Mammals

A representative list of mammals that may occur in the study area are listed in Table 3-5 (Schmidly and Bradley 2016). The likelihood for occurrence of each species within the study area will depend upon suitable habitat.

TABLE 3-5 MAMMALIAN SPECIES POTENTIALLY OCCURRING WITHIN THE STUDY AREA[1]

COMMON NAME[2]	SCIENTIFIC NAME[2]
Mammals	
American badger	*Taxidea taxus*
American beaver	*Castor canadensis*
American perimyotis	*Perimyotis subflavus*
Attwater's pocket gopher	*Geomys attwateri*
Big brown bat	*Eptesicus fuscus*
Big free-tailed bat	*Nyctinomops macrotis*
Black rat	*Rattus rattus*
Black-tailed jackrabbit	*Lepus californicus*
Black-tailed prairie dog	*Cynomys ludovicianus*
Bobcat	*Lynx rufus*
Brazilian free-tailed bat	*Tadarida brasiliensis*
Cave myotis	*Myotis velifer*
Collared peccary	*Pecari tajacu*
Common gray fox	*Urocyon cinereoargenteus*
Common raccoon	*Procyon lotor*
Coyote	*Canis latrans*
Crawford's desert shrew	*Notiosorex crawfordi*
Eastern cottontail	*Sylvilagus floridanus*
Eastern fox squirrel	*Sciurus niger*
Eastern gray squirrel	*Sciurus carolinensis*
Eastern mole	*Scalopus aquaticus*
Eastern red bat	*Lasiurus borealis*
Eastern spotted skunk	*Spilogale putorius*
Eastern woodrat	*Neotoma floridana*
Feral pig	*Sus scrofa*
Fulvous harvest mouse	*Reithrodontomys fulvescens*
Ghost-faced bat	*Mormoops megalophylla*
Gulf Coast kangaroo rat	*Dipodomys compactus*
Hispid cotton rat	*Sigmodon hispidus*
Hispid pocket mouse	*Chaetodipus hispidus*
Hoary bat	*Aeorestes cinereus*
Hog-nosed skunk	*Conepatus leuconotus*
House mouse	*Mus musculus*
Lacey's white-ankled deermouse	*Peromyscus laceianus*
Least shrew	*Cryptotis parva*
Long-tailed weasel	*Mustela frenata*
Merriam's pocket mouse	*Perognathus merriami*
Mountain lion	*Puma concolor*
Nine-banded armadillo	*Dasypus novemcinctus*
North American deermouse	*Peromyscus maniculatus*

TABLE 3-5 MAMMALIAN SPECIES POTENTIALLY OCCURRING WITHIN THE STUDY AREA[1]

COMMON NAME[2]	SCIENTIFIC NAME[2]
Northern pygmy mouse	*Baiomys taylori*
Northern yellow bat	*Dasypterus intermedius*
Norway rat	*Rattus norvegicus*
Nutria	*Myocastor coypus*
Plains harvest mouse	*Reithrodontomys montanus*
Red fox	*Vulpes vulpes*
Red wolf	*Canis rufus*
Ringtail	*Bassariscus astutus*
Rio Grande ground squirrel	*Ictidomys parvidens*
Rock squirrel	*Otospermophilus variegatus*
Southern plains woodrat	*Neotoma micropus*
Striped skunk	*Mephitis mephitis*
Swamp rabbit	*Sylvilagus aquaticus*
Texas deermouse	*Peromyscus attwateri*
Tricolored bat	*Perimyotis subflavus*
Virginia opossum	*Didelphis virginiana*
Western spotted skunk	*Spilogale gracilis*
White-footed deermouse	*Peromyscus leucopus*
White-tailed deer	*Odocoileus virginianus*

[1] According to Schmidly and Bradley (2016).
[2] Nomenclature follows: Bradley et al. (2014).

Fishes and Aquatic Invertebrates

In Texas, the divisions of the biotic provinces were separated on the basis of terrestrial vertebrate distributions; however, the distribution of freshwater fishes generally corresponds with the terrestrial biotic province boundaries. Areas showing the greatest deviation from this general rule include northeast Texas and the coastal zone (Hubbs 1957). Review of USGS (2024a) topographic maps indicates that mapped surface waters within the study area include perennial, intermittent, and ephemeral streams. Additionally, unmapped surface waters may occur within the study area.

Perennial and large ponds provide consistent aquatic habitats for all trophic levels with fish being the most prominent. The relatively stable water levels of perennial ponds facilitate stable population growth. Species adapted for deeper waters will utilize pond environments (Hubbs 1957). Potential ponds located in the study area will exhibit variability in terms of their age, drainage, use by livestock, past fish stocking, and fertilization history. Typically for pond habitat, fluctuations in water levels are experienced during summer months because of high evaporation rates and repeated heavy rainfall required to fill ponds. Periods of extended drought in the region may reduce these seasonal water level fluctuations or dry ponds completely. Intermittent and ephemeral flowing streams support aquatic species primarily adapted to ephemeral pool habitats. Because intermittent streams consist of small headwater drainages, persistent flow is unlikely to be sufficient to support any substantial lotic species assemblage. Species in ephemeral aquatic habitats are typically adapted to rapid dispersal and completion

of life cycles. In streams dominated by scoured, sandy-clay bottoms, accumulations of woody debris or leaf pack provide the most important feeding and refuge areas for invertebrates and forage fish. Softer, muddy bottoms generally harbor substantial populations of burrowing invertebrates (e.g., larval diptera and oligochaetes), which can be an important food source to higher trophic levels (Thomas et al. 2007).

3.1.10 Southern Edwards Plateau Habitat Conservation Plan

The study area is located in the Southern Edwards Plateau (SEP) Habitat Conservation Plan (HCP) area (City of San Antonio 2015). The SEP HCP was established in 2015 in coordination between USFWS, San Antonio, and Bexar County to streamline project compliance for landowners and private developers in accordance with the ESA. It created an incidental take credit bank in the form of a preserve system for nine federally listed species: golden-cheeked warbler (*Setophaga chryosparia*), black-capped vireo (*Vireo atricapilla*), Government Canyon Bat Cave spider (*Neoleptoneta microps*), Madla Cave meshweaver (*Cicurina madla*), Braken Cave meshweaver (*Cicurina venii*), Government Canyon Bat Cave meshweaver (*Cicurina vespera*), unnamed beetle (*Rhadine exilis*), unnamed beetle (*Rhadine infernalis*), and Helotes mold beetle (*Batrisodes venyivi*). If the Project is expected to impact any of these listed species, presence or absence surveys and/or coordination with the SEP HCP may be necessary.

3.1.11 Threatened and Endangered Species

Information on sensitive wildlife and vegetation resources within the study area were obtained from a variety of sources, including correspondence with the USFWS and TPWD. Additional information was obtained from published literature and technical reports.

For the purpose of this EA, emphasis was placed on obtaining documented occurrences of special status species and/or their designated critical habitat within the study area. Documented occurrences of unique vegetation communities within the study area were also reviewed. Special status species include those listed by the USFWS (2024b) as threatened, endangered, or proposed for listing; and those species listed by TPWD identified by Rare, Threatened, and Endangered Species by County, Annotated County Lists (TPWD 2024d). Spatial data of known occurrences for listed species and/or sensitive vegetation communities was obtained from the TPWD's TXNDD on September 25, 2024 (TPWD 2024e). The TXNDD data provides a data record, known as an element of occurrence record (EOR), of state-listed rare or threatened/endangered species and rare vegetation communities that have been documented within a given area. The TXNDD data does not preclude the potential for a species to exist within the study area. Only a species-specific survey within the study area can determine the presence or absence of a special status species.

The USFWS regulates activities affecting plants and animals designated as endangered or threatened under the ESA (16 U.S.C. § 1531 *et seq.*). A USFWS IPaC Official Species List (USFWS 2024b; Project Code: 2025-0032488) and Resource List was received on December 16, 2024. The IPaC report identifies federally listed threatened, endangered, and proposed species and designated critical habitat potentially occurring within the study area (USFWS 2024b). By federal definition, an endangered species is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as likely to become endangered within the near foreseeable future throughout all or a significant portion of its range. Proposed species are those that have been proposed in the Federal Register to be listed under the ESA. Candidate species are those that have sufficient information on their biological vulnerability and threats to support listing as threatened or endangered and are likely to be proposed for listing in the near future. The ESA also provides for the conservation of "designated critical habitat," which is defined by the USFWS as the areas of land, water, and air space that an endangered species needs for survival. These areas include sites with food and water, breeding areas, cover or shelter sites, and sufficient habitat to provide for normal population growth and behavior for the species. The IPaC report received for the study area states that there are no designated critical habitats within the study area (USFWS 2024b).

The TPWD also regulates plants and animals designated at the state level as endangered or threatened (Chapters 67 and 68 of the TPWC and § 65.171 - 65.176 of Title 31 of the TAC; and Chapter 88 of the TPWC and § 69.01 - 69.9 of the TAC). Under Texas law, endangered animal species are those deemed to be "threatened with statewide extinction" and endangered plant species are those "in danger of extinction throughout all or a significant portion of its range". Threatened animal and plant species are those deemed likely to become endangered within the foreseeable future.

Special Status Plant Species

USFWS (2024b) IPaC species list for the study area and TPWD (2024d) county listings were reviewed for special status plant species potentially occurring within the study area. One federally listed endangered plant species, the black lace cactus (*Echinocereus reichenbachii var. albertii*) and the bracted twistflower (*Streptanthus bracteatus*), were identified as having the potential to occur within the study area (USFWS 2024b). A brief description of these species' life history, habitat requirements, and potential to occur within the study area are summarized below. The legal status and in which county these species could potentially be found are indicated in Table 3-6. TPWD's TXNDD data identified five EORs for special status plant species occurring within the study area (TPWD 2024c). Two EORs were observed for the Elmendorf's onion (*Allium elmendorfii*) in 1949, two EORs were observed for the Texas peachbush (*Prunus texana*) in 1945 and 2001, and one EOR was observed for the low spurge (*Euphorbia peplidion*) in 2002. Although none of these species are federally or state listed, they are endemic to Texas and considered species of greatest conservation need under the State Wildlife Action Plan

(SWAP) (TPWD 2023). The SWAP identifies what mitigative actions can be taken to provide the best chance of continual survival for these species.

Black Lace Cactus

Black lace cactus is a succulent perennial growing approximately eight inches tall and produces a bright purple-pink flower with a crimson center (TPWD 2024f). Habitat includes dense mesquite shrublands and woodlands on poorly drained sandy soils within coastal grasslands of the Gulf Coastal Plain (TPWD 2024f). Although most of the study area is north and northeast of this species' known range, the southern portion of the study area intersects known ranges of where this species is found. This species may have the potential to occur within the study area where suitable habitat is available.

Bracted Twistflower

The bracted twistflower is endemic to the Edwards Plateau ecoregion. It is a short annual plant, growing to about eight inches tall. The entire plant is glabrous with pink to purple flowers. Bracted twistflower occurs on shallow, well-drained gravelly clays and clay loams over limestone hillsides and slopes in openings of live oak (*Quercus virginiana*) and juniper woodlands, as well as in canyon bottoms (Brazos River Authority 2024). Populations of this species may change extensively between years depending on the amount of winter rainfall. The primary causes for its decline are residential development and browsing by white-tailed deer (Poole et al. 2007). This species is not anticipated to occur within the study area due to lack of suitable rocky limestone hillsides and canyon habitat.

Special Status Animal Species

The USFWS (2024b) IPaC official species list identified federally listed animal species potentially occurring within the study area. Additionally, the TPWD (2024d) Rare, Threatened, and Endangered Species of Texas by County interactive web map identified state-listed animal species potentially occurring within the study area counties. Federally and/or federally proposed, state-listed, and candidate status animal species potentially occurring within each county of the study area are listed in Table 3-6. Some federal status species listed in the TPWD Annotated County Lists of Rare Species but were not identified in the IPaC have been included in Table 3-6 for consistency. Only USFWS listed threatened or endangered species are afforded federal protection under the ESA. Although only federally-listed threatened or endangered species are protected under the ESA, state-listed species may receive protection under other federal and/or state laws, such as the MBTA, BGEPA, Chapters 67, 68, and 88 of the Texas Parks and Wildlife Code, and Section 65.171–65.184 and 69.01–69.14 of Title 31 of the TAC. A brief description of each species' life history, habitat requirements, and any documented occurrences within the study area are summarized below.

TPWD's TXNDD data did not identify any EORs for animal species within or near the study area (TPWD 2024e).

TABLE 3-6 LISTED THREATENED AND ENDANGERED SPECIES FOR THE STUDY AREA COUNTIES[1]

SPECIES		LEGAL STATUS[3]		COUNTY[4]		
COMMON NAME[2]	**SCIENTIFIC NAME[2]**	**USFWS**	**TPWD**	**BEXAR**	**KARNES**	**WILSON**
Amphibians						
Cascade Caverns salamander	*Eurycea latitans*	-	T	X	-	-
San Marcos salamander	*Eurycea nana*	T	-	-	-	-
Sheep frog	*Hypopachus variolosus*	-	T	-	X	-
Texas salamander	*Eurycea neotenes*	-	T	X	-	-
Arachnids						
Cokendolpher Cave harvestman	*Texella cokendolpheri*	E	-	X	-	-
Government Canyon Bat Cave meshweaver	*Cicurina vespera*	E	-	X	-	-
Government Canyon Bat Cave spider	*Tayshaneta microps*	E	-	X	-	-
Madla Cave meshweaver	*Cicurina madla*	E	-	X	-	-
Robber Baron Cave meshweaver	*Cicurina baronia*	E	-	X	-	-
Birds						
Black rail	*Laterallus jamaicensis*	-	T	-	X	X
Golden-cheeked warbler	*Setophaga chrysoparia*	E	E	X	-	-
Interior least tern	*Sternula antillarum athalassos*	-	E	X	X	X
Piping plover	*Charadrius melodus*	T	T	X	X	X
Rufa red knot	*Calidris canutus rufa*	T	T	-	X	-
Swallow-tailed kite	*Elanoides forficatus*	-	T	-	X	X
White-faced ibis	*Plegadis chihi*	-	T	X	X	X
White-tailed hawk	*Buteo albicaudatus*	-	T	-	X	-
Whooping crane	*Grus americana*	E	E	X	X	X
Wood stork	*Mycteria americana*	-	T	X	X	X
Fishes						
Fountain darter	*Etheostoma fonticola*	E	-	-	-	-
Toothless blindcat	*Trogloglanis pattersoni*	PE	T	X	-	-
Widemouth blindcat	*Satan eurystomus*	PE	T	X	-	-
Flowering Plants						
Black lace cactus	*Echinocereus reichenbachii* var. *albertii*	E	-	X	X	X
Bracted twistflower	*Streptanthus bracteatus*	T	-	X	-	-
Insects						
Beetle (no designated common name)	*Rhadine exilis*	E	-	-	-	-
Beetle (no designated common name)	*Rhadine infernalis*	E	-	-	-	-
Helotes mold beetle	*Batrisodea venyivi*	E	-	-	-	-
Monarch butterfly	*Danaus plexippus*	PT	-	X	X	X

TABLE 3-6 LISTED THREATENED AND ENDANGERED SPECIES FOR THE STUDY AREA COUNTIES[1]

SPECIES		LEGAL STATUS[3]		COUNTY[4]		
COMMON NAME[2]	SCIENTIFIC NAME[2]	USFWS	TPWD	BEXAR	KARNES	WILSON
Mammals						
American black bear	*Ursus americanus*	-	T	X	-	-
Ocelot	*Leopardus pardalis*	E	E	-	X	-
Tricolored bat	*Perimyotis subflavus*	PE	-	X	X	X
White-nosed coati	*Nasua narica*	-	T	X	X	X
Mollusks						
False spike	*Fusconaia mitchelli*	E	E	X	-	-
Reptiles						
Cagle's map turtle	*Graptemys caglei*	-	T	X	-	-
Texas horned lizard	*Phrynosoma cornutum*	-	T	X	X	X
Texas tortoise	*Gopherus berlandieri*	-	T	X	X	X

[1] According to USFWS (2024b) and TPWD (2024d).
[2] Nomenclature follows: USFWS (2024b) and TPWD (2024d)
[3] Legal status abbreviations: E – Endangered, PE – Proposed Endangered, PT – Proposed Threatened, T – Threatened
[4] Indicates the county(ies) the species could potentially occur in based on the TPWD Rare, Threatened, and Endangered Species by County, Annotated County Lists database, habitat descriptions described below, and known documented ranges.

Federal Listed Threatened and Endangered Species

AMPHIBIANS

San Marcos Salamander

The San Marcos salamander requires clear, constant flowing water with aquatic vegetation over sand and gravel substrates. Its reddish-brown color allows it to camouflage well with aquatic vegetation. The San Marcos salamander is restricted to the outflows of Spring Lake and the riffle just below Spring Lake dam near the City of San Marcos (Tipton et al. 2012). This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species.

ARACHNIDS

Cokendolpher Cave Harvestman

The Cokendolpher Cave harvestman is a species of eyeless spider also referred to as the Robber Baron Cave harvestman. It is a troglobite (NatureServe 2024a) endemic to Bexar County, Texas, where it has only been documented in Robber Baron Cave, a cave which runs underneath a heavily urbanized area in the City of San Antonio. Threats to this species include habitat loss from quarrying operations, cave filling, habitat degradation via pollution, and alterations in water flow (USFWS 2012). This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species.

Government Canyon Bat Cave Meshweaver

The Government Canyon Bat Cave meshweaver is a spider endemic to Bexar County, Texas. It is a troglobite (NatureServe 2024b) that is only known to occur in Bexar County at Government Canyon Bat Cave located within Government Canyon State Natural Area. Threats to this species include habitat loss from quarrying operations, cave filling, habitat degradation via pollution, and alterations in water flow (USFWS 2012). This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species.

Government Canyon Bat Cave Spider

The Government Canyon Bat Cave spider is endemic to Bexar County, Texas. It is a troglobite (NatureServe 2024c) that has only been documented in Bexar County at Government Canyon Bat Cave and Surprise Sink located within Government Canyon State Natural Area. Threats to this species include habitat loss from quarrying operations, cave filling, habitat degradation via pollution, and alterations in water flow (USFWS 2012). This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species.

Madla Cave Meshweaver

The Madla Cave meshweaver is an eyeless spider endemic to Bexar County, Texas. It is a troglobite that has been observed in eight caves including Lost Pothole, Christmas Cave, Helotes Blowhole, Madla's Cave, Madla's Drop Cave, Headquarters Cave, the Hills and Dales Pit, and Robbers Cave within the University of Texas at San Antonio main campus (NatureServe 2024d). Threats to this species include habitat loss from quarrying operations, cave filling, habitat degradation via pollution, and alterations in water flow (USFWS 2012). Genetic research of this species suggests that additional populations may exist outside the eight documented caves (Paquin and Hedin 2004). This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species and lack of karst topography within the study area.

Robber Baron Cave Meshweaver

The Robber Baron Cave meshweaver is an eyeless spider endemic to Bexar County, Texas. It is a troglobite (NatureServe 2024e) that is only known from Robber Baron Cave within the Alamo Heights karst region. Threats to this species include habitat loss from quarrying operations, cave filling, habitat degradation via pollution, and alterations in water flow (USFWS 2012). This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species.

BIRDS

Golden-cheeked Warbler

The golden-cheeked warbler's entire nesting range is confined to habitat in 33 counties located in central Texas. Nesting typically occurs from March to May in mature oak-juniper woodland areas with a moderate to high

density of mature ashe juniper (*Juniperus ashei*) trees mixed with deciduous trees (e.g., oaks) creating dense foliage in the upper canopy (Pulich 1976; Campbell 2003). These oak-juniper woodland vegetation communities are typically located in moist areas along steep-sided slopes, drainages, and bottomlands. However, golden-cheeked warblers will also nest in upland oak-juniper woodlands on flat topography (TPWD 2024g). The golden-cheeked warbler is also a state listed species and migrates southward to southern Mexico and northern Central America to overwinter. This species is not anticipated to occur within the study area due to lack of contiguous dense, mature ashe juniper stands that would provide adequate habitat. However, if during surveys habitat for the species is observed occurring within the study area, an absence/presence survey must be conducted and depending on the outcome of these surveys coordination with the SEP HCP may be necessary.

Piping Plover

The piping plover is a small migratory shorebird that nests within the Great Lakes, Northern Great Plains or Atlantic Coast (USFWS 2024c). Primary fall migration to Texas is from July to early September, while spring migration occurs from March to early May. Piping plovers are also state listed species and are common to locally uncommon winter residents along the Gulf of Mexico coastline (Lockwood and Freeman 2014). Multiple large lakes, ponds, streams, and other aquatic features occur within the study area that could potentially be utilized for migratory habitat by the piping plover during winter migration. This species has the potential to occur within the study area as a transient migrant wherever suitable habitat is available. However, within the study area this species only needs to be considered for wind-related projects that occur within the species' migratory route.

Rufa Red Knot

Rufa red knots are migratory and breed in the drier arctic tundra areas while overwintering takes place along shorelines of the Gulf of Mexico and Central and South America (USFWS 2024d). Spring migration occurs in large flocks and takes place from April to June. This species, which is also state listed, preferers habitat that includes the shoreline of coasts and bays and sometimes inland mudflats. Their primary prey items are small mussels, clams, snails, and other invertebrates (USFWS 2013). Due to the study area being located outside the migratory corridor and the rare transient nature of the species, it is anticipated that this species will not occur within the study area. However, within the study area this species only needs to be considered for wind-related projects that occur within the species' migratory route.

Whooping Crane

The study area is located within the central migratory corridor for the whooping crane (USGS 2024b). The migration path includes a 220-mile-wide corridor that begins at their nesting site at Wood Buffalo National Park in Canada and continues south to their wintering grounds at the Aransas National Wildlife Refuge along the Texas coast (USFWS 2024c). The migratory corridor contains 95% of all confirmed whooping crane stopover sightings, during migration. Whooping cranes, which are also state listed species, overwinter in the Aransas National

Wildlife Refuge from November through March. During migration, they typically fly at altitudes greater than 1,000 feet but will roost and feed in areas away from human disturbance during nightly stopovers. Stopover areas include large rivers, lakes and associated wetlands, playa lakes, pastureland, and cropland (USFWS 2009). Aquatic features, pastureland, and cropland located within the study area might be utilized during migration. This species has the potential to occur within the study area as a transient migrant wherever suitable habitat is available.

FISHES

Fountain Darter

The fountain darter is a species of perch that is endemic to the San Marcos and Comal River headwaters in Hays and Comal Counties, Texas (Thomas et al. 2007). It inhabits clear waters with aquatic vegetation and constant water temperatures. Diet consists of small crustaceans and insect larvae. Females lay their eggs year-round and utilize calmer waters of the river. Fountain darters are often associated with algae mats (Thomas et al. 2007). This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species.

INSECTS

Unnamed Beetle (*Rhadine exilis*)

This unnamed beetle species is endemic to Bexar County, Texas. It is an eyeless cave obligate that has been documented in about 50 different caves (NatureServe 2024f). *Rhadine exilis* is known only from caves in the southern portion of Camp Bullis Military Base (Reddell and Cokendolpher 2004). Threats to this species include habitat loss from quarrying operations, cave filling, and habitat degradation via pollution, and alterations in water flow (USFWS 2012). This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species and lack of karst topography within the study area.

Unnamed Beetle (*Rhadine infernalis*)

This unnamed beetle species is an eyeless cave obligate that has been documented in approximately 39 different caves in Bexar County, Texas (NatureServe 2024g). Threats to this species include habitat loss from quarrying operations, cave filling, and habitat degradation via pollution, and alterations in water flow (USFWS 2012). This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species and lack of karst topography within the study area.

Helotes Mold Beetle

The Helotes mold beetle is endemic to karst features within Texas. It has been documented in eight caves near Helotes, Texas, northwest of San Antonio. This species is a cave obligate, growing up to 2.4 millimeters long and is believed to be predatory in nature (USFWS 2012; NatureServe 2024h). This species is not anticipated to occur

within the study area due to the study area being outside of the known range of this species and lack of karst topography within the study area.

MAMMALS

Ocelot

In Texas, ocelots are also state-listed species and occur in dense thorny shrublands of the Lower Rio Grande Valley and Rio Grande Plains. Deep fertile clay or loamy soils are generally needed to produce suitable habitat. Typical habitat consists of mixed brush species such as granjeno, brasil, desert yaupon (*Schaefferia cuneifolia*), lotebush, wolfberry (*Lycium berlandieri*), amargosa (*Nitrophila mohavensis*), whitebrush, blackbrush, guayacan, catclaw (*Acacia greggii*), cenizo, desert olive (*Forestiera pubescens*), and Texas persimmon (TPWD 2011). Dense shrubs and canopy cover are important considerations for suitable habitat. Although the study area shares similar plant species for suitable habitat for the ocelot, this species is not anticipated to occur within the study area due to the study area being north of the known range of this species.

MOLLUSKS

False Spike

The false spike, which is also a state listed species, is a Guadalupe River Basin endemic and known to occur in the mainstem Guadalupe River between Gonzales and Victoria, Texas (USFWS 2024f). Until as recently as 2011, the false spike was thought to be extinct prior to the re-discovery of the species in the Guadalupe River near Gonzales. This species tends to occur in larger creeks and rivers with heterogenous mixtures of sand, gravel, or cobble substrates. This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species.

Federal Proposed Threatened and Endangered Species

FISHES

Toothless Blindcat

The toothless blindcat, which is also a state-listed species, is a small, eyeless fish restricted to freshwater pools and groundwater within caves and karst located in the Medina and Upper San Antonio River watersheds. Diet of the toothless blindcat may consist of detritus and fungi (USFWS 2024g). This species is not anticipated to occur within the study area due to the lack of karst topography within the study area.

Widemouth Blindcat

The widemouth blindcat, which is also a state listed species, is a small, white to pink eyeless fish restricted to freshwater pools and groundwater within caves and karst located in the Medina and Upper San Antonio River watershed. Diet of the widemouth blindcat consists of shrimp, amphipods, and isopods (USFWS 2024h). This

species is not anticipated to occur within the study area due to the lack of potential karst topography within the study area.

INSECTS

Monarch Butterfly

The monarch butterfly ranges from North and South America to the Caribbean, Australia, New Zealand, the Pacific Islands, and Western Europe. The species has been proposed as candidate species for protection under the ESA due to decreasing populations and habitat loss. Eastern and western monarch populations migrate both north and south on an annual basis. Populations usually overwinter in Mexico, Texas, Florida, and California and then spend the spring and summer months migrating back north. The entire migration cycle last for four generations of monarchs and no individual makes the round trip. Monarchs are heavily dependent on milkweed plants (*Asclepias* spp.) as larval hosts and to help produce poison. Preferred overwintering habitat includes appropriate roosting vegetation, dense tree cover, access to streams, and warm enough temperatures to allow for flight (USFWS 2024j). This species has the potential to occur as a temporary migrant at specific times of year within the study area wherever suitable habitat is available. However, due to the Project being a rebuild of an existing transmission line, it is unlikely that suitable habitat occurs within the expected Project ROW.

MAMMALS

Tricolored Bat

The tricolored bat has a large extensive range throughout eastern and central North America. Throughout its range, the species has many types of roost sites and locations due to their expansive foraging habitat. Tricolored bats are closely associated with forested landscapes and bottomland riparian forest with most foraging occurring within forested riparian corridors. In spring and summer, non-reproductive individuals roost in trees near perennial streams. Maternal and other summertime roosts are found in dead or live tree foliage, caves, mines, and rock crevices, with maternal colonies also occasionally occurring within man-made structures. Winter hibernation sites typically found within caves, mines, cave like tunnels, or large box culverts adjacent to forest habitat (USFWS 2024i). This species is a habitat generalist and has the potential to occur within the study area wherever suitable habitat is available. However, due to the Project being a rebuild of an existing transmission line, it is unlikely that suitable habitat occurs within expected Project ROW.

Other Federally Protected Species

BIRDS

Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) was delisted in 2007 by the USFWS, because the population has recovered beyond the ESA criteria for listing. The status of the bald eagle population is currently monitored by USFWS, and the species is still protected under the MBTA and the BGEPA. Bald eagles may nest and/or winter

in Texas. Nests are built in treetops or on cliffs near rivers or large lakes. The bald eagle primarily preys on fish but will also eat birds, small mammals, and turtles and will often scavenge or steal carrion (Campbell 2003; USFWS 2024k). This species has the potential to occur within the study area wherever suitable habitat is available. However, due to the Project being a rebuild of an existing transmission line, it is unlikely that suitable habitat occurs within the expected Project ROW.

Golden Eagle

The golden eagle (*Aquila chrysaetos*) is one of the largest raptors in North America. Breeding range spans from western and northern Alaska, eastward to the Northwest Territories of Canada, south to northern Mexico and Texas, western Oklahoma, and western Kansas. The species' North American winter range extends from south-central Alaska, southern Canada, and casually further southward. As habitat generalists, this species has been found inhabiting open to semi-open country that includes prairies, sage brush, artic alpine and tundra, savanna, sparse woodlands, and mountainous or hilly barren areas (USFWS 2024l). In Texas, golden eagles occur more commonly in the western portion of the state where they breed at high elevation (8,600 above mean sea level) in mountains and canyons. This species is not anticipated to occur within the study area due to the study area being outside of known breeding populations.

State Listed Threatened and Endangered Species

AMPHIBIANS

Cascade Caverns Salamander

The Cascade Caverns salamander is a small amphibian endemic to Texas and restricted to springs and karst aquatic habitats within the Edwards Aquifer (USFWS 2024m). The salamander is pale brown to yellowish in color and grows up to four inches in length. Cave-dwelling forms of the Cascade Caverns salamander have greatly reduced nonfunctional eyes and little skin pigmentation. Other populations of this species have more skin pigmentation and functional eyes (Powell et al. 2016). This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species and lack of karst topography within the study area.

Sheep Frog

The sheep frog's range extends from south Texas through the Pacific and Atlantic slopes of Mexico to Costa Rica. In Texas, this species is known to occupy various habitats such as grasslands, savannas, and in moist sites in arid areas (AmphibiaWeb 2024). Eggs are usually laid after heavy rainfall or when their habitat is flooded by irrigation water. Species are known to migrate unknown distances through unsuitable habitats from their home range to breeding ponds (AmphibiaWeb 2024). This species has the potential to occur within the study area wherever suitable habitat is available.

Texas Salamander

The Texas salamander is endemic to north Bexar and south Kendall Counties, Texas near the city of Helotes. It is adapted to living in subterranean streams and creeks. This subterranean species is capable of traversing upland habitats when conditions are wet but may rarely do so successfully (NatureServe 2024i). This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species.

BIRDS

Black Rail

The black rail has a large range throughout North, Central, and South America. Breeding habitat includes marshes with salt, brackish, and freshwater salinity; grass swamps; wet prairies; and pond borders. Preferred habitat is salty prairie and high salt marsh where grass stem counts of 10 to 20 centimeters or higher (TPWD 2015). Wintering habitat along the Gulf Coast has been identified as either tidally or non-tidally influenced persistent, herbaceous emergent wetlands occurring over the wetland-upland interface. This species is not anticipated to occur within the study area due to lack of potential suitable habitat.

Interior Least Tern

The interior least tern is a subspecies of least tern. The USFWS recognizes any nesting least tern that is 50 miles or greater from a coastline as being an interior least tern (Campbell 2003). Interior least terns nest inland along sand and gravel bars within large, braided streams and rivers as well as salt flats associated with rivers and reservoirs. They are also known to nest on man-made structures (inland beaches, wastewater treatment plants, gravel quarries, etc.) (Thompson et al. 2020). This species is not anticipated to occur within the study area due to lack of potential suitable habitat.

Swallow-tailed Kite

The swallow-tailed kite historically occurred along the coastal plains, interior lowlands, and riparian areas throughout the southeastern United States and into central Texas. Today in Texas, the species is a rare to uncommon migrant throughout the eastern third of the state and a rare to locally uncommon summer resident in southeast Texas. The most recent breeding records exist from Chambers, Liberty, Orange, and Tyler counties (Lockwood and Freeman 2014). Habitats include lowland forested swampy areas ranging into open woodland, marshes, rivers, lakes, and ponds. Nesting occurs in tall trees within clearings or on forest woodland edge, usually in pine, bald cypress, or other deciduous trees (Meyer 1995). This species has the potential to occur within the study area as a rare temporary migrant wherever suitable habitat is available. However, due to the Project being a rebuild of an existing transmission line, it is unlikely that suitable habitat occurs within the expected Project ROW.

White-faced Ibis

The white-faced ibis prefers freshwater marshes, swamps, ponds, rivers, sloughs, and irrigated rice fields, but will also use brackish and saltwater habitats (Lockwood and Freeman 2014). This species is a colonial nester and forages on insects, newts, leeches, earthworms, snails, crayfish, frogs, and fish (TPWD 2024h). The white-faced ibis commonly breeds and winters along the Texas Gulf Coast (Arvin 2007). This species is not anticipated to occur within the study area due to lack of potential suitable habitat.

White-tailed Hawk

White-tailed hawks are resident species in their range which extends local from coastal south Texas plains to Mexico and as far south as South America. This species nests from near sea level to about 160 feet in elevation in savannas with short trees with average heights of 12 feet and shrubs (Arnold 2001a). This species has the potential to occur within the study area wherever suitable habitat is available. However, due to the Project being a rebuild of an existing transmission line, it is unlikely that suitable habitat occurs within the expected Project ROW.

Wood Stork

The wood stork inhabits prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including saltwater areas. This species usually roosts communally in tall snags, sometimes in association with other wading birds and historically nested in Texas (Arnold 2001b). This species is not anticipated to occur within the study area due to lack of potential suitable habitat.

MAMMALS

American Black Bear

The American black bear is listed as threatened due to similarities with the Louisiana black bear (*Ursus americanus luteolus*), which has now been federally delisted. The black bear is a stocky, large, omnivore with black to cinnamon brown fur that consumes insects, roots, and tubers. Preferred habitat in Texas includes bottomland hardwood forest and large tracts of inaccessible forested areas (TPWD 2024i). This species historically inhabited large tracts of forest and woodland throughout Texas and was once thought to be extirpated from the state. This species is extremely rare in Texas where recent sightings have only been recorded in deep east Texas. This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species.

White-nosed Coati

The white-nosed coati is a member of the raccoon family (*Procyonidae*) that inhabits cropland/hedgerows, mesquite grasslands, oak scrub, riparian corridors, and canyons of far south and west Texas but could once historically be found throughout central Texas as well (Schmidly and Bradley 2016). Denning occurs in snags or hollow trees. Adult males are solitary while females and young males travel in groups of 12 or more. White-nosed

coatis are most active during mornings and evenings at which times they forage canopies and the ground for fruits, insects, birds, and small mammals (Schmidly and Bradley 2016). This species is not anticipated to occur within the study area due to the study area being outside of the known range of this species.

REPTILES

Cagle's Map Turtle

The Cagle's map turtle habitat range is limited to the Guadalupe and San Antonio River basins, inhabiting the Guadalupe, San Antonio, and San Marcos Rivers. This species prefers rivers with slow to moderate flow and silt and gravel substrates. Optimal habitat includes riffles and pools. Like most other turtles, this species basks in the sun on brush piles along river and stream banks (Conant and Collins 1991; Dixon 2013). This species has the potential to occur within the study area wherever suitable habitat is available.

Texas Horned Lizard

The Texas horned lizard inhabits open, arid to semiarid regions with sparse vegetation including open desert, grasslands, and shrubland containing bunch grasses, cacti, and yucca (TPWD 2024j). Preferred soils vary from pure sands and sandy loams to coarse gravels, conglomerates, and desert pavements (Henke and Fair 1998). Texas horned lizards are active between early spring to late summer and thermo-regulate by basking or burrowing into the soil. During winter inactivity periods, this species aestivates beneath the surface six to 12 inches deep under rocks, leaf litter, or abandoned animal burrows. Populations are thought to have decreased because of land use conversions, increased pesticide/herbicide use, collection, and increased fire ant populations. The Texas horned lizard forages primarily on the red harvester ant (*Pogonomyrmex barbatus*), but also consumes grasshoppers, beetles, and grubs (Dixon 2013; Henke and Fair 1998). This species has the potential to occur within the study area wherever suitable habitat is available.

Texas Tortoise

The Texas tortoise is a long-lived species with a shell that has characteristically yellowish-orange, bluntly-horned scutes (shell plates). Habitat preferences include arid brush, scrub woods, and grass-cactus associations with grassy understories (TPWD 2024k). The Texas tortoise is active during March to November and when inactive, it occupies shallow depressions at the base of bushes or cactus, underground burrows, or under other suitable objects such as man-made debris. The tortoise feeds on fruits of prickly pear and other mostly succulent plants. This species has the potential to occur within the study area wherever suitable habitat is available.

3.2 Human Resources/Community Values

3.2.1 Land Use

Jurisdiction does not necessarily represent land ownership. Potential conflicts that could arise from crossing jurisdictional boundaries were evaluated in this study. The study area is located within the jurisdictional boundary

of Bexar, Wilson, and Karnes Counties and partially within the City of Floresville. A portion of the City of San Antonio's extraterritorial jurisdiction is located within the study area.

The study area covers approximately 14.22 square miles in Bexar, Wilson, and Karnes Counties. Land uses within the study area were identified and placed into the following categories: urban/developed, planned land use, agriculture, oil and gas facilities, communication towers, and parks and recreation areas. The primary sources of land use information were obtained from interpretation of aerial imagery, USGS topographical maps and vehicular reconnaissance surveys from accessible public viewpoints. Planned land use features were limited to known features obtained from governmental entities and mobility authorities.

Residential Areas

The urban/developed classification represents concentrations of surface disturbing land uses, which include habitable structures and other developed areas, characterized with low, medium and high intensities. The various levels of development include a mix of institutional, commercial, and/or industrial land uses. Developed low, medium, and high intensity areas were identified using aerial photograph interpretation and reconnaissance surveys. These classifications are described below:

- **Developed Low Intensity** areas typically include rural settings with single-family housing units.
- **Developed Medium Intensity** areas typically include single-family housing units that are grouped in residential subdivisions and might include peripheral commercial structures.
- **Developed High Intensity** includes highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses, and commercial/industrial parks. Areas with the highest concentration of development are typically located within or near the towns and communities in the study area.

The study area is located within Bexar, Wilson, and Karnes Counties. A portion of the study area also falls within the City of Floresville and the City of San Antonio's extraterritorial jurisdiction. The primary land use in the study area along the existing 345 kV transmission line ROW includes a mix of agricultural development, low and medium-density residential and commercial development, industrial development, and transportation infrastructure. Habitable structures were identified using aerial imagery Google Earth (Google Earth 2024) and reconnaissance surveys. The PUC definition of a habitable structure was used for this routing study. The PUC's Substantive Rules (16 TAC § 25.101(a)(3)) define habitable structures 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 multi-family dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, and schools."

Schools

The study area is located within the East Central, Floresville, Poth, Falls City, Karnes City, Kenedy and Pawnee Independent School Districts. However, no schools were identified within the study area (Texas Education Agency 2024).

Planned Land Use

The planned land use component identifies objectives and/or policies regarding land use goals and plans, including conservation easements, managed lands, and proposed developments. Cities and counties typically prepare comprehensive land use plans to provide strategic direction by goals and objectives for the individual city or county. City and county websites were reviewed, and correspondence was submitted to local and county officials to identify potential planned land use conflicts. The City of San Antonio has a Comprehensive Plan which is a long-term planning initiative aimed at guiding development, economic growth and environmental conservation (City of San Antonio 2024). The City of Floresville has a Master Plan (City of Floresville 2024a) and a Land Use Plan (City of Floresville 2024b) intended to provide guidance in future decisions related to land use, infrastructure improvements, transportation, and more. Additionally, the City of Floresville has set up zoning districts to provide information on how a property may be developed (City of Floresville 2024c). No Neighborhood Conservation Districts were identified within the study area, but there are platted subdivisions. There are no zoning regulations in the unincorporated areas of Bexar, Wilson and Karnes Counties. Bexar County has the 2021-2025 5-Year Consolidated Plan which outlines the county's goals and actions related to community development over a five year period (Bexar County 2024a). Bexar County is implementing a parks master plan. Bexar County updated the Bexar County Parks Master Plan in 2021, but no new parks were planned within the study area (Bexar County 2024b). The Bexar County Office of Emergency Management has an Emergency Management Plan which provides guidance for emergency management activities and an overview of methods for mitigation, preparedness, response, and recovery (Bexar County 2024c). Wilson and Karnes Counties do not have comprehensive land use plans.

Conservation Easements

A conservation easement is a restriction that property owners voluntarily place on specified uses of their property to protect natural, productive or cultural features. The property owner retains legal title to the property and determines the types of uses to allow or restrict. The property can still be bought, sold, and inherited, but the conservation easement is tied to the land and binds all present and future owners to its terms and restrictions. Conservation easement language will vary as to the individual property owner's allowances for additional developments on the land. The land trusts facilitate the easement and ensure compliance with the specified terms and conditions.

Based on review of numerous non-governmental groups (e.g., the Nature Conservancy, Texas Land Conservancy [TLC] and the National Conservation Easement Database [NCED]) that are land trusts and databases for conservation easements within Texas, two conservation easements were identified. The Calaveras Lake Park and the San Antonio Missions National Historical Park are conservation easements located within the study area (Nature Conservancy 2024; TLC 2024; NCED 2024).

3.2.2 Agriculture

Agriculture is a significant segment of the economy throughout Texas, and study area counties have an active agricultural sector. According to the USDA's National Agricultural Statistics Service's 2017 Census of Agriculture, the total market value for agricultural products sold for all of the study area counties was $165,945,000, an 18% decrease from the 2012 market value $202,084,000. Livestock sales accounted for 26% of agricultural sales in Bexar County, while crop sales accounted for 74% of agricultural sales. The number of farms in Bexar County increased slightly from 2,457 in 2012 to 2,520 in 2017 (an increase of 3%). Livestock sales accounted for 82% of agricultural sales in Wilson County, while crop sales accounted for 18% of agricultural sales. The number of farms in Wilson County increased slightly from 2,444 in 2012 to 2,621 in 2017 (an increase of 7%). Livestock sales accounted for 63% of agricultural sales in Karnes County, while crop sales accounted for 37% of agricultural sales. The number of farms in Karnes County decreased slightly from 1,288 in 2012 to 1,213 in 2017 (a decrease of 6%) (USDA 2012 and 2017). Detailed agricultural information for the study area counties is provided in Table 3-7.

TABLE 3-7 AGRICULTURE INFORMATION IN THE STUDY AREA COUNTIES

COUNTY	TOTAL MARKET VALUE OF AGRICULTURAL PRODUCTS			DISTRIBUTION OF PRODUCTS (2017)		NUMBER OF FARMS		
	2012	2017	Change	Crop Sales	Livestock Sales	2012	2017	Change
Bexar County	$72,387,000	$67,877,000	-6%	74%	26%	2,457	2,520	+3%
Wilson County	$102,098,000	$68,632,000	-33%	18%	82%	2,444	2,621	+7%
Karnes County	$27,599,000	$29,436,000	+7%	37%	63%	1,288	1,213	-6%

Source: USDA 2012 and 2017.

3.2.3 Transportation/Aviation

Transportation

Federal, state, and local roadways were identified using TxDOT county transportation maps, Texas Natural Resources Information System data, and field reconnaissance surveys. The roadway transportation system within the study area includes US Hwy 181, SH 1604 Loop, SH 97, FM 775, FM 536, FM 541, FM 791, FM 197, FM 1144, FM 99, and several County roads (TxDOT 2024a).

TxDOT's "Project Tracker," which contains detailed information by county for every project that is or could be scheduled for construction, was reviewed to identify any state roadway projects planned within the study area. The TxDOT Project Tracker indicated there are eight projects planned within the study area (TxDOT 2024b).

Bexar County

- There are two projects to perform a seal coat and one safety improvement project within the study area on SH 1604 Loop that is underway or begins soon.
- There is one project to widen non-freeway on SH 1604 Loop that will begin construction within five to ten years.

Wilson County

- There are a total of four projects to perform a seal coat within the study area, with one on US Hwy 181, FM 775, FM 536, FM 541, and SH 97 that is underway or will begin soon.
- There is one project to perform safety improvements within the study area on US Hwy 181 and FM 536 that is underway or will begin soon.

Karnes County

- There are a total of two projects to perform safety improvements within the study area on FM 791 and FM 2102 that is underway or begins soon.
- There is one project to perform a seal coat within the study area on FM 99 that begins construction within four years.
- There is one project to perform safety improvements within the study area on FM 791 that begins construction within four years.

There is one Union Pacific railroad spur identified within the northern portion of study area (United States Department of Transportation 2024).

Aviation

POWER reviewed the San Antonio Sectional Aeronautical Chart (FAA 2024a) and the Chart Supplement for the South Central United States (US) (formerly the Airport/Facility Directory) (FAA 2024b) to identify FAA registered facilities within the study area subject to notification requirements listed in 14 C.F.R. 77.9. Facilities subject to notification requirements listed in 14 C.F.R. 77.9 include public-use airports listed in the Airport/Facility Directory (currently the Chart Supplement), public-use or military airports under construction, airports operated by a federal agency or DoD, or an airport or heliport with at least one FAA-approved instrument approach procedure.

The Chart Supplement for the South Central US used in conjunction with the San Antonio Sectional Aeronautical Chart, contains all public-use airports, seaplane bases and public-use heliports, military facilities, and selected private-use facilities specifically requested by the DoD for which a DoD Instrument Approach Procedure has been published in the US Terminal Procedures Publication.

No public-use or military FAA registered airports were identified within the study area (FAA 2024b).

Although pre-existing landing areas for air ambulance services may exist in the study area, no public-use heliports or heliports with an instrument approach procedure are listed for the study area in the Chart Supplement for the South Central US (FAA 2024b).

In addition, POWER also reviewed the FAA database (FAA 2024c), USGS topographic maps, recent aerial imagery, and conducted field reconnaissance from publicly accessible areas to identify private-use airstrips and private-use heliports not subject to notification requirements listed in 14 C.F.R. 77.9. There were no private-use airstrips and no private-use heliports identified within the study area.

3.2.4 Communication Towers

Review of the Federal Communication Commission (FCC) database indicated that there are no amplitude modulation radio (AM radio) transmitters within the study area. There are three frequency modulation radio (FM radio) transmitters/microwave towers/other electronic installations identified within the study area. There are two additional FM radio transmitters/microwave towers/other electronic installations within 2,000 feet of the study area boundary (FCC 2024).

3.2.5 Utility Features

Utility features reviewed include existing electrical transmission lines, pipelines, water and gas/oil wells, and water and gas/oil storage tanks. Data sources used to identify existing electrical transmission and distribution lines include utility company and regional system maps, aerial imagery, USGS topographic maps, additional available planning documents, and field reconnaissance surveys. Existing transmission lines identified within the study area include seven 345-kV transmission lines, four 138-kV transmission lines, and one 69-kV transmission line. Distribution lines are prevalent throughout the developed portions of the study area; however, these features were not mapped or inventoried.

Data was obtained from the RRC (RRC 2024a) which provided a GIS layer for existing oil and gas wells, pipelines, and supporting facilities. The 2024 RRC dataset along with aerial imagery interpretation and field reconnaissance were used to identify and map existing oil and gas related facilities. Several pipelines and oil and

gas wells were identified within the study area (RRC 2024a). Pipeline information was also provided by CPS Energy regarding the pipelines within the existing ROW (CPS Energy 2024).

Water wells within the study area are scattered throughout study area (TWDB 2024).

3.2.6 Socioeconomics

This section presents a summary of economic and demographic characteristics for the county and describes the socioeconomic environment of the study area. Literature sources reviewed include publications of the United States Census Bureau (USCB), and the Texas State Data Center (TSDC).

Population Trends

Bexar and Wilson Counties experienced a population increase between 2010 and 2020 of 17% and 16% respectively. Karnes County experienced a population decrease between 2010 and 2020 of 1%. By comparison, population at the state level increased by nearly 16% between 2010 and 2020 (USCB 2010 and 2024).

According to TSDC projections, Bexar, Wilson and Karnes Counties are projected to experience a population growth between 2020 and 2050. The population of Bexar County is expected to experience population increases of 15%, 13% and 10%, respectively. The population of Wilson County is expected to experience population increases of 12%, 11% and 10%, respectively. The population of Karnes County is expected to experience population increases of 4%, 5% and 4%, respectively. By comparison, the population of Texas is expected to experience population increases of 13%, 12%, and 10% over the next three decades, respectively (TSDC 2022). Table 3-8 presents the past population trends and projections for the study area counties and for the state of Texas.

TABLE 3-8 POPULATION TRENDS

STATE/COUNTY	PAST		PROJECTED		
	2010	2020	2030	2040	2050
Texas	25,145,561	29,145,505	32,912,882	36,807,213	40,645,784
Bexar County	1,714,773	2,009,324	2,302,829	2,599,727	2,865,834
Wilson County	42,918	49,753	55,858	61,941	67,968
Karnes County	14,824	14,710	15,357	16,052	16,739

Sources: USCB 2010 and 2024; TSDC 2022.

Employment

From 2010 to 2022, the civilian labor force (CLF) in Bexar, Wilson and Karnes Counties increased by 28%, 14% and 7%, respectively. By comparison, the CLF at the state level grew by 23% (2,711,288 people) over the same time period (USCB 2024). Table 3-9 presents the CLF for the study area counties and the state of Texas for the years 2010 and 2022.

Between 2010 and 2020, Bexar County experienced a decrease in its unemployment rate from 6.90% in 2010, to 5.50% in 2020. Wilson County experienced a decrease in its unemployment rate from 5.60% in 2010 to 3.40% in 2020. Karnes County experienced an increase in its unemployment rate from 3.20% in 2010 to 5.30% in 2020. By comparison, the state of Texas experienced a decrease in the unemployment rate over the same period. The state's unemployment rate decreased from 7.00% in 2010, to 5.20% in 2020 (USCB 2024). Table 3-9 presents the employment and unemployment data for the study area counties and the state of Texas for the years 2010 and 2020.

TABLE 3-9 CIVILIAN LABOR FORCE AND EMPLOYMENT

STATE/COUNTY	2010	2022
Texas		
Civilian Labor Force	11,962,847	14,674,135
Employment	11,125,616	13,908,128
Unemployment	837,231	766,007
Unemployment Rate	7.00%	5.20%
Bexar County		
Civilian Labor Force	793,358	1,014,064
Employment	738,564	957,948
Unemployment	54,794	56,116
Unemployment Rate	6.90%	5.50%
Wilson County		
Civilian Labor Force	21,215	24,145
Employment	20,026	23,332
Unemployment	1,189	813
Unemployment Rate	5.60%	3.40%
Karnes County		
Civilian Labor Force	4,829	5,177
Employment	4,675	4,904
Unemployment	154	273
Unemployment Rate	3.20%	5.30%

Source: USCB 2010 and 2024.

Leading Economic Sectors

The major occupations in Bexar and Wilson counties in 2022 are listed under the category of management, business, science, and arts occupations, followed by sales and office occupations (USCB 2024). The major occupations in Karnes County in 2022 are listed under the category of management, business, science, and arts occupations, followed by service occupations (USCB 2024). Table 3-10 presents the number of persons employed in each occupation category during 2022 in the study area counties.

TABLE 3-10 OCCUPATIONS IN THE STUDY AREA COUNTIES

OCCUPATION	BEXAR COUNTY	WILSON COUNTY	KARNES COUNTY
Management, business, science, and arts occupations	359,381	8,579	1,320
Service occupations	177,740	3,440	1,284
Sales and office occupations	221,469	5,252	1,098
Natural resources, construction, and maintenance occupations	91,230	2,919	762
Production, transportation, and material moving occupations	108,128	3,142	440

Source: USCB 2024.

In 2010 and 2022, the industry group employing the most people in Bexar, Wilson and Karnes counties was educational services, and healthcare and social assistance (USCB 2024). Table 3-11 presents the number of persons employed in each of the industries in the study area counties for the years 2010 and 2022.

TABLE 3-11 INDUSTRY IN THE STUDY AREA COUNTIES

INDUSTRY GROUP	BEXAR COUNTY		WILSON COUNTY		KARNES COUNTY	
	2010	2022	2010	2022	2010	2022
Agriculture, forestry, fishing and hunting, and mining	4,864	9,829	802	1,064	559	518
Construction	60,387	78,240	2,112	2,493	254	599
Manufacturing	44,307	52,214	1,638	1,917	242	242
Wholesale trade	21,801	20,302	778	559	54	15
Retail trade	87,948	112,093	2,064	2,636	414	607
Transportation and warehousing, and utilities	35,297	50,748	1,561	1,741	279	136
Information	18,424	15,106	353	204	90	154
Finance and insurance, and real estate and rental and leasing	71,493	84,923	1,472	1,075	260	103
Professional, scientific and management, and administrative and waste management services	79,856	117,949	1,427	2,455	218	274
Educational services, and health care and social assistance	163,102	221,059	4,540	5,057	1,261	925
Arts, entertainment, and recreation, and accommodation and food services	73,044	105,164	1,056	1,417	319	344
Other services, except public administration	37,264	45,614	766	1,049	272	234
Public administration	40,777	44,707	1,457	1,665	453	720

Source: USCB 2024.

3.2.7 Community Values

The term "community values" is included as a factor for the consideration of transmission line route approval under PURA 37.056(c)(4)(A-D); however, the term has not been defined by the PUC. The PUC CCN application requires information concerning the following items related to community values:

- Public open-house meeting if applicable.
- Approval or permits required from other governmental agencies.

- Brief description of the area traversed.
- Habitable structures within 500 feet of the centerline for transmission lines of 230 kV or more.
- AM and FM radio, microwave, and other electronic installations in the area.
- FAA-registered public use airstrips, private airstrips, and heliports located in the area.
- Irrigated pasture or croplands utilizing center-pivot or other traveling irrigation systems.
- Parks and recreation areas.
- Historical and archeological sites.

In addition, POWER also evaluated the Project for community values and resources that might not be specifically listed by the PUC, but that might be of importance to a particular community as a whole. Although the term "community values" is not formally defined in PUC rules, in several dockets the PUC and Staff have used the following as a working definition: the term "community values" is defined as *a shared appreciation of an area or other natural resource by a national, regional, or local community*. Examples of a community resource would be a park or recreational area, historical or archeological site, or a scenic vista (aesthetics). POWER mailed consultation letters to various local elected and appointed officials to identify and collect information regarding community values and community resources.

3.3 Recreational and Park Areas

The PUC's CCN application specifically requires reporting of recreational and park areas owned by a governmental body or an organized group, club, or church. Federal and state database searches and county/local maps were reviewed to identify any parks and/or recreational areas within the study area. A reconnaissance survey was also conducted to identify any additional park or recreational areas.

3.3.1 National/State/County/Local Parks

One national and one state park were identified within the study area (National Park Service [NPS] 2024a; TPWD 2024l). Rancho de Las Cabras is managed by the NPS as part of San Antonio Missions National Historical Park. The park offers a guided tour with a park ranger to explore the stories, myths, and mysteries surrounding Rancho de loas Cabras (NPS 2024b). Calaveras Lake Park is owned by CPS Energy and is managed by TPWD. The park offers camping, picnic areas, boat ramps and good shoreline access (TPWD 2024m). No county or local parks were identified within the study area.

There are no public hunting areas or wildlife management areas identified within the study area (TPWD 2024n). Additional recreational activities such as hunting and fishing might occur on private properties throughout the study area but are not considered to be open to the general public.

3.3.2 Wildlife Viewing Trails

Review of the TPWD *Heart of Texas East Wildlife Trail* and the *Central Texas Coast – Great Texas Coastal Birding Trail* did not indicate any wildlife viewing loops within the study area. However, the Calaveras Lake Park was identified as a site of interest within the study area (TPWD 2024o and 2024p).

3.4 Aesthetic Values

PURA § 37.056(c)(4)(C) incorporates aesthetics as a consideration when evaluating proposed electric transmission facilities. There are currently no formal guidelines provided for managing visual resources on private, state, or county owned lands. For the purposes of this study, the term aesthetics is defined by POWER to accommodate the subjective perception of natural beauty in a landscape and measure an area's scenic qualities. The visual analysis was conducted by describing the regional setting and determining a viewer's sensitivity. Related literature, aerial photograph interpretation, and field reconnaissance surveys were used to describe the regional setting and to determine the landscape character types for the area.

Consideration of the visual environment includes a determination of aesthetic values (where the major potential effect of a project on the resource is considered visual) and recreational values (where the location of a transmission line could potentially affect the scenic enjoyment of the area) that would help define a viewer's sensitivity. POWER considered the following aesthetic criteria that combine to give an area its aesthetic identity:

- Topographical variation (hills, valleys, etc.).
- Prominence of water in the landscape (rivers, lakes, etc.).
- Vegetation variety (woodland, meadows).
- Diversity of scenic elements.
- Degree of human development or alteration.
- Overall uniqueness of the scenic environment compared with the larger region.

The study area is primarily rural, with some residential, commercial, and industrial development scattered throughout. The predominant land use within the study area is pastureland/rangeland. The majority of the study area has been impacted by land improvements associated with residential structures, commercial and industrial activities, local roadways, and various utility corridors including the existing 345 kV transmission line. Overall, the study area viewscape consists of medium intensity urban development.

However, no known high-quality aesthetic resources, designated views, or designated scenic roads or highways were identified within the study area (Federal Highway Administration 2024).

The study area is located within the Texas Independence Trail Region There are no identified sites of interest within the study area (THC 2024a).

A review of the NPS website did not indicate any Wild and Scenic Rivers, National Monuments, National Memorials, National Historic Sites, National Battlefields, within the study area; however, as mentioned above in Section 3.3.1, the El Camino Real de los Tejas National Historic Trail is located within the study area. A review of the THC Atlas indicated a recorded Texas Historic Landmark *Flores Rancho*, located within the study area (National Wild and Scenic Rivers System 2024; NPS 2024c, 2024d, and 2024e).

Based on these criteria, the study area exhibits a moderate degree of aesthetic quality for the region. The majority of the study area maintains the feel of a rural community and agricultural setting. Although some portions of the study area might be visually appealing, the aesthetic quality of the study area overall is not distinguishable from that of other adjacent areas within the region.

3.5 Historical (Cultural Resource) Values

PURA § 37.056(c)(4)(A-D) incorporates historical and aesthetic values as a consideration when evaluating proposed electric transmission facilities. The PUC's CCN application requires that known historical sites within 1,000 feet of a route be listed, mapped, and their distance from the centerline of the route documented in the application filed for consideration. Archeological sites within 1,000 feet of a route are required to be listed and their distance from the centerline documented, but they need not be shown on maps for the protection of the site. Sources consulted to identify known sites (national, state, or local commission) must also be listed.

The THC is the state agency responsible for preservation of the state's cultural resources. The THC, working in conjunction with the TARL, maintains records of previously recorded cultural resources as well as records of previous field investigations. Information from the THC's restricted-access Texas Archeological Sites Atlas (TASA) and Texas Historical Sites Atlas (THSA) was reviewed to identify and map locations of previously recorded cultural (archeological and historical) resources within the study area. TxDOT Historic Resources of Texas Aggregator was also reviewed for listed or determined eligible for listing on the NRHP historic properties and bridges. At the national level, NPS websites and data centers were reviewed to identify locations and boundaries for nationally designated historic landmarks, trails, and battlefield monuments.

Together, archeological and historical sites are often referred to as cultural resources. Under the NPS standardized definitions, cultural resources include districts, sites, buildings, structures, or objects important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. For this study, cultural resources

have been divided into three major categories: archeological resources, historical resources, and cemeteries. These three categories correlate to the organization of cultural resource records maintained by the THC and TARL.

Archeological resources are sites where human activity has measurably altered the earth and left deposits of physical remains (e.g., burned rock middens, stone tools, petroglyphs, house foundations, trails, trash scatters). Most archeological sites in Texas are Native American (prehistoric), Euro/African American, or Hispanic in origin. Much of the study area has not been studied intensively for archeological resources. Therefore, high probability areas (HPAs) for prehistoric and historic archeological resources were determined based on proximity to perennial water sources, certain topographic features, previously recorded cultural resources, and the presence of structures on historic maps in currently undeveloped areas.

Historical resources include standing buildings or structures (e.g., houses, barns and outbuildings), and may also include dams, canals, bridges, transportation routes, silos, etc., and districts that are non-archeological in nature and generally more than 50 years of age.

Cemeteries are locations of intentional human interment and may include large public burial grounds with multiple individuals, small family plots with only a few burials, or individual grave sites. In some instances, cemeteries may be designated as Historic Texas Cemeteries (HTCs) by the THC or recognized with an Official Texas Historic Marker (OTHM). Cemeteries may also be documented as part of the THC Record-Investigate-Protect Program.

3.5.1 Cultural Background

Prehistory

Pertulla (2004) includes the study area in the northern portion of the South Texas Plains archeological region of Texas, and the THC (Mercado-Allinger et al. 1996) places the study area in the Central and Southern Planning Region (Figure 3-4). The study area is near several cultural regions, and thus shares culture histories with the Central Texas Region to the north, the Savannah and Prairie Region to the east, and the Coastal Texas region to the south. The following culture history is drawn primarily from Hester's (1995) discussion of South Texas prehistory, unless otherwise noted. Like most of Texas, the prehistory of South Texas is divided into three broad periods of cultural development based on technological changes evident in the archeological record, and on broad changes in the physical and cultural environment. These periods, the Paleoindian, Archaic and Late Prehistoric Periods, are discussed below, followed by a discussion of the study area following the arrival of Europeans. All dates pertaining to the prehistory of the area are given as approximate years before present (BP).

Paleoindian Period (11,500 to 8,800 BP)

The Paleoindian period is the earliest generally accepted period of human occupation in North America. During this period, prehistoric populations exploited now-extinct giant mammals, such as ancient bison (*Bison antiquus*) and mammoth (*Mammuthus columbi*), although recent emphasis has been placed on the wide diversity of plants and animals exploited by these early groups (Collins 1995 and 2002). Late Pleistocene fauna and possibly associated lithic materials have been reported at the Buckner Ranch Site (41BE2) on the Berclair Terrace in Bee County near its border with Goliad County. The Paleoindian Period coincided with the end of the last major North American glaciation, known geologically as the Late Pleistocene, and with the beginning of the Holocene.

In South Texas, the Paleoindian tradition is represented by fluted projectile points and specialized blade production (Hester 1995). Sites containing diagnostic dart point types such as Clovis, Folsom, Plainview, and Angostura are often attributed to this early period of human occupation in South Texas and elsewhere. The late Paleoindian period corresponds to a greater variety of point styles, including smaller side-notched points that are believed to reflect a more diverse hunting strategy. Climate changes including a warming trend at the end of the Pleistocene contributed to the extinction of Pleistocene mega-fauna and regional changes in flora and fauna.

During this time, while the focus shifted to hunting large game, small animals, fish, reptiles, and plant life remained vital components of the diet. Small groups continued their traditional practices of hunting, gathering, and sourcing materials for stone tools across a wide region. The distinctive Clovis spear points of the early Paleoindian era transitioned to the shorter, fluted Folsom points. There was also an increased diversity of smaller dart points, including the St. Mary's Hall point found at the St. Mary's Hall site and the Brackenridge Park site in Bexar County.

0 30 60 120 180 240
Miles

Source: Mercado-Allinger et. al., 1996

Legend

Cultural Resource Planning Region Boundary

County Boundary

SPRUCE TO PAWNEE
345 KV TRANSMISSION LINE
REBUILD PROJECT

FIGURE 3-4

LOCATION OF THE STUDY AREA IN RELATION TO THE CULTURAL RESOURCE PLANNING REGIONS OF TEXAS

CPS ENERGY

POWER ENGINEERS

Date: 12/18/2024

PAGE 3-53

Archaic Period (8,000 to 1,150 BP)

The long-lasting Archaic Period in South Texas followed the Paleoindian period and is distinguished by changes in material culture representing cultural adaptation to the changing North American environment. It is thought that human population density gradually increased during this period, and the Archaic Period is characterized by a shift to the hunting of smaller game, plant gathering, and an emphasis on the exploitation of marine resources in coastal zones. The hunting and gathering lifeway is epitomized by the Archaic tradition. The Archaic period is generally subdivided into three subperiods: Early, Middle and Late.

Early Archaic archeological sites are rare in South Texas, and the settlement patterns and subsistence strategies of this period are poorly understood. Early Archaic groups were likely organized into small hunting and gathering bands and were similar to their Paleoindian predecessors in their lifestyle and population density. Typical food resources probably consisted of deer, mussels, small game, fish and acorn nuts (Hester 1995). In Central Texas, the transition from the late Paleoindian period to the Early Archaic is characterized by a gradual shift from broad hunting and gathering practices to more localized methods. This transition also resulted in a wider array of artifacts compared to the late Paleoindian period (Collins 2004). Key aspects of the Early Archaic included a greater usage of groundstone tools and the prevalent use of heat-treated rocks, which may have served as hearths or ovens. Bison are notably absent during the early Archaic in Central Texas (Collins 2004).

The Middle Archaic Period (4,500 BP to 2,400 BP) has a distinct lithic technology separating it from earlier periods. Dart points from this period are distinguished by their triangular shape. Middle Archaic dart points, such as the Tortugas and Abasolo point types, differ sharply from the stemmed points of the Early Archaic Period. Pedernales, Langtry, Kinney, and Bulverde dart points are also Middle Archaic dart point types (Turner and Hester 1999). This period also exhibits a large amount of distally-beveled "gouges." Use-wear analysis suggests the gouges were used for woodworking (Hester 1995). During the early Middle Archaic in central Texas, evidence of bison hunting can be found in the archaeological record (Collins 2004). However, around 5,000 BP, bison disappear from the central Texas sites, coinciding with some of the driest conditions experienced by humans in the region (Collins 2004). The Middle Archaic is marked by growing populations and increased population density from earlier periods, although the population density remained low (Hester 1995). Site densities in South Texas increased markedly during the Middle Archaic, possibly reflecting a decrease in group mobility and/or an increase in territoriality among groups (Black 1989). Early cemeteries, dating to the end of the Middle Archaic, suggest territoriality increased during the Middle Archaic.

The Late Archaic Period (2,400 BP to 1,300 BP) is the best understood and best represented of the Archaic subperiods. Shumla, Ensor, Frio, Marco, and Montell point types are typical of the Late Archaic period. Ground stones are more frequently encountered in Late Archaic sites than in previous periods, consisting primarily of

manos and metates. The increased use of ground stones likely represents an increased exploitation of mesquite, acacia beans, and other plant resources. Hester (1995) suggests this shift reflects a continued increase in population density. Cultural deposits on Late Archaic sites also tend to be deeper than during preceding periods, suggesting that occupations were either more extended in duration or that sites were reoccupied more frequently (Black 1989).

Late Prehistoric Period (1,150 to 350 BP)

The primary hallmarks of the Late Prehistoric Period are the introduction of the bow and arrow and the introduction of pottery in the region. The arrow points found from this period are much smaller and lighter than the dart points from earlier periods, and include Fresno, Scallorn, Starr, Zavala, and Perdiz points (Hester 1995). Evidence points to the presence of two ceramic traditions in South Texas, bone-tempered and sandy paste. The bone-tempered pottery, often referred to as Leon Plain ware, is primarily recovered from inland South Texas sites and associated with the Toyah culture (Hester 1989). These wares include mostly undecorated jars and bowls. The sandy paste ceramic tradition, commonly referred to as Rockport ware, originates along the Texas Gulf Coast. These wares tend to be thin walled, sandy textured, and often decorated and waterproofed with asphaltum (Hester 1989).

The Late Prehistoric period is often considered to have begun around 1,250 BP, although it might have actually started as late as 800 BP. During this time, subsistence practices remained relatively stable, with hunting and gathering still prominent and the processing of plants in burned rock middens continuing. A significant change marking the transition from the Late Archaic to the Late Prehistoric was the rise of arrow points, which became more common in archaeological findings compared to dart and spear points. Additionally, there seems to be an uptick in intergroup violence, likely linked to rising population pressures, as seen in many skeletal remains showing fatal arrow wounds. Toward the end of the Late Prehistoric period, pottery and signs of small-scale agriculture begin to emerge in the archaeological records (Collins 2004).

As Europeans began to explore Mexico and South Texas in the sixteenth century, European goods were introduced to the native groups, some of which appear in contact-era artifact assemblages. Records made by early European explorers, such as Alvar Nunez Cabeza da Vaca, provide the earliest ethnohistoric accounts of the Coahuiltecan-affiliated groups located in South Texas at the time. Based on these records, it appears that native groups in the region were highly nomadic hunter gatherers who moved in a seasonal pattern within distinctive territories (Hester 1989). The combined effects of diseases introduced by Europeans as well as violent cultural conflicts decimated local Native American populations.

Post-contact Period (ca. 500 to 50 BP)

Direct European contact in the region began with exploratory expeditions in the late seventeenth and early eighteenth centuries. Spain was the pioneer among European nations in exploring and claiming territories in the New World, which included present-day Texas and the Lower Rio Grande. In 1528, Cabeza de Vaca found himself journeying across South Texas after being shipwrecked near Galveston Bay. For over 200 years, Spanish expeditions into the Rio Grande Valley mainly focused on military objectives aimed at reinforcing Spain's claim to the area and thwarting other European countries from encroaching on Spanish lands. During this time, the roads and trails established by the Spanish often traced the paths previously used by Native American communities and relied heavily on natural springs and other water sources for navigation.

The earliest interaction occurred in 1691, when Domingo Terán de los Ríos and Damián Massanet traveled through East Texas and encountered the indigenous Payaya population, naming an indigenous village and nearby river San Antonio de Padua (Jasinski 2024). This area saw further exploration in 1709 with an expedition led by Antonio de San Buenaventura y Olivares and Isidro Félix de Espinosa (Chipman 2024a), after which it was frequently revisited by various explorers (Chipman 2024b). Beginning in 1718 and throughout the 1720s, the Spanish occupation grew more robust as the population expanded, largely due to the establishment of the presidio of San Antonio de Bexar and several missions (Handbook of Texas Online 2024). On May 1st, Olivares founded Mission San Antonio de Valero at its original site west of San Pedro Springs. Shortly after, Martín de Alcarón, the governor of Coahuila y Texas, established the presidio of San Antonio de Béxar near the mission (Jasinski 2024). In September 1718, he journeyed through what is now Wilson County, while exploring the bay of Espiritu Santo. Nearly a decade later, in 1727, Pedro de Rivera y Villalón traveled north across the area during his inspection tour between La Bahía and Bexar (Long 2024a). As earlier European explorers journeyed through Mexico and South Texas in the sixteenth century, they introduced various goods to local native populations. Accounts from explorers like Alvar Nunez Cabeza da Vaca shed light on the Coahuiltecan-affiliated groups in South Texas, revealing their nomadic hunter-gatherer lifestyle and seasonal patterns of movement within specific territories (Hester 1989).

Unfortunately, the introduction of diseases and violent cultural clashes led to a significant decline in the local Native American populations. By 1722 and 1724, both the presidio and mission were moved to their current positions, with the presidio located on the west bank of the San Antonio River and the mission on the opposite east bank. As the area's population continued to grow, more missions were established to accommodate the increasing number of settlers (Schoelwer 2024). Development in the region ramped up as construction efforts expanded to accommodate the growing population and support the emerging government. Founded in 1731, the San Fernando de Béxar settlement marked the establishment of the first civil government in Texas (de la Teja 2024).

Beginning in 1682, the Spanish in conjunction with Franciscan missionaries, established the mission system throughout Texas. The San Francisco de la Espada Mission was established in 1731 (Davis 2024) and The Rancho de las Cabras, located within the study area, was an outpost of the mission (Long 2024c). These missions were used to encourage the eradication of Indigenous practices and replace with Christian indoctrination. Many native groups would not stay in the mission permanently but would stay for a time in accordance with a seminomadic lifestyle (Wright 2024).

In 1758, a land grant was given to Andrés Hernández and Luis Antonio Menchaca in present-day Karnes County, and they proceeded to establish ranches soon thereafter (Long 2024a). The Spanish established a fort, Fuerte de Santa Cruz del Cibolo, on Cibolo Creek in present-day Karnes County in 1770. The fort lasted 13 years before it was abandoned after multiple Comanche attacks (Long 2024a). By 1773, San Fernando had ascended to the status of the capital of Spanish Texas (de la Teja 2024).

San Fernando de Béxar began as a community of military personnel and various civilians, including Mexican frontiersmen, local families, and Native Americans residing at the missions. Over time, it transformed into a caste system, characterized by a social hierarchy rooted in racial distinctions. This type of society was common in North American Spanish colonies, incorporating Europeans and their descendants, Native Americans, individuals of African descent, and mixed-race populations (Jasinski 2024). Between 1766 and 1776, the Marqués de Rubí included the Wilson County region in his inspection of the Spanish frontier. During the early eighteenth century, ranchers from nearby San Antonio began to graze cattle here, leading to temporary settlements for vaqueros and herdsmen emerging by the mid-century. The first land grants in the area were awarded to Luis Menchaca and Andrés Hernández, who established their ranches in the southern part of what is now the county. Permanent settlement in the area began before 1830 (Long 2024b).

During the late eighteenth and early nineteenth centuries, San Fernando faced a turbulent time. Native American groups like the Apache and Comanche exerted pressure on communication networks and local agriculture, while the city experienced military strife (de la Teja 2024). In 1811, Captain Juan Bautista de las Casas took charge as governor of Texas during what came to be known as the Casas Revolt. However, this uprising was short-lived, concluding with the re-establishment of the previous governor, Manuel María de Salcedo, and the city's recapture in 1813 (Caldwell 2024). This period of unrest ultimately resulted in the reorganization of Texas and Coahuila into a single state, governed from Saltillo (de la Teja 2024). As the Texas Revolution began, San Fernando de Béxar was besieged and taken over by rebel forces. By 1837, it had changed its name to San Antonio and became the county seat of Bexar County (de la Teja 2024).

The Texas Revolution was sparked when several Mexican states revolted against President Antonio Lopez de Santa Anna's decision to replace the 1824 constitution with a new government. Among those states was Coahuila y Tejas. On February 23, 1836, Santa Anna's army responded to the Texian rebels by besieging San Antonio, leading to the infamous Battle of the Alamo. This uprising ultimately concluded on April 21, 1836, with Texas gaining independence and Mexican forces being expelled from San Antonio (Barker and Pohl 2024).

After the war for independence, San Antonio became the heart of Bexar County in the Republic of Texas (Long 2024a). In 1842, Mexico reclaimed San Antonio twice (Jasinski 2024). The situation escalated further when Texas joined the US in 1845, leading to the outbreak of the Mexican-American War in 1846. The US military set up a headquarters in San Antonio in 1848, but when Texas seceded from the Union at the beginning of the American Civil War in 1861, they had to surrender control to militia forces (Jasinski 2024).

With hostilities coming to an end, the regional population and economy increased to the point that Karnes County was formed in 1854 (Long 2024a). Wilson County was established shortly before in 1860 after the area was carved out from Bexar and Karnes Counties. Wilson County was named after James C. Wilson, a member of the Somervell expedition and a legislator (Long 2024b). In 1867, John W. Longsworth, who had been appointed judge and Wilson County clerk by the military government during Reconstruction, moved the county records to Lodi, sparking a debate over the county seat that would continue for over ten years (Long 2024b). To settle the issue, an election took place in November 1873, resulting in the selection of Floresville, located near the county's geographic center, as the new Wilson County seat (Long 2024b).

After the Civil War, San Antonio and Wilson County flourished into a bustling center for various industries, attracting a growing population (Jasinski 2024; Long 2024b). Cattle drives played a vital role in the local economy of Wilson and Karnes Counties, alongside wool production from the nearby hill country (Long 20924a and 2024b). In 1877, the arrival of the Galveston, Harrisburg and San Antonio Railway marked a significant development for the city, reaching Floresville in 1886 (Long 2024b). This was soon followed by the International-Great Northern Railway in 1881. These railroads not only boosted local industries but also established five more connections by 1900, linking the area to broader markets (Jasinski 2024). When the railroads reached Karnes County, they brought an economic and population boom and an increased reliance on farming (Long 2024a).

Tenant farming became common, and the farmers were hit by the combination of falling prices and the boll weevil during the Great Depression (Long 2024a). The discovery of oil in Pettus in 1929 and in Karnes County in 1930 aided in the post-Depression recovery in the area. In the 1940s and 1950s, the regional economy began shifting towards large farms and ranches worked by agricultural laborers (Long 2024a).

3.5.2 Literature and Records Review

On November 19, 2024, shapefiles were acquired from TARL to identify and map the locations of recorded archeological resources within the study area. Descriptive data pertaining to archeological sites and surveys were obtained from the TASA in November 2024. The locations of, and information pertaining to, State Antiquities Landmarks (SALs), NRHP properties, Historic Texas Cemeteries, and OTHMs within the study area were obtained from the TASA (THC 2024a) and the THSA (THC 2024b). The TASA, THSA, and USGS topographic maps were reviewed to identify cemeteries within the study area. Texas Department of Transportation's Historic Resources Aggregator database was reviewed to identify historic resources within the study area that are listed or determined eligible for listing on the NRHP (TxDOT 2024c). At the national level, the NRHP database (NPS 2024c) and NPS websites for National Historic Landmarks (NPS 2024c) and National Historic Trails (NPS 2024d) were reviewed. At the local level, the City of San Antonio's Office of Historic Preservation (OHP) was reviewed for identify historic resources that are listed or determined eligible for listing on the NRHP (OHP 2024b).

The records search indicated that two NRHP-listed resources and 10 archeological sites, including one that has been determined eligible for listing on the NRHP and is also an SAL, and four previous investigations have been recorded in the study area. No cemeteries, OTHM, TxDOT historic properties, TxDOT eligible- or listed bridges, or OHP properties are documented within the study area. The cultural resources within the study area are summarized below in Table 3-12.

TABLE 3-12 RECORDED CULTURAL RESOURCES WITHIN THE STUDY AREA

ARCHEOLOGICAL SITES	NRHP-LISTED RESOURCES	NRHP DETERMINED - ELIGIBLE RESOURCE	STATE ANTIQUITIES LANDMARKS	CEMETERIES	OTHM
11	2	1	1	1	0

Source: THC 2024a and 2024b.

The NRHP-listed Rancho de las Cabras District and a portion of the El Camino Real de los Tejas National Historic Trail are within the study area. The Rancho de las Cabras District was a ranch outpost for the San Francisco de la Espada Mission. Occupied between 1731 and 1794, Spanish missionaries and indigenous people raised livestock at the ranch. During its occupation, the site included fortifications and a chapel, though only the foundation survived until the 1980s (Long 2024b). Rancho de las Cabras is listed under Criterion D for information that can be gained from archeological remains. Archeological sites 41WN30, 41WN91, 41WN92, and 41WN93 are recorded within the historic district. Sites 41WN92 and 41WN93 are within the study area. Both sites are pre-contact lithic scatters that have been determined ineligible for listing on the NRHP (THC 2024b).

El Camino Real De Los Tejas National Historic Trail, as mapped by the NPS, crosses the proposed rebuild in Bexar County. El Camino Real de Los Tejas was one of the roads connecting regions of the Spanish territories to Mexico City. This road provided an overland route to the Red River Valley in Louisiana. Consisting of established Indian trails and trade routes, El Camino Real de Los Tejas continued to be utilized by the Spanish during their conquests, by Mexico, the Republic of Texas, and eventually the United States (NPS 2024b, 2024c, 2024d, and 2024e).

A total of 10 archeological sites, including 41WN92 and 41WN93, have been recorded within the study area (Table 3-13). Pre-contact archeological sites that have been recorded in the study area include lithic procurement site 41WN67; lithic scatters 41BX726, 41BX1306, 41BX1310, 41BX1312, 41KA42, 41WN67, 41WN92, and 41WN93; and two isolated flakes (41KA121 and 41KA122). These pre-contact sites are near streams (e.g., Hondo Creek and Calaveras Lake [formally Calaveras Creek]) or uplands adjacent to these streams (USGS 1953 and 1967). Site 41BX732 is a horse ranch complex with a cement slab, barn, silo, cistern and a scatter of cement, barbed wire, metal, glass, piping, and bricks. The site was determined eligible for listing on the NRHP and designated an SAL in 1989. However, in 2008, Pape-Dawson Engineers recommended further investigation at the site to determine its eligibility for listing on the NRHP. Despite this discrepancy, site 41BX732 has been determined eligible for listing on the NRHP and is a designated SAL (THC 2024b).

TABLE 3-13 RECORDED ARCHEOLOGICAL SITES WITHIN THE STUDY AREA

TRINOMIAL	PERIOD	ELIGIBILITY STATUS	SITE DESCRIPTION
41BX726	pre-contact	Undetermined	lithic scatter with debitage, uniface, cores
41BX732	post-contact	SAL/Eligible	Horse ranch complex with a cement slab, barn, silo, and cistern and a scatter of cement, barbed wire, metal, glass, piping, and bricks
41BX1306	pre-contact	Ineligible*	lithic scatter
41BX1310	pre-contact	Ineligible	lithic scatter with debitage and dart and Ensor or Ellis-like dart point
41BX1312	pre-contact	Ineligible	lithic scatter with debitage and dart and Ensor or Ellis-like dart point
41KA42	pre-contact	Undetermined	lithic scatter with debitage, a biface blade, biface tools, and a small chopping tool.
41KA121	pre-contact	Undetermined	one flake
41KA122	pre-contact	Undetermined	one flake
41WN67	pre-contact	Undetermined	lithic procurement site with cores and flakes
41WN92	pre-contact	Ineligible	lithic scatter with debitage, biface, cores
41WN93	pre-contact	Ineligible	lithic scatter

Source: THC 2024b.
Note: asterisks (*) indicate the site has been partially determined ineligible.

The Gilley Family Cemetery (WN-C052) is mapped within the study area (THC 2024b). The Gilley Family Cemetery is a vicinity cemetery with approximately 20 graves and has not been designated an HTC. A vicinity

cemetery as recorded by the THC, is the location where a cemetery was reported at one time, but the exact location is unknown (THC 2024b).

3.5.3 Previous Investigations

According to the TASA (THC 2024b), there have been 13 cultural resource investigations within the study area (Table 3-14). The surveys were conducted in advance of oil and gas (Clark 2012; Justen and Clark 2013; Nickels 2014; Sager et al. 2012), and water supply (Iruegas 2016) projects. The remaining eight investigations had little to no information available on the TASA (THC 2024b).

TABLE 3-14 PREVIOUS CULTURAL RESOURCE INVESTIGATIONS WITHIN THE STUDY AREA

Atlas Number	AUTHOR	YEAR	REPORT TITLE	INVESTIGATING AGENCY/ FIRM
8400002813	-	-	Information unavailable on the TASA	-
8400002873	-	-	Information unavailable on the TASA	-
8400002864	-	1978	Information unavailable on the TASA	Texas Department of Highways and Public Transportation
8400000789	-	1984	Information unavailable on the TASA	NPS
8500003077	-	1991	Information unavailable on the TASA	Texas Department of Highways and Public Transportation
8500010908	-	1999	Information unavailable on the TASA	City of San Antonio
8400010247	-	2000	Information unavailable on the TASA	FHA
8500020704	Clark, Reign	2012	Cultural Resources Survey of the Proposed +6,698-Foot Enterprise to Milton HUD Crude, Karnes County, Texas (Clark 2012)	Goshawk Environmental Consulting, Inc.
8500021127	Stanyard, William, et al.	2012	-	TRC
8500025418	Rebecca Sager, Reign Clark, and Scott Justen	2012	Cultural Resources Survey of the Proposed ±22,053-Foot Jarzombeck Unit Gathering Pipeline, Karnes County, Texas (Sager et al. 2012)	Goshawk Environmental Consulting, Inc.
8500054673	Scott Justen and Reign Clark	2013	Cultural Resources Survey of the Proposed ±8,786-Foot Myrtle Unit #1H Flowline, Wilson County, Texas (Justen and Clark 2013)	Goshawk Environmental Consulting, Inc.
8500060418	Nickels, David L.	2014	A Cultural Resources Survey of a Segment of the Proposed Karnes North Pipeline on a Tract of Land Owned by the City of Poth, Wilson County, Texas (Nickels 2014)	Tierras Antiguas Archaeological Investigations; Martindale, TX
8500079971	Sergio A. Iruegas	2016	An Intensive Archaeological Survey for the El Oso Water Supply Corporation Project, Atascosa and Karnes Counties, Texas (Iruegas 2016)	GTI Environmental, LLC

Source: THC 2024b.

3.5.4 High Probability Areas

Review of the previously recorded cultural resource site data indicates that the study area has not been entirely examined during previous archeological and historical investigations. Consequently, the records review results do not include all possible cultural resource sites within the study area. To further assess and avoid potential impacts to cultural resources, HPAs for pre-contact archeological sites were defined during the route analysis process. HPAs were designated based on a review of the site and survey data within the study area, as well as soils and geologic data, topographic variables, and previously surveyed areas. Within the study area, the pre-contact HPAs typically occur near and along streams, at the heads of major draws, near springs, and outcroppings of chert gravels suited to stone tool manufacture. Terraces and topographic high points that would provide flats for camping and expansive landscape views as well as access to fresh water sources are also considered to have a high probability of containing prehistoric archeological sites.

4.0 ENVIRONMENTAL IMPACTS OF THE PROJECT ROUTE

Potential impacts of the Project that could occur from, and are unique to, the construction (new and rebuild) and operation of a transmission line are discussed separately in this section of the EA. Evaluation of the potential impacts of the Project Route identified in Section 3.0 was conducted by tabulating the data for each of the 46 evaluation criteria in Table 2-1. The data tabulation for land use and environmental criteria for the Project Route is presented in Table 4-1.

TABLE 4-1 LAND USE AND ENVIRONMENTAL DATA FOR PROJECT ROUTE EVALUATION

EVALUATION CRITERIA		
Land Use		**Route**
1	Length of project route (miles)	45.83
2	Number of habitable structures[1] within 500 feet of ROW centerline	143
3	Length of ROW using existing transmission line ROW	45.83
4	Length of ROW parallel and adjacent to existing transmission line ROW	0
5	Length of ROW parallel and adjacent to other existing ROW (e.g., roadways, highways, utilities, etc.)	0
6	Length of ROW parallel and adjacent to apparent property lines[2] or other natural or cultural features	0
7	Sum of evaluation criteria 3, 4, 5, and 6	45.83
8	Percent of evaluation criteria 3, 4, 5, and 6	100%
9	Length of ROW across parks/recreational areas[3]	0.44
10	Number of additional parks/recreational areas[3] within 1,000 feet of ROW centerline	0
11	Length of ROW across cropland	1.08
12	Length of ROW across pasture/rangeland	43.24
13	Length of ROW across land irrigated by traveling systems (rolling or pivot type)	0.56
14	Length of route across conservation easements and/or mitigation banks (Special Management Area)	0
15	Length of route across gravel pits, mines, or quarries	0
16	Length of ROW parallel and adjacent to pipelines[4]	36.92
17	Number of pipeline[4] crossings	76
18	Number of transmission line crossings	5
19	Number of IH, US and state highway crossings	3
20	Number of FM or RM road crossings	6
21	Number of FAA registered airports[5] with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0
22	Number of FAA registered airports[5] having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline	0
23	Number of private airstrips within 10,000 feet of the ROW centerline	1
24	Number of heliports within 5,000 feet of the ROW centerline	1
25	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0
26	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	7
27	Number of identifiable existing water wells within 200 feet of the ROW centerline	0
28	Number of oil and gas wells within 200 feet of the ROW centerline (including dry or plugged wells)	2
Aesthetics		
29	Estimated length of ROW within foreground visual zone[6] of interstate, US and state highways	4.25

TABLE 4-1 LAND USE AND ENVIRONMENTAL DATA FOR PROJECT ROUTE EVALUATION

EVALUATION CRITERIA		
30	Estimated length of ROW within foreground visual zone[6] of FM/RM roads	7.00
31	Estimated length of ROW within foreground visual zone[6][7] of parks/recreational areas[3]	2.56
Ecology		
32	Length of ROW across upland woodlands/brushlands	0.05
33	Length of ROW across bottomland/riparian woodlands	0.02
34	Length of ROW across NWI mapped wetlands	0.02
35	Length of route across USFWS designated critical habitat for federally-listed threatened or endangered species	0
36	Length of ROW across open water (lakes, ponds)	0.54
37	Number of stream crossings	59
38	Length of ROW parallel (within 100 feet) to streams	1.63
39	Length of ROW across Edwards Aquifer Zones	0
40	Length of ROW across FEMA mapped 100-year floodplain	9.86
Cultural Resources		
41	Number of cemeteries within 1,000 feet of the ROW centerline	2
42	Number of recorded cultural resource sites crossed by ROW	2
43	Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline	8
44	Number of resources determined eligible for or NRHP properties crossed by ROW	2
45	Number of additional resources determined eligible for or NRHP properties within 1,000 feet of ROW centerline	1
46	Length of ROW across areas of high archeological site potential	33.26

Notes: All length measurements are shown in miles unless noted otherwise.
[1]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 within 500 feet of the centerline of a transmission project of 230 kV or more.
[2]Apparent property boundaries created by existing roads, highways, or railroad ROWs are not "double-counted" in the length of ROW parallel to apparent property boundaries criteria.
[3]Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church within 1,000 feet of the centerline of the Project.
[4]Only steel pipelines six inches and greater in diameter carrying petrochemicals were quantified in the pipeline crossing and paralleling calculations.
[5]As listed in the Chart Supplement South Central US (FAA 2024b formerly known as the Airport/Facility Directory South Central US) and FAA 2024a.
[6]One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of interstates, US and state highway criteria are not "double-counted" in the length of ROW within the visual foreground zone of FM roads criteria.
[7]One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone of interstates, US, and state highway criteria and/or with the total length of ROW within the visual foreground zone of FM roads criteria.

4.1 Impacts on Natural Resources/Environmental Integrity

4.1.1 Impacts on Physiography and Geology

Construction related to rebuilding the existing transmission line is not anticipated to have any significant adverse effects on the physiographic or geologic features and resources of the area. Replacement and erection of the new pole structures proposed for the Project will require the excavation and/or minor disturbance of small quantities of near-surface materials but should have no measurable impacts on the geologic resources or features along the Project Route. Although the existing transmission line and Project Route intersects one in-situ recovery uranium mine, no geological hazards were identified within the study area and no geologic hazards are anticipated along the Project Route.

4.1.2 Impacts on Soils

Potential impacts to soils from the construction, operation, and maintenance of electric transmission lines include erosion and compaction. Such impacts can be avoided by CPS Energy's implementation of appropriate mitigative measures during construction. No conversion of prime farmland soils is anticipated because of the Project.

The highest risk for soil erosion and compaction is associated with the clearing and construction phases of the Project. In accordance with CPS Energy standard construction specifications, woody vegetation will be cleared within the ROW as necessary to achieve the conductor to ground clearances of the transmission line. Areas with vegetation removed will have the highest potential for soil erosion and the movement of heavy equipment down the cleared ROW creates the greatest potential for soil compaction. Prior to construction, CPS Energy will develop a SWPPP to minimize potential impacts associated with soil erosion, compaction, and off-ROW sedimentation. Implementation of this plan will incorporate temporary and permanent BMPs to minimize soil erosion on the ROW during rainfall events. The SWPPP will also establish the criteria for mitigating soil compaction and re-vegetation to maintain soil stabilization during the construction and post construction phases. The native herbaceous layer of vegetation will be maintained, to the extent practical, during construction. Denuded areas will be seeded and/or further stabilized with the implementation of permanent soil berms or interceptor slopes to stabilize disturbed areas and minimize soil erosion potential. The ROW will be inspected during and post construction to identify potential high erosion areas and that BMPs are implemented and maintained.

The potential for erosion and compaction will be minimized by CPS Energy's development and implementation of a SWPPP for the Project.

4.1.3 Impacts on Surface Water

The Project Route crosses surface waters within the study area. CPS Energy proposes to span all surface waters and construct any structures outside of the ordinary high-water marks for any surface waters. CPS Energy will limit the removal of woody vegetation as necessary to meet the necessary conductor to ground clearances. The shorter understory and herbaceous layers of vegetation will remain, where allowable, and BMPs will be implemented in accordance with the SWPPP for the Project to reduce the potential for sedimentation into surface waters. Since CPS Energy intends to span all surface waters and a SWPPP will be implemented during construction, no significant impacts to surface waters are anticipated for the Project Route. The length of open water crossings (lakes, ponds), number of streams and rivers crossed, and length of the Project Route paralleling (within 100 feet) streams or rivers are provided in Table 4-1.

The Project Route crosses approximately 0.54 mile of open water (lakes, ponds), has 59 stream and river crossings, and parallels (within 100 feet) streams or rivers for approximately 1.63 miles. These determinations are based on the NHD and, since the dataset's inception, the hydrology of some stream features may have been altered by construction of drainage ditches, impoundments, and residential areas. A Section 10 permit is not anticipated for this Project.

4.1.4 Impacts on Ground Water

The Project Route occurs within the Carrizo-Wilcox Aquifer, Gulf Coast Aquifer, and the EAA Jurisdictional Boundary but does not cross the Edwards Aquifer Contributing Zone (Table 4-1). Due to the Project's location within the EAA Jurisdictional Boundary, CPS Energy will consult with the EAA to ensure compliance with program requirements. The construction, operation, and maintenance of the Project are not anticipated to adversely affect groundwater resources within the study area.

During construction activities, a potential impact to groundwater resources is related to fuel and/or other chemical spills. Avoidance and minimization measures of potential contamination of water resources will be identified in the SWPPP. CPS Energy will take all necessary precautions to avoid the occurrence of these spills. If an unauthorized discharge occurs during construction, CPS Energy will comply with TCEQ and/or EAA notification requirements.

4.1.5 Impacts on Floodplains

The construction of the Project Route is not anticipated to impact the overall function of floodplains within the study area, or adversely affect adjacent or downstream properties. Engineering design should alleviate the potential of construction activities to adversely impact flood channels and proper structure placement will minimize any flow impedance during a major flood event. Typically, the small footprint of pole structures as proposed for the Project does not significantly alter the flow of water within a floodplain.

The Project Route crosses approximately 9.86 miles of FEMA-mapped floodplain associated with named surface waters including but not limited to Calaveras Lake, Conquista Creek, Olmos Creek, Parita Creek, Picosa Creek, San Antonio River (Upper), San Christoval Creek, Scared Dog Creek, and Weedy Creek. Prior to construction CPS Energy will coordinate with the respective county floodplain administrator(s) to acquire any permits.

4.1.6 Impacts on Wetlands

As indicated in Table 4-1, the Project Route crosses approximately 0.02 mile of NWI mapped wetlands. Unmapped wetlands still have the potential to occur within the study area. Removal of vegetation in wetlands

increases the potential for erosion and sedimentation, which can be detrimental to downstream plant communities and aquatic life. Wetland areas also provide habitat to a number of species and are often used as migration corridors for wildlife. Mitigation measures with BMPs will be implemented, as appropriate, in identified areas of wetland potential during construction activities to further avoid and minimize impacts to those areas. CPS Energy proposes to implement BMPs as a component of their SWPPP to prevent off-ROW sedimentation and degradation of potential wetland areas. With the use of these avoidance and minimization measures, the Project Route is not anticipated to have a significant impact on potential wetlands.

The temporary and/or permanent placement of fill material within jurisdictional waterways and wetlands may require a permit from the USACE under Section 404 of the CWA. If necessary, CPS Energy will coordinate with the USACE – Fort Worth District and/or Galveston District prior to clearing and construction to ensure compliance with Section 404 of the CWA. The construction of the Project will likely meet the criteria for the NWP 57 – Electricity Utility Line and Telecommunications Activities.

4.1.7 Impacts on Coastal Natural Resources Areas

The study area is not located within the CMZ boundary as defined by 31 TAC § 27.1, which excludes the Project from CMP conditions. Therefore, no impacts from the Project Route on coastal natural resource areas are anticipated.

4.1.8 Impacts on Vegetation

Potential impacts to vegetation will result from clearing the ROW of woody vegetation and/or mowing/clearing of herbaceous vegetation. These activities facilitate ROW access for structure construction, line stringing, and future maintenance activities of the proposed transmission line.

Impacts to vegetation will generally be limited to the transmission line ROW. Additional clearing might be necessary in temporary easements outside of the ROW to facilitate the construction of the transmission line. The clearing activities will be completed while minimizing the impacts to existing groundcover vegetation when practical. Future ROW maintenance activities might include periodic mowing and/or herbicide applications to maintain an herbaceous vegetation layer within the ROW.

Clearing trees and shrubs from woodland areas typically generates a degree of habitat fragmentation. The magnitude of anticipated habitat fragmentation was minimized to the extent possible during the routing process by utilizing the existing transmission line ROW. Vegetation clearing will occur only where necessary to provide access, workspace, and future maintenance access to the ROW.

As indicated in Table 4-1, the Project Route crosses approximately 0.02 mile of bottomland/riparian woodlands and approximately 0.05 mile across upland woodlands/brushlands.

4.1.9 Impacts on Wildlife

The primary impacts of construction activities on wildlife species are typically associated with temporary disturbances from construction activities, and with the removal of vegetation (habitat modification). Increased noise and equipment movement during construction might temporarily displace mobile wildlife species from the immediate workspace area. These impacts are considered short-term and normal wildlife movements would be expected to resume after construction is completed. Potential long-term impacts include those resulting from habitat modifications and/or fragmentation. The Project Route crosses areas of upland woodlands/brushlands, which can represent the highest degree of habitat fragmentation by converting the area within the ROW to an herbaceous habitat. During the routing process, POWER attempted to minimize potential woodland habitat fragmentation by utilizing the existing transmission line ROW.

Construction activities might impact small, immobile, or fossorial (living underground) animal species through incidental impacts or from the alteration of local habitats. Incidental impacts to these species might occur due to equipment or vehicular movement on the ROW by direct impact or due to the compaction of the soil if the species is fossorial. Potential impacts of this type are not typically considered significant and are not likely to have an adverse effect on any species population dynamics.

If ROW clearing occurs during bird nesting seasons, potential impacts could occur within the ROW area related to bird eggs and/or nestlings. Increases in noise and equipment activity levels during construction could also potentially disturb breeding or other activities of species nesting in areas immediately adjacent to the ROW. If ROW clearing activities are necessary during the migratory bird nesting season (March 15 to September 15), CPS Energy will comply with state (TPWC Chapter 64) and federal (MBTA) regulations regarding avian species by having a qualified biologist conduct surveys for active nests prior to ground disturbance and/or vegetation clearing.

Transmission lines can also present additional hazards to birds due to electrocutions and/or collisions. Measures would be implemented to minimize this risk with transmission line through engineering designs. The electrocution risk to birds would not be significant since the engineering design distance between conductors, conductor to structure, or conductor to ground wire for the proposed transmission line is greater than the wingspan of most birds typically expected to occur within the area (i.e., greater than eight feet). The risk for avian

collisions with the shield wire can be minimized by installing bird flight diverters or other marking devices on the line within determined high bird use areas.

4.1.10 Impacts on Aquatic Resources

Potential impacts to aquatic resources would include potential effects of erosion, siltation, and sedimentation. Vegetation clearing of the ROW might result in increased suspended solids entering surface waters traversed by the Project. Increases in suspended solids might adversely affect aquatic organisms that require relatively clear water for foraging and/or reproduction. Physical aquatic habitat loss or alteration could result wherever riparian vegetation is removed and at temporary crossings required for access. Increased levels of siltation or sedimentation might also potentially impact downstream areas primarily affecting filter feeding benthic and other aquatic invertebrates. Implementation of a SWPPP utilizing BMPs will minimize these potential impacts. No significant adverse impacts are anticipated to any aquatic habitats crossed or located adjacent to the ROW for the Project Route.

Construction of the Project is not anticipated to have significant impacts to wildlife and aquatic resources within the study area. Direct impacts would be associated with the loss of woodland/brushland habitat, which is reflected in the vegetation analysis discussed above. Habitat fragmentation was minimized for the Project Route within woodland areas by utilizing the existing transmission line. While highly mobile animals might temporarily be displaced from habitats near the ROW during the construction phase, normal movement patterns should return after Project construction is complete. Implementation of a SWPPP utilizing BMP will minimize potential impacts to aquatic habitats.

4.1.11 Impacts to Threatened and Endangered Species

In order to assess potential impacts to threatened or endangered species, POWER utilized available information for the species under review. Known occurrence data from TXNDD for the study area and Project scoping comments from TPWD were reviewed as discussed in Section 3.1.11. A USFWS IPaC consultation, TPWD county listings, USFWS designated critical habitat locations, and the SEP HCP were included in the review.

The TXNDD data provides a GIS data record of state-listed, rare, and federally threatened and endangered species and special status vegetation communities that have been documented within a given area. The absence of species within the TXNDD database is not a substitute for a species-specific field survey as may be needed to assess potential habitat for state or federal listed special status species. Prior to construction, a field survey would be completed of the Project Route to determine if suitable habitat for threatened and endangered species is present. Additional consultation with the USFWS and TPWD may be required if suitable habitat is observed during field

surveys. Review of TPWD'S TXNDD data (TPWD 2024e) identified five EORs for special status plant species including Elmendorf's onion, Texas peachbush, and low spurge. Although none of these species are federally or state listed, they are endemic to Texas and considered species of greatest conservation need under the SWAP (TPWD 2023). If these species are found during field surveys and/or construction of the Project Route, TPWD recommends that precautions outlined in the SWAP be taken to avoid impacts to them. TPWD's full recommendations are outlined in Appendix A.

Threatened and Endangered Plant Species

Review of the TPWD (2024d) and USFWS (2024b) data identified two plant species that are federally listed (see Table 3-6 in Section 3.1.11).

The black lace cactus is a federally endangered species that may have the potential to occur within the study area where suitable habitat is available. The bracted twistflower is also a federally listed species that is not anticipated to occur within the study area due to lack of suitable habitat. Federally listed plant species are only afforded federal protection from take if they are located on federal lands and/or federal funding or actions are associated with the Project. If necessary, CPS Energy would coordinate with the USFWS regarding the black lace cactus. Construction of the Project Route is not anticipated to have adverse effects on federally listed threatened or endangered plant species.

Threatened and Endangered Animal Species

Review of the TPWD (2024d) and USFWS (2024b) data identified 34 animal species that are federally and/or federally proposed listed or state-listed for Bexar, Karnes, and/or Wilson Counties (see Table 3-6 in Section 3.1.11).

As indicated in Table 4-1, the Project Route does not cross known critical habitat of federally listed threatened or endangered species.

Federally Listed and Proposed Species

The study area is located outside of the recognized/known distributions of the San Marcos salamander, Cokendolpher Cave harvestman, Government Canyon Bat Cave meshweaver, Government Canyon Bat Cave spider, Madla Cave meshweaver, Robber Baron Cave meshweaver, fountain darter, unnamed beetle, (*Rhadine exilis*), unnamed beetle (*Rhadine infernalis*), Helotes mold beetle, ocelot, and false spike. Therefore, no impacts to these species are anticipated to occur from the Project.

Additionally, impacts to the golden-cheeked warbler, rufa red knot, toothless blindcat and widemouth blindcat are not anticipated due to lack of suitable habitat. Therefore, impacts to these species are not anticipated. Similarly, if

suitable potential habitat for the golden-checked warbler is observed occurring within the study area during field surveys, coordination with the SEP HCP and the USFWS may be necessary. However, due to the Project being limited to existing, maintained utility ROW, impacts from the Project Route are not anticipated to occur to this species.

The piping plover and whooping crane may potentially occur temporarily within the study area as transient migrants wherever suitable habitat is available. The Project is not anticipated to have adverse impacts to piping plover or whooping crane nesting habitat due to the Project being limited to existing, maintained utility ROW. The USFWS only requires consideration of impacts to the piping plover and rufa red knot for wind energy projects within their migratory route; however, for due diligence, they have been included in this impact evaluation.

The monarch butterfly is a federally proposed threatened species that may occur within the study area as a temporary migrant at specific times of year within the study area wherever suitable habitat is available. The recent proposal by USFWS to list the monarch butterfly as a threatened species under the ESA includes section 4(d) protective regulations (USFWS 2024n). This species may be susceptible to minor temporary disturbance during construction efforts; however, due to the Project being limited to existing, maintained utility ROW, impacts from the Project Route are not anticipated to occur to this species. If the monarch butterfly becomes federally listed prior to construction, additional consultation with USFWS may be required.

The tricolored bat is a federally proposed species that may occur within the study area wherever suitable habitat is available. TPWD recommends that tree clearing activities should be avoided during the pupping season from May 1 to July 15, during winter torpor from December 15 to February 15, and minimizing the Project's overall tree clearing footprint in anticipation of a listing decision by USFWS. This species may be susceptible to minor temporary disturbance during construction efforts; however, due to the Project being limited to existing, maintained utility ROW, impacts from the Project Route are not anticipated to occur to this species' roosting or foraging habitat. If the tricolored bat becomes federally listed prior to construction, additional consultation with USFWS and/or a voluntary environmental review process as detailed by the USFWS Consultation Guidance (USFWS 2024o) for the tricolored bat may be required to determine appropriate mitigation practices, if any.

Other Federally Protected Species

The bald eagle may occur within the study area wherever suitable habitat is available. Bald eagles and their nests are protected under the MBTA and BGEPA. Nests are protected if they have been used within the previous five nesting seasons. If nests are identified or individuals are observed during field surveys of the Project Route, CPS Energy will further coordinate with the TPWD and USFWS to determine avoidance or mitigation measures. However, due to the Project being limited to existing, maintained utility ROW, impacts from the Project Route

are not anticipated to occur to this species. Golden eagles are not anticipated to occur within the study area due to the study area being outside of known breeding populations. Therefore, impacts to golden eagles are not anticipated.

State-Listed Species

The study area is located outside of the recognized/known distributions of the Cascade Caverns salamander, Texas salamander, American black bear, and white-nosed coati, and therefore, no impacts to these species are anticipated to occur from the Project.

The black rail, interior least tern, white-faced ibis, and wood stork are not anticipated to occur within the study area due to the lack of potential suitable habitat and the Project being limited to existing, maintained utility ROW. Therefore, impacts to these species are not anticipated.

The sheep frog, swallow-tailed kite, white-tailed hawk, Cagle's map turtle, Texas horned lizard, and Texas tortoise may occur within the study area wherever suitable habitat is available. If suitable habitat is identified for these species during field surveys, CPS Energy shall follow the recommendations outlined in Appendix A to avoid and minimize impacts to these species.

CPS Energy proposes to conduct ROW clearing activities in compliance with state (TPWC Chapter 64) and federal (MBTA) regulations regarding avian species and appoint a qualified biologist to conduct surveys for active nests prior to vegetation clearing.

4.2 Impacts on Human Resources/Community Values

4.2.1 Impacts on Land Use

The magnitude of potential impacts to land use resulting from the construction of a transmission line is determined by the amount of land (land use type) temporarily or permanently displaced by the actual ROW and by the compatibility of the facility with adjacent land uses. During construction, temporary impacts to land uses within the ROW might occur due to the movement of workers, equipment, and materials through the area. Construction noise and dust, as well as temporary disruptions of traffic flow, might also temporarily affect local residents and businesses in the area immediately adjacent the ROW. Coordination between CPS Energy, their respective contractors, and landowners regarding ROW access and construction scheduling should minimize these disruptions.

The evaluation criteria used to compare potential land use impacts include overall route length, route length using existing ROW, parallel to existing linear features (including apparent property boundaries), route proximity to habitable structures, route proximity to park and recreational areas, and route length across various land use types.

An analysis of the existing land use within and adjacent to the proposed ROW is required to evaluate the potential impacts.

Route Length

The length of a proposed route can be an indicator of the relative magnitude of land use impacts. Generally, all other things being equal, the shorter the route, the less land is crossed, which usually results in the least amount of potential impacts. The total length of the Project Route that will be rebuilt as a double-circuit line is approximately 45.83 miles (see Table 4-1).

Compatible ROW

PUC Substantive Rule 25.101(b)(3)(B) requires that an applicant for a CCN, and ultimately the PUC, consider whether new transmission line routes are within existing compatible ROWs and/or are parallel to existing compatible ROWs, apparent property lines, or other natural or cultural features. Criteria were used to evaluate the use of existing transmission line ROW, length parallel and adjacent to existing transmission line ROW, length of route parallel to other existing linear ROWs, and length of ROW parallel and adjacent to apparent property lines. The entire length of the Project Route, approximately 45.83 miles, will be rebuilt in and utilize existing transmission line ROW. As a result, the Project Route is not parallel or adjacent to additional existing transmission line ROW, other existing ROW (roadways, railways, utilities, etc.), or apparent property lines or other natural or cultural features (see Table 4-1).

Typically, a more representative account for the consideration of whether new transmission line routes are within and/or parallel to existing compatible ROWs, apparent property lines, or other natural or cultural features is demonstrated with the percentage of total route length parallel to any of these existing linear features. The percentage can be calculated for the Project Route by adding up the total length within and/or parallel to existing transmission lines, other existing ROW, and apparent property lines and then dividing the result by the total length of the route. The percentage of the Project Route within and/or paralleling existing linear features is 100% (see Table 4-1).

Developed and Residential Areas

Typically, one of the most important measures of potential land use impacts is the number of habitable structures located in the vicinity of the route. Based on direction provided by the PUC, habitable structure identification is included with the CCN application. POWER determined the number of habitable structures located within 500 feet of the Project Route and the distance from the centerline through the use of GIS software, interpretation of aerial photography, and verification during reconnaissance surveys. The existing transmission line that will be rebuilt, or the Project Route has 143 habitable structures located within 500 feet of its centerline (see Table 4-1).

Table 4-6 presents detailed information on the habitable structures. All known habitable structure locations are shown on Figure 4-2 located in Appendix D (map pocket).

Lands with Conservation Easements

As discussed in Section 3.2.1, there are two conservation easements within the study area, Calaveras Lake Park, and the San Antonio Missions National Historical Park. However, the Project Route's current alignment crosses both of these conservation easements, and therefore would have additional direct impact on lands with the conservation easements.

4.2.2 Impacts on Agriculture

Impacts to agricultural land uses can generally be ranked by degree of potential impact, with the least potential impact occurring in areas where cultivation is not the primary use (pastureland/rangeland), followed by cultivated croplands, which have a higher degree of potential impact. Most existing agricultural land uses may be resumed within the ROW following construction. The Project Route crosses approximately 1.08 miles of cropland (see Table 4-1).

The Project Route crosses approximately 43.24 miles of land categorized as pastureland/rangeland; however, because the ROW for this project will not be fenced or otherwise separated from adjacent lands, there will be no significant long-term displacement of ongoing activities. The Project Route crosses lands with known mobile irrigation systems (rolling or pivot type) for approximately 0.56 mile (see Table 4-1).

4.2.3 Impacts on Transportation/Aviation Features

Transportation Features

Potential impacts to transportation could include temporary disruption of traffic or conflicts with future proposed roadways and/or utility improvements. Traffic disruptions would include those associated with the movement of equipment and materials to the ROW, and slightly increased traffic flow and/or periodic congestion during the construction phase of the Project. In the rural areas, these impacts are typically considered minor, temporary, and short-term. In the urban areas, the temporary impacts to traffic flow can be significant during construction; however, the Project Route is not located in areas that are considered densely developed areas. CPS Energy will coordinate with the agencies in control of the affected roadways to address these traffic flow impacts. As mentioned in Section 3.2.3, there were several state roadway projects within the study area. The Project Route crosses US Hwy 181, SH 1604 Loop, and SH 97, at one crossing each. The Project Route has six FM road crossings (see Table 4-1).

Aviation Facilities

According to FAA regulations, Title 14 C.F.R. 77, the construction of a transmission line requires FAA notification if tower structure heights exceed the height of an imaginary surface extending outward and upward at a slope of 100:1 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. The FAA also requires notification if tower structure heights exceed 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, and if tower structure heights exceed a 25:1 slope for a horizontal distance of 5,000 feet for heliports.

No public FAA registered airports with at least one runway longer than 3,200 feet were identified within 20,000 feet of the Project Route. There were no FAA registered airports with a runway longer than 3,200 feet identified within 10,000 feet of the Project Route. There is one heliport, Calaveras Ehlf, identified within 5,000 feet of the Project Route.

Following PUC and CPS Energy approval of a complete route for the Project, CPS Energy will make a final determination of the need for FAA notification, based on specific route location and structure design of the approved route. The result of this notification, and any subsequent coordination with the FAA, could include changes in the line design and/or potential requirements to mark the conductors and/or light the structures.

There is one private airstrip, San Christoval Ranch, identified within 10,000 feet of the Project Route.

The Project Route is not anticipated to have a substantial impact on aviation activities within the study area. The number of airports, airstrips, and heliports for the Project is presented in Table 4-1. Table 4- 6 presents detailed information on airports, airstrips, and heliports. The distance for each airport/airstrip from the Project Route was measured using GIS software and aerial photography interpretation (see Table 4-2). All known airport/airstrip locations are shown on Figures 4-1 and 4-2 located in Appendix C and D (map pockets).

TABLE 4-2 AIRPORT FACILITIES AND RUNWAY LOCATIONS

FIGURE 4-2 MAP ID	AIRPORTS	DISTANCE FROM PROJECT ROUTE (FEET)*	ESTIMATED RUNWAY LENGTH (FEET)[1][*]	EXCEEDS THE SLOPE[1,2]
2001	Calaveras Ehlf Heliport (Private)	3,902	42	N/A
2002	San Christoval Ranch Airstrip (Private)	6,147	3,955	N/A

[1]FAA 2024b; *POWER aerial photo and USGS interpretation.
[2]POWER used aerial photo and USGS interpretation considering elevation information obtained from USGS topographic maps and a typical maximum transmission structure height of 150 feet.

4.2.4 Impacts on Communication Towers

The Project Route would not have a significant impact on electronic communication facilities or operations in the study area. No commercial AM radio transmitters were identified within 10,000 feet of the Project Route. Seven FM radio tower or other electronic communication facilities were identified within 2,000 feet of the Project Route centerline.

The number of other communication facilities located within 2,000 feet of the Project Route is presented in Table 4-1. Table 4-6 presents detailed information on the electronic communication facilities. The distance to the electronic communication facilities from the Project Route was measured using GIS software and aerial photograph interpretation (see Table 4-3). All known radio and communication facility locations are shown on Figures 4-1 and 4-2 located in Appendix C and D (map pockets).

TABLE 4-3 ELECTRONIC COMMUNICATION FACILITIES

FIGURE 4-1 MAP ID	TOWER TYPE	DISTANCE FROM PROJECT ROUTE (FEET)*
3001	Other Electronic Installation	1,654
3002	Other Electronic Installation	1,563
3003	Other Electronic Installation	1,840
3004	Other Electronic Installation	324
3005	Other Electronic Installation	367
3006	Other Electronic Installation	606
3007	Other Electronic Installation	1,275

*POWER aerial photo and USGS interpretation; FCC 2024.

4.2.5 Impacts on Utility Features

Utility features include existing electrical transmission lines, distribution lines, water wells, pipelines, and oil and gas wells. Some water wells were identified within the study area and were mapped and avoided to the extent practicable. There are no identifiable water wells within 200 feet of the Project Route (see Table 4-1).

The Project Route crosses five existing transmission lines (see Table 4-1).

There are two identifiable oil and gas wells within 200 feet of the Project Route (see Table 4-1).

The Project Route crosses 76 identified pipelines and is parallel and adjacent to existing pipelines for approximately 36.92 miles. Additionally, the Project Route does not cross any gravel pits, mines, or quarries (see Table 4-1).

If additional unidentified utility features are crossed by or are in close vicinity to the Project Route centerline approved by the PUC, CPS Energy will coordinate with appropriate entities to obtain necessary permits or permission as required.

4.2.6 Impacts on Socioeconomics

Construction and operation of the Project is not anticipated to result in a significant change in the population or employment rate within the study area. For this project, some short-term employment would be generated. CPS Energy normally uses contract labor supervised by CPS Energy employees during the clearing and construction phases of transmission line projects. Construction workers for the Project would likely commute to the work site on a daily or weekly basis instead of permanently relocating to the area. The temporary workforce increase would likely result in an increase in local retail sales due to purchases of lodging, food, fuel, and other merchandise for the duration of construction activities. No additional CPS Energy staff will be required for line operations and maintenance.

4.2.7 Impacts on Community Values

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

Potential impacts to community resources can be classified into direct and indirect effects. Direct effects are those that would occur if the location and construction of a transmission line and station result in the removal or loss of public access to a valued resource. Indirect effects are those that would result from a loss in the enjoyment or use of a resource due to the characteristics (primarily aesthetic) of the proposed transmission line, structures, or ROW.

4.3 Impacts on Parks and Recreation Areas

Potential impacts to parks or recreation areas include the disruption or preemption of recreation activities. As previously mentioned in Section 3.3.1, there are two parks or recreational areas meeting the definition set forth in the PUC application were identified within the study area. The Project Route crosses a portion of both a park and recreational areas. The length of ROW across parks or recreational areas is approximately 0.44 mile. However, since the existing line will be rebuilt within the existing transmission line ROW, no substantial impacts to the use of the parks and recreation areas located within the study area are anticipated from the Project Route. Also, no

adverse impacts are anticipated for any other potential fishing or hunting areas from the Project Route. The Project Route is not located within 1,000 feet of any other parks or recreation facilities.

The number of park or recreational areas crossed by the Project Route is presented in Table 4-1. Table 4-6 presents detailed information on the park or recreational areas. The distance to the park or recreational areas from the Project Route was measured using GIS software and aerial photograph interpretation (see Table 4-4). All known park or recreational area locations are shown on Figures 4-1 and 4-2 located in Appendix C and D (map pockets).

TABLE 4-4 PARK AND RECREATIONAL AREAS

FIGURE 4-1 MAP ID	PARK OR RECREATIONAL AREA	DISTANCE FROM PROJECT ROUTE (FEET)*
4001	Calaveras Lake Park	0
4002	San Antonio Missions National Historical Park	0

*POWER aerial photo and USGS interpretation.

4.4 Impacts on Aesthetic Values

Aesthetic impacts, or impacts to visual resources, exist when the ROW, lines and/or structures of a transmission line system create an intrusion into, or substantially alter the character of the existing 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 and/or enjoyment of an area, in the case of valued community resources and recreational areas.

Construction of the Project could have both temporary and permanent aesthetic impacts. Temporary impacts would include views of the actual assembly and erection of the tower structures. If wooded areas are cleared, the brush and wood debris could have an additional negative temporary impact on the local visual environment. Permanent impacts from the Project would involve the views of the cleared ROW, tower structures, and lines from public viewpoints including roadways, recreational areas, and scenic overlooks.

Since no designated landscapes protected from most forms of development or by legislation exist within the study area, potential aesthetic impacts were evaluated by estimating the length of the Project Route that would fall within the foreground visual zones (one-half mile with unobstructed views) of major highways, FM roads, and parks or recreational areas. The Project Route lengths within the foreground visual zone of IH, US Hwys, SH, FM roads, and parks or recreational areas were tabulated and are discussed below.

The Project Route has a portion of its ROW length located within the foreground visual zone of US Hwys and SHs for approximately 4.25 miles. Additionally, the Project Route has a portion of its ROW length located within the foreground visual zone of FM roads for approximately 7.00 miles. The Project Route also has a portion of its ROW length located within the foreground visual zone of parks or recreational areas for approximately 2.56 miles (see Table 4-1).

Overall, the study area along the existing 345 kV transmission line maintains the characteristics of a rural landscape which includes partially wooded areas with low-density residential and agricultural development scattered throughout. The residential and agricultural developments within the study area have already impacted the aesthetic quality within the area. The rebuild construction of the Project Route is not anticipated to significantly impact the aesthetic quality of the landscape.

4.5 Impacts on Historical (Cultural Resources) Values

Methods for identifying, evaluating, and mitigating impacts to cultural resources have been established for federal projects or permitting actions, primarily for purposes of compliance with the National Historic Preservation Act. Similar methods are often used when considering cultural resources affected by state-regulated undertakings. In either case, this process generally involves identification of significant (i.e., national- or state-designated) cultural resources within a project area, determining the potential impacts of a project on those resources, and implementing measures to avoid, minimize, or mitigate those impacts.

Impacts associated with the construction, operation, and maintenance of transmission lines can affect cultural resources either directly or indirectly. Construction activities associated with any proposed project can adversely impact cultural resources if those activities alter the integrity of key characteristics that contribute to a property's significance as defined by the standards of the NRHP or the Antiquities Code of Texas. These characteristics might include location, design, setting, materials, workmanship, feeling, or association for architectural and engineering resources or archeological information potential for archeological resources.

4.5.1 Direct Impacts

Typically, direct impacts could be caused by the actual construction of the line or through increased vehicular and pedestrian traffic and excavation for towers during the construction phase. If construction is required near historic structures, landscapes, or districts, proper mitigation and avoidance measures will avoid adversely impacting such features during construction of a transmission line. Additionally, an increase in vehicular and/or pedestrian traffic might damage surficial or shallowly buried sites. Excavation for transmission structures could impact shallow or

deeply buried archeological sites. Direct impacts might also include isolation of a historic resource from or alteration of its surrounding environment.

4.5.2 Indirect Impacts

Indirect impacts include those effects caused by a project that are farther removed in distance or that occur later in time but are reasonably foreseeable. These indirect impacts might include introduction of visual or audible elements that are out of character with the resource or its setting. Indirect impacts might also occur as a result of alterations in the pattern of land use, changes in population density, accelerated growth rates, or increased pedestrian or vehicular traffic. Absent BMPs, proper mitigation, and avoidance measures, historic buildings, structures, landscapes, and districts are among the types of resources that could be adversely impacted by the indirect impact of a transmission line.

The preferred form of mitigation for direct and indirect impacts to cultural resources is avoidance through project modifications. Additional mitigation measures for direct impacts might include implementing a program for data recovery excavations if an archeological site cannot be avoided. Indirect impacts on historical properties and landscapes can be lessened through careful design and landscaping considerations, such as using vegetation screens or berms if practicable. Additionally, relocation might be possible for some historic structures.

4.5.3 Summary of Cultural Resource Impacts

The distance of each recorded site located within 1,000 feet of the Project Route was measured using GIS software and aerial photography interpretation (see Table 4-3). A review of the THC (2024a and b), NPS (2024c - e), and TxDOT (2024c) data indicated that two NRHP-listed resources; 11 archeological sites, one of which has been determined eligible for listing on the NRHP; and two cemeteries are recorded within 1,000 feet of the Project Route (see Table 4-2).

The Rancho de las Cabras Historic District and El Camino Real De Los Tejas National Historic Trail are NRHP-listed resources crossed by the Project Route. The historic ranching features associated with the Rancho de las Cabras District are approximately 0.5 mile east of the Project Route near the San Antonio River and will not be directly impacted by the Project. Because this is the rebuild of an existing transmission line, it is anticipated that there will be no appreciable change to the viewshed of these features as a result of the Project. Archeological sites 41WN92 and 41WN93 are recorded within the NRHP district within 1,000 feet of the Project Route. Both sites have been determined ineligible and are not anticipated to be impacted by the rebuild construction.

As mapped by the NPS, El Camino Real De Los Tejas National Historic Trail is crossed by the Project Route near State Highway 181. Highway and residential construction along and near El Camino Real De Los Tejas suggest the area has been disturbed where the Project crosses the trail. The trail location has not been ground-truthed and is mapped by the NPS based on research. The current line spans the mapped location of the trail along the highway. El Camino Real De Los Tejas National Historic Trail is not anticipated to be directly impacted by the Project Route.

One archeological site recorded within 1,000 feet of the Project Route, 41BX732, has been determined eligible for the NRHP, and is a designated SAL. Site 41BX732 is the remains of a horse ranch complex, including a concrete slab, outbuildings, a cistern, and an associated scatter of artifacts. Site 41BX732 is approximately 374 feet from the Project Route thus no impacts are anticipated.

Of the 10 remaining archeological sites within 1,000 feet of the Project Route, sites 41BX1312 and 41KA122 are crossed by the Project Route. Site 41BX1312 is a lithic scatter that has been determined ineligible for listing on NRHP. Site 41KA122 is described as a single flake and has not been evaluated for inclusion on the NRHP. Both sites are spannable as the transmission line structure spans typically range from approximately 800 to 1,200 feet. No impacts are anticipated for the remaining sites recorded within 1,000 feet due to their distance from the Project Route. The cultural resources recorded within the study area are described in Section 3.2 and the distances of recorded resources within 1,000 feet of the Project Route are given in Table 4-2.

The Gilley Family Cemetery, a vicinity cemetery, is crossed by the Project Route. According to the THC, vicinity cemetery location information is a general area where a cemetery was reported at one time, but the exact location is unknown (THC 2024a and 2024b). The Gilley Family vicinity cemetery polygon is over a mile in diameter and the Project Route crosses the polygon at the far eastern edge. The Project Route is a proposed rebuild of an existing line, that in conjunction with the large general area indicated by the vicinity cemetery polygon, the Project Route most likely does not cross the actual location of the cemetery. The San Lorenzo Cemetery (BX-C009), although not located in the study area, is located within 1,000 feet of the Project Route. The San Lorenzo Cemetery mapped approximately 880 feet from the Project Route (THC 2024a) and no impacts to the San Lorenzo Cemetery are anticipated.

TABLE 4-5 CULTURAL RESOURCES RECORDED WITHIN 1,000 FEET OF THE PROJECT ROUTE

RESOURCE NAME	DISTANCE IN FEET FROM CENTERLINE	NRHP ELIGIBILITY
El Camino Real De Los Tejas National Historic Trail	**0**	**Listed**
Rancho de las Cabras	**0**	**Listed**
41BX726	371	Undetermined
41BX0732	374	Eligible/SAL
41BX1306	69	Portions of this site have been determined ineligible
41BX1310	114	Ineligible
41BX1312	**36**	**Ineligible**
41KA42	226	Undetermined
41KA121	772	Undetermined
41KA122	**10**	**Undetermined**
41WN67	105	Undetermined
41WN92	648	Ineligible
41WN93	167	Ineligible
San Lorenzo Cemetery	880	-
Gilley Family Vicinity Cemetery	**0**	**-**

Note: Bold entries will be crossed by 125-foot-wide ROW.

Although much of the Project Route has been surveyed for cultural resources, the potential for undiscovered cultural resources does exist along the route. To assess this potential, a review of geological, soils, and topographical maps was undertaken by a professional archeologist to identify areas along the route where unrecorded pre-contact archeological resources have a higher probability to occur. These HPAs for pre-contact archeological sites were identified near the San Antonio River, Parita Creek, Olmos Creek, Eagle Creek, Scared Dog Creek, Conquista Creek, and their tributaries, particularly where previous surveys have not been conducted, and near previously recorded sites. To facilitate the data evaluation each HPA was mapped using GIS and the length of HPA tabulated. Post-contact HPA were mapped near previously recorded historic sites and NRHP properties, and near structures depicted on historic topographic maps. Based on the analysis, the Project Route crosses 33.26 miles of HPA (see Table 4-1)

TABLE 4-6 HABITABLE STRUCTURES AND OTHER LAND USE FEATURES IN THE VICINITY OF THE PROJECT ROUTE

MAP NUMBER	STRUCTURE OR FEATURE	APPROXIMATE DISTANCE FROM ROUTE CENTERLINE[1] (FEET)
1	Commercial	401
2	Single Family Residential	390
3	Single Family Residential	154
4	Single Family Residential	179
5	Single Family Residential	114

TABLE 4-6 HABITABLE STRUCTURES AND OTHER LAND USE FEATURES IN THE VICINITY OF THE PROJECT ROUTE

MAP NUMBER	STRUCTURE OR FEATURE	APPROXIMATE DISTANCE FROM ROUTE CENTERLINE[1] (FEET)
6	Single Family Residential	151
7	Single Family Residential	188
8	Single Family Residential	212
9	Single Family Residential	363
10	Single Family Residential	381
11	Single Family Residential	259
12	Single Family Residential	461
13	Single Family Residential	174
14	Single Family Residential	323
15	Single Family Residential	479
16	Single Family Residential	466
17	Single Family Residential	475
18	Single Family Residential	266
19	Single Family Residential	248
20	Single Family Residential	497
21	Single Family Residential	168
22	Single Family Residential	493
23	Single Family Residential	215
24	Single Family Residential	435
25	Single Family Residential	275
26	Single Family Residential	125
27	Single Family Residential	195
28	Single Family Residential	331
29	Single Family Residential	348
30	Single Family Residential	355
31	Single Family Residential	139
32	Single Family Residential	112
33	Single Family Residential	338
34	Single Family Residential	138
35	Single Family Residential	131
36	Single Family Residential	204
37	Single Family Residential	94
38	Single Family Residential	229
39	Single Family Residential	91
40	Single Family Residential	146
41	Single Family Residential	147
42	Single Family Residential	392
43	Single Family Residential	350
44	Single Family Residential	505

TABLE 4-6 HABITABLE STRUCTURES AND OTHER LAND USE FEATURES IN THE VICINITY OF THE PROJECT ROUTE

MAP NUMBER	STRUCTURE OR FEATURE	APPROXIMATE DISTANCE FROM ROUTE CENTERLINE[1] (FEET)
45	Single Family Residential	266
46	Single Family Residential	117
47	Single Family Residential	113
48	Single Family Residential	299
49	Single Family Residential	458
50	Single Family Residential	393
51	Single Family Residential	340
52	Single Family Residential	192
53	Single Family Residential	326
54	Single Family Residential	201
55	Single Family Residential	338
56	Single Family Residential	169
57	Single Family Residential	275
58	Single Family Residential	199
59	Single Family Residential	412
60	Single Family Residential	139
61	Single Family Residential	116
62	Single Family Residential	337
63	Single Family Residential	459
64	Single Family Residential	505
65	Single Family Residential	288
66	Single Family Residential	238
67	Single Family Residential	85
68	Single Family Residential	145
69	Single Family Residential	345
70	Single Family Residential	338
71	Single Family Residential	184
72	Single Family Residential	302
73	Single Family Residential	235
74	Single Family Residential	87
75	Single Family Residential	414
76	Single Family Residential	419
77	Single Family Residential	202
78	Single Family Residential	448
79	Single Family Residential	372
80	Single Family Residential	322
81	Single Family Residential	494
82	Single Family Residential	227
83	Single Family Residential	135

TABLE 4-6 HABITABLE STRUCTURES AND OTHER LAND USE FEATURES IN THE VICINITY OF THE PROJECT ROUTE

MAP NUMBER	STRUCTURE OR FEATURE	APPROXIMATE DISTANCE FROM ROUTE CENTERLINE[1] (FEET)
84	Single Family Residential	382
85	Single Family Residential	165
86	Single Family Residential	267
87	Single Family Residential	250
88	Single Family Residential	327
89	Single Family Residential	478
90	Single Family Residential	465
91	Single Family Residential	171
92	Single Family Residential	288
93	Single Family Residential	133
94	Single Family Residential	193
95	Single Family Residential	453
96	Single Family Residential	420
97	Single Family Residential	480
98	Single Family Residential	316
99	Single Family Residential	132
100	Single Family Residential	427
101	Single Family Residential	263
102	Single Family Residential	169
103	Single Family Residential	118
104	Single Family Residential	279
105	Single Family Residential	131
106	Single Family Residential	177
107	Commercial	413
108	Commercial	428
109	Single Family Residential	252
110	Single Family Residential	220
111	Single Family Residential	212
112	Commercial	350
113	Single Family Residential	156
114	Single Family Residential	306
115	Single Family Residential	470
116	Single Family Residential	465
117	Single Family Residential	250
118	Single Family Residential	197
119	Single Family Residential	357
120	Single Family Residential	358
121	Single Family Residential	382
122	Single Family Residential	188

TABLE 4-6 HABITABLE STRUCTURES AND OTHER LAND USE FEATURES IN THE VICINITY OF THE PROJECT ROUTE

MAP NUMBER	STRUCTURE OR FEATURE	APPROXIMATE DISTANCE FROM ROUTE CENTERLINE[1] (FEET)
123	Single Family Residential	395
124	Single Family Residential	193
125	Single Family Residential	298
126	Single Family Residential	191
127	Single Family Residential	275
128	Single Family Residential	326
129	Single Family Residential	468
130	Single Family Residential	461
131	Single Family Residential	373
132	Single Family Residential	305
133	Single Family Residential	466
134	Single Family Residential	335
135	Single Family Residential	480
136	Single Family Residential	474
137	Single Family Residential	416
138	Single Family Residential	471
139	Single Family Residential	432
140	Single Family Residential	225
141	Single Family Residential	425
142	Single Family Residential	209
143	Single Family Residential	201
2001	Calaveras Ehlf Helicopter	3,902
2002	San Christoval Ranch Airstrip	6,147
3001	Other Electronic Installation	1,654
3002	Other Electronic Installation	1,563
3003	Other Electronic Installation	1,840
3004	Other Electronic Installation	324
3005	Other Electronic Installation	367
3006	Other Electronic Installation	606
3007	Other Electronic Installation	1,275
4001	Calaveras Lake Park	0
4002	San Antonio Missions National Historical Park	0
5001	San Lorenzo Panteon Cemetery	880
--	Gilley Family Vicinity Cemetery (Not Public)	0
--	41BX1306	69
--	41BX1310	114
--	41BX1312	36
--	41BX726	371
--	41KA121	772

TABLE 4-6 HABITABLE STRUCTURES AND OTHER LAND USE FEATURES IN THE VICINITY OF THE PROJECT ROUTE

MAP NUMBER	STRUCTURE OR FEATURE	APPROXIMATE DISTANCE FROM ROUTE CENTERLINE[1] (FEET)
--	41KA122	10
--	41KA42	226
--	41WN67	105
--	41WN92	648
--	41WN93	167
--	Rancho de las Cabras (Not Public)	0
--	41BX732	374
6001	El Camino Real de los Tejas National Historic Trail	0

[1] Due to the potential horizontal accuracies of the aerial photography and data utilized, all habitable structures within 510 feet have been identified.

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5.0 AGENCY CORRESPONDENCE

A list of federal, state, and local regulatory agencies, elected officials, and organizations was developed to receive a consultation letter regarding the Project. The purpose of the letter was to inform the various agencies and officials of the Project and provide them with an opportunity to provide information regarding resources and potential issues within the study area. Various federal, state, and local agencies and officials that may have potential concerns and/or regulatory permitting requirements for the proposed Project were contacted. POWER utilized websites and telephone confirmations to identify local officials. Copies of all correspondence with the various state/federal regulatory agencies and local/county officials and departments are included in Appendix A.

Federal, state and local agencies/officials contacted include:

- Federal Aviation Administration (FAA)
- Federal Emergency Management Agency (FEMA) – Region 6
- National Park Service (NPS)
- Natural Resource Conservation Service (NRCS) – Texas Office
- United States Army Corps of Engineers (USACE) – Fort Worth District
- Military Aviation and Installation Assurance Siting Clearinghouse
- United States Environmental Protection Agency (USEPA) – Region 6
- United States Fish and Wildlife Service (USFWS)
- Applicable United States Congressman
- Applicable Texas Senators
- Applicable Texas House Members
- Railroad Commission of Texas (RRC)
- Texas Commission on Environmental Quality (TCEQ)
- Texas Department of Transportation (TxDOT) – Aviation Division, Environmental Affairs Division, Planning & Programming, San Antonio and Corpus Christi District Engineers
- Texas General Land Office (GLO)
- Texas Historical Commission (THC)
- Texas Parks and Wildlife Department (TPWD)
- Texas Water Development Board (TWDB)
- Bexar County Judge and Commissioners Court
- Bexar County Economic and Community Development
- Bexar County Flood Control
- Bexar County Historical Commission
- Bexar County Manager

- Wilson County Judge and Commissioners Court
- Wilson County Permitting & Development
- Karnes County Judge and Commissioners Court
- Karnes County Special Projects and Permits
- City of San Antonio Officials
- Alamo Area Council of Governments
- Alamo Soil and Water Conservation District
- Edwards Aquifer Authority Chairman
- San Antonio River Authority
- San Antonio World Heritage Office
- San Antonio Water System
- East Central Independent School District (ISD)
- Floresville ISD
- Poth ISD
- Falls City ISD
- Karnes City ISD
- Kenedy ISD
- The Nature Conservancy – Texas
- Texas Land Trust Council
- Texas Land Conservancy (TLC)
- Texas Agricultural Land Trust
- Texas Cave Management Association

In addition to letters sent to the agencies listed, POWER also requested and reviewed TXNDD Element Occurrence Records from TPWD (TXNDD 2024). POWER also requested and reviewed previously recorded archeological site information from TARL and reviewed the THC's TASA for additional cultural resource information. As of the date of this document, written responses to letters sent in relation to the study area that were received are listed and summarized below.

FEMA responded with a letter dated October 24, 2024, requesting that the community floodplain administrator be contacted for the review of, and possible permit requirements for, the Project. CPS Energy will coordinate with the floodplain administrator as needed.

The USACE Regulatory Division responded with an email dated October 19, 2024, stating that they had assigned Project Number SWF-2024-00513 and a regulatory project manager to the request. CPS Energy will coordinate with USACE as needed.

The USACE Regulatory Division responded with an email dated November 12, 2024, requesting some Project-specific information and whether a pre-application meeting might be necessary. CPS Energy will coordinate with USACE as needed.

The USACE Section 408 Coordinator responded with an email dated October 18, 2024, stating that they had assigned Project Number 408-SWF-2024-0076. They have determined that the Project will not require authorization under Section 408. However, authorization may still be required under Section 404 of the Clean Water Act. CPS Energy will coordinate with USACE as needed.

The USFWS Texas Coastal and Central Plains Ecological Services Field Office responded with a letter dated December 3, 2024, providing a list of the federally listed threatened and endangered species for the study area county. The USFWS also provided the definitions of the affected determinations and referenced the MBTA and BGEPA. CPS Energy will coordinate with the USFWS as needed.

The RRC of Texas responded with a letter dated October 31, 2024, stating that information is available on the RRC's GIS concerning existing oil and gas well and pipeline locations. They also provide the web address for information regarding oil and gas drilling permits, pipeline permits, and surface mining operations. CPS Energy will coordinate with the RRC as needed.

The Texas GLO responded with a letter dated October 31, 2024, stating that it did not appear that the GLO will have any environmental issues or land use constraints at this time.

The THC responded with an email dated November 22, 2024, stating that it is likely an archeological survey and a Texas Antiquities Permit will be required. CPS Energy will coordinate with the THC as needed.

The TPWD responded with a letter dated November 27, 2024, providing several recommendations. In summary, TPWD recommended avoiding or minimizing potential impacts to nesting migratory birds and listed or rare species. The TPWD also recommended a list of beneficial management practices to follow. CPS Energy will coordinate with the TPWD as needed.

TxDOT responded with an email dated January 30, 2025, providing various maps illustrating publicly available environmental constrains and other data from the TxDOT databases. CPS Energy will coordinate with the TxDOT as needed.

Bexar County responded with a letter dated December 10, 2024, stating that there are no zoning or land use regulations in the unincorporated area of Bexar County. They also provided the Permit Verification Guidelines. CPS Energy will coordinate with Bexar County as needed.

Karnes County responded with an email dated January 7, 2025, stating that they were the new Commissioner for Precinct 1. They requested property owner information and an update on the Project. CPS Energy will coordinate with Karnes County as needed

The Poth ISD responded with an email dated October 31, 2024, stating that they did not have any existing environment, cultural, or land use constraints within the proposed Project area.

6.0 PUBLIC INVOLVEMENT

CPS Energy hosted a public open house meeting within the study area to solicit comments, concerns, and input from residents, landowners, public officials, and other interested parties. The purpose of the meeting was to:

- Promote a better understanding of the Project, including the purpose, need, potential benefits and impacts, and the PUC CCN application approval process.
- Inform the public with regard to the procedure, schedule, and decision-making process.
- Ensure that the decision-making process adequately identifies and considers the values and concerns of the public and community leaders.

The public meeting was held on November 18, 2024, at the Floresville Early Childhood Center in Floresville, Texas from 6:00 p.m. to 8:00 p.m. Invitation letters were sent to landowners who owned property within 500 feet from the Project Route. CPS Energy mailed approximately 633 invitation letters to landowners. Each landowner that received an invitation letter also received a map of the study area depicting the Project Route. Advertisements for the open house was also published in *The Karnes Countywide* on November 7 and 14, 2024, in *Wilson County News* on November 6 and 13, 2024, in *Conexion* on November 6 and 13, 2024, and in *San Antonio Express News* on November 10 and 17, 2024.

At the public meeting, engineers, GIS analysts, biologists, project managers, and regulatory professionals from CPS Energy and POWER were available to answer questions regarding the Project. Manned information stations were set up that provided typical 345 kV pole types, a list of agencies contacted, land-use and environmental criteria for transmission lines, and an environmental and land use constraints map on aerial base. CPS Energy also provided two GIS interactive stations operated by POWER GIS analysts. These computer stations allowed attendees to view more-detailed digital maps of the Project Route and to submit comments digitally and spatially. The information station format is advantageous because it facilitates one-on-one discussions and encourages personalized landowner interactions.

CPS Energy established a Project website, https://www.cpsenergy.com/en/about-us/new-infrastructure/spruce-to-pawnee-transmission-line.html, to provide information to the public. The website content explains the scope and need for the Project. The website also provides several Project documents including the public meeting invitation letter, Project brochure, open house displays, the questionnaire, Frequently Asked Questions document, and aerial map.

Each individual in attendance was offered the opportunity to sign their name on the sign-in sheet and given three handouts. The first handout was an information brochure that provided general information about the Project. The

second handout was a questionnaire that solicited comments on the Project and an evaluation of the information presented at the public meeting. Individuals were asked to fill out the questionnaire after visiting the information stations and speaking with POWER and CPS Energy personnel. The third handout was a Frequently Asked Questions document providing an overview of the Project as well as a description of the regulatory process. Copies of the public notice letter with map, brochure, questionnaire, and Frequently Asked Questions are located in Appendix B.

A total of 51 individuals signed in as attendees at the public meeting and 11 submitted questionnaire responses at or after the public meeting. Results from the questionnaires were reviewed and analyzed. Table 6-1 summarizes general response information from the questionnaires.

TABLE 6-1 GENERAL RESPONSE SUMMARY FROM QUESTIONNAIRES

GENERAL INFORMATION RESPONSES	PERCENTAGE (%) OF RESPONDENTS
Was the need for the project clearly explained?	
Strongly Agree	9%
Agree	64%
Neutral	27%
Disagree	0%
Strongly Disagree	0%
The project team responded to and answered questions about the Project.	
Strongly Agree	9%
Agree	55%
Neutral	27%
Disagree	0%
Strongly Disagree	9%
The exhibits at the open house were helpful.	
Strongly Agree	36%
Agree	45%
Neutral	18%
Disagree	0%
Strongly Disagree	0%

Respondents were then presented with a list of 13 factors that are taken into consideration for a routing study (see a complete list of the criteria on the questionnaire in Appendix B). They were asked to rank each of these criteria, with **1** being the most important factor and **5** being the least important factor. Of those attendees that ranked the criteria, the three criteria that were ranked by the respondents as being the most important are listed in descending order:

- Impact to residences: 6 questionnaires (55%)
- Impact to woodlands/grassland/wetlands: 2 questionnaire (18%)
- Impact to businesses: 1 questionnaire (33%)

Respondents were asked if there are other factors that should be considered when evaluating the Project Route, written responses were as follows:

- Concerns about additional ROW on their property
- Concerns about property value
- Concerns about future residential development
- Concerns about placement of new structures

Respondents were then asked if there are other features that should be added to the Land Use and Environmental Constraints map; however, no responses were provided.

Respondents were asked which of three situations applied to them, written responses were as follows:

- Six indicated that the Project Route is near their home/business
- Seven indicated that the Project Route crosses their property
- Three answered "Other"

Respondents were also asked if there was any other information they would like the Project team to know or take into consideration when evaluating the Project, and the responses included:

- Concerns about letting their cows out
- Concerns about removal of existing concrete footers below ground level when abandoning the existing lattice towers
- Concerns about construction timeframe and easement maintenance
- Concerns about cattle and securing gates
- Concerns about interruption farm/ranch activities
- Concerns about tower placement and access

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This EA and Route Analysis was prepared for CPS Energy by POWER. A list of the POWER employees with primary responsibilities for the preparation of this document is presented below.

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Appendix A

Agency and Other Correspondence

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CPS Energy Spruce to Pawnee 345 kV Rebuild Project
Federal, State, and Local Agencies/Officials Contact List

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Southwest Regional Administrator
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Mr. Tony Robinson
Region 6 Regional Administrator
Federal Emergency Management Agency
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Ms. Kate Hammond
Regions 6, 7, and 8 Acting Director
National Parks Service
IMRextrev@nps.gov

Ms. Kristy Oates
State Conservationist
NRCS Texas State Office
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Temple, TX 76501

Mr. Jason Story
Section 408 Coordinator
U.S. Army Corps of Engineers – Fort Worth District
Jason.c.story@usace.army.mil

Regulatory Division
U.S. Army Corps of Engineers – Fort Worth District
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Military Aviation and Installation Assurance Siting Clearinghouse
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Ms. Earthea Nance
Region 6 Aministrator
U.S. Environmental Protection Agency
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Texas Coastal & Central Plains
Ecological Field Office
U.S. Fish & Wildlife Service
Ipac.ecosphere.fws.gov

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1145 E. Commerce St., Suite 205
San Antonio, TX 78205

The Honorable Mónica De La Cruz
U.S. Congressional District 15
210 W Calvert Ave., #120
Karnes City, TX 78118

STATE

The Honorable Judith Zaffirini
Texas Senator District 21
1407 Washington Street
Laredo, TX 78040

The Honorable John Lujan
Texas House District 118
Capitol Extension Room E2.812
Austin, TX 78768

The Honorable Ryan Guillen
Texas House District 31
100 N. FM 3167, Suite 212
Rio Grande City, TX 78582

Ms. Leslie Savage
Chief Geologist, Oil and Gas Division
Railroad Commission of Texas
P.O. Box 12967
Austin, TX 78711-2967

Mr. George Ortiz
Region 13 Director
Texas Commission on Environmental Quality
14250 Judson Rd.
San Antonio, TX 78233-4480

CPS Energy Spruce to Pawnee 345 kV Rebuild Project
Federal, State, and Local Agencies/Officials Contact List

Mr. Dan Harmon
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Texas Department of Transportation
6230 E Stassney Lane
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Mr. Doug Booher, P.E.
Director, Environmental Affairs Division
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6230 E Stassney Lane
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Mr. Humberto "Tito" Gonzalez Jr., P.E.
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Ms. Charles Benavides, P.E.
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Mr. Mike Walsh, P.E.
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Executive Director
Texas Historical Commission
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Ms. Laura Zebehazy
Program Leader
Wildlife Habitat Assessment Program
Texas Parks and Wildlife Department
WHAB@tpwd.texas.gov

Mr. Bryan McMath
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P.O. Box 13231
Austin, TX 78711-3231

LOCAL

Ms. Brenda Hicks-Sorensen
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Ms. Catherine Hernandez
Director
City of San Antonio - Transportation
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San Antonio, TX 78283

Ms. Shanon Shea Miller
Director
City of San Antonio Office of Historic
Preservation Development and Business
Services Center
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San Antonio, TX 78283

Hon. Ron Nirenberg
Mayor
City of San Antonio
P.O. Box 839966
San Antonio, TX 78283

Mr. Erik Walsh
City Manager
City of San Antonio
P.O. Box 839966
San Antonio, TX 78283

CPS Energy Spruce to Pawnee 345 kV Rebuild Project
Federal, State, and Local Agencies/Officials Contact List

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San Antonio, TX 78217

Mr. Gary Schott
Chairman
Alamo Soil and Water Conservation District
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San Antonio, TX 78206-1216

Ms. Colleen Swain
Director World Heritage Office
City of San Antonio
P.O. Box 839966
San Antonio, TX 78283

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President & CEO
San Antonio Water System
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San Antonio, TX 78298

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General Manager & Chairman
Edwards Aquifer Authority
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Mr. Derek Boese, JD, PMP
Interim General Manager
San Antonio River Authority
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San Antonio, TX 78204

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101 West Nueva, 10th Floor
San Antonio, TX 78205-3482

Hon. Tommy Calvert
Bexar County Commissioner
Precinct 4
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Bexar County Economic and Community
Development
101 West Nueva, Suite 944
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Mr. Todd Putnam
Bexar County Flood Control
1948 Probandt Street
San Antonio, TX 78214

Ms. Belinda Gavallos
Chair
Bexar County Historical Commission
100 Dolorosa Suite 311
San Antonio, TX 78205

Mr. David L. Smith
Bexar County Manager
101 W. Nueva, 10th Floor
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Mr. Roland Toscano
Superintendent
East Central ISD
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WILSON COUNTY

Hon. Henry L. Whitman, Jr.
Wilson County Judge
1420 3rd Street, Suite 101
Floresville, TX 78114

Hon. Gary Martin
Wilson County Commissioner Precinct 1
1420 3rd Street, Suite 106
Floresville, TX 78114

Hon. Russell A. King
Wilson County Commissioner Precinct 2
P.O. Box 1073
Poth, TX 78147

Ms. Luz Serrato
Wilson County Development Director –
Permitting & Development
1420 3rd Street
Floresville, TX 78114

CPS Energy Spruce to Pawnee 345 kV Rebuild Project
Federal, State, and Local Agencies/Officials Contact List

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Floresville ISD
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Poth ISD
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Poth, TX 78147

KARNES COUNTY

Hon. Wade Hedtke
Karnes County Judge
101 N. Panna Maria Avenue, Suite 101
Karnes City, TX 78118

Hon. Shelby Dupnik
Karnes County Commissioner Precinct 1
101 North Panna Maria Avenue
Karnes City, TX 78118

Hon. Benny Lyssy
Karnes County Commissioner Precinct 2
101 North Panna Maria Avenue
Karnes City, TX 78118

Mr. Jim Adams
Karnes County Special Projects Manager –
Special Projects and Permits
210 W Calvert Ave. Suite 155
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Superintendent
Falls City ISD
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Falls City, TX 78113

Ms. Katherine Kuenstler
Superintendent
Karnes City ISD
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Karnes City, TX 78118

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Superintendent
Kenedy ISD
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Texas Land Trust Council
Executive Director
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Wimberley, TX 78676

Mr. Mark Steinbach
Executive Director
Texas Land Conservancy
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Austin, TX 78716

Mr. Chad Ellis
Chief Executive Director
Texas Agricultural Land Trust
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San Antonio, TX 78209

Mr. Joe Ranzau
President
Texas Cave Management Association
2186 Jackson Keller Street, #533
San Antonio, TX 78214

POWER ENGINEERS, INC.
7600B N CAPITAL OF TEXAS HWY
SUITE 320
AUSTIN, TX 78731 USA
PHONE 281-765-5500

October 15, 2024
(Via Mail)

Ms. Laura Zebchazy
Program Leader
Wildlife Habitat Assessment Program
WHAB@tpwd.texas.gov

Re: Proposed Spruce to Pawnee 345 kV Rebuild Project in Bexar, Wilson and Karnes Counties, Texas
POWER Engineers, Inc. Project No. 254685

Dear Ms. Zebchazy:

CPS Energy is evaluating an existing single-circuit 345 kV transmission line in Bexar, Wilson, and Karnes Counties, Texas that it intends to rebuild as a double-circuit transmission line based on the endorsement and designation by the Electric Reliability Council of Texas (ERCOT) that the rebuild project is critical to the reliability of the ERCOT system. The proposed rebuild of the 345 kV transmission line will extend approximately 46 miles from the CPS Energy Spruce Substation, located at the Calaveras Power Station, approximately 2.5 miles north of US Highway 181, to the existing South Texas Electric Cooperative Pawnee Substation, located approximately 4.5 miles northwest of State Highway 72. The purpose of this project is to support existing and anticipated growth and enhance and ensure reliability. The study area is shown on the enclosed map.

POWER Engineers, Inc. (POWER) is preparing an Environmental Assessment (EA) to support CPS Energy's regulatory activities associated with the project. POWER is gathering data on the existing environment and identifying environmental, cultural, and land use constraints within the study area. POWER and CPS Energy will review the existing line between the end points for rebuilding and consider these environmental, cultural and land use constraints and the need to serve the electrical load in the area.

We are requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your input will be an important consideration in the evaluation of rebuilding the existing transmission line and in the assessment of potential impacts. In addition, we would appreciate receiving information about any permits, easements, or other approvals by your agency/office that you believe could affect this project, or if you are aware of any major proposed development or construction in the study area. Upon certification for the proposed project, CPS Energy will identify and obtain necessary permits, if required, from your agency/office.

October 15, 2024

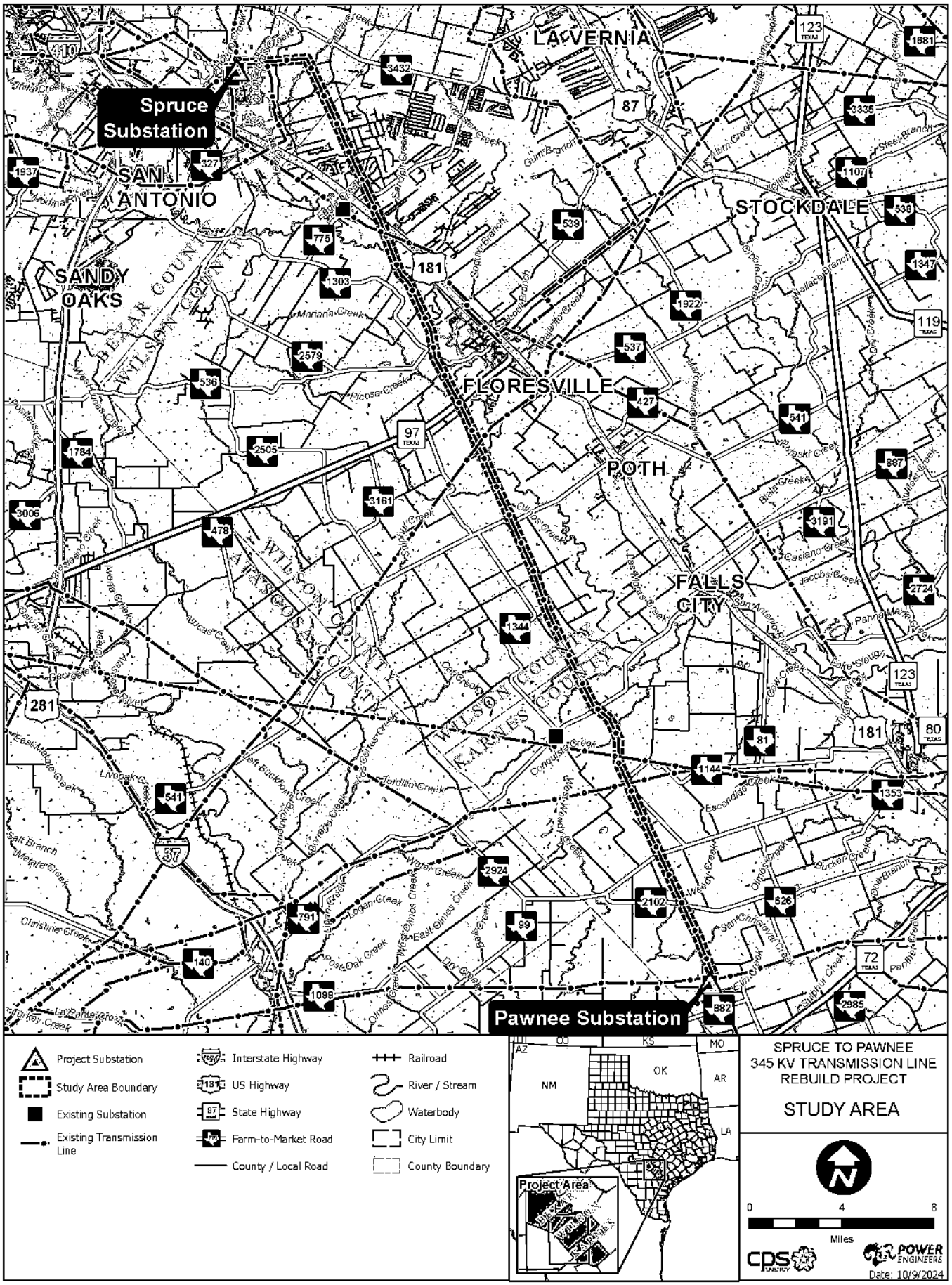
Thank you for your assistance with this proposed electric transmission line project. Please contact me by phone at 281-765-5511, or by e-mail at denise.williams@powereng.com, if you have any questions or require additional information. We would appreciate receiving your reply by November 5, 2024.

Sincerely,

Denise M. Williams
Project Manager

Enclosure(s):
Study Area Map

Sent Via Mail
ProjectWise 254685


Spruce Substation
Pawnee Substation
SAN ANTONIO
SANDY OAKS
LA VERNIA
STOCKDALE
FLORESVILLE
POTH
FALLS CITY
BEXAR COUNTY
WILSON COUNTY
KARNES COUNTY
Project Substation
Study Area Boundary
Existing Substation
Existing Transmission Line
Interstate Highway
US Highway
State Highway
Farm-to-Market Road
County / Local Road
Railroad
River / Stream
Waterbody
City Limit
County Boundary
Project Area
SPRUCE TO PAWNEE
345 KV TRANSMISSION LINE
REBUILD PROJECT
STUDY AREA
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Miles
Date: 10/9/2024

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

FEMA

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION VI
MITIGATION DIVISION

RE: Proposed Spruce to Pawnee 345kV Rebuild Project in Bexar, Wilson, and Karnes Counties, Texas, Powers Engineers, Inc. Project No. 254685

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.

County Contact:
Tammi Burleson, Floodplain Administrator
(830) 393-8357
addressing@wilsoncountytx.gov
Wilson County, Texas

REVIEWER:

Charles Cook
Floodplain Management and Insurance Branch
Mitigation Division
Charles.Cook4@fema.dhs.gov
(940) 898-5400

DATE: October 24, 2024

RA #24-10-126037

Date Rec'd: 10/23/24		
Rec'd by: Marin		
	Action	Info
RA		
Deputy RA		
XA		
Analyst		
RES		
REC		
MIT	✓	
MSD		
NP		
Grants		
File		
Suspense Date:	11/6/24	

POWER ENGINEERS, INC.
7600B N CAPITAL OF TEXAS HWY
SUITE 320
AUSTIN, TX 78731 USA

PHONE 281-765-5500

October 15, 2024
(Via Mail)

Mr. Tony Robinson
Region 6 Regional Administrator
Federal Emergency Management Agency
FRC 800 N. Loop 288
Denton, TX 76209-3698

Re: Proposed Spruce to Pawnee 345 kV Rebuild Project in Bexar, Wilson and Karnes Counties, Texas
POWER Engineers, Inc. Project No. 254685

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We are requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your input will be an important consideration in the evaluation of rebuilding the existing transmission line and in the assessment of potential impacts. In addition, we would appreciate receiving information about any permits, easements, or other approvals by your agency/office that you believe could affect this project, or if you are aware of any major proposed development or construction in the study area. Upon certification for the proposed project, CPS Energy will identify and obtain necessary permits, if required, from your agency/office.

October 15, 2024

Thank you for your assistance with this proposed electric transmission line project. Please contact me by phone at 281-765-5511, or by e-mail at denise.williams@powereng.com, if you have any questions or require additional information. We would appreciate receiving your reply by November 5, 2024.

Sincerely,

Denise M. Williams
Project Manager

Enclosure(s):
Study Area Map

Sent Via Mail
ProjectWise 254685