SR
Black-crowned Night-Heron	*Nycticorax nycticorax*	M, SR
Black-headed Grosbeak	*Pheucticus melanocephalus*	M
Black-necked Stilt	*Himantopus mexicanus*	M
Black-throated Sparrow	*Amphispiza bilineata*	R
Blue Grosbeak	*Passerina caerulea*	M, SR
Blue-winged Teal	*Spatula discors*	M, WR
Brown Thrasher	*Toxostoma rufum*	M, WR
Brown-headed Cowbird	*Molothrus ater*	R
Bufflehead	*Bucephala albeola*	M, WR
Bullock's Oriole	*Icterus bullockii*	M, SR
Burrowing Owl	*Athene cunicularia*	R
Cactus Wren	*Campylorhynchus brunneicapillus*	R
Canada Goose	*Branta canadensis*	M, WR
Carolina Wren	*Thryothorus ludovicianus*	R
Cattle Egret	*Bubulcus ibis*	R
Cedar Waxwing	*Bombycilla cedrorum*	M, WR
Chihuahuan Raven	*Corvus cryptoleucus*	R

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Chimney Swift	*Chaetura pelagica*	M, SR
Chipping Sparrow	*Spizella passerine*	M, WR
Cinnamon Teal	*Spatula cyanoptera*	M, WR
Cliff Swallow	*Petrochelidon pyrrhonota*	M, SR
Common Ground Dove	*Columbina passerina*	R
Common Nighthawk	*Chordeiles minor*	M, SR
Common Yellowthroat	*Geothlypis trichas*	M, WR
Cooper's Hawk	*Accipiter cooperii*	R
Crested Caracara	*Caracara cheriway*	M, WR
Curve-billed Thrasher	*Toxostoma curvirostre*	R
Dark-eyed Junco	*Junco hyemalis*	M, WR
Dickcissel	*Spiza Americana*	M
Eastern Bluebird	*Sialia sialis*	R
Eastern Kingbird	*Tyrannus tyrannus*	M, SR
Eastern Phoebe	*Sayornis phoebe*	M, WR
Eastern Screech-Owl	*Megascops asio*	R
Eurasian Collared-Dove	*Streptopelia decaocto*	R
European Starling	*Sturnus vulgaris*	R
Gadwall	*Mareca Strepera*	M, WR
Golden Eagle	*Aquila chrysaetos*	M, WR
Golden-fronted Woodpecker	*Melanerpes aurifrons*	R
Gray Catbird	*Dumetella carolinensis*	M
Great Blue Heron	*Ardea Herodias*	M, WR
Great Egret	*Ardea alba*	R
Great Horned Owl	*Bubo virginianus*	R
Great Kiskadee	*Pitangus sulphuratus*	R
Greater Roadrunner	*Geococcyx californianus*	R
Greater Yellowlegs	*Tringa melanoleuca*	M, WR
Great-tailed Grackle	*Quiscalus mexicanus*	M, WR
Green Heron	*Butorides virescens*	M, SR
Green Jay	*Cyanocorax yncas*	R
Green-tailed Towhee	*Pipilo chlorurus*	M, WR
Green-winged Teal	*Anas crecca*	R
Harris's Hawk	*Parabuteo unicinctus*	R
Hooded Oriole	*Icterus cucullatus*	M, SR
Horned Lark	*Eremophila alpestris*	R
House Finch	*Haemorhous mexicanus*	R
House Sparrow	*Passer domesticus*	R
House Wren	*Troglodytes aedon*	M, WR
Inca Dove	*Columbina inca*	R
Indigo Bunting	*Passerina cyanea*	M
Killdeer	*Charadrius vociferus*	R
Ladder-backed Woodpecker	*Dryobates scalaris*	R

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Lark Bunting	*Calamospiza melanocorys*	M, WR
Lark Sparrow	*Chondestes grammacus*	R
Least Sandpiper	*Calidris minutilla*	M, WR
Lesser Goldfinch	*Spinus psaltria*	R
Lesser Scaup	*Aythya affinis*	M, WR
Loggerhead Shrike	*Lanius ludovicianus*	R
Long-billed Curlew	*Numenius americanus*	M
Mallard	*Anas platyrhynchos*	M, WR
Mourning Dove	*Zenaida macroura*	R
Northern Cardinal	*Cardinalis cardinalis*	R
Northern Flicker	*Colaptes auratus*	M, WR
Northern Harrier	*Circus hudsonius*	M, WR
Northern Mockingbird	*Mimus polyglottos*	R
Northern Pintail	*Anas acuta*	M, WR
Northern Shoveler	*Spatula clypeata*	M, WR
Orange-crowned Warbler	*Leiothlypis celata*	M, WR
Orchard Oriole	*Icterus spurius*	M, SR
Osprey	*Pandion haliaetus*	M
Painted Bunting	*Passerina ciris*	M, SR
Pied-billed Grebe	*Podilymbus podiceps*	R
Pine Siskin	*Spinus pinus*	M, WR
Pine Warbler	*Basileuterus ignotus*	M, WR
Plain chachalaca	*Ortalis vetula*	R
Pyrrhuloxia	*Cardinalis sinuatus*	R
Redhead	*Aythya Americana*	M, WR
Red-shouldered Hawk	*Buteo lineatus*	R
Red-tailed Hawk	*Buteo jamaicensis*	R
Red-winged Blackbird	*Agelaius phoeniceus*	R
Ring-billed Gull	*Larus delawarensis*	M, WR
Ring-necked Duck	*Aythya collaris*	M, WR
Rock Pigeon	*Columba livia*	R
Ruby-crowned Kinglet	*Regulus calendula*	M, WR
Ruddy Duck	*Oxyura jamaicensis*	M, WR
Sanderling	*Calidris alba*	M
Sandhill Crane	*Antigone canadensis*	M, WR
Scissor-tailed Flycatcher	*Tyrannus forficatus*	M, SR
Sharp-shinned Hawk	*Accipiter striatus*	M, WR
Snowy Egret	*Egretta thula*	M
Song Sparrow	*Melospiza melodia*	M, WR
Spotted Sandpiper	*Actitis macularius*	M, WR
Spotted Towhee	*Pipilo maculatus*	M, WR
Summer Tanager	*Piranga rubra*	M, SR
Tufted Titmouse	*Baeolophus bicolor*	R

Turkey Vulture	*Cathartes aura*	R
Verdin	*Auriparus flaviceps*	R
Vermilion Flycatcher	*Pyrocephalus rubinus*	M, SR
Western Kingbird	*Tyrannus verticalis*	M, SR
Western Meadowlark	*Sturnella neglecta*	M, WR
White-faced Ibis	*Plegadis chihi*	M
White-throated Sparrow	*Zonotrichia albicollis*	M, WR
White-winged Dove	*Zenaida asiatica*	M, WR
Wild Turkey	*Meleagris gallopavo*	R
Willet	*Tringa semipalmata*	M
Wilson's Warbler	*Cardellina pusilla*	M
Yellow-crowned Night-Heron	*Nyctanassa violacea*	M
Yellow-rumped Warbler	*Setophaga coronata*	M, WR

A According to Lockwood and Freeman (2014)
B Nomenclature follows Chesser et al (2018)
C R – Resident Occurring regularly in the same general area throughout the year-implies breeding
SR – Summer Resident Implies breeding but may include nonbreeders
WR – Winter Resident Occurring during winter season
M – Migrant- Occurs as a transient passing through the area either in spring or fall or both

3.7.5.Mammals

A representative list of mammals that may occur in the Study Area is included as Table 3-4.

TABLE 3-4: REPRESENTATIVE LIST OF MAMMALIAN SPECIES OF POTENTIAL OCCURRENCE[A] IN THE STUDY AREA

Didelphimorphia	
Virginia opossum	*Didelphis virginiana*
Cingulata	
Nine-banded armadillo	*Dasypus novemcinctus*
Lagomorpha	
Black-tailed jackrabbit	*Lepus californicus*
Desert cottontail	*Sylvilagus audubonii*
Eastern cottontail	*Sylvilagus floridanus*
Soricomorpha	
Crawford's desert shrew	*Notiosorex crawfordi*
Chiroptera	
Big brown bat	*Eptesicus fuscus*
Big free-tailed bat	*Nyctinomops macrotis*
Brazilian free-tailed bat	*Tadarida brasiliensis*
Cave myotis	*Myotis velifer*
Eastern red bat	*Lasiurus borealis*
Ghost-faced bat	*Mormoops megalophylla*
Hoary bat	*Aeorestes cinereus*
Mexican long-tongued bat	*Choeronycteris Mexicana*
Silver-haired bat	*Lasionycteris noctivagans*

Southern yellow bat	*Dasypterus ega*
Carnivora	
American beaver	*Castor canadensis*
Bobcat	*Lynx rufus*
Common gray fox	*Urocyon cinereoargenteus*
Coyote	*Canis latrans*
Hog-nosed skunk	*Conepatus leuconotus*
Jaguarundi	*Puma yagouaroundi*
Long-tailed weasel	*Mustela frenata*
Mountain lion	*Puma concolor*
Northern raccoon	*Procyon lotor*
Ocelot	*Leopardus paradalis*
Ringtail	*Bassariscus astutus*
Striped skunk	*Mephitis mephitis*
Western spotted skunk	*Spilogale gracilis*
White-nosed Coati	*Nasua narica*
Artiodactyla	
Collared peccary	*Precari tajacu*
Feral hog	*Sus scrofa*
White-tailed deer	*Odocoileus virginianus*
Rodentia	
Coues' rice rat	*Oryzomys couesi*
Fulvous harvest mouse	*Reithrodontomys fulvescens*
Gulf Coast kangaroo rat	*Dipodomys compactus*
Hispid cotton rat	*Sigmodon hispidus*
Hispid pocket mouse	*Chaetodipus hispidus*
Merriam's pocket mouse	*Perognathus merriami*
Mexican spiny pocket mouse	*Liomys irroratus*
North American deermouse	*Peromyscus maniculatus*
North American porcupine	*Erethizon dorsatum*
Northern grasshopper mouse	*Onychomys leucogaster*
Northern pygmy mouse	*Baiomys taylori*
Ord's kangaroo rat	*Dipodomys ordii*
Rio Grande ground squirrel	*Ictidomys parvidens*
Southern plains woodrat	*Neotoma micropus*
Spotted ground squirrel	*Xerospermophilus spilosoma*
Strecker's pocket gopher	*Geomys streckeri*
Texas pocket gopher	*Geomys personatus*
White-footed deermouse	*Peromyscus leucopus*

A According to Schmidly (2004)
B Nomenclature follows Manning et al (2008)

3.8. Recreationally and Commercially Important Species

A species is considered important if one or more of the following criteria applies:

a. The species is recreationally or commercially valuable

b. The species is endangered or threatened

c. The species affects the well-being of some important species within criterion (a) or (b)

d. The species is critical to the structure and function of the ecological system

e. The species is a biological indicator

Wildlife resources within the Study Area provide human benefits resulting from both consumptive and non-consumptive uses. Non-consumptive uses include observing and photographing wildlife, bird watching, and other similar activities. These uses, although difficult to quantify, deserve consideration in the evaluation of the wildlife resources of the Study Area. Consumptive uses such as fishing, hunting, and trapping, are more easily quantifiable. Consumptive and non-consumptive uses of wildlife are often enjoyed contemporaneously and are generally compatible. Many species occurring in the Study Area provide consumptive uses, and all provide the potential for non-consumptive benefits.

The white-tailed deer (*Odocoileus virginianus*) is the most economically important big game mammal in Texas (Schmidly, 2004). The TPWD divides the State into ecological regions for deer management. Zapata County falls within the South Texas Plains Ecological Region. During the 2017-2018 hunting season, an estimated 147,870 white-tailed deer were harvested within this ecological region (Purvis, 2018a).

The South Texas Plains Ecological Region also provides habitat for a variety of economically and recreationally important upland game birds, including the Mourning Dove (*Zenaida macroura*), White-winged Dove (*Zenaida asiatica*), White-tipped Dove (*Leptotila verreauxi tobagensis*), Eurasian Collared-dove (*Streptopelia decaocto*), Northern Bobwhite (*Colinus virginianus coyolcos*), Scaled Quail (*Callipepla squamata*), Wild Turkey (*Meleagris gallopavo*), and Blue-winged Teal (*Spatula discors*). During the 2017-2018 hunting season, an estimated 1,309,501 mourning dove, 707,597 white-winged dove, 123,069 white-tipped dove, 104,797 Eurasian collared-dove, 223,874 northern bobwhite quail, 17,389 scaled quail, 9,879 wild turkey, and 7,099 blue-winged teal were harvested within this ecological region (Purvis, 2018b).

The feral hog (*Sus scrofa*) is an exotic, unprotected, non-game species that poses a threat commercially viable species in the Study Area. Feral hogs cause destruction to the habitat that support these species including disturbing wetlands, streams, and tanks by excessive rooting and wallowing. Wild hogs can prey on fawns and on occasion, destroy and consume the eggs of ground nesting birds such as turkey and quail (TPWD, 2020). However, while they are not a commercially viable species, the feral hog provides additional funding sources for landowners within the Study Area.

Free ranging exotic species such as axis deer, sika, blackbuck antelope, fallow, and aoudad are not commercially viable species within the Study Area and would not allow a landowner to benefit from the sale of those specialty hunts.

3.9. Endangered and Threatened Species

An endangered species is one that is in danger of extinction throughout all or a significant portion of its natural range, while a threatened species is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

3.9.1 Endangered and Threatened Plant Species

Available information from the USFWS (2019a), TPWD (2019b), and TPWD's TXNDD (TPWD, 2019c) was reviewed to identify endangered or threatened plant species of potential occurrence within the Study Area. Currently, 31 plant species are listed by the USFWS as endangered or threatened species in Texas (USFWS, 2019b). However, there are two federally listed and three state-listed plants that have been recorded in Zapata County (USFWS, 2019a; TPWD, 2019b). No sensitive plant communities have been specifically identified by either the USFWS or TPWD as occurring within the Study Area (USFWS, 2019a; TPWD, 2019c).

3.9.2 Federally Listed Fish and Wildlife Species

The USFWS (2019a) and TPWD (2019b) county lists of endangered and threatened species indicate that nine federally listed endangered, threatened, or proposed for federal listing fish and wildlife species may occur in Zapata County (Table 3-5). Protection under the ESA can also include protection of habitat designated as critical habitat for supporting a listed species. It should be noted that inclusion in this table does not necessarily mean that a species is known to occur in the Study Area, but only acknowledges the potential for its occurrence based on historic records, known ranges, and presence of potential habitat. Only those species that USFWS lists as endangered or threatened have Federal protection under the ESA. Most avian species are protected under the MBTA and bald and golden eagles are protected under the BGEPA.

TABLE 3-5: FEDERALLY LISTED FISH AND WILDLIFE SPECIES FOR ZAPATA COUNTY[A]

Birds			
Interior Least Tern	*Sterna antillarum athalassos*	Endangered	Not likely[C]
Piping Plover	*Charadrius melodus*	Threatened	Not likely[C]
Red Knot	*Calidris canutus rufa*	Threatened	Not likely[C]

[redacted]

Mammals			
Gulf Coast jaguarundi	*Felis yagouaroundi*	Endangered	Not likely[C]
Ocelot	*Felis pardalis*	Endangered	Not likely[C]
Mollusks			
Texas hornshell	*Popenaias popeii*	Threatened	Does not occur
Plants			
Ashy dogweed	*Thymophylla tephroleuca*	Endangered	Likely to occur
Star cactus[D]	*Astrophytum asterias*	Endangered	Not likely
Zapata bladderpod	*Lesquerella thamnophila*	Endangered	Not likely

A According to USFWS (2019a) and TPWD (2019b, 2019c)
B Nomenclature follows Manning et al. (2008), Crother et al. (2012), Chesser et al. (2018), USFWS (2019a), and TPWD (2019b)
C Only expected to occur as a migrant, transient, or rare vagrant within the Study Area
D Not listed by USFWS (2019a) as occurring in Zapata County

The USFWS considers seven of the taxa in Table 3-4 as endangered and two as threatened. They are the endangered interior least tern (*Sterna antillarum athalassos*), Texas hornshell (*Popenaias popeii*), Gulf Coast jaguarundi (*Felis yagouaroundi*), ocelot (*Felis pardalis*), ashy dogweed (*Thymophylla* tephroleuca), star cactus (*Astrophytum asterias*), and Zapata bladderpod (*Lesquerella thamnophila*); and the threatened piping plover (*Charadrius melodus*) and red knot (*Calidris canutus rufa*).

The TPWD county list for Zapata County shows the Texas hornshell and star cactus to be federally listed as endangered; however, the USFWS (2019a) does not list them for Zapata County.

3.9.2.1 Interior Least Tern

The Interior Least Tern population breeds in the Mississippi, Missouri, and Rio Grande river systems and nests on sandbars. The winter range for interior least terns is along the Texas Gulf Coast. The Interior Least Tern's preferred nesting habitat is unvegetated, frequently flooded sand flats, salt flats, sand and gravel bars, and sand, shell, and gravel beaches (Thompson et al. 1997; Campbell, 2003). The species is increasingly rare westward in the State and the Study Area lies outside of the breeding area at Falcon Reservoir (Lockwood and Freeman, 2014). One documented record exists within the Study Area (eBird, 2019), and the species is not expected to breed or nest within the Study Area due to the general absence of suitable habitat.

3.9.2.2 Piping Plover

The Piping Plover is a small shorebird that inhabits sandy beaches and alkali flats (Cornell Lab of Ornithology, 2019). Approximately 35% of Piping Plovers are estimated to winter in Texas along the Gulf Coast, where they spend approximately 70% of their time (Campbell, 2003). The Piping Plover population that winters in Texas breeds in the Great Plains and near the Great Lakes.

The species is an uncommon to locally common winter resident along the coast and is a rare visitor along the coast in the summer. Piping Plovers are not often observed during migration at inland locations, but most appear to pass east of the Balcones Escarpment (Lockwood and Freeman, 2014). No documented records of the Piping Plover exist within the Study Area (eBird, 2019), and it is unlikely that this species would occur in the Study Area as it is outside of the species' critical habitat (USFWS, 2020).

3.9.2.3 Red Knot

The Red Knot is a medium-sized, Arctic breeding shorebird. The *rufa* subspecies, one of three subspecies occurring in North America, has one of the longest migration distances known, travelling between its breeding grounds in the central Canadian Arctic to wintering areas that are primarily in South America (USFWS, 2011). It is an uncommon to common migrant along the coast, especially the Upper Texas Coast, and very rare to casual inland, primarily in the eastern half of the State (Lockwood and Freeman, 2014). No documented records of the Red Knot exist within the Study Area (eBird 2019), and it is extremely unlikely that this species would occur in the Study Area.

3.9.2.4 Gulf Coast Jaguarundi

The Gulf Coast jaguarundi is a small, slender-bodied, unspotted cat with a small flattened head and long tail. The species is thought to occur in the dense thorny shrublands of the Rio Grande Valley, with occurrences documented in Cameron and Willacy Counties (Campbell, 2003). The species formerly occurred in the brush country of extreme south Texas in Cameron, Hidalgo, Starr, and Willacy counties (Schmidly, 2004). The species has never been documented north of the Rio Grande Valley in recorded history, and is currently extinct in Texas (Schmidly, 2004). Therefore, it is unlikely to occur in the Study Area.

3.9.2.5 Ocelot

The ocelot is a medium-sized spotted cat, similar to the bobcat. Ocelots occur in dense thorny shrub lands of the Lower Rio Grande Valley and Rio Grande Plains, where optimal habitat has at least 95% cover of shrubs and marginal habitat has 75-95% canopy cover (Campbell, 2003). The species once ranged all over southern Texas with occasional records in east and central Texas; now restricted to several isolated patches of suitable habitat in four or five counties of the Rio Grande Plains (Schmidly, 2004), the closest of which is approximately 73 miles to the east-southeast in Hidalgo County. It is unlikely that the ocelot would occur in the Study Area.

3.9.2.6 Texas Hornshell

The Texas hornshell is a medium-sized freshwater mussel with a dark brown to green, elongate, laterally compressed shell. The species historically ranged throughout the Rio Grande drainage in the United States

(Texas and New Mexico) and Mexico. Adult Texas hornshells occur in medium to large rivers, in habitat not typical for most mussel species. The nearest population to the Study Area is north of Laredo in Webb County, Texas (USFWS, 2018).

3.9.2.6 Ashy Dogweed

Ashy dogweed is an erect perennial with numerous, wooly, 10 to 30-centimeter tall stems, and minute, oil-bearing cells which give off a strong aroma when the plant is crushed. This species occurs in sandy soils in level or gently rolling grasslands with scatted shrubs (TPWD, 2019d). Habitat for this species is present within the Study Area and could occur. However, no known records of sightings were found.

3.9.2.7 Star Cactus

The star cactus is a flat, or at most, dome-shaped, spineless cactus up to 15 centimeters in diameter. The species grows on gravelly, somewhat salty, clay or loam soils in areas of sparse vegetation in grassy thornscrub (TPWD, 2019e). The species is not likely to occur within the Study Area.

3.9.2.8 Zapata Bladderpod

The Zapata bladderpod is a trailing perennial with zig-zaging, silvery-green stems that grows 40 to 80 centimeters tall. The species occurs in open thorn shrublands over shallow, gravelly or sandy soils and sandstone outcrops (TPWD, 2019f). The Study Area is located outside of the critical habitat and therefore, is unlikely to occur within the Study Area.

9.3 Critical Habitat

The USFWS, in Section 3(5)(A) of the ESA, defines critical habitat as:

> "(i) the specific areas within the geographical area occupied by the species, at the time that it is listed in accordance with the ESA, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination by the Secretary of the Interior that such areas are essential for the conservation of the species" (USFWS, 1973).

No critical habitat has been designated in the Study Area for any species included under the ESA.

3.9.4 State-Listed Fish and Wildlife Species

State-listed species receive protection under State laws, such as Chapters 67, 68, and 88 of the TPWD Code, and sections 65.171-65.184 and 69.01-69.14 of Title 31 of the Texas Administrative Code. There are 19 species protected at the State level and designated as threatened within Zapata County (Table 3-6) (TPWD, 2019c).

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TABLE 3-6: STATE-LISTED FISH AND WILDLIFE SPECIES FOR ZAPATA COUNTY[A]

Amphibians			
Mexican burrowing toad	*Rhinophyrnus dorsalis*	Threatened	Not likely
Sheep frog	*Hypopachus variolosus*	Threatened	Does not occur
South Texas siren (large form)	*Siren sp. 1*	Threatened	Does not occur
Birds			
Common Black-Hawk	*Buteogallus anthracinus*	Threatened	Not likely[C]
Gray Hawk	*Buteo plagiatus*	Threatened	Not likely[C]
Northern Beardless-Tyrannulet	*Camptostoma imberbe*	Threatened	Likely[C]
Reddish Egret	*Egretta rufescens*	Threatened	Does not occur
White-faced Ibis	*Plegadis chihi*	Threatened	Does not occur
Wood Stork	*Mycteria Americana*	Threatened	Does not occur
Zone-tailed Hawk	*Buteo albonotatus*	Threatened	Likely[C]
Mammals			
Black bear	*Ursus americanus*	Threatened	Does not occur
Southern yellow bat	*Lasiurus ega*	Threatened	Does not occur
White-nosed coati	*Nasua narica*	Threatened	Not likely[C]
Mollusks			
Mexican fawnsfoot mussel	*Truncilla cognata*	Threatened	Does not occur
Salina mucket	*Potamilus metnecktayi*	Threatened	Does not occur
Reptiles			
Reticulate collared lizard	*Crotaphytus reiculatus*	Threatened	Likely
Texas horned lizard	*Phrynosoma cornutum*	Threatened	Likely
Texas indigo snake	*Drymarchon melanurus erebennus*	Threatened	Does not occur
Texas tortoise	*Gopherus berlandieri*	Threatened	Not likely

A According to USFWS (2019a) and TPWD (2019c, 2019d).
B Nomenclature follows Manning et al. (2008), Crother et al. (2012), Chesser et al. (2018), USFWS (2019a), and TPWD (2019c).
C Only expected to occur as a migrant, transient, or rare vagrant within the Study Area.

3.9.4.1 Northern Beardless-Tyrannulet

The Northern Beardless-Tyrannulet is a tiny gray flycatcher from the tropics that hops between branches, unlike other U.S. flycatchers. The species occurs in mesquite forests and dense woodlands near streams in the southwestern United States (Cornell Lab of Ornithology, 2019a). The Northern Beardless-Tyrannulet is rare to locally uncommon resident in the Lower Rio Grande Valley, northward through the Coastal Sand Plain (Lockwood and Freeman, 2014). It is likely for the species to occur within the Study Area.

3.9.4.2 Zone-tailed Hawk

The Zone-tailed Hawk is a lightly built hawk with slim wings and a fairly long tail when compared to a Red-tailed Hawk. The species utilizes cottonwood riparian corridors, upland desert, foothills, and mountain pine forest, especially where there is uneven terrain such as cliffs, mesas, or canyons (Cornell Lab of Ornithology, 2019b). The Zone-tailed Hawk is a rare migrant and winter resident in the Lower Rio Grande Valley and an irregular visitor there during the summer (Lockwood and Freeman, 2014). The Zone-tailed Hawk is likely to occur within the Study Area as a migrant.

3.9.4.3 Reticulate Collared Lizard

The reticulate collared lizard is a large lizard with a ground color of olive brown to olive green. When the lizard is warm a reticulate pattern of light lines is present; males have a brownish-orange throat and yellowish chest and groin with a narrow collar that may be broken into spots. Females do not have a collar. The reticulate collared lizard inhabits desert scrub largely devoid of rocks and other promontories and diverges from other collared lizards of the United States (Bartlett, 1999). The TXNDD element occurrence record identifies the species was last observed and recorded in 1983 in the Study Area (TPWD, 2019x). It is likely the lizard species would occur within the Study Area.

3.9.4.4 Texas Horned Lizard

The Texas horned lizard is a reddish, tan, or buff colored lizard dorsally with a white venter and four pairs of light-edged, irregular, dark spots on each side of the vertebral line. The Texas horned lizard inhabits sandy fields, dunes, and areas of open scrub. It often basks on the edges of paved roads in the early morning or late afternoon (Bartlett, 1999). It is likely the Texas Horned Lizard would occur within the Study Area.

3.10. Human Resources

3.10.1. Community Values and Community Resources

Under PURA § 37.0567(c)(4) "community values" are viewed as a factor in the consideration of transmission line certifications by the PUC. This term has not been formally defined by the PUC, but based on knowledge of several CCN proceedings, the staff of the PUC has adopted a working definition of community values as "a shared appreciation of an area or other natural resource by a national, regional or local community."

As part of this analysis community resources that may be important, such as parks and recreational areas, historical and archaeological sites and scenic vistas, within the Study Area were evaluated. Also, Quanta Environmental mailed letters to Federal, State and Local officials to collect information regarding these community resources and values. The input received from responses to these letters were utilized for the composition of the sections below.

3.10.2. Land Use

The Study Area is located in the southwestern region of Zapata County approximately 14 miles northwest of the City of Zapata, the county seat. The total land area of the County is approximately 1,058 square miles and the 2018 estimated population was 14,190. The Study Area does not lie within any incorporated area; however, the Census Designated Place of San Ygnacio, Texas lies approximately 2 miles southwest of the Project area. San Ygnacio does not appear in the U.S. Census estimates for 2018. The most recent data from 2010 show the population of San Ygnacio to be 667 individuals. (U.S. Census Bureau, 2019). The landscape of the Study Area consists of rolling hills dominated by brushlands with interspersed grasslands.

The Study Area is within South Texas State Planning Region No. 4 of the South Texas Development Council (STDC) which serves Jim Hogg, Starr, Webb and Zapata Counties. This Region covers approximately 6,799 square miles and serves a population of approximately 359,659 individuals. The STDC is an instrument by which local governments are encouraged to join and cooperate with each other to accomplish goals which are set by the Board. This allows for the promotion of activities to improve health, safety and general welfare of the participating regions, and allows for the STDC to take an active role in alleviating problems. The STDC programs for the region include those assisting with community and economic development, criminal justice issues, 911 planning, aging services and waste and water management (Texas Association of Regional Councils, 2019).

The Study Area lies within the Zapata County Independent School District (ISD) which administers six schools, serving approximately 3,500 students (Texas Education Agency, 2019). Five of the ISD schools are located in the City of Zapata and one is located in San Ygnacio. No schools are located within the Study Area (National Center for Education Statistics, 2017-2018 school year).

The Study Area is located within a rural portion of the County and is dominated by shrubland (30,133 acres) and grass/pasture (21,643 acres) which make up 94% of the Area. Development makes up approximately 4% of the Study Area (2,542 acres) and is chiefly residential (US Department of Agriculture [USDA], 2018a).

3.10.3. Recreation

Upon reviewing federal, state, and local maps, the Texas Outdoor Recreation Plan (TORP), internet searches and field reconnaissance, no federal, state, county or municipal park, forest/grassland, wildlife refuge, wildlife management area, or preserve was found within Zapata County (TPWD, 2019g; National Park Service, 2019; National Forest Service, 2019; USDA, 2019). Extensive hunting opportunities exist in Zapata County throughout all seasons of the year (Texas State Historical Association, 2019). Other recreational activities that might occur in the Study Area include hiking, wildlife viewing and bird

watching. Each of these activities in the Study Area would need to be conducted on private property. There are no properties within the Study Area that are open to the public for these uses.

Oil was discovered in Zapata County in 1919 and the first commercial oil and gas wells were drilled in the Mirando Valley in the 1920s. By 2004 more than 257,00 barrels of oil and 296,265,484 cubic feet of natural gas were produced in the County (THSA, 2019). Current Data from the RRC shows that there are 107 oil and gas wells within the Study Area. Of those wells 90 are producing, 13 are abandoned, and 4 have an unknown status (RRC, 2019b).

3.10.4. Agriculture

The Study Area is dominated by shrubland and grass/pasture for land use with the grass/pasture potentially utilized for livestock production. Approximately 2% of the Study Area is comprised of vegetative agricultural products, chiefly sorghum, winter wheat, and hay or alfalfa (USDA, 2018). This is consistent with USDA data from 2017 which states that 93% of production in Zapata County is attributed to livestock, poultry and products, whereas crops attribute to only 7% of production.

3.10.5. Transportation and Aviation

Directly outside of the Study Area to the west is U.S. Highway (Hwy) 83, which runs north to south. FM 3169 runs southwest to northeast along the southern border of the Study Area. Local and county roads located in the Study Area are Camino del Poterito, Vetland Road and Don Manuel Drive.

There are no FAA-registered airports, heliports or private air strips within the Study Area. The Corralitos Airport is the closest airport to the Study Area at approximately 6,800 feet northwest along U.S. Hwy 83 (TxDOT Texas Airport Directory, 2019; FAA, 2019).

3.10.6. Communication Towers

No commercial AM radio transmitters occur within the Study Area but one FM radio transmitter, microwave tower, or other electronic installation is located within the Study Area (AntennaSearch, 2019; FAA 2019; FCC 2019). There are cellular towers that run along U.S. Hwy 83 to the west of the Study Area.

3.10.7. Utilities

The existing ETT Lobo to North Edinburg 345-kV electrical transmission line traverses the western portion of the Study Area and will connect to the proposed Project at the proposed northwest end point. AEP Texas has a 138-kV line (Zapata to Rio Bravo) that parallels the east side of the ETT Lobo to North Edinburg 345-kV line within the Study Area. The Study Area is also part of the JV Borgeo Oil Field, an active gas field, and approximately 86 miles of primarily gathering pipelines are located within the Study Area (RCC, 2019). There are currently no wind turbines within the Study Area, though a review of

available FAA data shows that several Notices of Construction or Alteration (Form 7460-1) have been filed for proposed structures in the Study Area (FAA, 2019).

3.10.8. Aesthetic Values

PURA § 37.056(c)(4) considers aesthetics when evaluating transmission facilities for approval. Aesthetics typically refers to the natural beauty found in a landscape and is a subjective value. This document attempts to define and measure those aspects, which could be considered part of the Study Area's aesthetic qualities. This section considers the potential effects of the location of the Consensus Route on areas that can be considered scenic as well as the scenic enjoyment of designated recreation areas.

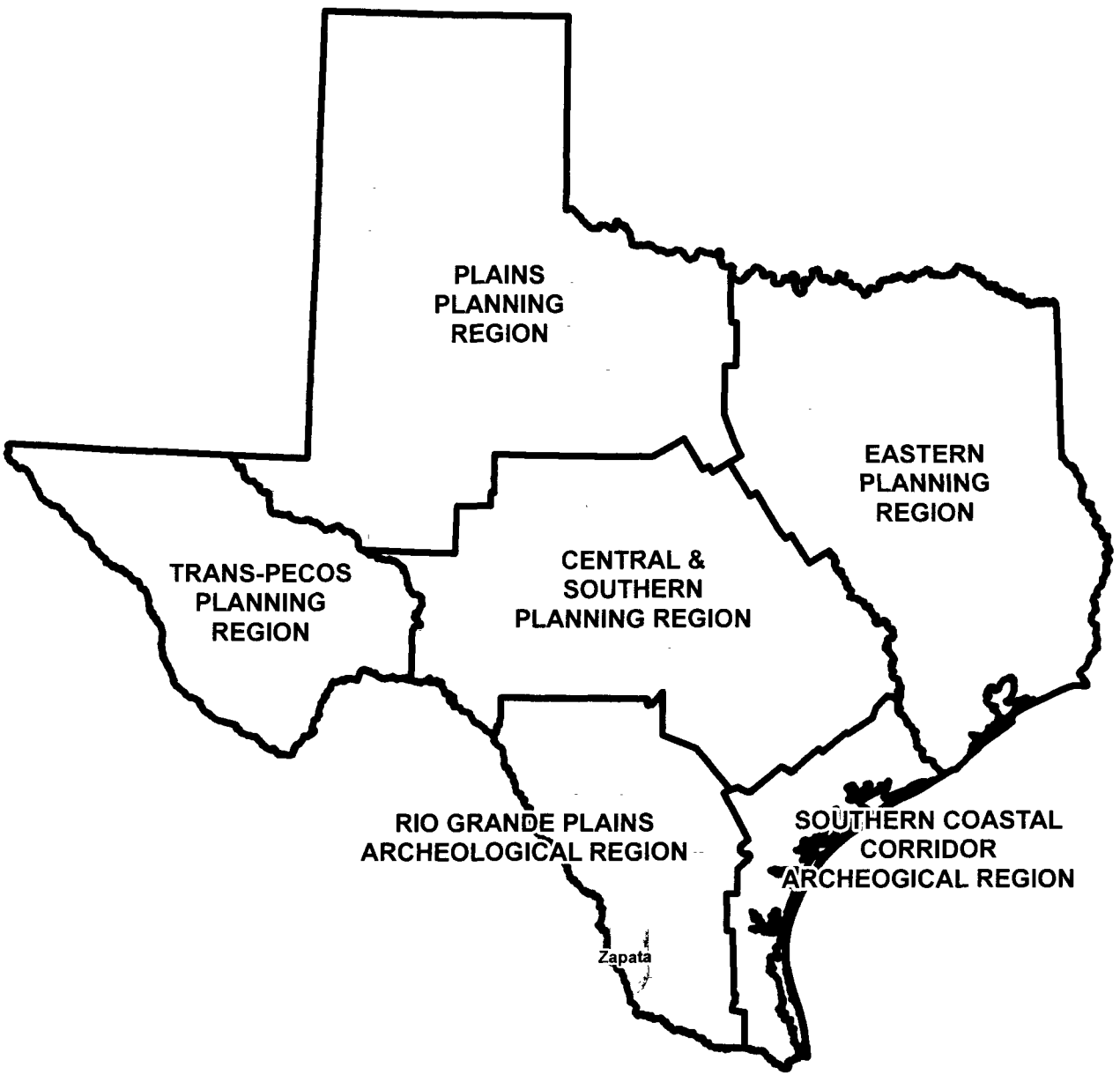
The Study Area does not contain any publicly accessible lands, so only the view from the major roadway, FM 3169 was analyzed for the proposed route. Factors taken into consideration for this analysis included:

- Topographical information (hills, valleys, etc.)
- Prominence of water in the landscape
- Vegetation variety (forests, pasture, etc.)
- Diversity of scenic elements
- Degree of human development or alteration
- Overall uniqueness of the scenic environment compared to the larger region

FM 3169 runs along the southern border of the Study Area in a southwest to northeast orientation. The proposed transmission line ROW is approximately 0.7 miles from FM 3169.

3.11. Cultural Resources

Zapata County is located in the Rio Grande Plains Planning Region as delineated by the THC (Mercado-Allinger et al., 1996, Figure 3-4). The county is part of the South Texas prehistoric archeological region as defined by Black (1989). The South Texas Plains Archeological Region is poorly understood due to unique site formation processes as well having witnessed few systematic investigations. Meaningful excavation of south Texas prehistoric sites is complex due to the patterning of many open occupation sites in the region (Hester, 1995; Karbula, King and Stotts, 2007). These sites manifest as laterally extensive occupation areas with temporally separated components that are also separated horizontally and rarely overlap. Other open occupation sites in upland settings occur on stable surfaces with very shallow, deflated cultural deposits that are impossible to separate out into time frames (Hester, 1995; Karbula et al, 2007). Few deep stratified, in-situ occupation sites have been excavated in south Texas. This is possibly the result



0 25 50 100
Miles

QUANTA ENVIRONMENTAL

PREPARED BY QPSE

Figure 3-4
Location of Zapata County in Relation to the Cultural Resources Planning Regions of Texas
Reloj del Sol 345-kV Interconnection Project
Zapata County, Texas

Source: ESRI Mercado-Allinger et al. (1946), QPSE

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of both settlement patterning and depositional context (Black, 1989). Additional site types include lithic procurement and reduction sites, rockshelters, lithic caches and burials.

Synthesis of the South Texas plains archaeological region are constructed by Hester (1980), Hall et al. (1986) and Black (1989). More recently, Hester (1995, 2004) has refined these syntheses in a general overview of the culture history of the region (Karbula et al. 2007). Mercado-Allinger et al. (1996) and Pertulla 2004 offer the most up to date syntheses. The cultural sequence adapted from Black (1989) and Hester (1995) is based on four time periods roughly parallel to those in central Texas. These time periods include: Paleoindian (11,200-8000 radiocarbon years before present [B.P.]), Archaic (8000-1,200 B.P.), Late Prehistoric (1,200-400 B.P.) and Protohistoric (400-300 B.P.). These divisions are marked by shifts in subsistence strategies and technological innovations visible in the archeological record and through documented oral and written histories. These technological changes reflect further changes in broader patterns of environment and culture. The following sections present a brief overview of the region's cultural history and the associated archeological and historic resources that could potentially be located within the Study Area.

3.11.1. Prehistoric Cultural Chronology

Much of the prehistoric data on south Texas derives from the Choke Canyon reservoir investigations (Karbula et al., 2007). The entire south Texas cultural chronology is documented in the Choke Canyon reservoir. Only a handful of Paleoindian sites have been recorded at Choke Canyon and are mainly shallow surface sites suggesting sparse and highly mobile Paleoindian occupations (Hall et al., 1986; Karbula et al., 2007). Hester (1980) suggests that erosion and shifting river channels have destroyed much of the already ephemeral Paleoindian sites. The Early Archaic presence is likewise poorly represented in this region. There are indications of stone hearths and a heavy reliance on processed plant foods and gathered aquatic resources and a dearth of hunting implements such as projectile points. The archaeology of Choke Canyon suggests there is a steady population increase from the Middle to Late Archaic cultural intervals. Site types and artifacts increasingly demonstrate a reliance on plant foods and small mammal consumption (Karbula et al., 2007). The number of burned rock midden sites increases along with occurrences of ground stone, flakes tools and distally beveled gouges (Hall et al., 1986; Karbula et al., 2007).

Extrapolation of data from adjacent regions is also useful in the reconstruction of the south Texas cultural historical sequence. Suhm, Krieger and Jelks (1954) used artifact collections and other data to type Archaic and Late Prehistoric assemblages as the Falcon and Mier assemblages, respectively (Quigg and Cordova, 1999). The Falcon Focus exhibits archaic surficial artifacts recovered from open camp sites near the Zapata and Rosita terraces along the Rio Grande River. The most common diagnostic artifact is the unnotched, triangular Tortugas dart point, in association with large crude fist axes, triangular knives, heavy

end scrapers, and gouges (Quigg and Cordova, 1999; Karbula et al., 2007). These sites are common in south Texas and represent a population increase in the region.

The Mier Focus is a continuation of the earlier Falcon Focus (Suhm et al., 1954). The most common diagnostic artifact is the unnotched Tortugas and Abasolo projectile points, in addition to the smaller Matamoros and Catan arrow points (Karbula et al., 2007). According to Quigg and Cordova (1999), limited excavations in this region of south Texas have failed to clarify the relationship or transition between the Falcon and Mier Foci. As in other parts of Texas, sites of the Late Prehistoric and Protohistoric periods in south Texas demonstrate a radical shift in technology with the abandonment of the dart point and gouge tool kit and adoption of the arrow point and ceramic technology.

3.11.2. Historic

Zapata County, bordered on the north by Webb County, Jim Hogg and Starr Counties to the east, and Mexico to the west was named for local rancher Antonio Zapata. Captain Miguel de la Garza Falcon let the first European exploration of the region in 1747, when he led a group down the north bank of the Rio Grande River from the site of present day Eagle Pass to the mouth of the river (Sanchez, 1994; Fleming, 1998,; Garza and Long 2001,; Karbula et al., 2007). Although Garza described the land as "barren, with little or no water, scanty grass...and unfit for settlement due to the lack of a water supply", the first settlement of Nuestra Senora de los Delores Hacienda was founded in 1750, a few miles from the present day San Ygnacio (Garza and Long, 2001). According to McCulloch et al. (2001) lifestyles of local Native Americans became dominated due to the establishment of permanent Spanish settlements in south Texas. Ranching was the primary industry in the early years. Fleming (1998) states only a few large ranches were present along the Rio Grande River, with most ranches being small stock farms during the early Spanish settlement. In 1821, the future Zapata County, along with other settlements between the Nueces and the Rio Grande Rivers became part of the Mexican State of Tamaulipas (Garza and Long 2001).

There were numerous small groups of American Indians living in south Texas and northeastern Mexico when Spanish explorers arrived. Salinas (1990) describes how the Spanish explorers referred to the different Indian groups as "Carrizos." The Carrizo groups were further distinguished by their location east and west of the Rio Grande River (Karbula et al., 2007). Some of the American Indian settlements near the present-day Falcon Reservoir included the Malaguitas, western Carrizos, the Borrado, and the Tepemaca (Garza and Long, 1996). The Malaguitas inhabited the area near the present-day Starr and Zapata County line. The western Carrizos inhabited the area west of the Falcon Reservoir, along the Rio Salado, east of Lampazos in Nuevo Leon (Garza and Long, 1996).

Claimed by both Texas and Mexico, the region was disputed territory from the time of the Texas revolution until the Mexican war. Despite political turmoil in the region and continual raids by Comanches, apaches

and other Indians, by 1848 thirty-nine *porciones* and 15 other tracts of land had been granted to individuals by either Spanish authorities or by the Mexican government. In 1839, Henry Redmond, who was one of the earliest Anglo-Americans in the region, filed a claim for a headright. A small settlement grew at that site which became known as Habitacion. This settlement was renamed Bellville in 1858, and eventually became known as Zapata, the County seat of Zapata County. The County itself was established by legislative measure on January 22, 1858, following the 1858 Treaty of Hidalgo, in which Texas laid claim to the region.

With a population of 1,248 before the Civil War, Zapata County had been known as a haven for outlaws (Karbula et al., 2007). "After the war, both Mexican and American outlaws made frequent raids on Zapata County ranches, stealing cattle and horses and sometimes killing the inhabitants (Garza and Long, 2001). In 1875, following the killing of several county officials, Governor Richard Coke declared that all judicial proceedings be moved to neighboring Webb County until order could be restored. Ranching remains the dominant occupation at the time, with an increased reliance on sheep ranching. By the 1890s most ranchers had turned to goat ranching. Goats were better adapted to the harsh climate and sparse vegetation, and by 1910, mohair exportation was a chief source of revenue for the county. Prior to the 1900s, farming had largely been subsistence led by corn production. After 1900, there was an increased emphasis on commercial farming crops such as cotton, with local farmers producing 2000 bales annually by 1920.

The first commercial oil and gas wells were drilled in 1919 and 1920. In 1931, a toll bridge was constructed between Zapata and Guerrero (Tamaulipas, Mexico), followed by the introduction of a water system to the county seat in 1932. A few years later, U.S. Highway 83 connected Brownsville and Laredo, affording Zapata County access to outside markets for the first time. Additionally, many other county roads were graded and improved. As the county was beginning to boom, the Great Depression hit, and Zapata County and nearby farmers suffered from falling crop and livestock prices. Following World War II, ranching once again emerged as the dominant industry. Many other important changes took place during the post-war years in Zapata County, including the construction of the Falcon Reservoir. The planning stages for the project were initiated in the late 1940's and to oversee the efforts, the International Boundary and Water Commission was formed (USIBWC). The selection of the Starr/Zapata County line for the dam location meant that more than 115,000 acres in Zapata County would be inundated (Garza and Long, 2001; McCulloch et al., 2001). Nevertheless, the Falcon Reservoir provided a boom to the county's economy, fostering tourism, one of the County's largest sources of income by the 1960's. Lakeshore developments became the focus of both commercial and social activity and for the next three decades tourism, ranching, oil and gas were Zapata's County's leading industries (Garza and Long, 2001; Karbula et al., 2007).

3.11.3. Literature and Records Review

Quanta Environmental conducted an examination of the THC Texas Archeological Sites Atlas to identify previously conducted cultural resources investigations and previously recorded archeological sites and other designated non-archeological historic resources including NRHP-listed properties and districts, State Antiquities Landmarks (SALs), historic-age cemeteries, Official Texas Historical Markers (OTHMs), and Recorded Texas Historic Landmarks (RTHLs), within the Study Area. One previously recorded archaeological site is recorded within the Study Area (41ZP980). There is no information available on the ATLAS site 41ZP980 other than its mapped location. No previous cultural resource investigations or additional resources were identified within the Study Area. Site 41ZP980 is located well south of the proposed Project.

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4. ENVIRONMENTAL IMPACTS OF THE PROJECT

The potential and anticipated impacts to natural, human, and cultural resources resulting from the proposed Project are discussed below by subject area.

4.1. Impact on Natural Resources

4.1.1. Impact of Physiography and Geology

Construction of the proposed transmission line will have no significant effect on the physiographic or geologic features and resources of the area. Structure assembly would require removal and minor disturbance of small amounts to near-surface materials. The Consensus Route will have no measurable impacts to the geologic resources or features. Therefore, the Project will have no significant impact on mineral resources in the Study Area.

4.1.2. Impact on Soils

The construction and operation of transmission lines typically create minimal long-term adverse impacts on soils. The major potential impact upon soils from transmission line construction is erosion and soil compaction. The potential for soil erosion is generally greatest during the initial clearing of the ROW; however, erosion control measures during the clearing and construction process will be employed. Where existing land cover includes woody/brushy vegetation within the ROW, most of this vegetation will be removed to provide adequate space for construction activities and to minimize corridor maintenance and operational concerns. However, when vegetation can be left intact and/or timber matting used safely during construction, this approach would be used to limit the disturbance of soils by the necessary movement of heavy equipment.

Construction of the transmission line would require minimal amounts of clearing in areas that have already been cleared for existing travel lanes and pipeline ROWs. The most important factor in controlling soil erosion associated with construction activity is to revegetate areas that have potential erosion problems immediately following construction. Natural succession would revegetate most of the ROW. Impacts from soil erosion caused by construction activity would be minimized due to the implementation of BMPs designed in the SWPPP. Areas where construction activity has occurred will be restored and revegetated in accordance with the SWPPP and the PUC final order.

4.1.3. Impact on Water Resources

4.1.3.1. Surface Water

Construction and operation of the transmission line would have minimal adverse impact on the surface water resources of the area. The Consensus Route would span all streams. Potential impacts from any construction project include short-term disturbances resulting from construction activities, which would

result primarily from increased siltation from erosion and decreased water quality from accidental spills of petroleum and other chemical products. Additionally, activities such as clearing of vegetation may temporarily increase local stormwater runoff volumes and sediment loading. Potential impacts would be avoided whenever possible by spanning surface waters, diverting construction traffic around water resources via existing roads, and eliminating unnecessary clearing of vegetation.

Although impacts would be avoided to the extent practicable, some unavoidable impacts could occur. Reducing vegetation removal around surface water features and minimizing ground disturbance would minimize these impacts. The use of erosion control measures, such as silt fencing and selective clearing, and BMPs regarding the use of chemicals, would also minimize potential impacts. As such, impacts occurring from construction of the proposed transmission line would be short term and minor because of the relatively small area that would be disturbed at any one time, the short duration of the construction activities, the preservation of vegetation adjacent to surface water features where practicable, and the implementation of BMPs designed in the SWPPP to control runoff from construction areas. Contractors will also make efforts during construction for proper control and handling of any petroleum or other chemical products.

The measurements of the various criteria used in the environmental analysis of the route for this Project are tabulated in Table 6-1 in Section 6.0 of this report. The National Hydrography Data (NHD) map indicates the Consensus Route crosses one intermittent stream; however, field reconnaissance did not identify any stream crossings. The Consensus Route does not parallel any streams within 100 feet, and does not cross open water (playa lakes, ponds, etc.).

Generally, surface water resources do not present a major constraint to transmission line construction, unless navigable river crossings or impacts to wetlands occur that would warrant USACE permitting, or areas that would require extensive woodland clearing near streams, which would present potential erosion control problems. However, navigable river crossings, extensive contiguous wetland systems, or areas requiring extensive woodland clearing near streams do not exist along the Consensus Route.

4.1.3.2. Floodplains

FEMA FIRM maps indicate the Consensus Route intersects flood hazard areas at two locations for a total of approximately 4,345 feet. The Consensus Route would span flood hazard areas to the maximum extent possible; however, several structures would be located within the flood hazard areas.

Potential impacts from any construction project include short-term disturbances resulting from construction activities, which would result primarily from increased siltation from erosion and decreased water quality from accidental spills of petroleum and other chemical products. Additionally, activities

such as clearing of vegetation may temporarily increase local stormwater runoff volumes and sediment loading. Potential impacts would be avoided whenever possible by spanning, diverting construction traffic around water resources via existing roads, and eliminating unnecessary clearing of vegetation. Reducing vegetation removal around surface water features and minimizing ground disturbance would minimize these impacts. The use of erosion control measures, such as silt fencing and selective clearing, and BMPs regarding the use of chemicals, would also minimize potential impacts. As such, impacts occurring from construction of the proposed transmission line would be short term and minor because of the relatively small area that would be disturbed at any one time, the short duration of the construction activities, the preservation of vegetation adjacent to surface water features where practicable, and the implementation of BMPs designed in the SWPPP to control runoff from construction areas. Contractors will also make efforts during construction for proper control and handling of any petroleum or other chemical products.

4.1.3.3. Groundwater

No adverse impacts to groundwater are expected to occur from the construction and operation of the proposed transmission line. The amount of recharge area that would be disturbed by construction is minimal when compared to the total amount of recharge area available for the aquifer systems in the region. Additionally, if accidental spillage of fuel, lubricants, or other petroleum products occurred from normal operation of heavy equipment during construction activities, it would be unlikely to result in any groundwater contamination. Any accidental spills would be promptly handled in accordance with State and Federal regulations. Contractors will take necessary precautions to avoid and minimize the occurrence of such spills.

4.1.4. Impact on the Ecosystem

4.1.4.1. Vegetation

Impacts to vegetation resulting from the construction and operation of transmission lines are primarily associated with the removal of existing woody vegetation within the ROW and conversion to herbaceous vegetation. The amount of vegetation cleared from the transmission line ROW would be dependent upon the type of vegetation present and whether the ROW will be completely new or involve widening existing ROW. For example, the greatest amount of vegetation clearing generally occurs in wooded areas, whereas cropland and grassland usually requires little to no removal of vegetation.

Approximately 59 percent of the Consensus Route crosses lands dominated by Woodland and Shrubland; therefore, clearing of trees and shrubs will be necessary for construction. The linear extent of plant communities crossed by the Consensus Route was determined using digital aerial imagery, and the length across potential water bodies was estimated by referencing USFWS NWI and NHD maps (Table 6-1 in Section 6.0). Vegetation community types within the ROW along the Consensus Route were verified in

the field. Regarding woody vegetation communities, the Consensus Route crosses approximately 16,768 feet of woodland and shrubland that would require removal.

Construction within the ROW would be performed to minimize adverse impacts to vegetation and to retain existing ground cover wherever practicable. Additionally, ETT will minimize damage to local vegetation and retain native ground cover wherever practicable. Clearing will occur only where necessary to provide access and working space and to protect conductors. Where necessary, soil conservation practices will be undertaken to protect local vegetation and ensure successful revegetation for areas disturbed during construction.

4.1.4.2. Aquatic Resources

Impacts to aquatic ecosystems from transmission line construction are generally minor. Aquatic features along the Consensus Route, such as streams, can generally be spanned. The implementation of sedimentation controls, as prescribed in the Project-specific SWPPP, during construction will help to minimize erosion and sedimentation into area streams. Potential impacts include physical habitat loss or modification, increased runoff, erosion and sedimentation, turbidity, and spills of petroleum or other chemical products. However, all these tend to be short-term effects and will vary with the intensity and timing of the construction along the Consensus Route. Contractors will make efforts during construction for proper control and handling of any petroleum or other chemical products.

Physical habitat loss or modification could result whenever access road crossings intercept a drainage system, through sedimentation due to erosion, increased suspended solids loading, or accidental petroleum spills directly into a creek, pond, or other aquatic feature; however, permanent water sources are not crossed by the Consensus Route.

Typically, the main considerations regarding potential impacts to aquatic systems include the length across wetlands and open water, and length of ROW paralleling (within 100 feet) streams. The NHD map indicates the Consensus Route does cross one intermittent stream; however, field reconnaissance did not identify any stream crossings. Potential water bodies would be spanned by the transmission line and, therefore, no waters of the U.S. would be impacted. Precautions would be taken throughout the construction process to avoid and minimize impacts to waterbodies. Placement of approved BMPs for construction and minimization of erosion in disturbed areas would help dissipate the flow of runoff. Placement of silt fences or hay-bale dikes near disturbed areas would also help prevent siltation into nearby waters of the US.

4.1.4.3. Wildlife

The impacts of transmission lines on wildlife include short-term effects resulting from physical disturbance during construction, as well as long-term effects resulting from habitat modification, fragmentation, or loss. The net effect from transmission line construction on local wildlife is typically minor. The following section provides a general discussion of the effects of transmission line construction and operation on terrestrial wildlife, followed by a discussion of the possible impact of the Consensus Route in the following subsections.

Any required clearing or other construction-related activities would directly or indirectly affect most animals that reside within or traverse the transmission line ROW. Heavy machinery may adversely affect smaller, low-mobility species, particularly amphibians, reptiles, and small mammals.

If construction occurs during the breeding season (generally spring to fall), construction activities may adversely affect the young of some species. Heavy machinery may cause soil compaction, which may adversely affect fossorial animals (i.e., those that live underground). Mobile species, such as birds and larger mammals, may avoid initial clearing and construction activities and move into adjacent areas outside the ROW. Construction activities may temporarily deprive some animals of cover and potentially subject them to increased natural predation. Wildlife in the immediate area may experience a slight loss of browse or forage material during construction; however, the prevalence of similar habitats in adjacent areas and vegetation succession in the ROW following construction would minimize the effects of these losses.

Transmission line structures will be designed in compliance with the Avian Power Line Interaction Committee (APLIC) standards, as defined in *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC, 2012). As such, the danger of electrocution to birds from this Project is anticipated to be insignificant. Some avian species may use transmission line structures or wires for perching and roosting locations; however, this is not the designed intent of those facilities.

The transmission line (both structures and wires) could present a hazard to flying birds, particularly, migrants. Collision may result in disorientation, crippling, or mortality (New York Power Authority, 2005). Mortality is directly related to an increase in structure height; number of guy wires, conductors, and ground wires; and use of solid or pulsating red lights (Erickson et al., 2005). Birds are known to be attracted to non-flashing red lights and less attracted to flashing lights (FCC, 2015). In addition to lighting concerns, collision hazards are greatest near habitat "magnets" (e.g., wetlands, open water, edges, and riparian zones) and during the fall when flight altitudes of dense migrating flocks are lower in association with cold air masses, fog, and inclement weather. The greatest danger of mortality exists during periods of low ceiling, poor visibility, and drizzle when birds are flying low, perhaps commencing or terminating

a flight, and when they may have difficulty seeing obstructions (Electric Power Research Institute, 1993). Most migrant species known to occur in the Study Area, including passerines, should be minimally affected during migration, since their normal flying altitudes are much greater than the heights of the proposed transmission structures (Willard, 1978; Gauthereuax, 1978).

The species most prone to collision are often the largest and most common resident birds in a given area (APLIC, 1994); however, over time, these birds learn the location of transmission lines and become less susceptible to wire strikes (Avery, 1978). Raptors, typically, are uncommon victims of transmission line collisions, because of their great visual acuity (Thompson, 1978). In addition, many raptors only become active after sufficient thermal currents develop, which is usually late in the morning when poor light is not a factor (Avery, 1978).

Power lines within the daily use areas of birds are responsible for most bird collisions occurring in such areas. Waterfowl species are vulnerable because of their low-altitude flight and high speed. Species that travel in large flocks, such as shorebirds, are also vulnerable, because dense flocking makes movement around obstacles more difficult for individuals in the flock (APLIC, 1994). Faanes (1987) reported that 97 percent of birds observed colliding with a power line did so with the ground (static) wire, largely because of attempts to avoid the conductors.

4.1.4.4. Recreationally and Commercially Important Species

Construction of the proposed transmission line is not expected to have significant impacts on terrestrial recreationally and commercially important species in the Study Area. Game species such as the white-tailed deer, mourning dove, white-winged dove, white-tipped dove, Eurasian collared dove, northern bobwhite, scaled quail, wild turkey, and blue-winged dove are very mobile and will leave the immediate vicinity during the initial construction phase. Wildlife in the immediate vicinity may experience a temporary loss of browse or forage vegetation during construction; however, the prevalence of similar habitats in adjacent areas will minimize the effect of the loss. The proposed Project would have little or no impact on hunting, and no fishing occurs within the Study Area.

4.1.4.5. Endangered and Threatened Species

Several plant species are Federally listed according to the USFWS. However, the ashy dogweed is the only plant species with the potential to occur and be adversely affected by the Project. Ashy dogweed is easily identifiable during the spring (March to May) while flowering although somewhat dependent on rainfall. The species is recognizable year-round and tolerates infrequent, low-impact ground disturbances. Measures will be taken to identify any species within the Project area prior to ground disturbance. Given that the Project area is well-traveled by private landowners, the potential for occurrence is unlikely.

According to USFWS (2019), there are Federally listed endangered or threatened species of potential occurrence in Zapata County: Gulf Coast jaguarundi, ocelot, and Texas Hornshell. These species have restricted habitats that lie outside of the Study Area and would not occur within the Study Area. Due to the lack of suitable habitat, they are not expected to be adversely affected by the Project.

TPWD listed two reptilian species with the potential to occur within the Study Area: reticulate collared lizard, and the Texas Horned Lizard. Both the lizards may reside within the Study Area, and if these species are present along the Consensus Route, individuals could experience minor temporal disturbance during construction efforts.

The avian species protected under the ESA that may migrate through the Study Area, such as Interior Least Tern, Piping Plover, and Red Knot and other bird species that receive protection under provisions of the BGEPA and MBTA, such as the Bald Eagle, may be affected by the presence of transmission lines. None of the listed avian species are likely to occur in the Study Area; however, the species may migrate or winter near the Rio Grande River to the south of the Study Area.

4.1.4.6. Critical Habitat

The Study Area does not contain any federally determined critical habitat for any endangered or threatened species. Therefore, the Project would have no impact on critical habitat.

4.2. Impact on Human Resources

4.2.1. Impact on Community Values

Adverse effects upon community values are defined as aspects of the proposed Project that would significantly and negatively alter the use, enjoyment, or intrinsic value attached to an important area or resource by a community. This assumes community concerns are identified with the location and specific characteristics of the Consensus Route and do not include possible objections to electric transmission lines in general.

Impacts on community values can be classified into two areas: (1) direct effects, or those effects that would occur if the location and construction of a transmission line results in the removal or loss of public access to a valued resource; and (2) indirect effects, or those effects that would result from a loss in the enjoyment or use of a resource due to the characteristics (primarily aesthetic) of the proposed line, structures, or ROW. Impacts on community values, whether direct or indirect, can be more accurately gauged as they affect recreational areas or resources and the visual environment of an area (aesthetics).

Impacts in these areas are discussed in detail in Sections 4.2.3 and 4.2.8 of this report, respectively.

4.2.2. Impact on Land Use

Land-use impacts from construction are determined by the amount of land (of varying use) displaced by the actual ROW and by the compatibility of electric transmission line ROW with adjacent land uses. During construction, temporary impacts to land uses within the ROW could occur due to the movement of workers and materials through the area. Construction noise and dust, as well as temporary disruption of traffic flow, may also temporarily affect residents in the area near the ROW. Coordination among contractors and landowners regarding access to the ROW and construction scheduling would minimize these disruptions.

4.2.2.1. Habitable Structures

Generally, one of the most important measures of potential land use impact is the number of habitable structures located within a specified distance of a route centerline. Habitable structures are defined by 16 TAC § 25.101(a)(3) as:

Structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis. Habitable structures include, but are not limited to, single-family and multifamily dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, and schools (PUC, 2015).

Review of aerial imagery and field reconnaissance of the Study Area and the Consensus Route determined that two habitable structures are located within 500 feet of the Consensus Route's centerline. Habitable structures within 500 feet of the Consensus Route are documented in Table 4-1 and Figure 2-2.

TABLE 4-1 HABITABLE STRUCTURES WITHIN 500 FEET OF THE CONSENSUS ROUTE

Habitable Structure ID	Structure	Approximate Distance from Centerline (feet)
1	Single Family Residence	200
2	Single Family Residence	158

4.2.2.2. Utilizing/Paralleling Existing Transmission Line ROW

Utilizing existing transmission line ROW generally results in the least impact to land use followed by building parallel to existing transmission line ROW. Utilizing existing transmission line ROW of sufficient width potentially eliminates the need for additional clearing. Furthermore, building parallel to existing transmission line ROW, when compared to establishing a new ROW corridor, can also minimize

the amount of ROW to be cleared. This generally results in the least amount of impact to landowners, the environment, and the overall aesthetic quality of that area. In fact, the factors listed by 16 TAC § 25.101(b)(3)(B) to be considered in the selection of alternative routes include:

- Whether the routes parallel or utilize existing compatible ROW for electric facilities, including the use of vacant positions on existing multiple-circuit transmission lines
- Whether the routes parallel or utilize other existing compatible ROW, including roads, highways, railroads, or telephone utility ROW
- Whether the routes parallel property lines or other natural or cultural features

The Consensus Route does not utilize any existing transmission line ROW for this Project, nor does the Consensus Route parallel existing transmission line ROW.

4.2.2.3. Paralleling Other Existing Compatible ROW

Paralleling other existing compatible ROW (roads, highways, etc.) is also generally considered to be a positive routing criterion, one that usually results in fewer impacts than establishing a new ROW corridor within an area and is included in the PUC's transmission line certification criteria. The Consensus Route does not parallel existing compatible ROW.

4.2.2.4. Paralleling Property Lines

Another important land use criterion is the length of property lines paralleled. In the absence of existing ROW to follow, paralleling property or fence lines minimizes disruption to agricultural activities and creates less of a constraint to future development of a tract of land. In this regard, the Consensus Route parallels approximately 28,283 feet of property lines.

4.2.3. Impact on Recreation

The Project is not anticipated to have any impacts to recreational land as all the lands along the Consensus Route are privately owned and there are no parks or recreation areas crossed by or located within 1,000 feet of the Consensus Route.

4.2.4. Impact on Agriculture

Construction-related activities would slightly impact agricultural production, depending upon the timing of construction related to the local planting and harvesting schedule. Impacts to agricultural land uses can generally be ranked by degree of potential impact; forested land has the highest degree of impact, followed by cultivated cropland, and the least-potential impact occurring in areas where cultivation is not the primary use (pastureland/rangeland).

The Consensus Route crosses approximately 11,515 feet of grassland and approximately 16,768 feet of shrubland. The Consensus Route does not cross any portions of cropland irrigated by center-pivot or other aboveground mechanical means.

4.2.5. Impact on Transportation and Aviation

Potential impacts to transportation could include temporary disruption of traffic and conflicts with proposed roadway or utility improvements and may include increased traffic during construction of the proposed Project. However, the Project would generate only minor construction traffic at any given time or location. This traffic would consist of construction employees' personal vehicles, truck traffic for material deliveries, trucks for structure foundation work, and mobile cranes for structure erection. Such impacts, however, are usually temporary and short term. Road crossing permits and access permits will not be required from TxDOT prior to construction, as the Consensus Route does not cross a State-maintained roadway.

The proposed transmission line would have no significant effect on aviation operations within the Study Area. According to Federal Aviation Regulations (FAR), Part 77, notification of the construction of the proposed transmission line would be required if structure heights exceed the height of an imaginary surface extending outward and upward at a slope of 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of a public or military airport having at least one runway longer than 3,200 feet (FAA, 2010). For a public or military airport having a runway shorter than 3,200 feet, notification would be required if structure heights exceed the height of an imaginary surface extending at a slope of 50 to 1 for 10,000 feet. Notification is also required for structure heights exceeding the height of an imaginary surface extending outward and upward at a slope of 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area for heliports.

No FAA-registered airport is located within 20,000 feet, one private landing strip is located within 10,000 feet, and no helipad is located within 5,000 feet of the Consensus Route. The proposed Project would have little to no effect on aviation operations in the Study Area.

4.2.6. Impact on Communication Towers

Based on publicly available data and field reconnaissance, there were no AM radio transmitters determined to be located within 10,000 feet of the Consensus Route. One FM radio transmitter, microwave tower, or other electronic installation was determined to be located within 2,000 feet of the centerline of the Consensus Route. Impacts are not anticipated by the proposed Project on the communication tower.

4.2.7. Impact on Utilities

The proposed Project would not be expected to significantly impact existing utilities within the Study Area. Based on available data and field reconnaissance, existing utilities will be avoided or spanned. Because the Project will not be utilizing or crossing existing transmission lines, no impact is expected to transmission lines within the Study Area.

4.2.8. Impact on Aesthetics

Aesthetic impacts, or impacts upon visual resources, exist when a transmission line system (i.e. ROW, lines, or structures) create an intrusion into, or substantially alter the character of, an existing scenic view. The significance of the impact is directly related to the quality of the view, in the case of natural scenic areas, or to the importance of the existing setting in the use or enjoyment of an area, in the case of valued community resources and recreational areas.

To evaluate aesthetic impacts, a field reconnaissance was conducted to determine the general aesthetic character of the area and the degree to which the proposed transmission line would be visible from selected areas. Although largely lacking in the vicinity of the Project, these areas generally include those of potential community value, parks and recreational areas, roads that traverse the Study Area. Measurements were made to estimate the length of the route that would fall within recreational or major highway foreground visual zones (FVZ) (0.5 mile, unobstructed). The determination of the visibility of the transmission line from various points was calculated from USGS maps and aerial imagery.

It is virtually impossible for a new transmission line not to have some visual impacts, and construction of the proposed 345-kV transmission line would have both temporary and permanent aesthetic effects.

Temporary impacts would include views of the actual construction (assembly and erection of the structures) and any clearing of the ROW. Where limited clearing is required, the brush and wood debris could have a temporary negative impact on the local visual environment. Permanent impacts from the Project would include the views of the structures and lines themselves as well as views of cleared ROW.

A transmission line (structures and wires) is within the FVZ if it is visible (i.e., not obstructed by terrain, trees, buildings, etc.) within 0.5 mile of an observer. The proposed transmission line generally runs parallel to RM169 for approximately 16,570, but the transmission line is located more than 6,000 feet from FM 3169. The end of the transmission line occurs approximately 6,850 feet from U.S. Hwy 83. The Project would have little or no effect on visual aesthetics. Based on publicly available data and field reconnaissance, one communication tower is found within the Study Area and is within 2,000 feet of the Consensus Route. The Project would have little to no effect to communication towers are anticipated by the proposed Project.

4.3. Impacts on Cultural Resources

Any construction activity has the potential for adversely impacting cultural resource sites. Although this transmission line Project is currently being conducted without the need for Federal funding, permitting or assistance, Federal guidelines established under Section 106 of the National Historic Preservation Act of 1966, as amended, provide useful standards for considering the severity of possible direct and indirect impacts. According to the Secretary of the Interior's Guidelines for protection of cultural resources (36 CFR 800), adverse impacts may occur directly or indirectly when a project causes changes in archeological, architectural, or cultural qualities that contribute to a resource's historical or archeological significance. Direct impacts to cultural resource sites may occur during the construction phase of the proposed transmission line and cause physical destruction or alteration of all or part of a resource. Typically, direct impacts are caused by the actual construction of the line or through increased vehicular and pedestrian traffic during the construction phase. Indirect impacts include those effects caused by the Project that are farther removed in distance, or that occur later in time. Historic buildings, structures, landscapes, and districts are among the types of resources that might be adversely impacted by the indirect impact of the proposed transmission towers and lines.

4.3.1. Mitigation

The preferred form of mitigation for impacts to cultural resources is avoidance. An alternative form of mitigation of direct impacts can be developed for archeological and historical sites with the implementation of a program of detailed data recovery. Indirect impacts on historical properties and landscapes can be lessened through careful design and landscaping considerations. Relocation may also be possible for some historic structures. Additionally, if contractors encounter any cultural resources, including human remains, during construction, work should cease immediately in the vicinity of the resource, the discovery reported to the THC, and action taken as directed by the THC.

4.4. Summary of Impact on Cultural Resources

The Study Area contains areas with a high probability for containing cultural resources; therefore, construction of the proposed transmission line has the potential to impact previously unrecorded cultural resources. One method utilized by archeologists to assess an area for the potential occurrence of cultural resources is the identification of high probability areas (HPAs). An HPA is an area considered to have a high potential for containing previously unrecorded cultural resources. The identification of HPAs is accomplished by examining USGS 7.5-minute topographic maps, aerial photography, or other relevant data sources. When identifying HPAs, the topography and the availability of water and subsistence resources are taken into consideration. Historic sites would be expected adjacent to historic roadways and in areas where structures appear on historic-age maps. Locations that are usually identified as HPAs for the occurrence of prehistoric sites include water crossings, stream confluences, drainages, alluvial terraces, wide floodplains, playa lakes, upland knolls, and areas where lithic or other subsistence resources could be found.

Several ephemeral streams are located in the west portion of the Study Area, which are feeder streams for the Rio Grande River, and also in the northeast portion of the Study Area. These areas exhibit recent Holocene Age alluvial

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sediments and eolian sands and represent high probability locations for surface oriented and shallowly buried prehistoric archaeological sites. The designation of HPAs were made based on review of Google Earth aerial photography (2020) for the proposed route. An archaeological survey of proposed Project has not been conducted. Approximately 3,000 linear feet of the Project runs adjacent to a small feeder stream and is considered a HPA. There are no recorded cultural resources located within 1,000 feet of the Consensus Route. The proposed Project will have no impacts on any previously recorded archaeological resources.

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5. PUBLIC INVOLVEMENT ACIVITIES

5.1. Correspondence with Agencies and Officials

Quanta Environmental contacted the following Federal, State and local agencies and officials by letter dated February 7, 2020, to solicit comments, concerns, and information regarding potential environmental impacts, permits, or approvals for the construction of the proposed 345-kV transmission line within the Study Area. A map of the Study Area was included with each letter. An example of the letter mailed to the agencies and officials and copies of the responses received are included in Appendix A (Agency Correspondence).

Federal

- Federal Emergency Management Agency
- International Boundary & Water Commission – US Section
- Natural Resources Conservation Service
- Natural Resources Conservation Service
- U.S. Army Corps of Engineers, Corpus Christi Field Office
- U.S. Army Corps of Engineers, Ft. Worth District Regulatory Division
- U.S. Border Patrol
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service

State

- Texas Commission on Environmental Quality – Laredo Division
- Texas Commission on Environmental Quality - Border Affairs
- Texas Historical Commission
- Texas General Land Office
- Texas Parks and Wildlife Department
- Railroad Commission of Texas
- Texas Water Development Board
- Texas Department of Transportation - Laredo District

- Texas Department of Transportation - Aviation Division
- Rio Grande Regional Water Authority

Local

- Zapata County
- Commissioner Olga M. Elizondo
- Lower Rio Grande Valley Development Council
- Zapata County Independent School District
- Rio Grande Regional Water Planning Group
- South Texas Development Council

As of the date of this document, written replies to the letters sent on February 7, 2020 have been received from FEMA, Laredo Sector of U.S. Border Patrol, the TCEQ Border Affairs, the GLO, and the Rio Grande Regional Water Planning Group. Comments and recommendations by the agencies will be taken into consideration throughout the routing process. Below is a summary of agency recommendations and responses received to date.

Region 6 of the FEMA recommended on March 10, 2020 that the Community Floodplain Administrator be contacted for the review and possible permit requirements of the Project.

The Laredo Sector of the Border Patrol responded on March 3, 2020 that currently there are no new projects or proposed developments in the Study Area under the jurisdiction of the Border Patrol or by other non-governmental agencies to their knowledge.

The TCEQ Border Affairs responded on March 9, 2020 to the request for information on land use, aesthetics, water quality and wetlands and other resources for the Project. TCEQ recommended requesting a Public Information Request through the TCEQ's database as other agency divisions/offices may be able to provide more accurate information relating the Project.

On March 5, 2020 the Rio Grande Regional Water Planning Group responded with the recommendation of contacting the Zapata County Judge, TPWD and the IBWC.

In addition to letters sent to the agencies, Quanta Environmental also reviewed the NDD Element Occurrence Records from the TPWD, the IPaC from the USFWS, and the TARL records and the THC Restricted Archeological Sites Atlas to verify or update cultural and natural resource records for the Study Area. All agency comments, concerns and information received were taken into consideration in the

preparation of this EA and the evaluation of the Consensus Route. Additionally, the information received from the agencies will be taken into consideration before and during construction of the Project.

5.2. Public Open-House Meetings

Fewer than 25 landowners would be entitled to receive direct notice of the CCN application; therefore, ETT did not hold a public open-house meeting prior to filing the application. Instead, the landowners were contacted directly, which has resulted in a Consensus Route for this Project.

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6. PROJECT ASSESSMENT

In assessing potential impacts of the Project, Quanta Environmental limited its evaluation to environmental considerations. Quanta Environmental professionals with expertise in different environmental disciplines (terrestrial and aquatic ecology, land use/planning, and cultural resources) assessed potential impacts of the Project based on research data collected for 38 separate environmental criteria; comments from local, State, and Federal agencies; and field reconnaissance. The amount or number of each environmental criterion measured along the Consensus Route is presented in Table 6-1.

The Project is located in the northwest portion of Zapata County, approximately 15 miles northwest from the center of the City of Zapata, which is the county seat. No incorporated city is located within the rural Study Area, which is dominated by shrubland and grassland. Development in the Study Area is primarily limited to single-family homes and farmsteads, with a small concentration of homes located in the northwestern portion of the Study Area. Two habitable structures are located within 500 feet of the Consensus Route. The Project would have little or no effect on habitable structures.

The Consensus Route, which is approximately 28,433 feet in length, does not cross any park or recreational area, and no park or recreational area is located within 1,000 feet of the Consensus Route.

The Consensus Route crosses approximately 11,515 feet of grassland and approximately 16,768 feet of shrubland, none of which contains aboveground mobile irrigation systems.

The Consensus Route crosses approximately 4,345 feet of 100-year floodplain as identified on FEMA FIRM maps. The Project would have little or no effect on 100-year floodplains.

There are no FAA-registered airfields located within 20,000 feet of the Consensus Route. However, one private airstrip was identified within 10,000 feet of the Consensus Route. No heliports were identified within 5,000 feet of the Consensus Route. The Project would have little or no effect on aviation operations in the Study Area.

No commercial AM radio transmitters occur within 10,000 feet of the Consensus Route but one FM radio transmitter, microwave tower, or other electronic installation is located within 2,000 feet of the Consensus Route.

The Consensus Route does not cross any State-maintained roadways. The proposed transmission line generally runs parallel to FM 3169 for approximately 16,570, but the transmission line is located more than 6,000 feet to the west of FM 3169. The end of the transmission line occurs approximately 6,850 feet from U.S. Hwy 83. The Project would have little or no effect on visual aesthetics.

Habitat for the Zapata bladderpod potentially occurs within the Study Area, but without sufficient rain and temperatures the Zapata bladderpod remains dormant and not likely impacted by the Project. Therefore, no impacts are expected to any federally listed or proposed federally listed species and consultation with USFWS is not expected to be necessary.

No previously recorded cultural resource sites are located within 1,000 feet of the Consensus Route centerline. The Consensus Route does cross approximately 3,000 feet of HPA.

TABLE 6-1: ENVIRONMENTAL DATA FOR CONSENSUS ROUTE ASSESSMENT

	Environmental Criterion	Route Data
Land Use		
1	Length of Route	28,433 feet
2	Number of habitable structures[A] within 500 feet of centerline	2
3	Length of ROW utilizing existing transmission line ROW	0
4	Length of ROW parallel to existing transmission line ROW	0
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc.)[B]	0
6	Length of ROW parallel to property lines (not following existing ROW)[C]	28,433 feet
7	Length of ROW across parks/recreational areas[D]	0
8	Number of additional parks/recreational areas[D] within 1,000 feet of ROW centerline	0
9	Length of ROW across cropland	0
10	Length of ROW across pastureland/rangeland	28,433 feet
11	Length of ROW across cropland or pastureland with mobile irrigation systems	0
12	Number of pipeline crossings	13
13	Number of transmission line crossings	0
14	Number of U.S. and State highway crossings	0
15	Number of FM/RM road crossings	0
16	Number of FAA-registered airfields within 20,000 feet of ROW centerline (with runway >3,200 feet)	0
17	Number of FAA-registered airfields within 10,000 feet of ROW centerline (with runway <3,200 feet)	0
18	Number of private airstrips within 10,000 feet of ROW centerline	1
19	Number of heliports within 5,000 feet of ROW centerline	0
20	Number of commercial AM radio transmitters within 10,000 feet of ROW centerline	0
21	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	1

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Aesthetics

22	Estimated length of ROW within foreground visual zone[I] of U.S. and State highways	0
23	Estimated length of ROW within foreground visual zone[J] of FM/RM roads	0
24	Estimated length of ROW within foreground visual zone[F] of parks/recreational areas[D]	0

Ecology

25	Length of ROW through brushland/shrubland	16,768 feet
26	Length of ROW through bottomland/riparian woodland	0
27	Length of ROW across potential wetlands[I]	0
28	Length of ROW across known habitat of endangered or threatened species	0
29	Number of stream crossings	1
30	Length of ROW parallel to (within 100 feet) streams	0
31	Length of ROW across open water (ponds, playa lakes[F] etc.)	0
32	Number of playa lake[F] crossings	0
33	Length of ROW across 100-year floodplains	4,345 feet

Cultural Resources

34	Number of recorded cultural resource sites crossed by ROW	0
35	Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline	0
36	Number of National Register of Historic Places (NRHP)-listed or determined-eligible sites crossed by ROW	0
37	Number of additional NRHP-listed or determined-eligible sites within 1,000 feet of ROW centerline	0
38	Length of ROW crossing areas of high archeological/historical site potential	3,000 feet

All length measurements in feet
A Single-family and multi-family dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis
B For purposes of this evaluation, pipelines were not considered a compatible corridor
C Property lines created by existing road, highways, or railroad ROW are not "double-counted" in the "length of route parallel to property lines" criterion.
D Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church
F 0.5 mile, unobstructed
I As mapped by the U.S. Fish and Wildlife Service National Wetland Inventory

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ENVIRONMENTAL

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QUANTA ENVIRONMENTAL

APPENDIX A

AGENCY CORRESPONDENCE

QUANTA
ENVIRONMENTAL

480 Wildwood Forest Dr
Suite 750
The Woodlands, Texas 77380
www quantaenv com

February 9, 2020

Addressee
Business Name
Address
City, State ZIP

Re: Request for Information
ETT Reloj del Sol 345-kV Interconnection
Zapata County, Texas

Dear XX:

Electric Transmission Texas, LLC (ETT) is proposing to design and construct a new single circuit 345-kilovolt (kV) transmission line in western Zapata County, Texas to interconnect a proposed wind generation development. The proposed Reloj del Sol Interconnection would be constructed as single-circuit 345-kV using tangent monopole structures. The proposed transmission line would be constructed at the north end of Los Potreritos Road tying into the existing ETT Lobo to North Edinburg 345-kV transmission line at Structure 251 HJK, to the proposed Reloj del Sol Wind Farm approximately 3,700 feet northwest of Farm-to-Market (FM) 3169 Please reference the proposed endpoint locations within the study area depicted on the attached map. The delineated Study Area encompasses approximately 18 square miles in Zapata County measuring approximately 3 miles from north to south and approximately 6 miles from west to east The proposed transmission line will be approximately 6.0 miles long and will require a 150-foot wide right-of-way.

Quanta Environmental Solutions (Quanta Environmental) is preparing an Environmental Assessment (EA) for the proposed project that will support ETT's application for a Certificate of Convenience and Necessity from the Public Utility Commission of Texas (PUCT). Quanta Environmental is in the process of collecting and evaluating environmental data for the study area. As part of this effort, we are asking that your agency/office relate any environmental or land use concerns that you may have regarding the siting and potential environmental effects from the construction of the proposed line in the designated study area, we would also appreciate receiving this information as well. Upon certification of the final route by the PUCT, ETT will then identify and obtain the necessary permits, if required, from your agency/office

Additionally, if any permits, easements, or other approvals by your agency/office are required, or if you are aware of any major proposed development or construction in the study area, we would also appreciate receiving this information as well

Your input on any of the following resources as they relate to your agency or office will assist the project team in evaluating the proposed project:

- Land use (current or proposed land development projects, park/recreation areas, etc)
- Aesthetics
- Water quality and wetlands
- Soils and geology
- Wildlife, vegetation, fisheries (including threatened and endangered species)
- Socioeconomics (population, employment, growth, current/future development)
- Cultural resources (historic and archeological sites)

- *Transportation and roads (airport and roadway expansions, construction, operations, and* maintenance)

Quanta Environmental would like to thank you in advance for your comments, which will be an important consideration in or assessment of potential environmental and land use impacts of the proposed transmission line If you have any questions concerning this project or our request for information, please contact me at bsmart@quantaenv com or (832) 791-5258. Your earliest reply will be appreciated.

Sincerely,

Brandy Smart
Project Manager

BS/bs

cc. Adam Wells, AEP
Randy Roper, ETT
Kensley Greuter, ETT
Matthew Walt, Dashiell Corporation

File

End Points
Existing ElectricTransmission Line
Study Area

DRAFT

0 2,000 4,000
Feet

QUANTA ENVIRONMENTAL
PREPARED BY
QPSE

Reloj del Sol
345-kV Interconnection
Electric Transmission Texas
Zapata County, Texas

Source: ESRI, Hart Energy Mapping and Data Services, REXTAG, USGS-National Hydrography Dataset (NHD), QPSE

Rev A 1/14/2020

Officials and Agencies Contact List
Reloj del Sol 345-kV Interconnection

Federal

Tony Robinson
Regional Administrator, Region VI
Federal Emergency Management Agency
FRC 800 North Loop 288
Denton, TX 76209-3698

Jayne Harkins, PE
Commissioner
International Boundary & Water Commission
U.S. Section
4191 North Mesa St.
El Paso, TX 79902-1441

Blas Saenz Jr.
Natural Resources Conservation Service
Zapata Service Center
707 Hwy 16
Zapata, TX 78076-1825

Salvador Salinas
State Conservationist
Natural Resources Conservation Service
101 South Main St.
Temple, TX 76501

Matthew Kimmel
Chief, Regulatory Field Office
U.S. Army Corps of Engineers,
5151 Flynn Parkway, Suite 306
Corpus Christi, TX 78411

Jennifer Walker
Chief, Regulatory
U.S. Army Corps of Engineers
Ft. Worth District Regulatory Division
819 Taylor St., Room 3A37
Fort Worth, TX 76102-0300

Feliz Chavez
Chief Patrol Agent
U.S. Border Patrol
Laredo Sector
207 West Del Mar Blvd.
Laredo, TX 78041

Ken McQueen
Regional Administrator, Region 6
U.S. Environmental Protection Agency
1201 Elm St., Suite 500
Dallas, TX 75270

Dawn Gardnier
Deputy Field Supervisor
U.S. Fish and Wildlife Service
Ecological Field Services Office
P.O Box 81468
Corpus Christi, TX 78468-1468

State

Jaime A. Garza
Regional Director, Region 16 Laredo
Texas Commission on Environmental Quality
707 East Calton Rd., Suite 304
Laredo, TX78041-3887

Victor Wong
Texas Commission on Environmental Quality
Border Affairs
707 East Calton Rd., Suite 304
Laredo, TX78041-3887

Mark Wolfe
Executive Director/Historic Preservation Officer
Texas Historical Commission
1501 Colorado St.
Austin, TX 78701

George P. Bush
Texas Land Commissioner
Texas General Land Office
1700 North Congress Avenue, Suite 935
Austin, TX 78701-7833

Carter Smith
Executive Director
Texas Parks and Wildlife Department
4200 Smith School Rd.
Austin, TX 78744

Laura Zebehazy
Program Leader
Wildlife Habitat Assessment Program
Texas Parks and Wildlife Department
4200 Smith School Rd.
Austin, TX 78744

Officials and Agencies Contact List
Reloj del Sol 345-kV Interconnection

Environmental Program Manager
Railroad Commission of Texas
P.O. Box 12967
Austin, TX 78711-2967

Jeff Walker
Executive Administrator
Texas Water Development Board
1700 North Congress Ave.
Austin, TX 78701

David Salazar, Jr., P.E.
District Engineer
Texas Department of Transportation
Laredo District
1817 Bob Bullock Loop
Laredo, TX 78043

Dan Harmon
Director
Texas Department of Transportation
Aviation Division
125 East 11th St.
Austin, TX 78701

Karran Westerman
Zapata County Appointee
Rio Grande Regional Water Authority
322 South Missouri Ave.
Weslaco, TX 78596

County

Judge Joe Rathmell
Zapata County
200 East 7th Ave. Suite 115
Zapata, TX 78076

Commissioner Olga M. Elizondo
Zapata County, Precinct 2
200 Est 7th Ave., Suite 115
Zapata, TX 78076

Ron Garza
Executive Director
Lower Rio Grande Valley Development Council
301 W Railroad
Weslaco, TX 78596

Local

Carlos Gonzalez, Jr.
Zapata County Independent School District
1302 Glenn St.
Zapata, TX 78706

Tomas Rodriguez
Chairman
Rio Grande Regional Water Planning Group
301 West Railroad
Weslaco, TX 78596

Robert Mendiola
Executive Director
South Texas Development Council
1002 Dickey Lane
Laredo, TX 78044-2187

U S Department of Homeland Security
FEMA Region 6
800 North Loop 288
Denton, TX 76209-3698

FEMA

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION 6
MITIGATION DIVISION

RE: Request for Information ETT Reloj del Sol 345-kV Interconnection, Zapata County, Texas

NOTICE REVIEW/ENVIRONMENTAL CONSULTATION

☐ We have no comments to offer. ☒ We offer the following comments:

WE WOULD REQUEST THAT THE COMMUNITY FLOODPLAIN ADMINISTRATOR BE CONTACTED FOR THE REVIEW AND POSSIBLE PERMIT REQUIREMENTS FOR THIS PROJECT. IF FEDERALLY FUNDED, WE WOULD REQUEST PROJECT TO BE IN COMPLIANCE WITH EO11988 & EO 11990.

Mario Gonzalez-Davis
P.O. Box 99
Zapata, TX 78076
(946) 765-9939

REVIEWER:

Colleen Sciano
Floodplain Management and Insurance Branch
Mitigation Division
(940) 383-7257

DATE: March 10, 2020

QUANTA
ENVIRONMENTAL

480 Wildwood Forest Dr.
Suite 750
The Woodlands, Texas 77380
www.quantaenv.com

20.3.57903

Date Rec'd	3/9/20
Rec'd by:	KR
Docket #	
Analyst	
RES	
EFC	
MIT	X
MSD	
NP	
Grants	
File	X
Suspense Date:	3/23/20

February 7, 2020

Tony Robison
Regional Administrator, Region VI
Federal Emergency Management Agency
FRC 800 North Loop 288
Denton, TX 76209-3698

Re: Request for Information
ETT Reloj del Sol 345-kV Interconnection
Zapata County, Texas

Dear Mr. Robison:

Electric Transmission Texas, LLC (ETT) is proposing to design and construct a new single circuit 345-kilovolt (kV) transmission line in western Zapata County, Texas to interconnect a proposed wind generation development. The proposed Reloj del Sol Interconnection would be constructed as single-circuit 345-kV using tangent monopole structures The proposed transmission line would be constructed at the north end of Los Potreritos Road tying into the existing ETT Lobo to North Edinburg 345-kV transmission line at Structure 251 HJK, to the proposed Reloj del Sol Wind Farm approximately 3,700 feet northwest of Farm-to-Market (FM) 3169. Please reference the proposed endpoint locations within the study area depicted on the attached map. The delineated Study Area encompasses approximately 18 square miles in Zapata County measuring approximately 3 miles from north to south and approximately 6 miles from west to east The proposed transmission line will be approximately 6.0 miles long and will require a 150-foot wide right-of-way.

Quanta Environmental Solutions (Quanta Environmental) is preparing an Environmental Assessment (EA) for the proposed project that will support ETT's application for a Certificate of Convenience and Necessity from the Public Utility Commission of Texas (PUCT). Quanta Environmental is in the process of collecting and evaluating environmental data for the study area. As part of this effort, we are asking that your agency/office relate any environmental or land use concerns that you may have regarding the siting and potential environmental effects from the construction of the proposed line in the designated study area, we would also appreciate receiving this information as well. Upon certification of the final route by the PUCT, ETT will then identify and obtain the necessary permits, if required, from your agency/office.

Additionally, if any permits, easements, or other approvals by your agency/office are required, or if you are aware of any major proposed development or construction in the study area, we would also appreciate receiving this information as well.

Your input on any of the following resources as they relate to your agency or office will assist the project team in evaluating the proposed project:

- Land use (current or proposed land development projects, park/recreation areas, etc.)
- Aesthetics
- Water quality and wetlands
- Soils and geology
- Wildlife, vegetation, fisheries (including threatened and endangered species)
- Socioeconomics (population, employment, growth, current/future development)

- Cultural resources (historic and archeological sites)
- Transportation and roads (airport and roadway expansions, construction, operations, and maintenance)

Quanta Environmental would like to thank you in advance for your comments, which will be an important consideration in or assessment of potential environmental and land use impacts of the proposed transmission line. If you have any questions concerning this project or our request for information, please contact me at bsmart@quantaenv.com or (832) 791-5258. Your earliest reply will be appreciated.

Sincerely,

Brandy Smart

Brandy Smart
Project Manager

BS/bs

cc: Adam Wells, AEP
Randy Roper, ETT
Kensley Greuter, ETT
Matthew Walt, Dashiell Corporation

File


Northwest
– Proposed
End Point
Northeast
– Proposed
End Point
83
End Points
Existing ElectricTransmission Line
Study Area
DRAFT
0 2,000 4,000
Feet
PREPARED BY
QPSE
Reloj del Sol
345-kV Interconnection
Electric Transmission Texas
Zapata County, Texas
Rev. A 1/14/2026

From: MARTINEZ, NICHOLAS J
To: Smart, Brandy
Cc: CASTILLO, JOSE A; PALACIOS, DIANA; IRUEGAS, SERVANDO
Subject: [EXTERNAL] ETT Reloj del Sol Rfi
Date: Tuesday, March 3, 2020 3:03:24 PM
Attachments: RFI Reponse 30-30-2020.pdf

Good afternoon,

Regarding your request for information, we currently do not have any projects in the study area you provided nor do we know of any other proposed developments by other non-governmental agencies.

Thank you,

Nicholas J. Martinez
Special Operations Supervisor, NREMT
Laredo Sector Border Patrol
GOV Cell: (956) 286-5971
Nicholas.J.Martinez@cbp.dhs.gov

From: Victor Wong
To: Smart, Brandy
Subject: [EXTERNAL] Request for Information regarding interconnection project in Zapata County
Date: Monday, March 9, 2020 3:14:34 PM
Attachments: tips-for-making-a-PIR.pdf

Good afternoon Ms. Smart,

I received your letter dated February 7 regarding the request for information on land use, aesthetics, water quality and wetlands, and other resources for a wind generation development project in Zapata County. TCEQ would need specific locations for the project area (addresses, facility names, RN#'s, programmatic ID#'s, etc.) I would recommend requesting a PIR as other agency divisions/offices may be able to provide accurate information.

Here is the link where you can find more information on open records request.
https://www.tceq.texas.gov/agency/data/records-services/reqinfo.html

Let me know if you have any questions or if I can be of any assistance.

Regards,

Victor H. Wong
Program Specialist
Border Affairs/Intergovernmental Relations Division
Texas Commission on Environmental Quality (TCEQ)
707 E. Calton Rd., Suite #304
Laredo, Texas 78041
Direct Phone: (956)753-4050
victor.wong@tceq.texas.gov

TIPS FOR REQUESTING PUBLIC INFORMATION

1. The more specific and clear the request, the more quickly we can locate and provide the public information. If your request is unclear or its scope is broad, TCEQ staff may ask you to clarify or narrow your request, which will extend the time it takes for you to receive the requested information. Reviewing our central registry database will provide you with the TCEQ regulatory program areas associated with the facility and allow you to specify your request. The more specific your request, with date ranges and the type of information you seek from which program areas, the more quickly TCEQ staff can provide the information.
2. You can view our online records and databases at no charge.
3. The sites the TCEQ regulates are each assigned an "RN" number. Generally, if there is no RN number for a site, the TCEQ will not have any information related to the site. In some very rare cases, the Superfund Section or the incident database may have some limited information related to a site with no RN number.
4. Because the cost is usually less than providing hard copies of information, the TCEQ will assume that you request information in electronic format, unless you specifically request otherwise. When you request information in microfilm/microfiche format, there may be a delay associated with converting the information to PDF format, then redacting the confidential information from the PDF file. If you are seeking both electronic data and data stored in other mediums (e.g. hard copies and/or microfilm/microfiche), requesting electronic data in a separate request from the other information may allow us to respond to your request more quickly.
5. You may also inspect information in person at the TCEQ office location where the information is stored, often at a reduced charge or no charge. These sources may contain the information you seek, or may help you specify your request.
6. The TCEQ is required by law to provide existing, non-confidential information. If you request confidential information, the TCEQ will likely seek an opinion from the Attorney General regarding whether the material must be released, which may take 60 days or more to receive. Because confidential information can take several months to process, you may wish to request the non-confidential information first, then, based on your review, request the confidential information if you find you need it.
7. When you indicate that you do not wish to receive confidential information, you agree that the TCEQ will remove or redact the information for which it would normally seek an Attorney General opinion. Some information is confidential by

law and will be redacted without input from the Attorney General. You can ask the Attorney General to review these redactions.

8. If some of the information you request involves a third party's interests, that third party may ask the Attorney General to determine if the information should be released.

9. The TCEQ is not required to, and will not, forward your request to another governmental entity to locate additional responsive information.

10. The TCEQ is not required to create documents, answer questions, or perform legal research when responding to a PIR, nor is it required to compile or extract information if it is made available by giving you access to our files.

11. You will be able to view copyrighted material that resides in the TCEQ's files, but TCEQ staff will not reproduce this material for you. Federal Copyright restrictions may apply to this material and you are responsible for your own compliance.

12. The Texas Public Information Act (TEX. GOV'T CODE ch. 552) allows TCEQ to recover certain costs incurred to provide the requested public information to you, and allows the TCEQ to require a deposit in some circumstances. While TCEQ staff strive to provide an accurate estimate of these costs, it is merely an estimate and the invoiced amount will likely be different. This difference can be up to 20% more than the estimate without notice to you. If the actual amount exceeds more than 20% of the estimate, the TCEQ will provide you with a revised estimate before completing the work. TCEQ is not required to provide an estimate for costs under $40, but will provide one as a courtesy if included in your request.

13. If you request "any and all" information related to a company or facility, you will likely receive a large cost estimate.

14. You may receive multiple invoices for the information you request. For example:

    - Your request may require a deposit and a final invoice.
    - If you choose to accept voluminous information as it becomes available, you will receive an invoice with each installment of information.
    - If part of the information is sent to the Attorney General for a determination on its release, you will receive a separate invoice for information the Attorney General determines should be released.

TEXAS GENERAL LAND OFFICE
GEORGE P. BUSH, COMMISSIONER

March 3, 2020

Brandy Smart
Quanta Environmental
480 Wildwood Forest Dr., Suite 750
The Woodlands, TX 77380-2649

Re: Request for Information
ETT Reloj del Sol 345-kV Interconnection
Zapata County, Texas

Dear Ms. Smart:

On behalf of Commissioner Bush, I would like to thank you for your letter concerning the above-referenced project.

Using your map depicting the project's study area, it does not appear that the General Land Office will have any environmental issues or land use constraints at this time.

When a final route for this proposed project has been determined, please contact me and we can assess the route to determine if the project will cross any streambeds or Permanent School Fund (PSF) land that would require an easement from our agency.

In the interim, if you would like to speak to me further on this project, I can be reached by email at glenn.rosenbaum@glo.texas.gov or by phone at (512) 463-8180.

Again, thank you for your inquiry.

Sincerely,

Glenn Rosenbaum

Glenn Rosenbaum
Manager, Right-of-Way Department
Leasing Operations

1700 North Congress Avenue, Austin, Texas 78701-1495
P.O. Box 12873, Austin, Texas 78711-2873
512-463-5001 glo.texas.gov