



# Form Species Analysis

Project Name: **US 281 at SH 71 Interchange**

CSJ(s): **0252-02-058**

County(ies): **Burnet**

Date Analysis Completed: **6/27/2024, 2/26/2025**

Prepared by: **Benjamin Gochenouer, WSP; Tracy R. White, TxDOT**

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

## I. Endangered Species Act

Select the appropriate statement below based on the determinations recorded in the completed project-specific species analysis spreadsheet:

- This project does not require consultation with or authorization from the USFWS or NMFS under the Endangered Species Act.
- This project requires consultation with or authorization from the USFWS or NMFS under the Endangered Species Act.
- This project does not require consultation with or authorization from the USFWS or NMFS under the Endangered Species Act at this time; however, it may affect species that are candidates or are proposed for federal listing or proposed critical habitat. Commitments to review the project and its impacts including the need to consult if the species are listed are documented in the ECOS project file in a "Perform Endangered Species Act Consultation Commitments" Activity.
- This project does not require consultation with or authorization from the USFWS or NMFS under the Endangered Species Act at this time; however, a voluntary conference opinion is being sought to address proposed species or proposed critical habitat prior to listing. The conference will be documented in the "Obtain Endangered Species Act Consultation" Activity. in the ECOS project file.

For a project that requires federal authorization or approval, if the completed project-specific species analysis spreadsheet indicates, "May affect," for any listed species, then consultation with the USFWS is required under section 7 of the Endangered Species Act and the second checkbox above must be checked.

For more information regarding the Endangered Species Act, see **ENV's Endangered Species Act Handbook**.

## II. TPWD Coordination



Select the appropriate statement below:

- This project requires a new environmental assessment (EA) or environmental impact statement (EIS), and therefore must be coordinated with TPWD under the 2021 TxDOT/TPWD MOU.
- This project involves a re-evaluation of an EA or EIS that was previously coordinated with TPWD and triggers for re-coordination were met, therefore the re-evaluation must be coordinated with TPWD under the 2021 TxDOT/TPWD MOU.
- This project involves a re-evaluation of an EA or EIS that was previously coordinated with TPWD and triggers for re-coordination were not met, therefore the re-evaluation will not be coordinated with TPWD under the TxDOT/TPWD MOU.
- This project is a categorical exclusion (CE)-level project; therefore, coordination with TPWD under the 2021 TxDOT/TPWD MOU is not required; however, it will be coordinated with TPWD under the 2021 TxDOT/TPWD MOU at the TxDOT district's discretion.
- This project is a categorical exclusion (CE)-level project; therefore coordination with TPWD under the 2021 TxDOT/TPWD MOU is not required and it will not be coordinated with TPWD under 2021 TxDOT/TPWD MOU at the TxDOT district's discretion.

For any project that will be coordinated with TPWD, complete the **Documentation of Texas Parks and Wildlife Department Best Management Practices Form**.

For more information regarding TPWD Coordination, see **ENV's Guidance: TPWD Coordination Under the 2021 Memorandum of Understanding**.

### III. Bald and Golden Eagle Protection Act (BGEPA)

Select the appropriate statement below:

- This project is not within 660 feet of an active or inactive Bald or Golden Eagle nest. Therefore, no coordination with USFWS is required.
- This project is within 660 feet of an active or inactive Bald or Golden Eagle nest; however, construction activities within 660 feet will not occur during the nesting season, and the project will adhere to the National Bald Eagle Management Guidelines of 2007. Therefore, no coordination with USFWS is required.
- This project is within 660 feet of an active or inactive Bald or Golden Eagle nest, and construction within 660 feet will occur during the nesting season or the project will not adhere to the National Bald Eagle Management Guidelines of 2007. Therefore, coordination with USFWS to obtain a Non-Purposeful Take Permit is required.

For more information regarding BGEPA, see Section 7.0 of **ENV's Ecological Resources Handbook**.



#### **IV. Migratory Bird Protections**

This project will comply with applicable provisions of the Migratory Bird Treaty Act (MBTA) and Texas Parks and Wildlife Code Title 5, Subtitle B, Chapter 64, Birds. It is the department's policy to avoid removal and destruction of active bird nests except through federal or state approved options. In addition, it is the department's policy to, where appropriate and practicable:

- use measures to prevent or discourage birds from building nests on man-made structures within portions of the project area planned for construction, and
- schedule construction activities outside the typical nesting season.

For more information regarding migratory bird protections, see **ENV's Guidance: Avoiding Migratory Birds and Handling Potential Violations** and Section 3.0 of **ENV's Ecological Resources Handbook**.

**SPECIES ANALYSIS SUMMARY**  
**Project Name: US 281 at SH 71 Interchange**  
**CSJ(s): 0252-02-058**

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Federal Status	Effect/Take Determination for Federally Listed Species	State Status	Impact Determination for State-Listed Species	Explanation for Effect/Take and/or Impact Determination	Presence/Absence survey conducted?
Burnet	Arachnids	Bee Creek Cave Harvestman	<i>Texella reddelli</i>	This subterranean obligate species inhabits karstic features within the Edwards Limestone Formation. It is known from Tooth, Bee Creek, McDonald, Weldon, and Bone Caves, and possibly Root Cave, in Travis and Williamson Counties.	N	The project area is not within Travis or Williamson County. No karst features were observed within the project area during a site survey on January 30 and May 29, 2024 and the project area is within Karst Zone 4b. This species is not listed on IPaC.	E	No effect or take	—	N/A	Species habitat does not occur within the project area.	N
Burnet	Birds	Golden-cheeked Warbler	<i>Setophaga (=Dendroica) chrysoparia</i>	This migratory species breeds in central Texas along the Balcones Escarpment on the eastern edge of the Edwards Plateau and ranges from southwest of Fort Worth to northeast of Del Rio. Breeding habitat consists of juniper-oak woodlands dominated by Ashe juniper ( <i>Juniperus ashei</i> ) and various oak ( <i>Quercus</i> sp.) species and deciduous trees found in areas with steep slopes, canyon heads, draws, and adjacent ridgetops. The species is dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are generally placed in upright forks of mature Ashe junipers or various deciduous species. Occupied sites usually contain junipers at least 40 years old.	Y	The project area is within the USFWS range mapper and the Heger 2013 habitat range model. TPWD NDD EO records list two records of species presence within 10 miles of the project. Potential suitable species habitat of juniper-oak woodlands dominated by Ashe juniper and live oak was observed within and adjacent to the project area during the January 30 and May 29, 2024 field surveys.	E	May affect	E	May impact	Potential species habitat occurs within the project area.	N

**SPECIES ANALYSIS SUMMARY**  
**Project Name: US 281 at SH 71 Interchange**  
**CSJ(s): 0252-02-058**

Burnet	Birds	Piping Plover - Migratory	<i>Charadrius melodus</i>	This migratory species overwinters in Texas, where it occurs on beaches, ephemeral sand flats, barrier islands, sand, mud, algal flats, washover passes, salt marshes, lagoons, and dunes along the Gulf Coast and adjacent offshore islands, including spoil islands in the Intracoastal Waterway. Algal flats appear to be the highest quality habitat because of their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low or very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast.	N/A	The list of federally threatened and endangered species indicates that based on the project location within the migratory route, effects to Piping Plover only need be considered for wind energy projects. The project area is outside the breeding and wintering range of this species. Although suitable stopover habitat may be present, Piping Plover is not expected to regularly occur and any use of this habitat would be incidental.	T	No effect or Take	T	No impact	The project is not a wind energy project within the migratory route and does not contain suitable breeding and wintering habitat for the Piping Plover.	N
Burnet	Birds	Red Knot - Migratory	<i>Calidris canutus rufa</i>	The species is a winter resident and migrant in Texas. It is primarily found in marine habitats such as sandy beaches, salt marshes, lagoons, mudflats of estuaries and bays, and mangrove swamps during winter months. It primarily occurs along the Gulf coast on tidal flats and beaches and less frequently in marshes and flooded fields. It has occasionally been observed along shorelines of large lakes and freshwater marshes.	N/A	The list of federally threatened and endangered species indicates that based on the project location within the migratory route, effects to Red Knot only need be considered for wind energy projects. The project area is outside the breeding and wintering range of this species. Although suitable stopover habitat may be present, Red Knot is not expected to regularly occur and any use of this habitat would be incidental.	T	No effect or Take	T	No impact	The project is not a wind energy project within the migratory route and does not contain suitable breeding and wintering habitat for the Red Knot.	N

**SPECIES ANALYSIS SUMMARY**  
**Project Name: US 281 at SH 71 Interchange**  
**CSJ(s): 0252-02-058**

Burnet	Birds	White-faced Ibis	<i>Plegadis chihi</i>	The species is found in the Western Gulf Coastal Plains ecoregion of Texas. Preferred habitat includes freshwater wetlands, marshes, ponds, rivers, irrigated land, and sloughs, but it occasionally forages in brackish or saltwater marshes. It nests in marshes in low trees, on the ground in bulrushes ( <i>Scirpus</i> sp.) or reeds, or on floating mats.	N	According to TPWD the project area is not located within the Western Gulf Coastal Plains ecoregion of Texas. No preferred species habitat of freshwater marshes, irrigated land, sloughs, or brackish or saltwater marshes were observed within the project area during the January 30 and May 29, 2024 site surveys. Nesting habitat of low trees in marshes, bulrushes, reeds, or floating mats were not observed.	—	N/A	T	No impact	Species habitat does not occur within the project area.	N
Burnet	Birds	Whooping Crane	<i>Grus americana</i>	The species breeds in Canada and winters on the Texas coast at Aransas National Wildlife Refuge. During migration it typically stops to rest and feed in open bottomlands of large rivers and marshes but, like other waterbirds, it may also utilize flooded croplands, playas, large wetlands associated with lakes, small ponds, and various other aquatic features. Typical migration habitat includes sites with good horizontal visibility, water depth of 30 centimeters or less, and minimum wetland size of 0.04 hectare for roosting.	N	During the January 30 and May 29, 2024 site surveys, no typical stopover or foraging habitat of bottomlands, flooded croplands, playas, marshes, or large wetlands associated with various aquatic features were observed within the project area. Potential wetlands observed within the project area are smaller than 0.04 hectares and would likely not be suitable for roosting. The project area is not located within the species wintering grounds, according to TPWD. This species is not listed on IPaC.	E	No effect or take	E	No impact	Species habitat does not occur within the project area.	N

**SPECIES ANALYSIS SUMMARY**  
**Project Name: US 281 at SH 71 Interchange**  
**CSJ(s): 0252-02-058**

Burnet	Birds	Zone-tailed Hawk	<i>Buteo albonotatus</i>	The species occurs in arid open country, especially open deciduous or pine-oak woodland, mesa and mountain country, often near watercourses, and wooded canyons and tree-lined rivers along middle-slopes of desert mountains. It nests in a variety of sites including small trees in lower desert, giant cottonwoods in riparian areas, and mature conifers in high mountain regions. Nests are typically constructed in large trees like cottonwoods ( <i>Populus deltoides</i> ), usually along streams near cliffs or steep hillsides.	N	Arid open country, lower deserts, mesas, mountains, wooded canyons, and tree-lined rivers along middle-slopes of desert mountains do not occur within the project area. While riparian areas and deciduous woodlands	—	N/A	T	No impact	Species habitat does not occur within the project area.	N
Burnet	Insects	Monarch Butterfly	<i>Danaus plexippus</i>	Found statewide. Adults are found in a variety of habitats including native prairies, pastures, open woodlands and savannas, desert scrub, roadsides, and other habitats with abundant nectar plants, including urbanized areas. Although adults may be present year round, they are primarily encountered between March and November, and are most commonly observed in the summer and fall during breeding and migration. Caterpillars are found on various species of the family Asclepiadaceae (occasionally treated as a subfamily of Apocynaceae). Common host plants in Texas include milkweeds ( <i>Asclepias</i> spp.) milkweed vines ( <i>Matelea</i> spp.), climbing milkweed ( <i>Funastrum</i> spp.), swallowworts ( <i>Cynanchum</i> spp.) and Anglepod ( <i>Gonolobus suberosus</i> ). Caterpillars are most frequently observed between April and September.	Y	Pastures, open woodlands, roadsides, and urbanized areas occur within and adjacent to the project area. Host plants including antelope horns milkweed ( <i>Asclepias asperula</i> ) and other common flowering plants that could provide nectar to the species were observed within the project area during the January 30 and May 29, 2024 site surveys.	C	May affect	—	N/A	The monarch butterfly is a proposed threatened species, and no consultation with USFWS is required at this time. TxDOT is a partner in the Nationwide Candidate Conservation Agreement with Assurances/Candidate Conservation Agreement for Monarch Butterfly on Energy and Transportation Lands (Agreement). The Agreement authorizes incidental take for all activities included in the proposed project should the monarch butterfly be listed as endangered or threatened.	N

**SPECIES ANALYSIS SUMMARY**  
**Project Name: US 281 at SH 71 Interchange**  
**CSJ(s): 0252-02-058**

Burnet	Mammals	Tricolored Bat	<i>Perimyotis subflavus</i>	<p>In Texas, Tricolored Bats may be found year-round, in mature hardwoods (&gt;5-inch average dbh), nesting in the leaves or bark of live and dead trees, or epiphytic vegetation such as Spanish moss (<i>Tillandsia usneoides</i>). They may also roost among ferns and crevices on limestone and sandstone bluffs and cliffs, and in caves, where present. From late winter to early spring, they also may roost in bridges, culverts, and abandoned buildings. During the winter they may go into periods of torpor during colder temperatures; however, they will emerge to feed on warm evenings. Foraging habitat consists of open woodlands, riparian corridors, and forest edge, especially near waterbodies (natural and manmade).</p> <p>[If any portion of the project area is inside of the IPaC species range, an effect determination is required. If the entirety of the project area is outside of the IPaC species range, use the following:          "In this project area, effects to tricolored bat only need to be considered for wind energy projects. Tricolored bat is not expected to regularly occur, and any use of this habitat would be incidental."]</p>	N	According to the USFWS range map, the project area does not occur within the species' known range.	PE	No effect or take	—	N/A	The current range of this species does not include the project area according to USFWS range map.	N
Burnet	Mollusks	Balcones Spike	<i>Fusconaia (=Quadrula) iheringi</i>	Freshwater mussel recently determined to be a separate and distinct species from the false spike. The Balcones spike is found within the Colorado and Brazos River basins. The species does not co-occur with false spike, which is found in the Guadalupe River basin. The Balcones spike occurs in small to medium-sized streams and rivers with various substrates including mud and mixtures of sand, gravel, and cobble. It is often found in riffle and pool habitats, and host species include the red shiner ( <i>Cyprinella lutrensis</i> ) and blacktail shiner ( <i>C. venusta</i> ).	N	While occurring within the Lower Colorado River basin, perennial streams were not observed within the project area during the January 30 and May 29, 2024 site surveys. There are no USFWS/TPWD grouped streams within the project	E	No effect or take	E	No impact	Species habitat does not occur within the project area.	N
Burnet	Mollusks	Texas Fatmucket	<i>Lampsilis bracteata</i>	A freshwater mussel endemic to streams and small rivers of the Texas Hill Country, the species occurs in moderately flowing waters generally less than 1 meter in depth. It can occur in sand or gravel substrates, but typically occurs in soft silt deposits in bank or pool habitats or cracks in bedrock. It inhabits microhabitats among large cobble, boulders, bedrock ledges, horizontal cracks in bedrock slabs, and macrophyte beds. It has been reported inhabiting roots of cypress trees and other vegetation along steep banks. It is intolerant to impoundment and absent from backwater, mid-channel, and riffle habitats.	N	While occurring within the Lower Colorado River basin, perennial streams were not observed within the project area during the January 30 and May 29, 2024 site surveys. There are no USFWS/TPWD grouped streams within the project area. The majority of	E	No effect or take	E	No impact	Species habitat does not occur within the project area.	N

**SPECIES ANALYSIS SUMMARY**  
**Project Name: US 281 at SH 71 Interchange**  
**CSJ(s): 0252-02-058**

Burnet	Mollusks	Texas Fawnsfoot	<i>Truncilla macronon</i>	A freshwater mussel that is currently limited to the Brazos, Colorado, and Trinity River basins in Texas. The species occupies large streams to medium rivers and is intolerant of impoundment. Little is known about the species due to lack of representative specimens, however it is thought that the species prefers protected areas near shore in water with a moderate current over mud, sandy mud, and gravel substrates. It is also found in perennial irrigation canals for rice.	N	While occurring within the Lower Colorado River basin, perennial streams were not observed within the project area during the January 30 and May 29, 2024 site surveys. There are no USFWS/TPWD grouped streams within the project area. The majority of the stream channels within the project area were observed as dry at the time of the survey. This species is not listed on IPaC.	T	No effect or take	T	No impact	Species habitat does not occur within the project area.	N
Burnet	Mollusks	Texas Pimpleback	<i>Cyclonaias (Quadula) petrina</i>	A freshwater mussel endemic to the middle and lower portions of the Colorado River basin in Texas. The species inhabits medium to large rivers with shallow water and slow to moderate currents. It occurs in gravel-filled cracks in bedrock and microhabitats and on mud, sand, gravel, and cobble substrates. It is intolerant to extremely soft substrates, shifting sands, scoured bottoms, and impoundments.	N	While occurring within the Lower Colorado River basin, perennial streams were not observed within the project area during the January 30 and May 29, 2024 site surveys. There are no	E	No effect or take	E	No impact	Species habitat does not occur within the project area.	N
Burnet	Plants	Bracted Twistflower	<i>Streptanthus bracteatus</i>	The species is found in south-central Texas. It is an annual; endemic to the Edwards Plateau where it is occurs on shallow, well-drained gravelly clays and clay loams over limestone, within oak-juniper woodland and associated openings, on steep to moderate slopes, and in canyon bottoms. Often found amid dense shrub growth where there is some protection from browsing.	N	Oak-juniper woodlands and associated openings on steep to moderate limestone slopes or in canyons were not observed within the project area during the January 30 and May 29, 2024 site surveys. The NRCS lists gravelly clay and clay loam soils as occurring within the project area. However, the project area is not within the known range of the species, according to USFWS.	T	No effect or harm	—	N/A	The project area is outside of the species' known range. This species is no longer listed on the IPaC or RTEST list for Burnet County.	N

**SPECIES ANALYSIS SUMMARY**  
**Project Name: US 281 at SH 71 Interchange**  
**CSJ(s): 0252-02-058**

Burnet	Plants	Rock Quillwort	<i>Isoetes lithophila</i>	This species is endemic to the Llano Uplift of Central Texas. The plant occurs in sand and gravel under shallow water of seasonal pools (vernal pools) that develop during rainy seasons in small, shallow, unshaded basins on barren outcrops of granite and gneiss. The plant is a perennial, sporulating in late winter and spring, and opportunistically in other seasons following heavy rainfall, but shriveling to the ground and undetectable during periods when pools are dry.	N	According to USGS topographic maps, the project area is located approximately 3 miles southeast of the boundaries of the Llano Uplift of Central Texas. TPWD NDD EO records list four records of species presence within 10 miles of the project area. Barren outcrops of granite and gneiss were not observed during the January 30 and May 29, 2024 site surveys and are not listed within the project area according to the USGS TX Pocket Geology Map.	—	N/A	T	No impact	Species habitat does not occur within the project area.	N
Burnet	Reptiles	Texas Horned Lizard	<i>Phrynosoma cornutum</i>	The species is found in semi-arid open areas with scattered vegetation comprised of bunchgrass, cacti, yucca, mesquite, acacia, juniper, or other woody shrubs and small trees commonly found in loose sandy or loamy soils.	Y	Loose loamy soils occur within the project area according to NRCS. Semi-arid open areas with bunchgrass, prickly pear, mesquite, acacia, Ashe juniper, and other small trees and woody shrubs were observed within the project area during the January 30 and May 29, 2024 site surveys.	—	N/A	T	May impact	Potential species habitat occurs within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Amphibians	Pedernales River Springs salamander	<i>Eurycea</i> sp. 6	Aquatic; springs, streams and caves with rocky or cobble beds.	N	Springs or caves with rocky or cobble beds do not occur within the project area.	No impact	Species habitat does not occur within the project area.	N
BURNET	Amphibians	Strecker's chorus frog	<i>Pseudacris streckeri</i>	Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.	Y	According to the NRCS, sandy substrates do not occur within the project area. Sand prairies, moist woods, marshes, swamps, flooded fields, and sloughs were not observed within the project area during the January 30 and May 29, 2024 site surveys. However, wooded floodplains and habitat around streams and ponds does occur.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Amphibians	Woodhouse's toad	<i>Anaxyrus woodhousii</i>	Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.	Y	According to the NRCS, deep friable soils are not present within the project area. Shrublands, forests, grasslands, and ponds were observed within the project area during the January 30 and May 29, 2024 site surveys. Stream channels with shallow temporary and permanent pools and ground coverage of rock, vegetation, and fallen debris also occurs. Animal burrows were observed in the project area during the site surveys.	May impact	Potential species habitat occurs within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Arachnids	No accepted common name	<i>Tyrannochthonius troglodytes</i>	Habitat description is not available at this time.		This species is an invertebrate with no habitat description provided by TPWD.		According to TxDOT ENV Guidance, invertebrate species without habitat description do not need to be considered for analysis.	N
BURNET	Birds	bald eagle	<i>Haliaeetus leucocephalus</i>	Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds	N	Large streams were observed within the project area during the site surveys on January 30 and May 29, 2024. However, these streams were observed to be mostly dry and no tall trees, cliffs, or large lakes were observed within or adjacent to the project area. TPWD NDD EO records list three records of species presence within 1.0 miles of the project area.	No impact	Species habitat does not occur within the project area.	N
BURNET	Birds	Bank Swallow	<i>Riparia riparia</i>	Bank Swallows live in low areas along rivers, streams, ocean coasts, and reservoirs. Their territories usually include vertical cliffs or banks where they nest in colonies of 10 to 2,000 nests. Though in the past Bank Swallows were most commonly found around natural bluffs or eroding streamside banks, they now often nest in human-made sites, such as sand and gravel quarries or road cuts. They forage in open areas and avoid places with tree cover.	N	There are no vertical cliffs or banks along rivers, streams, coasts, or reservoirs within the project area.	No impact	Species habitat does not occur within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Birds	black-capped vireo	<i>Vireo atricapilla</i>	Oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer	Y	TPWD NDD EO records indicate two records of species presence within 10 miles of the project area. Oak juniper woodlands with patchy, two-layered strata with tree, shrub, and grassy components were observed within the project area during the site surveys on January 30 and May 29, 2024. Suitable nesting and foraging habitat of deciduous and broad-leaved trees and shrubs reaching ground level are also present.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Birds	Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	Shrubby and bushy areas (especially near water), riparian woodland, aspen parklands, cultivated lands, marshes, and around human habitation; in migration and winter also in pastures and fields (AOU 1983).	Y	The project area contains shrubby and bushy areas near water, riparian woodlands, and areas near human habitation.	May impact	Potential species habitat occurs within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Birds	Cactus Wren	<i>Campylorhynchus brunneicapillus</i>	Desert (especially with cholla cactus or yucca), mesquite, arid scrub, coastal sage scrub, and in trees in towns in arid regions (Tropical to Subtropical zones) (AOU 1983). Nests in OPUNTIA cactus, or in twiggy, thorny, trees and shrubs, sometimes in buildings. Nest may be relined and used as a winter roost.	Y	The project area contains <i>Opuntia</i> cactus and twiggy, thorny trees and shrubs.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Birds	chestnut-collared longspur	<i>Calcarius ornatus</i>	Occurs in open shortgrass settings especially in patches with some bare ground. Also occurs in grain sorghum fields and Conservation Reserve Program lands	Y	No sorghum fields or Conservation Reserve Program lands occur within the project area. Foraging habitat of pastures and patches of open shortgrass settings with some bare ground and similar herbaceous habitat was observed within the project area during the January 30 and May 29, 2024 site surveys.	No impact	While potential habitat occurs within the project area, the species' use of habitat is likely to be temporary and incidental since this species' breeding grounds occur in the high plains.	N
BURNET	Birds	Common Nighthawk	<i>Chordeiles minor</i>	Common Nighthawks nest in both rural and urban habitats including coastal sand dunes and beaches, logged forest, recently burned forest, woodland clearings, prairies, plains, sagebrush, grasslands, open forests, and rock outcrops. They also nest on flat gravel rooftops, though less often as gravel roofs are being replaced by smooth, rubberized roofs that provide an unsuitable surface.	Y	The proposed project area contains woodland clearings, grasslands, and open forests.	May impact	Potential species habitat occurs within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Birds	Franklin's gull	<i>Leucophaeus pipixcan</i>	The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. This species is only a spring and fall migrant throughout Texas. It does not breed in or near Texas. Winter records are unusual consisting of one or a few individuals at a given site (especially along the Gulf coastline). During migration, these gulls fly during daylight hours but often come down to wetlands, lake shore, or islands to roost for the night.	N	The project area is not located near the Gulf coastline. No aquatic habitat of lake shores, islands, marshes, irrigated fields, or mudflats were observed within the project area during the January 30 and May 29, 2024 site surveys. A potential wetland was observed, but species use of this potential habitat would be temporary and incidental due to distance from the Gulf coastline.	No impact	Species habitat does not occur within the project area.	N
BURNET	Birds	lark bunting	<i>Calamospiza melanocorys</i>	Overall, it's a generalist in most short grassland settings including ones with some brushy component plus certain agricultural lands that include grain sorghum. Short grasses include sideoats and blue gramas, sand dropseed, prairie junegrass (Koeleria), buffalograss also with patches of bluestem and other mid-grass species. This bunting will frequent smaller patches of grasses or disturbed patches of grasses including rural yards. It also uses weedy fields surrounding playas. This species avoids urban areas and cotton fields.	Y	Suitable species habitat of disturbed small patches of grass including rural yards and similar short grassland settings including pastures were observed within the project area during the January 30 and May 29, 2024 site surveys. However, no sorghum fields or weedy fields surrounding playas occur within the project area.	No impact	While potential habitat occurs within the project area, the species' use of habitat is likely to be temporary and incidental since this species' breeding grounds occur in the high plains.	N
BURNET	Birds	Least Tern	<i>Sternula antillarum</i>	Sand beaches, flats, bays, inlets, lagoons, islands, river sandbars and flat gravel rooftops in urban areas.	N	There are no sand beaches, flats, bays, inlets, lagoons, islands, river sandbars, or flat gravel rooftops in urban areas within the project area.	No impact	Species habitat does not occur within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Birds	Loggerhead Shrike	<i>Lanius ludovicianus</i>	Loggerhead Shrikes inhabit open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses, and cemeteries. Loggerhead Shrikes are often seen along mowed roadsides with access to fence lines and utility poles.	Y	The proposed project area contains riparian areas, savannas, and mowed roadsides with access to fence lines and utility poles.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Birds	mountain plover	<i>Charadrius montanus</i>	The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous.	Y	No high plains, shortgrass prairies, desert tablelands, alkali flats, or prairie dog towns occur within the project area. However suitable migratory habitat of pastures, agricultural fields, and herbaceous ground cover with shallow depressional areas were observed within the project area during the site surveys on January 30 and May 29, 2024.	No impact	While potential habitat occurs within the project area, the species' use of habitat is likely to be temporary and incidental since this species' breeding grounds occur in the high plains.	N
BURNET	Birds	Northern Bobwhite	<i>Colinus virginianus</i>	Inhabits a wide variety of vegetation types, particularly early successional stages. Occurs in croplands, grasslands, pastures, fallow fields, grass-brush rangelands, open pinelands, open mixed pine-hardwood forests, and habitat mosaics (Brennan 1999).	Y	The proposed project area contains grasslands and habitat mosaics.	May impact	Potential species habitat occurs within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Birds	Pyrrhuloxia	<i>Cardinalis sinuatus</i>	Pyrrhuloxias live in upland deserts, mesquite savannas, riparian (streamside) woodlands, desert scrublands, farm fields with hedgerows, and residential areas with nearby mesquite. When not breeding, some Pyrrhuloxias wander into urban habitats, mesquite-hackberry habitats, and riparian habitats with Arizona sycamore and cottonwood.	Y	The proposed project area contains riparian woodlands.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Birds	Sanderling	<i>Calidris alba</i>	Nonbreeding: primarily sandy beaches, less frequently on mud flats and shores of lakes or rivers (AOU 1983) also on exposed reefs (Pratt et al. 1987). Sleeps/loafs on upper beach or on salt pond dike.	N	There are no sandy beaches, mud flats, shores of lakes or rivers, exposed reefs, or salt pond dikes within the project area.	No impact	Species habitat does not occur within the project area.	N
BURNET	Birds	Snowy Plover	<i>Charadrius nivosus</i>	Algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. An optimal site characteristic would be large in size. The size of populations appear to be roughly proportional to the total area of suitable habitat used. Formerly an uncommon breeder in the Panhandle; potential migrant; winter along coast.	N	There are no algal flats within the project area.	No impact	Species habitat does not occur within the project area.	N
BURNET	Birds	Sprague's pipit	<i>Anthus spragueii</i>	The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat during migration and in winter consists of pastures and weedy fields (AOU 1983), including grasslands with dense herbaceous vegetation or grassy agricultural fields.	Y	Breeding habitat of short-grass plains, alkaline meadows, and wet meadow zones around alkali and freshwater lakes do not occur within the project area. However, suitable migratory habitat of pastures, grassy fields, and weedy pastures were observed within the project area during the May 2024 site surveys.	No impact	While potential habitat occurs within the project area, the species' use of habitat is likely to be temporary and incidental since this species' breeding grounds occur in the high plains.	N
BURNET	Birds	western burrowing owl	<i>Athene cunicularia hypugaea</i>	Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows	Y	Vacant lots near human habitation with short herbaceous vegetation and small burrows were observed within the project area during the January 30 and May 29, 2024 site surveys.	May impact	Potential species habitat occurs within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Birds	Willet	<i>Tringa semipalmata</i>	Marshes, tidal mudflats, beaches, lake margins, mangroves, tidal channels, river mouths, coastal lagoons, sandy or rocky shores, and, less frequently, open grassland (AOU 1983, Stiles and Skutch 1989).	N	There are no marshes, tidal mudflats, beaches, lake margins, mangroves, tidal channels, river mouths, coastal lagoons, sandy or rocky shores, or open grasslands within the project area.	No impact	Species habitat does not occur within the project area.	N
BURNET	Birds	Wilson's Warbler	<i>Cardellina pusilla</i>	Wilson's warblers key in on forests and scrubby areas along streams to fatten up during migration. During the nonbreeding season they use many types of habitats from lowland thickets near streams to high-elevation cloud forests in Mexico and Central America.	Y	The proposed project area contains forests and scrubby areas along ephemeral or intermittent drainages.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Crustaceans	Bifurcated Cave Amphipod	<i>Stygobromus bifurcatus</i>	Habitat description is not available at this time.		This species is an invertebrate with no habitat description provided by TPWD.		According to TxDOT ENV Guidance, invertebrate species without habitat description do not need to be considered for analysis.	N
BURNET	Fish	Guadalupe bass	<i>Micropterus treculii</i>	Endemic to the streams of the northern and eastern Edwards Plateau including portions of the Brazos, Colorado, Guadalupe, and San Antonio basins; species also found outside of the Edwards Plateau streams in decreased abundance, primarily in the lower Colorado River; two introduced populations have been established in the Nueces River system. A pure population was re-established in a portion of the Blanco River in 2014. Species prefers lentic environments but commonly taken in flowing water; numerous smaller fish occur in rapids, many times near eddies; large individuals found mainly in riffle tail races; usually found in spring-fed streams having clear water and relatively consistent temperatures.	N	The project area occurs within the Colorado River drainage basin in the northeastern region of the Edwards Plateau, according to USGS topographic maps. TPWD NDD EO records indicate four records of species presence within 10 miles of the project area, with two occurrences listed in Double Horn Creek, to the east, and the Colorado River to the northwest. During the January 30 and May 29, 2024 site surveys, all stream crossings within the project area were observed to be dry.	No impact	Species habitat does not occur within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Fish	silverband shiner	<i>Notropis shumardi</i>	In Texas, found from Red River to Lavaca River; Main channel with moderate to swift current velocities and moderate to deep depths; associated with turbid water over silt, sand, and gravel.	N	According to USGS topographic maps, the project area is between the Red River and Lavaca River. During the site surveys on January 30 and May 29, 2024, all stream crossings within the project area were observed to be dry.	No impact	Species habitat does not occur within the project area.	N
BURNET	Fish	Texas shiner	<i>Notropis amabilis</i>	In Texas, it is found primarily in Edwards Plateau streams from the San Gabriel River in the east to the Pecos River in the west. Typical habitat includes rocky or sandy runs, as well as pools.	N	According to USGS topographic maps, the project area is located in the Edwards Plateau. TPWD NDD EO records indicate two records of species presence within 10 miles of the project area, within Double Horn Creek to the east. Perennial streams were not observed within the project area during the January 30 and May 29, 2024 site surveys. Stream features within the project area were observed as dry.	No impact	Species habitat does not occur within the project area.	N
BURNET	Insects	American bumblebee	<i>Bombus pensylvanicus</i>	Habitat description is not available at this time.		This species is an invertebrate with no habitat description provided by TPWD.		According to TxDOT ENV Guidance, invertebrate species without habitat description do not need to be considered for analysis.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Insects	No accepted common name	<i>Rhadine russelli</i>	Habitat description is not available at this time.		This species is an invertebrate with no habitat description provided by TPWD.		According to TxDOT ENV Guidance, invertebrate species without habitat description do not need to be considered for analysis.	N
BURNET	Mammals	big free-tailed bat	<i>Nyctinomops macrotis</i>	Habitat data sparse but records indicate that species prefers to roost in crevices and cracks in high canyon walls, but will use buildings, as well; reproduction data sparse, gives birth to single offspring late June-early July; females gather in nursery colonies; winter habits undetermined, but may hibernate in the Trans-Pecos; opportunistic insectivore	N	No high canyon walls or cliffs were observed during the January 30 and May 29, 2024 site surveys. No bats were observed during the site surveys.	No impact	Species habitat does not occur within the project area.	N
BURNET	Mammals	cave myotis bat	<i>Myotis velifer</i>	Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow ( <i>Hirundo pyrrhonota</i> ) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore.	Y	During the January 30 and May 29, 2024 site surveys, suitable species habitat of rock crevices, old buildings, culverts, and bridges were observed within the project area. Active cliff swallow nests were also observed within culverts throughout the project area. A Brazilian free-tailed bat colony inhabits the box beam bridge at Flatrock Creek; the cave myotis bat may also be present at this location.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Mammals	eastern spotted skunk	<i>Spilogale putorius</i>	Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.	Y	During the January 30 and May 29, 2024 site surveys woodlands and brushy areas were observed within the project area.	May impact	Potential species habitat occurs within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Mammals	hoary bat	<i>Lasiurus cinereus</i>	Hoary bats are highly migratory, high-flying bats that have been noted throughout the state. Females are known to migrate to Mexico in the winter, males tend to remain further north and may stay in Texas year-round. Commonly associated with forests (foliage roosting species) but are found in unforested parts of the state and lowland deserts. Tend to be captured over water and large, open flyways.	Y	During the January 30 and May 29, 2024 site surveys, deciduous woodlands and large, open flyways along riparian corridors were observed within the project area. No bats were observed during the site visit.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Mammals	Llano pocket gopher	<i>Geomys texensis texensis</i>	Found in deep, brown loamy sands or gravelly sandy loams and is isolated from other species of pocket gophers by intervening shallow stony to gravelly clayey soils	N	According to the NRCS, deep loamy sands or gravelly sandy loam soils do not occur within the project area. TPWD NDD EO records indicate two records of the species within a 10 mile buffer of the project area. While oak-mesquite-Ashe juniper habitats and small animal burrows were observed within the project area during the January 30 and May 29, 2024 site surveys, gravelly clay soils with a shallow restrictive layer of bedrock were present throughout the project area, which would likely not provide suitable habitat for the species. No gophers were observed during the site survey.	No impact	Species habitat does not occur within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Mammals	mountain lion	<i>Puma concolor</i>	Generalist; found in a wide range of habitats statewide. Found most frequently in rugged mountains & riparian zones.	N	The project area is not located in a mountainous region, according to USGS topographic maps. During the January 30 and May 29, 2024 site surveys, stream riparian zones, riparian woodlands, and rocky brushland with dense vegetation were observed within the project area. However, surrounding areas are developed with commercial, rural residential, and agriculture land use. There are no connections between the project area and large mountainous areas.	No impact	Species habitat does not occur within the project area.	N
BURNET	Mammals	plains spotted skunk	<i>Spilogale interrupta</i>	Generalist; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie	Y	During the January 30 and May 29, 2024 site surveys woodlands and brushy areas were observed within the project area.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Mammals	Seminole bat	<i>Lasiurus seminolus</i>	Pine-oak and long-leaf pine in east Texas. Habitats include pine, mixed pine-hardwood, and hardwood forests of uplands and bottomlands, particularly pine-dominated forests, including mature pine and pine-hardwood corridors in managed pine forest landscapes (Menzel et al. 1998, 1999, 2000; Carter et al. 2004; Marks and Marks 2006; Perry and Thill 2007; Perry et al. 2007; Hein et al. 2008; Ammerman et al. 2012).	N	There are no pine-dominated forests within the project area.	No impact	Species habitat does not occur within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Mollusks	Lilliput	<i>Toxolasma parvum</i>	Reported from small streams, where it may penetrate into the headwaters, to large rivers, oxbows, sloughs, lakes, ponds, canals, borrow pits, and reservoirs. Primarily occurs in still to slow currents in mud and sand substrates (Coker et al. 1921; Read 1954; Neck and Metcalf 1988; Williams et al. 2008; Watters et al. 2009).	N	While occurring within the Lower Colorado River basin, perennial streams were not observed within the project area during the January 30 and May 29, 2024 site surveys. There are no USFWS/TPWD grouped streams within the project area. The majority of the stream channels within the project area were observed as dry at the time of the survey. This species is not listed on IPaC.	No impact	Species habitat does not occur within the project area.	N
BURNET	Mollusks	Mapleleaf	<i>Quadrula quadrula</i>	Reported from streams to rivers, lakes, and reservoirs. In riverine habitats, it may be found in main-channel habitats such as riffles or runs in sand, gravel, and cobble substrates with moderate to swift currents. May also be found in nearshore habitats such as banks and backwaters to include pools in sand or mud substrates with little to no flow. (Williams et al. 2008; Howells 2016; Haag and Cicerello 2016).	N	While occurring within the Lower Colorado River basin, perennial streams were not observed within the project area during the January 30 and May 29, 2024 site surveys. There are no USFWS/TPWD grouped streams within the project area. The majority of the stream channels within the project area were observed as dry at the time of the survey. This species is not listed on IPaC.	No impact	Species habitat does not occur within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Mollusks	Pimpleback	<i>Cyclonaias pustulosa</i>	Occurs in small streams to large rivers in habitats including riffles and runs with flowing water, also found in nearshore habitats such as banks and backwaters or pools. Can occur in reservoirs but varies based by population. Is often found in substrates comprising of sand, gravel, and cobble but also mud and silt (Howells et al. 1996; Williams et al. 2008; Watters et al. 2009).	N	While occurring within the Lower Colorado River basin, perennial streams were not observed within the project area during the January 30 and May 29, 2024 site surveys. There are no USFWS/TPWD grouped streams within the project area. The majority of the stream channels within the project area were observed as dry at the time of the survey. This species is not listed on IPaC.	No impact	Species habitat does not occur within the project area.	N
BURNET	Mollusks	Pistolgrip	<i>Tritogonia verrucosa</i>	Reported from streams to rivers, lakes, and reservoirs, but considered less tolerant of impoundment (Haag and Cicerello 2016). Can occur in a variety of habitat types but most often found in main channel habitats such as riffles and runs with moderate current and sand, gravel, or cobble substrates (Howells et al. 1996; Williams et al. 2008).	N	While occurring within the Lower Colorado River basin, perennial streams were not observed within the project area during the January 30 and May 29, 2024 site surveys. There are no USFWS/TPWD grouped streams within the project area. The majority of the stream channels within the project area were observed as dry at the time of the survey. This species is not listed on IPaC.	No impact	Species habitat does not occur within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Mollusks	Tampico Pearlymussel	<i>Cyrtonaias tampicoensis</i>	Reported from streams to rivers, reservoirs, and canals. In riverine habitats often found in nearshore habitats such as banks and backwaters, to include pools and oxbows, in mud or sand or among cobble and boulders with still to moderate currents (Howells et al. 1996).	N	While occurring within the Lower Colorado River basin, perennial streams were not observed within the project area during the January 30 and May 29, 2024 site surveys. There are no USFWS/TPWD grouped streams within the project area. The majority of the stream channels within the project area were observed as dry at the time of the survey. This species is not listed on IPaC.	No impact	Species habitat does not occur within the project area.	N
BURNET	Mollusks	Tapered Pondhorn	<i>Unio merus declivis</i>	It likely occurs in streams, rivers, oxbows, marshes, swamps, lakes, canals, ponds, and reservoirs in still to moderate currents in mud, sand, or gravel substrates. Also probably occurs in woody debris such as logjams and exposed roots of riparian trees (Williams et al. 2008).	N	While occurring within the Lower Colorado River basin, perennial streams were not observed within the project area during the January 30 and May 29, 2024 site surveys. There are no USFWS/TPWD grouped streams within the project area. The majority of the stream channels within the project area were observed as dry at the time of the survey. This species is not listed on IPaC.	No impact	Species habitat does not occur within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Plants	basin bellflower	<i>Campanula reverchonii</i>	Among scattered vegetation on loose gravel, gravelly sand, and rock outcrops on open slopes with exposures of igneous and metamorphic rocks; may also occur on sandbars and other alluvial deposits along major rivers; flowering May-July	N	TPWD NDD EO records indicate seven records of this species within a 10 mile buffer of the project area. Loose gravel soil occurs within the project area according to the NRCS, however gravelly sands are not mapped. Igneous and metamorphic rocks, sandbars, and alluvial deposits along major rivers were not observed within the project area during the January 30 and May 29, 2024 site surveys.	No impact	Species habitat does not occur within the project area.	N
BURNET	Plants	basin wild-buckwheat	<i>Eriogonum tenellum</i> var. <i>ramosissimum</i>	Usually rooted in crevices of sparsely vegetated, unshaded granite and gneiss outcrops or associated deposits of dry sand and gravel; Perennial; Flowering Apr-Dec	N	During the January 30 and May 29, 2024 site surveys, granite and gneiss outcrops or deposits of dry sand were not observed within the project area. Igneous rock types are not mapped within the project area according to the USGS TX Pocket Geology Map.	No impact	Species habitat does not occur within the project area.	N
BURNET	Plants	bigflower cornsalad	<i>Valerianella stenocarpa</i>	Usually along creekbeds or in vernal moist grassy open areas (Carr 2015).	N	During the site surveys on January 30 and May 29, 2024, dry creek beds were observed within the project area; moist grassy open areas were not.	No impact	Species habitat does not occur within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Plants	Edwards Plateau cornsalad	<i>Valerianella texana</i>	Very shallow, well-drained, but seasonally moist gravelly-sandy soils derived from igneous or metamorphic rocks, often along the downslope margin of rock outcrops, in full sun or in partial shade of oak-juniper woodlands; more likely encountered in early successional areas; population numbers fluctuate considerably from year to year, with higher numbers following winters with higher rains and/or moderate temperatures; peak flowering/fruitlet mid-March to late April, stems wither and disappear by the beginning of May	N	TPWD NDD EO records indicate one record of this species within a 10 mile buffer of the project area. According to NRCS, moist gravelly-sandy soils derived from igneous or metamorphic rocks do not occur within the project area.	No impact	Species habitat does not occur within the project area.	N
BURNET	Plants	Enquist's sandmint	<i>Brazoria enquistii</i>	Primarily on sand banks in and along beds of streams that drain granitic or gneissic landscapes; flowering/fruitlet April-June	N	According to the NRCS, sandy substrates or substrates from granite or gneiss parent material do not occur within the project area.	No impact	Species habitat does not occur within the project area.	N
BURNET	Plants	glandular gay-feather	<i>Liatris glandulosa</i>	Occurs in herbaceous vegetation on limestone outcrops (Carr 2015). Flowering: July-Oct.	Y	During site surveys on January 30 and May 29, 2024, juniper trees and shallow gravelly soils over limestone were observed within the project area. The NRCS lists gravelly soil as occurring within the project area.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Plants	granite spiderwort	<i>Tradescantia pedicellata</i>	Mostly in fractures on outcrops of granite, gneiss, and similar igneous and metamorphic rocks, or in early successional grasslands or forb-dominated assemblages on well-drained, sandy to gravelly soils derived from same; flowering at least April-May	N	While well-drained gravelly soils were observed within the project area during the January 30 and May 29, 2024 site survey, igneous or metamorphic-based soil is not present within the project area, according to the NRCS.	No impact	Species habitat does not occur within the project area.	N
BURNET	Plants	Hall's prairie clover	<i>Dalea hallii</i>	In grasslands on eroded limestone or chalk and in oak scrub on rocky hillsides; Perennial; Flowering May-Sept; Fruitlet June-Sept	Y	During site surveys on January 30 and May 29, 2024, oak scrub on rocky hillsides and grasslands on eroded limestone were observed within the project area.	May impact	Potential species habitat occurs within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Plants	net-leaf bundleflower	<i>Desmanthus reticulatus</i>	Mostly on clay prairies of the coastal plain of central and south Texas; Perennial; Flowering April-July; Fruiting April-Oct	N	The project area is not located within the coastal plain region of central and south Texas, according to USDA WSS. Clay prairies were not observed within the project area during the January 30 and May 29, 2024 site surveys.	No impact	Species habitat does not occur within the project area.	N
BURNET	Plants	Plateau loosestrife	<i>Lythrum ovalifolium</i>	Banks and gravelly beds of perennial (or strong intermittent) streams on the Edwards Plateau, Llano Uplift and Lampasas Cutplain; Perennial; Flowering/Fruiting April-Nov	N	Perennial or strongly intermittent streams were not observed within the project area during the January 30 and May 29, 2024 site surveys.	No impact	Species habitat does not occur within the project area.	N
BURNET	Plants	plateau milkvine	<i>Matelea edwardsensis</i>	Occurs in various types of juniper-oak and oak-juniper woodlands; Perennial; Flowering March-Oct; Fruiting May-June	Y	During the January 30 and May 29, 2024 site surveys, mixed oak-juniper woodlands were observed throughout the project area.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Plants	rock grape	<i>Vitis rupestris</i>	Occurs on rocky limestone slopes and in streambeds; Perennial; Flowering March-May; Fruiting May-July	Y	During site surveys on January 30 and May 29, 2024 limestone streambeds and gravelly banks and slopes were observed within the project area.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Plants	scarlet leather-flower	<i>Clematis texensis</i>	Usually in oak-juniper woodlands in mesic rocky limestone canyons or along perennial streams; Perennial; Flowering March-July; Fruiting May-July	N	During site surveys on January 30 and May 29, 2024 oak-juniper woodlands in mesic rocky limestone canyons or along perennial streams were not observed within the project area.	No impact	Species habitat does not occur within the project area.	N
BURNET	Plants	Stanfield's beebalm	<i>Monarda stanfieldii</i>	Largely confined to granite sands along the middle course of the Colorado River and its tributaries; Perennial	N	While the project area occurs within the Colorado River Basin, granite sands were not listed by the NRCS as occurring within the project area.	No impact	Species habitat does not occur within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Plants	sycamore-leaf snowbell	<i>Styrax platanifolius</i> <i>ssp. platanifolius</i>	Rare throughout range, usually in oak-juniper woodlands on steep rocky banks and ledges along intermittent or perennial streams, rarely far from some reliable source of moisture; Perennial; Flowering April-May; Fruiting May-Aug.	N	TPWD NDD EO records indicate two records of this species within a 10 mile buffer of the project area. While clay soils occur within the project area according to the NRCS, steep rocky banks, limestone cliffs, bluffs, ledges, perennial streams or rivers, and rocky stream beds with high water tables were not observed within the project area during the site surveys on January 30 and May 29, 2024.	No impact	Species habitat does not occur within the project area.	N
BURNET	Plants	Texas almond	<i>Prunus minutiflora</i>	Wide-ranging but scarce, in a variety of grassland and shrubland situations, mostly on calcareous soils underlain by limestone but occasionally in sandier neutral soils underlain by granite; Perennial; Flowering Feb-May and Oct; Fruiting Feb-Sept	Y	Calcareous soils underlain by limestone occur within the project area. TPWD NDD EO records indicate two records of this species within a 10 mile buffer of the project area.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Plants	Texas amorpha	<i>Amorpha roemeriana</i>	Juniper-oak woodlands or shrublands on rocky limestone slopes, sometimes on dry shelves above creeks; Perennial; Flowering May-June; Fruiting June-Oct	Y	During the site surveys on January 30 and May 29, 2024, juniper-oak woodland and shrublands on rocky limestone slopes and shelves above creeks were observed. According to the NRCS, limestone soil occurs within the project area. TPWD NDD EO records indicate one record of this species within a 10 mile buffer of the project area.	May impact	Potential species habitat occurs within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Plants	Texas claret-cup cactus	<i>Echinocereus coccineus var. paucispinus</i>	Mountains, hills, and mesas, igneous and limestone, oak-juniper-pinyon woodland or juniper woodland on limestone mesas, mostly rocky habitats but also in alluvial basins, grasslands, or among mesquite or other shrubs. Flowering March - April (Powell and Weedon 2004).	Y	During the site surveys on January 30 and May 29, 2024 one specimen was field identified at the southern culvert of Little Flatrock Creek. Limestone, oak-juniper woodlands with mesquite were observed.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Plants	Texas peachbush	<i>Prunus texana</i>	Occurs at scattered sites in various well drained sandy situations; deep sand, plains and sand hills, grasslands, oak woods, 0-200 m elevation; Perennial; Flowering Feb-Mar; Fruiting Apr-Jun	N	Well drained sandy situations were not observed during the January 30 and May 29, 2024 site surveys.	No impact	Species habitat does not occur within the project area.	N
BURNET	Plants	threeflower penstemon	<i>Penstemon triflorus var. triflorus</i>	Occurs sparingly on rock outcrops and in grasslands associated with juniper-oak woodlands (Carr 2015).	Y	According to the NRCS, calcareous soil occurs within the project area. During the January 30 and May 29, 2024 site surveys rock outcrops and grasslands associated with juniper-oak woodlands.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Plants	tree dodder	<i>Cuscuta exaltata</i>	Parasitic on various Quercus, Juglans, Rhus, Vitis, Ulmus, and Diospyros species as well as Acacia berlandieri and other woody plants; Annual; Flowering May-Oct; Fruiting July-Oct	Y	According to the NRCS, limestone soils occur within the project area. During site surveys on January 30 and May 29, 2024, suitable host species were observed within the project area, such as Quercus, Ulmus, Vitis, and Juglans.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Plants	turnip-root scurfpea	<i>Pediomelum cyphocalyx</i>	Grasslands and openings in juniper-oak woodlands on limestone substrates on the Edwards Plateau and in north-central Texas (Carr 2015).	Y	According to USGS topographic maps, the project area occurs on the Edwards Plateau. According to NRCS, clay soils of 1 to 8 percent slopes occur within the project area. During the site surveys on January 30 and May 29, 2024, openings in juniper-oak woodlands on limestone substrates were observed.	May impact	Potential species habitat occurs within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Plants	Wright's milkvetch	<i>Astragalus wrightii</i>	On sandy or gravelly soils; Flowering/fruiting: April and May	Y	According to the NRCS, gravelly soils occur within the project area. During the January 30 and May 29, 2024 site surveys, sandy soils were not observed within the project area.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Reptiles	common garter snake	<i>Thamnophis sirtalis</i>	Terrestrial and aquatic: Habitats used include the grasslands and modified open areas in the vicinity of aquatic features, such as ponds, streams or marshes. Damp soils and debris for cover are thought to be critical.	Y	During the January 30 and May 29, 2024 site surveys, modified open areas in the vicinity of aquatic features such as ponds, streams, and herbaceous/forested wetlands with emergent rocks and woody debris were observed within the project area. While the majority of the stream channels were dry during the site surveys, damp soils were observed along the stream banks where pooling was present. One garter snake was observed in the vicinity of a pond and potential wetland.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Reptiles	Concho water snake	<i>Nerodia paucimaculata</i>	Aquatic: Shallow, fast-flowing water with a rocky or gravelly substrate preferred. Adults can be found in deep water with mud bottoms, such as large section fo rivers and reservoirs. Riffle habitat is particularly important for this species.	N	During the site surveys on January 30 and May 29, 2024, all stream crossings were dry.	No impact	Species habitat does not occur within the project area.	N
BURNET	Reptiles	eastern box turtle	<i>Terrapene carolina</i>	Terrestrial: Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures.	Y	Forests, fields, forest-brush ecotones were observed within the project area during the January 30 and May 29, 2024 site survey. Suitable aquatic habitat of ponds were also observed. Ground litter including debris, mud, old stump holes, and leaf litter were observed within the project area.	May impact	Potential species habitat occurs within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Reptiles	plateau spot-tailed earless lizard	<i>Holbrookia lacerata</i>	Terrestrial: Habitats include moderately open prairie-brushland regions, particularly fairly flat areas free of vegetation or other obstructions (e.g., open meadows, old and new fields, graded roadways, cleared and disturbed areas, prairie savanna, and active agriculture including row crops); also, oak-juniper woodlands and mesquite-prickly pear associations (Axtell 1968, Bartlett and Bartlett 1999).	Y	During the January 30 and May 29, 2024 site surveys, suitable species habitat of oak-juniper woodlands, moderately open prairie-brushland regions with gradual slopes, active and dormant agricultural fields, open meadows among woodland, graded roadways, and cleared and disturbed rural land was observed.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Reptiles	slender glass lizard	<i>Ophisaurus attenuatus</i>	Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.	Y	Sandy soils are not present within the project area, according to the NRCS. During the January 30 and May 29, 2024 site surveys, woodland edge, open woodland, scrubby areas, fallow fields, roadways, and aquatic features including ponds and ephemeral streams were observed within the project area. Suitable nesting habitat of grass clumps, flat rock cavities, and small animal burrows were also observed within the project area during the site surveys.	May impact	Potential species habitat occurs within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Reptiles	smooth softshell	<i>Apalone mutica</i>	Aquatic: Large rivers and streams; in some areas also found in lakes and impoundments (Ernst and Barbour 1972). Usually in water with sandy or mud bottom and few aquatic plants. Often basks on sand bars and mudflats at edge of water. Eggs are laid in nests dug in high open sandbars and banks close to water, usually within 90 m of water (Fitch and Plummer 1975).	N	During the January 30 and May 29, 2024 site surveys, stream conditions observed for all features were dry. No sand bars or mudflats observed. Ponds and stream channels with silty mud and gravel bottoms do not occur within the project area. Nesting habitat of high open sandbars close to water was not observed. Project area water features would likely not provide suitable habitat for the species.	No impact	Species habitat does not occur within the project area.	N
BURNET	Reptiles	Texas map turtle	<i>Graptemys versa</i>	Aquatic: Primarily a river turtle but can also be found in reservoirs. Can be found in deep and shallow water with sufficient basking sites (emergent rocks and woody debris).	N	No reservoirs, oxbows, or lakes occur within the project area, according to USGS topographic data. During the January 30 and May 29, 2024 site surveys, stream conditions observed within the project area were dry. While other suitable aquatic habitat including ponds are present within the project area, abundant aquatic vegetation and sufficient basking sites with emergent rocks and woody debris were not observed. Project area habitat would likely not be suitable for the species.	No impact	Species habitat does not occur within the project area.	N

SPECIES ANALYSIS SUMMARY (SGCN)  
 Project Name: US 281 at SH 71 Interchange  
 CSJ(s): 0252-02-058

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
BURNET	Reptiles	western box turtle	<i>Terrapene ornata</i>	Terrestrial: Ornate or western box turtles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.	Y	Terrestrial habitat of pastures, fields, and open woodlands were observed within the project area during the January 30 and May 29, 2024 site surveys. Stream conditions observed within the project area were dry. Suitable burrowing habitat of small animal burrows were observed within the project area.	May impact	Potential species habitat occurs within the project area.	N
BURNET	Reptiles	western massasauga	<i>Sistrurus tergeminus</i>	Terrestrial: Shortgrass or mixed grass prairie, with gravel or sandy soils. Often found associated with draws, floodplains, and more mesic habitats within the arid landscape. Frequently occurs in shrub encroached grasslands.	Y	According to the NRCS, gravel soils occur within the project area. Shortgrass, pasture, open woodlands, and small burrows were observed within floodplains during the January 30 and May 29, 2024 site surveys.	May impact	Potential species habitat occurs within the project area.	N