



Tier I Site Assessment

Main CSJ: 0015-11-067 and 0015-11-068

Form Prepared By: AmaTerra Environmental, Inc.

Date of Evaluation: May 31, 2019

Project is classified as a Categorical Exclusion

Proposed Letting Date: August 2020

Project not assigned to TxDOT under the NEPA Assignment MOU

District(s): Austin

County(ies): Travis

Roadway Name: Loop 275 (N. Lamar Blvd.)

Limits From: US 183

Limits To: Howard Lane

Project Description: Through its Corridor Mobility Program, the City of Austin intends to improve approximately 6.0 miles of North Lamar Blvd. (Loop 275) from U.S. Highway 183 to Howard Lane. The proposed project will upgrade North Lamar from a 4-lane undivided urban roadway to a divided four-lane urban roadway with enhanced features for pedestrians and users of bicycles and mass transit. The new proposed Right of Way (ROW) will extend 70 feet outward from the centerline of North Lamar, for a total width of 140 feet. Approximately 15.8 acres of new ROW will be acquired.

The first 700 feet of the proposed facility, from US 183 to the to the North Lamar Transit Center, will feature two 12-foot travel lanes with 14-foot outside shoulders and 10-foot concrete aprons, separated by a median tapering from 36 to 27 feet. Beyond the concrete aprons, medians tapering from 53 to 14 feet on the northbound side and 63 to 28 feet on the southbound side will separate the through lanes on North Lamar from entrance/exit lanes connecting to the westbound US 183 frontage road. The northbound entrance lane will feature two 12-foot lanes, while the southbound exit lane will feature two 12-foot lanes and a 14-foot outside lane. A shared-use path will cross North Lamar at US 183.

The 650 feet from the North Lamar Transit Center to Powell Lane will feature the same two 12-foot travel lanes with 14-foot outside shoulders separated by a median varying from 36 to 27 feet, but the concrete aprons will taper out from their width of 28 feet as they extend north. The respective northbound entrance and southbound exit lanes connecting to the westbound US 183 frontage road will consist of a single lane tapering from 19 feet wide to 11 feet.

For the remainder of its length from Powell Lane to Howard Lane, the new facility will feature 12-foot outside lanes, 11-foot inside lanes, and a 12-foot median. At most intersections and some driveways, the 12-foot median will taper to a 12-foot left turn lane. The bridge over Walnut Creek will feature travel lanes and a median of these same dimensions and will be expanded to a width of 101 feet to accommodate all improvements.

Seven-foot behind-the-curb bicycle paths and 8-foot sidewalks will be constructed along both sides of North Lamar for the entire length of the project. The bicycle paths will generally be set back approximately 3.5 feet from the edge of the roadway pavement except in locations of bus or MetroRapid stops or at intersections. When the bicycle paths are set 3.5 feet back from the edge of pavement, they will be separated from the sidewalks by an 8-foot grassy median; the medians will taper out and back in when the bicycle paths bend to accommodate transportation stops. There will be no median separating the bicycle paths and sidewalks on the Walnut Creek bridge. At Parmer Lane, the bicycle paths and sidewalks will merge to form shared-use lanes for approximately 500 feet alongside North Lamar on either side of the intersection and 100 feet along Parmer Lane on either side of the



intersection.

- 1. Yes Is the project within range of a state threatened or endangered species or SGCN and suitable habitat is present?

*Explain:

The project is within range of state threatened and endangered species and SGCN. Please see the Species Impact Table in Attachment D for the justification of impact determinations.

Date TPWD County List Accessed: June 3, 2019

Date that the NDD was accessed: July 25, 2018

What agency performed the NDD search? TPWD

No Does the BMP PA eliminate the requirement to coordinate for all species?

Comments:

A BMP PA does not exist for karst amphibians, arachnids, crustaceans, and insects. These species include the Bandit Cave spider, Balcones Cave amphipod, Eidmannella reclusa, Tartarocreagris altimana, Texella spinoperca, Tartarocreagris attenuata, Tartarocreagris domina, Tartarocreagris proserpina, Cicurina trivisa, Texella mulaiki, Tartarocreagris infernalis, Tartarocreagris intermedia, Texella grubbsi, Reddell harvestman, Lirceolus bisetus, a cave obligate beetle, Rhadine subterranea, and Oncopodura fenestra.

There are no SGCN plant BMPs for the listed plant species. There is no BMP PA for the Woodhouse's toad, Eastern box turtle, slender glass lizard, mink, and long-tailed weasel. A BMP does not exist for the SGCN insects such as the American bumblebee, Andrena scotoptera, Bombus variabilis, Lymantes nadineae, and Macrotera parkeri.

The BMP PA does eliminate the requirements to coordinate for the plains spotted skunk and the Terrestrial Reptile BMP for the Texas garter snake. The BMP PA also eliminates the requirements for coordination for the SGCN bat species with the bat BMP.

- 2. No NDD and TCAP review indicates adverse impacts to remnant vegetation?

- 3. No Does the project require a NWP with PCN or IP by USACE?

- 4. No Does the project include more than 200 linear feet of stream channel for each single and complete crossing of one or more of the following that is not already channelized or otherwise maintained:

- 5. No Does the project contain known isolated wetlands outside the TxDOT ROW that will be directly impacted by the project?

- 6. No Would the project impact at least 0.10 acre of riparian vegetation?



7. No Does project disturb a habitat type in an area equal to or greater than the area of disturbance indicated in the Threshold Table Programmatic Agreement?

*Attach associated file of EMST output (Mapper Report or other Excel File which includes MOU Type, Ecosystem Name, Common/Vegetation Type Name) in ECOS

Excel File Name:

see attached file

7.1. No Is there a discrepancy between actual habitat(s) and EMST mapped habitat(s)?

Attach file showing discrepancy between actual and EMST mapped habitat(s).

File Name:

Is TPWD Coordination Required?

Yes

Early Coordination

Administrated Coordination - Must be conducted through ENV-NRM

BMPs Implemented or EPICs included (as necessary):

The BMPs that will be implemented include the plains spotted skunk BMP, the Terrestrial Reptile BMP for the Texas garter snake, and bat BMPs for SGCN bats. There are no SGCN BMPs for the listed plant species, karst invertebrates, insects, Woodhouse's toad, Eastern box turtle, slender glass lizard, mink, and long-tailed weasel; therefore, Early Coordination is required.

TxDOT Contact Information

Name: Troy Olney

Phone Number: 512-832-7056

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Tier I Site Assessment



Suggested Attachments

Aerial Map (with delineated project boundaries)

USFWS T&E List

TPWD T&E List

Species Impact Table

NDD EOID List and Tracked Managed Areas (Required for TPWD Coordination)

EMST Project MOU Summary Table (Required for TPWD Coordination)

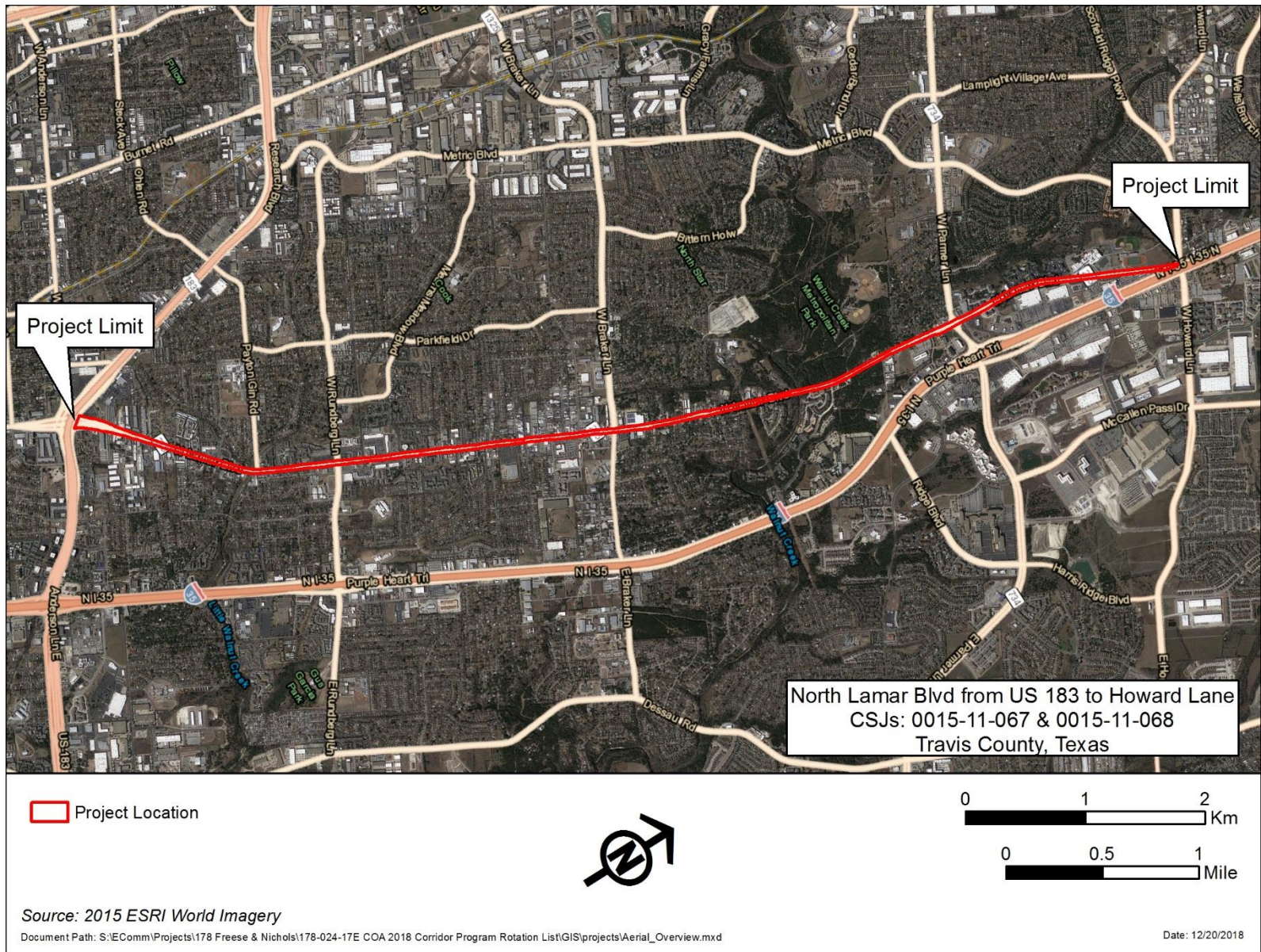
TPWD SGCN List

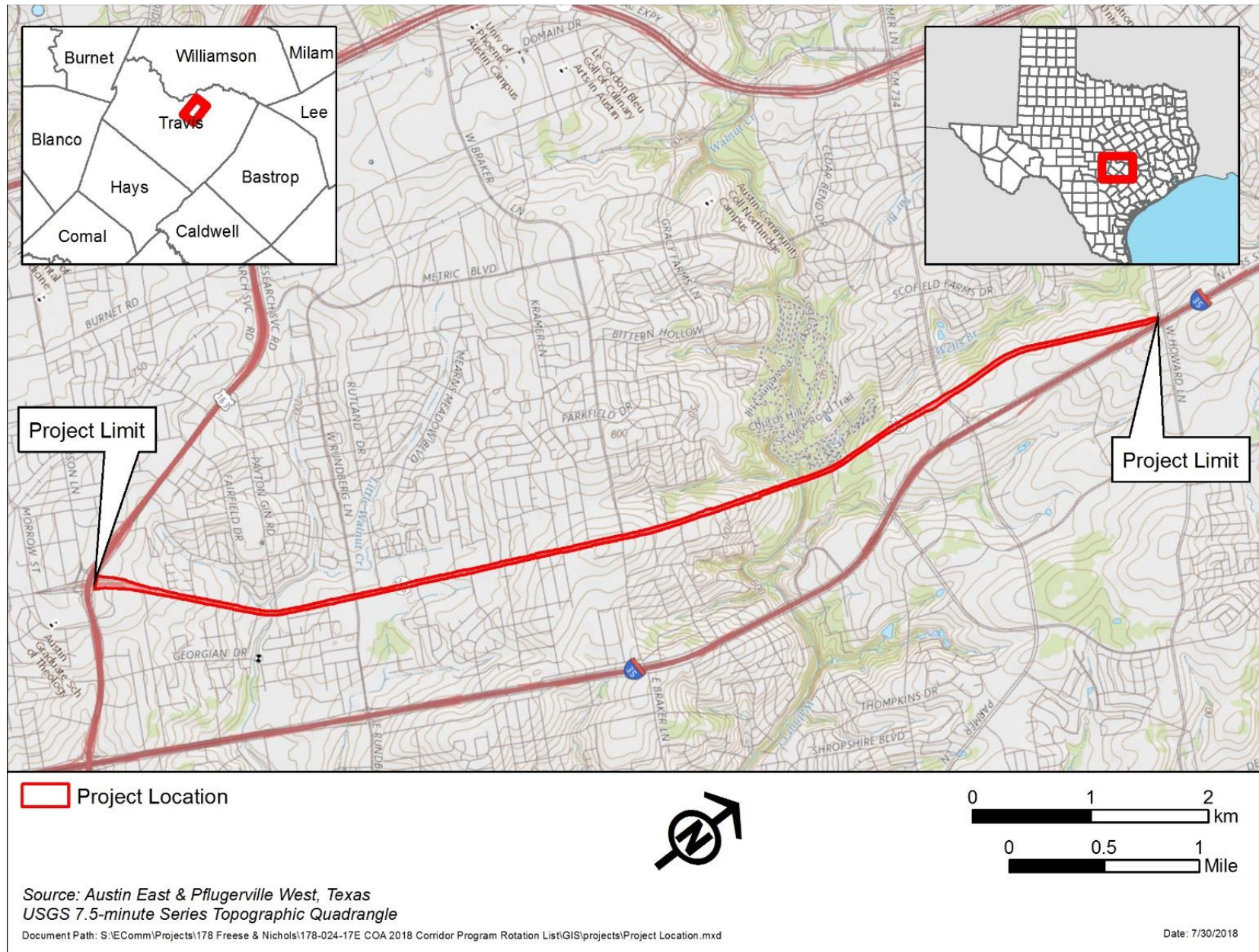
Photos (Required for TPWD Coordination)

Previous TPWD Coordination Documentation (if applicable)

ATTACHMENT A

AERIAL AND TOPOGRAPHIC MAP OF PROJECT





ATTACHMENT B

USFWS INFORMATION, PLANNING, AND CONSERVATION (IPaC) SYSTEM OFFICIAL SPECIES LIST



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Austin Ecological Services Field Office

10711 Burnet Road, Suite 200

Austin, TX 78758-4460

Phone: (512) 490-0057 Fax: (512) 490-0974

<http://www.fws.gov/southwest/es/AustinTexas/>

<http://www.fws.gov/southwest/es/EndangeredSpecies/lists/>

In Reply Refer To:

May 31, 2019

Consultation Code: 02ETAU00-2018-SLI-1228

Event Code: 02ETAU00-2019-E-02400

Project Name: North Lamar Blvd. Corridor Improvements

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that *may* occur within the county of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please note that new information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Also note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of federally listed as threatened

or endangered species and to determine whether projects may affect these species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

While a Federal agency may designate a non-Federal representative to conduct informal consultation or prepare a biological assessment, the Federal Agency must notify the Service in writing of any such designation. The Federal agency shall also independently review and evaluate the scope and content of a biological assessment prepared by their designated non-Federal representative before that document is submitted to the Service.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by a federally funded, permitted or authorized activity, the agency is required to consult with the Service pursuant to 50 CFR 402. The following definitions are provided to assist you in reaching a determination:

- *No effect* - the proposed action will not affect federally listed species or critical habitat. A “no effect” determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, if the project changes or additional information on the distribution of listed or proposed species becomes available, the project should be reanalyzed for effects not previously considered.
 - *May affect, but is not likely to adversely affect* - the project may affect listed species and/or critical habitat; however, the effects are expected to be discountable, insignificant, or completely beneficial. Certain avoidance and minimization measures may need to be implemented in order to reach this level of effect. The Federal agency or the designated non-Federal representative should consult with the Service to seek written concurrence that adverse effects are not likely. Be sure to include all of the information and documentation used to reach your decision with your request for concurrence. The Service must have this documentation before issuing a concurrence.
 - *Is likely to adversely affect* - adverse effects to listed species may occur as a direct or indirect result of the proposed action. For this determination, the effect of the action is neither discountable nor insignificant. If the overall effect of the proposed action is beneficial to the listed species but the action is also likely to cause some adverse effects to individuals of that species, then the proposed action “is likely to adversely affect” the listed species. The analysis should consider all interrelated and interdependent actions. An “is likely to adversely affect” determination requires the Federal action agency to initiate formal section 7 consultation with our office.
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Regardless of the determination, the Service recommends that the Federal agency maintain a complete record of the evaluation, including steps leading to the determination of effect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: <http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>.

Migratory Birds

For projects that may affect migratory birds, the Migratory Bird Treaty Act (MBTA) implements various treaties and conventions for the protection of these species. Under the MBTA, taking, killing, or possessing migratory birds is unlawful. Migratory birds may nest in trees, brushy areas, or other areas of suitable habitat. The Service recommends activities requiring vegetation removal or disturbance avoid the peak nesting period of March through August to avoid destruction of individuals, nests, or eggs. If project activities must be conducted during this time, we recommend surveying for nests prior to conducting work. If a nest is found, and if possible, the Service recommends a buffer of vegetation remain around the nest until the young have fledged or the nest is abandoned.

For additional information concerning the MBTA and recommendations to reduce impacts to migratory birds please contact the U.S. Fish and Wildlife Service Migratory Birds Office, 500 Gold Ave. SW, Albuquerque, NM 87102. A list of migratory birds may be viewed at <https://www.fws.gov/birds/management/managed-species/migratory-bird-treaty-act-protected-species.php>. Guidance for minimizing impacts to migratory birds for projects including communications towers can be found at: <https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/communication-towers.php>. Additionally, wind energy projects should follow the wind energy guidelines

<https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/wind-energy.php>) for minimizing impacts to migratory birds and bats.

Finally, please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan <https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/eagles.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Austin Ecological Services Field Office

10711 Burnet Road, Suite 200

Austin, TX 78758-4460

(512) 490-0057

Project Summary

Consultation Code: 02ETAU00-2018-SLI-1228

Event Code: 02ETAU00-2019-E-02400

Project Name: North Lamar Blvd. Corridor Improvements

Project Type: TRANSPORTATION

Project Description: The proposed project consists of improving North Lamar Boulevard between U.S. Highway 183 and Howard Lane.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/30.38595297480518N97.68435268653984W>



Counties: Travis, TX

Endangered Species Act Species

There is a total of 20 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 3 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.
-

Birds

NAME	STATUS
<p>Golden-cheeked Warbler (=wood) <i>Dendroica chrysoparia</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/33</p>	Endangered
<p>Least Tern <i>Sterna antillarum</i></p> <p>Population: interior pop. No critical habitat has been designated for this species. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> ▪ Wind Energy Projects <p>Species profile: https://ecos.fws.gov/ecp/species/8505</p>	Endangered
<p>Piping Plover <i>Charadrius melodus</i></p> <p>Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location is outside the critical habitat. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> ▪ Wind Energy Projects <p>Species profile: https://ecos.fws.gov/ecp/species/6039</p>	Threatened
<p>Red Knot <i>Calidris canutus rufa</i></p> <p>No critical habitat has been designated for this species. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> ▪ Wind Energy Projects <p>Species profile: https://ecos.fws.gov/ecp/species/1864</p>	Threatened
<p>Whooping Crane <i>Grus americana</i></p> <p>Population: Wherever found, except where listed as an experimental population There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758</p>	Endangered

Amphibians

NAME	STATUS
<p>Austin Blind Salamander <i>Eurycea waterlooensis</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5737</p>	Endangered
<p>Barton Springs Salamander <i>Eurycea sosorum</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1113</p>	Endangered
<p>Jollyville Plateau Salamander <i>Eurycea tonkawae</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3116</p>	Threatened

Clams

NAME	STATUS
<p>Golden Orb <i>Quadrula aurea</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9042</p>	Candidate
<p>Smooth Pimpleback <i>Cyclonaias houstonensis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8967</p>	Candidate
<p>Texas Fatmucket <i>Lampsilis bracteata</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9041</p>	Candidate
<p>Texas Fawnsfoot <i>Truncilla macrodon</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8965</p>	Candidate
<p>Texas Pimpleback <i>Quadrula petrina</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8966</p>	Candidate

Insects

NAME	STATUS
<p>Kretschmarr Cave Mold Beetle <i>Texamaurops reddelli</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3140</p>	Endangered
<p>Tooth Cave Ground Beetle <i>Rhadine persephone</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5625</p>	Endangered

Arachnids

NAME	STATUS
Bee Creek Cave Harvestman <i>Texella reddelli</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2464	Endangered
Bone Cave Harvestman <i>Texella reyesi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5306	Endangered
Tooth Cave Pseudoscorpion <i>Tartarocreagris texana</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6667	Endangered
Tooth Cave Spider <i>Neoleptoneta myopica</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2360	Endangered

Flowering Plants

NAME	STATUS
Bracted Twistflower <i>Streptanthus bracteatus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2856	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

ATTACHMENT C

TPWD and USFWS THREATENED AND ENDANGERED SPECIES LISTS

for

TRAVIS COUNTY

(July 2018)

Last Update: 4/18/2019

TRAVIS COUNTY

AMPHIBIANS

Austin blind salamander

Eurycea waterlooensis

Mostly restricted to subterranean cavities of the Edwards Aquifer; dependent upon water flow/quality from the Barton Springs segment of the Edwards Aquifer; only known from the outlets of Barton Springs (Sunken Gardens (Old Mill) Spring, Eliza Spring, and Parthenia (Main) Spring which forms Barton Springs Pool); feeds on amphipods, ostracods, copepods, plant material, and (in captivity) a wide variety of small aquatic invertebrates

Federal Status: LE

State Status: E

SGCN: Y

Endemic: Y

Global Rank: G1

State Rank: S1

Barton Springs salamander

Eurycea sosorum

Dependent upon water flow/quality from the Barton Springs pool of the Edwards Aquifer; known from the outlets of Barton Springs and subterranean water-filled caverns; found under rocks, in gravel, or among aquatic vascular plants and algae, as available; feeds primarily on amphipods

Federal Status: LE

State Status: E

SGCN: Y

Endemic: Y

Global Rank: G1

State Rank: S1

Houston toad

Anaxyrus houstonensis

Primary habitat is sandy soil which supports populations of *Pinus taeda*, water in pools, ephemeral pools, stock tanks; breeds in spring especially after rains; burrows in soil of adjacent uplands when inactive; breeds February-June; associated with soils of the Sparta, Carrizo, Goliad, Queen City, Recklaw, Weches, and Willis geologic formations.

Federal Status: LE

State Status: E

SGCN: Y

Endemic: Y

Global Rank: G1

State Rank: S1

Jollyville Plateau salamander

Eurycea tonkawae

Known from springs and waters of some caves north of the Colorado River

Federal Status: LT

State Status:

SGCN: Y

Endemic: Y

Global Rank: G1

State Rank: S2

Pedernales River Springs salamander

Eurycea sp. 6

Known only from springs

Federal Status:

State Status:

SGCN: N

Endemic: Y

Global Rank: G1

State Rank: S1S2

Strecker's chorus frog

Pseudacris streckeri

Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.

Federal Status:

State Status:

SGCN: Y

Endemic: N

Global Rank: G5

State Rank: S3

DISCLAIMER

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TRAVIS COUNTY

AMPHIBIANS

Texas salamander *Eurycea neotenes*
Troglotic; springs, seeps, cave streams, and creek headwaters; often hides under rocks and leaves in water; restricted to Helotes and Leon Creek drainages
Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1 State Rank: S1S2

Woodhouse's toad *Anaxyrus woodhousii*
Extremely catholic up to 5000 feet, does very well (except for traffic) in association with man.
Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G5 State Rank: SU

ARACHNIDS

Bandit Cave spider *Cicurina bandida*
Very small, subterrestrial, subterranean obligate
Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G2Q State Rank: S1

Bone Cave harvestman *Texella reyesi*
Small, blind, cave-adapted harvestman endemic to several caves in Travis and Williamson counties; weakly differentiated from *Texella reddelli*
Federal Status: LE State Status: SGCN: Y
Endemic: Y Global Rank: G2G3 State Rank: S2

No accepted common name *Eidmannella reclusa*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

No accepted common name *Tartarocreagris altimana*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

No accepted common name *Texella spinoperca*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: Global Rank: GNR State Rank: SNR

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TRAVIS COUNTY

ARACHNIDS

No accepted common name *Tartarocreagris attenuata*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

No accepted common name *Tartarocreagris domina*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

No accepted common name *Tartarocreagris proserpina*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

No accepted common name *Cicurina trivisaie*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2G3 State Rank: S1

No accepted common name *Texella mulaiki*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G2G3 State Rank: S2

No accepted common name *Tartarocreagris infernalis*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G2G3 State Rank: S2?

No accepted common name *Tartarocreagris intermedia*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

DISCLAIMER

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TRAVIS COUNTY

ARACHNIDS

No accepted common name *Texella grubbsi*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

Reddell harvestman *Texella reddelli*

Small, blind, cave-adapted harvestman endemic to a few caves in Travis and Williamson counties

Federal Status: LE State Status: SGCN: Y
Endemic: Y Global Rank: G2G3 State Rank: S2

Tooth Cave pseudoscorpion *Tartarocreagris texana*

Small, cave-adapted pseudoscorpion known from small limestone caves of the Edwards Plateau

Federal Status: LE State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

Tooth Cave spider *Neoleptoneta myopica*

Very small, cave-adapted, sedentary spider

Federal Status: LE State Status: SGCN: Y
Endemic: Global Rank: G1G2 State Rank: S1

BIRDS

bald eagle *Haliaeetus leucocephalus*

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

Federal Status: State Status: T SGCN: Y
Endemic: N Global Rank: G5 State Rank: S3B,S3N

black rail *Laterallus jamaicensis*

Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: PT State Status: SGCN: Y
Endemic: N Global Rank: G3G4 State Rank: S2

DISCLAIMER

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TRAVIS COUNTY

BIRDS

black-capped vireo

Vireo atricapilla

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

Federal Status:	State Status: E	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2B

Franklin's gull

Leucophaeus pipixcan

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S2N

golden-cheeked warbler

Setophaga chrysoparia

Ashe juniper in mixed stands with various oaks (*Quercus* spp.). Edges of cedar brakes. Dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer.

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G2	State Rank: S2B

interior least tern

Sternula antillarum athalassos

Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G4T2Q	State Rank: S1B

mountain plover

Charadrius montanus

Breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

piping plover

Charadrius melodus

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TRAVIS COUNTY

BIRDS

Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, 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. 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-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. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.

Federal Status: LT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2N

swallow-tailed kite *Elanoides forficatus*

Lowland forested regions, especially swampy areas, ranging into open woodland; marshes, along rivers, lakes, and ponds; nests high in tall tree in clearing or on forest woodland edge, usually in pine, cypress, or various deciduous trees

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2B

western burrowing owl *Athene cunicularia hypugaea*

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

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4T4	State Rank: S2

white-faced ibis *Plegadis chihi*

Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

whooping crane *Grus americana*

Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1N

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TRAVIS COUNTY

BIRDS

wood stork *Mycteria americana*

Prefers to nest in large tracts of baldcypress (*Taxodium distichum*) or red mangrove (*Rhizophora mangle*); forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960

Federal Status: State Status: T SGCN: Y
Endemic: N Global Rank: G4 State Rank: SHB,S2N

zone-tailed hawk *Buteo albonotatus*

Arid open country, including open deciduous or pine-oak woodland, mesa or mountain county, often near watercourses, and wooded canyons and tree-lined rivers along middle-slopes of desert mountains; nests in various habitats and sites, ranging from small trees in lower desert, giant cottonwoods in riparian areas, to mature conifers in high mountain regions

Federal Status: State Status: T SGCN: Y
Endemic: N Global Rank: G4 State Rank: S3B

CRUSTACEANS

Balcones Cave amphipod *Stygobromus balconis*

Subaquatic, subterranean obligate amphipod

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G2G3 State Rank: S2

Ezell's Cave amphipod *Stygobromus flagellatus*

Known only from artesian wells

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G2G3 State Rank: S3

No accepted common name *Lirceolus bisetus*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

FISH

alligator gar *Atractosteus spatula*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G3G4 State Rank: S4

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TRAVIS COUNTY

FISH

american eel

Anguilla rostrata

Coastal waterways below reservoirs to gulf; spawns January to February in ocean, larva move to coastal waters, metamorphose, then females move into freshwater; most aquatic habitats with access to ocean, muddy bottoms, still waters, large streams, lakes; can travel overland in wet areas; males in brackish estuaries; diet varies widely, geographically, and seasonally

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

blue sucker

Cycleptus elongatus

Usually inhabits channels and flowing pools with a moderate current, with bottoms of exposed bedrock sometimes in combination with hard clay, sand, and gravel; generally intolerant of highly turbid conditions. Larger portions of major rivers in Texas; adults winter in deep pools and move upstream in spring to spawn on riffles

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3

chub shiner

Notropis potteri

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

Guadalupe bass

Micropterus treculii

Endemic to perennial streams of the Edwards Plateau region; introduced in Nueces River system

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Guadalupe darter

Percina apristis

Most common over gravel or gravel and sand raceways of large streams and rivers.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G4	State Rank: SNR

headwater catfish

Ictalurus lupus

Originally throughout streams of the Edwards Plateau and the Rio Grande basin, currently limited to Rio Grande drainage, including Pecos River basin; springs, and sandy and rocky riffles, runs, and pools of clear creeks and small rivers

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

ironcolor shiner

Notropis chalybaeus

Big Cypress Bayou and Sabine River basins; spawns April-September, eggs sink to bottom of pool; pools and slow runs of low gradient small acidic streams with sandy substrate and clear well vegetated water; feeds mainly on small insects, ingested plant material not digested

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

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TRAVIS COUNTY

FISH

sharpnose shiner

Notropis oxyrhynchus

Endemic to Brazos River drainage; also, apparently introduced into adjacent Colorado River drainage; large turbid river, with bottom a combination of sand, gravel, and clay-mud

Federal Status: LE	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

silverband shiner

Notropis shumardi

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4

smalleye shiner

Notropis buccula

Endemic to upper Brazos River system and its tributaries (Clear Fork and Bosque); apparently introduced into adjacent Colorado River drainage; medium to large prairie streams with sandy substrate and turbid to clear warm water; presumably eats small aquatic invertebrates

Federal Status: LE	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S2

speckled chub

Macrhybopsis aestivalis

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3S4

Texas shiner

Notropis amabilis

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

western creek chubsucker

Erimyzon claviformis

Habitat includes silt-, sand-, and gravel-bottomed pools of clear headwaters, creeks, and small rivers; often near vegetation; occasionally in lakes (Page and Burr 2011). Spawning occurs in river mouths or pools, riffles, lake outlets, or upstream creeks (Becker 1983, Goodyear et al. 1982). Prefers headwaters, but seldom occurs in springs.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2S3

INSECTS

a cave obligate beetle

Rhadine austinica

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S1S2

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TRAVIS COUNTY

INSECTS

American bumblebee *Bombus pensylvanicus*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Global Rank: G3G4 State Rank: SNR

Comanche harvester ant *Pogonomyrmex comanche*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G2G3 State Rank: S2

Kretschmarr Cave mold beetle *Texamaurops reddelli*

Small, cave-adapted beetle found under rocks buried in silt; small, Edwards Limestone caves in of the Jollyville Plateau, a division of the Edwards Plateau

Federal Status: LE State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

No accepted common name *Andrena scotoptera*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Global Rank: GNR State Rank: SNR

No accepted common name *Bombus variabilis*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Global Rank: GU State Rank: SNR

No accepted common name *Lymantes nadineae*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Global Rank: GNR State Rank: SNR

No accepted common name *Macrotera parkeri*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Global Rank: GNR State Rank: SNR

No accepted common name *Neotrichia juani*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y

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TRAVIS COUNTY

INSECTS

Endemic: Global Rank: G1 State Rank: S1

No accepted common name *Xiphocentron messapus*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y

Endemic: Y Global Rank: G1G3 State Rank: S2?

No accepted common name *Rhadine subterranea*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y

Endemic: Y Global Rank: G2 State Rank: S2

No accepted common name *Oncopodura fenestra*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y

Endemic: Y Global Rank: G2G3 State Rank: S2?

Tooth Cave ground beetle *Rhadine persephone*

Resident, small, cave-adapted beetle found in small Edwards Limestone caves in Travis and Williamson counties

Federal Status: LE State Status: SGCN: Y

Endemic: Y Global Rank: G1G2 State Rank: S1

MAMMALS

American badger *Taxidea taxus*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y

Endemic: N Global Rank: G5 State Rank: S5

Aransas short-tailed shrew *Blarina hylophaga plumbea*

Excavates burrows in sandy soils underlying mottes of live oak trees or in areas with little to no ground cover; 2-3 litters of 4-6 young per year

Federal Status: State Status: SGCN: Y

Endemic: Y Global Rank: G5T1Q State Rank: S1

big brown bat *Eptesicus fuscus*

Any wooded areas or woodlands except south Texas. Riparian areas in west Texas.

Federal Status: State Status: SGCN: Y

Endemic: N Global Rank: G5 State Rank: S5

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TRAVIS COUNTY

MAMMALS

big free-tailed bat

Nyctinomops macrotis

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

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G5	State Rank: S3

cave myotis bat

Myotis velifer

Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (*Hirundo pyrrhonota*) 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.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S4

eastern red bat

Lasiurus borealis

Found in a variety of habitats in Texas. Usually associated with wooded areas. Found in towns especially during migration.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S4

hoary bat

Lasiurus cinereus

Known from montane and riparian woodland in Trans-Pecos, forests and woods in east and central Texas.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S4

long-tailed weasel

Mustela frenata

Includes brushlands, fence rows, upland woods and bottomland hardwoods, forest edges & rocky desert scrub. Usually live close to water.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

Mexican free-tailed bat

Tadarida brasiliensis

Roosts in buildings in east Texas. Largest maternity roosts are in limestone caves on the Edwards Plateau. Found in all habitats, forest to desert.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

Mexican long-tongued bat

Choeronycteris mexicana

Only Texas record is from riparian forest; in general--neotropical nectivorous species roosting in caves, mines, and large crevices found in deep canyons along the Rio Grande ; also found in buildings and often associated with big-eared bats (*Plecotus* spp.); single TX record from Santa Ana NWR

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S1

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TRAVIS COUNTY

MAMMALS

mink	<i>Neovison vison</i>		
Intimately associated with water; coastal swamps & marshes, wooded riparian zones, edges of lakes. Prefer floodplains.			
Federal Status:	State Status:	SGCN:	Y
Endemic: N	Global Rank: G5	State Rank:	S4
mountain lion	<i>Puma concolor</i>		
Rugged mountains & riparian zones.			
Federal Status:	State Status:	SGCN:	Y
Endemic: N	Global Rank: G5	State Rank:	S2S3
plains spotted skunk	<i>Spilogale putorius interrupta</i>		
Catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie			
Federal Status:	State Status:	SGCN:	N
Endemic: N	Global Rank: G4T4	State Rank:	S1S3
southern short-tailed shrew	<i>Blarina carolinensis</i>		
Habitat description is not available at this time.			
Federal Status:	State Status:	SGCN:	Y
Endemic: N	Global Rank: G5	State Rank:	S4
swamp rabbit	<i>Sylvilagus aquaticus</i>		
Habitat description is not available at this time.			
Federal Status:	State Status:	SGCN:	Y
Endemic: N	Global Rank: G5	State Rank:	S5
tricolored bat	<i>Perimyotis subflavus</i>		
Forest, woodland and riparian areas are important. Caves are very important to this species.			
Federal Status:	State Status:	SGCN:	Y
Endemic: N	Global Rank: G2G3	State Rank:	S3S4
western hog-nosed skunk	<i>Conepatus leuconotus</i>		
Habitats include woodlands, grasslands & deserts, to 7200 feet, most common in rugged, rocky canyon country; little is known about the habitat of the ssp. telmalestes			
Federal Status:	State Status:	SGCN:	Y
Endemic: N	Global Rank: G4	State Rank:	S4

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TRAVIS COUNTY

MAMMALS

woodland vole *Microtus pinetorum*

Include grassy marshes, swamp edges, old-field/pine woodland ecotones, tallgrass fields; generally sandy soils.

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G5 State Rank: S3

MOLLUSKS

false spike mussel *Fusconaia mitchelli*

Possibly extirpated in Texas; probably medium to large rivers; substrates varying from mud through mixtures of sand, gravel and cobble; one study indicated water lilies were present at the site; Rio Grande, Brazos, Colorado, and Guadalupe (historic) river basins

Federal Status: State Status: T SGCN: Y
Endemic: N Global Rank: G1 State Rank: S1

No accepted common name *Patera leatherwoodi*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Global Rank: G1 State Rank: S1

No accepted common name *Millerelix gracilis*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Global Rank: G2G3 State Rank: S2?

No accepted common name *Stygopyrgus bartonensis*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1 State Rank: S1

No accepted common name *Phreatodrobia punctata*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G2 State Rank: S1

smooth pimpleback *Quadrula houstonensis*

Small to moderate streams and rivers as well as moderate size reservoirs; mixed mud, sand, and fine gravel, tolerates very slow to moderate flow rates, appears not to tolerate dramatic water level fluctuations, scoured bedrock substrates, or shifting sand bottoms, lower Trinity (questionable), Brazos, and Colorado River basins

Federal Status: C State Status: T SGCN: Y
Endemic: Y Global Rank: G2 State Rank: S1S2

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TRAVIS COUNTY

MOLLUSKS

Texas fatmucket *Lampsilis bracteata*

Streams and rivers on sand, mud, and gravel substrates; intolerant of impoundment; broken bedrock and coarse gravel or sand in moderately flowing water; Colorado and Guadalupe River basins

Federal Status: C State Status: T SGCN: Y
Endemic: Y Global Rank: G1 State Rank: S1

Texas pimpleback *Cyclonaias petrina*

Mud, gravel and sand substrates, generally in areas with slow flow rates; Colorado River basin.

Federal Status: C State Status: T SGCN: Y
Endemic: Y Global Rank: G2 State Rank: S1

REPTILES

American alligator *Alligator mississippiensis*

Coastal marshes; inland natural rivers, swamps and marshes; manmade impoundments.

Federal Status: State Status: SGCN: N
Endemic: N Global Rank: G5 State Rank: S4

common garter snake *Thamnophis sirtalis*

Irrigation canals and riparian-corridor farmlands in west; marshy, flooded pastureland, grassy or brushy borders of permanent bodies of water; coastal salt marshes.

Federal Status: State Status: SGCN: N
Endemic: Global Rank: G5 State Rank: S2

eastern box turtle *Terrapene carolina*

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. In Maryland bottomland forest, some hibernated in pits or depressions in forest floor (usually about 30 cm deep) usually within summer range; individuals tended to hibernate in same area in different years (Stickel 1989). Also attracted to farms, old fields and cut-over woodlands, as well as creek bottoms and dense woodlands. Egg laying sites often are sandy or loamy soils in open areas; females may move from bottomlands to warmer and drier sites to nest. In Maryland, females used the same nesting area in different years (Stickel 1989).

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G5 State Rank: S3

northern spot-tailed earless lizard *Holbrookia lacerata lacerata*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G3G4TNR State Rank: S2

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TRAVIS COUNTY

REPTILES

slender glass lizard

Ophisaurus attenuatus

Prefers relatively dry microhabitats, usually associated with grassy areas. 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. This species often appears on roads in spring. During inactivity, it occurs in underground burrows. In Kansas, slender glass lizards were scarce in heavily grazed pastures, increased as grass increased with removal of grazing, and declined as brush and trees replaced grass (Fitch 1989). Eggs are laid underground, under cover, or under grass clumps (Ashton and Ashton 1985); in cavities beneath flat rocks or in abandoned tunnels of small mammals (Scalopus, Microtus) (Fitch 1989).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

spot-tailed earless lizard

Holbrookia lacerata

Central and southern Texas and adjacent Mexico; moderately open prairie-brushland; fairly flat areas free of vegetation or other obstructions, including disturbed areas; eats small invertebrates; eggs laid underground

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S2

Texas garter snake

Thamnophis sirtalis annectens

Irrigation canals and riparian-corridor farmlands in west; marshy, flooded pastureland, grassy or brushy borders of permanent bodies of water; coastal salt marshes. Wet or moist microhabitats are conducive to the species occurrence, but is not necessarily restricted to them; hibernates underground or in or under surface cover; breeds March-August.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G5T4	State Rank: S1

Texas horned lizard

Phrynosoma cornutum

Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area. Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

Texas map turtle

Graptemys versa

Rivers with moderate current, abundant aquatic vegetation, and basking logs; also associated oxbows and lakes (Bartlett and Bartlett 1999).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G4	State Rank: SU

Texas tortoise

Gopherus berlandieri

Open brush with a grass understory is preferred; open grass and bare ground are avoided. Seasonally flooded tidal flats are not utilized. When inactive occupies shallow depressions at base of bush or cactus, sometimes in underground burrows or under objects; longevity greater than 50 years; active March-November; breeds April-November

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S2

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TRAVIS COUNTY

REPTILES

timber (canebrake) rattlesnake *Crotalus horridus*

Swamps, floodplains, upland pine and deciduous woodland, riparian zones, abandoned farmland. Limestone bluffs, sandy soil or black clay. Prefers dense ground cover, i.e. grapevines, palmetto.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

western box turtle *Terrapene ornata*

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; winter burrow depth was 0.5-1.8 meters in Wisconsin (Doroff and Keith 1990), 7-120 cm (average depth 54 cm) in Nebraska (Converse et al. 2002). Eggs are laid in nests dug in soft well-drained soil in open area (Legler 1960, Converse et al. 2002). Very partial to sandy soil.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

western chicken turtle *Deirochelys reticularia miaria*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G5T5	State Rank: S2S3

PLANTS

arrowleaf milkvine *Matelea sagittifolia*

Most consistently encountered in thornscrub in South Texas; Perennial; Flowering March-July; Fruiting April-July and Dec?

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

basin bellflower *Campanula reverchonii*

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

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S2

bracted twistflower *Streptanthus bracteatus*

Shallow, well-drained gravelly clays and clay loams over limestone in oak juniper woodlands and associated openings, on steep to moderate slopes and in canyon bottoms; several known soils include Tarrant, Brackett, or Speck over Edwards, Glen Rose, and Walnut geologic formations; populations fluctuate widely from year to year, depending on winter rainfall; flowering mid April-late May, fruit matures and foliage withers by early summer

Federal Status: C	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S1

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TRAVIS COUNTY

PLANTS

Buckley tridens

Tridens buckleyanus

Occurs in juniper-oak woodlands on rocky limestone slopes; Perennial; Flowering/Fruiting April-Nov

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

canyon bean

Phaseolus texensis

Narrowly endemic to rocky canyons in eastern and southern Edwards Plateau occurring on limestone soils in mixed woodlands, on limestone cliffs and outcrops, frequently along creeks.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S2

canyon mock-orange

Philadelphus texensis var. *ernestii*

Usually found growing from honeycomb pits on outcrops of Cretaceous limestone exposed as rimrock along mesic canyons, usually in the shade of mixed evergreen-deciduous canyon woodland; flowering April-June, fruit dehiscing September-October

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2	State Rank: S3

canyon sedge

Carex edwardsiana

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

Correll's false dragon-head

Physostegia correllii

Wet, silty clay loams on streambanks, in creek beds, irrigation channels and roadside drainage ditches; or seepy, mucky, sometimes gravelly soils along riverbanks or small islands in the Rio Grande; or underlain by Austin Chalk limestone along gently flowing spring-fed creek in central Texas; flowering May-September

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2	State Rank: S2

Engelmann's bladderpod

Physaria engelmannii

Grasslands and calcareous rock outcrops in a band along the eastern edge of the Edwards Plateau, ranging as far north as the Red River (Carr 2015).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

glandular gay-feather

Liatrix glandulosa

Occurs in herbaceous vegetation on limestone outcrops (Carr 2015)

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

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TRAVIS COUNTY

PLANTS

Glass Mountains coral-root *Hexalectris nitida*

Apparently rare in mixed woodlands in canyons in the mountains of the Brewster County, but encountered with regularity, albeit in small numbers, under *Juniperus ashei* in woodlands over limestone on the Edwards Plateau, Callahan Divide and Lampasas Cutplain; Perennial; Flowering June-Sept; Fruiting July-Sept

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

gravelbar brickellbush *Brickellia dentata*

Essentially restricted to frequently-scoured gravelly alluvial beds in creek and river bottoms; Perennial; Flowering June-Nov; Fruiting June-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

Greenman's bluet *Houstonia parviflora*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Heller's marbleseed *Onosmodium helleri*

Occurs in loamy calcareous soils in oak-juniper woodlands on rocky limestone slopes, often in more mesic portions of canyons; Perennial; Flowering March-May

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

low spurge *Euphorbia peplidion*

Occurs in a variety of vernal-moist situations in a number of natural regions; Annual; Flowering Feb-April; Fruiting March-April

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

narrowleaf brickellbush *Brickellia eupatorioides* var. *gracillima*

Moist to dry gravelly alluvial soils along riverbanks but also on limestone slopes; Perennial; Flowering/Fruiting April-Nov

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G5T3	State Rank: S3

net-leaf bundleflower *Desmanthus reticulatus*

Mostly on clay prairies of the coastal plain of central and south Texas; Perennial; Flowering April-July; Fruiting April-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

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TRAVIS COUNTY

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		
Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3S4
plateau milkvine	<i>Matelea edwardsensis</i>	
Occurs in various types of juniper-oak and oak-juniper woodlands; Perennial; Flowering March-Oct; Fruiting May-June		
Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3
rock grape	<i>Vitis rupestris</i>	
Occurs on rocky limestone slopes and in streambeds; Perennial; Flowering March-May; Fruiting May-July		
Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S1
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		
Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4
spreading lestdaisy	<i>Chaetopappa effusa</i>	
Limestone cliffs, ledges, bluffs, steep hillsides, sometimes in seepy areas, oak-juniper, oak, or mixed deciduous woods, 300-500 m elevation; Perennial; Flowering (May) July-Oct		
Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4
Stanfield's beebalm	<i>Monarda stanfieldii</i>	
Largely confined to granite sands along the middle course of the Colorado River and its tributaries; Perennial		
Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3
sycamore-leaf snowbell	<i>Styrax platanifolius 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.		
Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3T3	State Rank: S3
Texabama croton	<i>Croton alabamensis var. texensis</i>	

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TRAVIS COUNTY

PLANTS

In duff-covered loamy clay soils on rocky slopes in forested, mesic limestone canyons; locally abundant on deeper soils on small terraces in canyon bottoms, often forming large colonies and dominating the shrub layer; scattered individuals are occasionally on sunny margins of such forests; also found in contrasting habitat of deep, friable soils of limestone uplands, mostly in the shade of evergreen woodland mottes; flowering late February-March; fruit maturing and dehiscing by early June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3T2	State Rank: S2

Texas almond *Prunus minutiflora*

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

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

Texas amorpha *Amorpha roemeriana*

Juniper-oak woodlands or shrublands on rocky limestone slopes, sometimes on dry shelves above creeks; Perennial; Flowering May-June; Fruiting June-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

Texas barberry *Berberis swaseyi*

Shallow calcareous stony clay of upland grasslands/shrublands over limestone as well as in loamier soils in openly wooded canyons and on creek terraces; Perennial; Flowering/Fruiting March-June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Texas fescue *Festuca versuta*

Occurs in mesic woodlands on limestone-derived soils on stream terraces and canyon slopes; Perennial; Flowering/Fruiting April-June

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

Texas milk vetch *Astragalus reflexus*

Grasslands, prairies, and roadsides on calcareous and clay substrates; Annual; Flowering Feb-June; Fruiting April-June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Texas seymeria *Seymeria texana*

Found primarily in grassy openings in juniper-oak woodlands on dry rocky slopes but sometimes on rock outcrops in shaded canyons; Annual; Flowering May-Nov; Fruiting July-Nov

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

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TRAVIS COUNTY

PLANTS

tree dodder

Cuscuta exaltata

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

Federal Status:

State Status:

SGCN: Y

Endemic: N

Global Rank: G3

State Rank: S3

turnip-root scurfea

Pediomelum cyphocalyx

Grasslands and openings in juniper-oak woodlands on limestone substrates on the Edwards Plateau and in north-central Texas (Carr 2015).

Federal Status:

State Status:

SGCN: Y

Endemic: Y

Global Rank: G3G4

State Rank: S3S4

Warnock's coral-root

Hexalectris warnockii

In leaf litter and humus in oak-juniper woodlands on shaded slopes and intermittent, rocky creekbeds in canyons; in the Trans Pecos in oak-pinyon-juniper woodlands in higher mesic canyons (to 2000 m [6550 ft]), primarily on igneous substrates; in Terrell County under *Quercus fusiformis* mottes on terraces of spring-fed perennial streams, draining an otherwise rather xeric limestone landscape; on the Callahan Divide (Taylor County), the White Rock Escarpment (Dallas County), and the Edwards Plateau in oak-juniper woodlands on limestone slopes; in Gillespie County on igneous substrates of the Llano Uplift; flowering June-September; individual plants do not usually bloom in successive years

Federal Status:

State Status:

SGCN: Y

Endemic: N

Global Rank: G2G3

State Rank: S2

Wright's milkvetch

Astragalus wrightii

Habitat description is not available at this time.

Federal Status:

State Status:

SGCN: Y

Endemic: Y

Global Rank: G3

State Rank: S3

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Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the [IPaC](#) application.

County: Travis, Texas

CSV

Need to contact a FWS field office about a species? Follow [this link](#) to find your local FWS Office.

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Amphibians	Barton Springs salamander (Eurycea sosorum)	Wherever found	Endangered	Austin Ecological Services Field Office	Barton Springs Salamander Recovery Plan	Implementation Progress	Final
Amphibians	Georgetown Salamander (Eurycea naufragia)	Wherever found	Threatened	Austin Ecological Services Field Office			
Amphibians	Jollyville Plateau Salamander (Eurycea tonkawae)	Wherever found	Threatened	Austin Ecological Services Field Office			
Amphibians	Austin blind Salamander (Eurycea waterlooensis)	Wherever found	Endangered	Austin Ecological Services Field Office	Barton Springs Salamander Recovery Plan	Implementation Progress	Final
Arachnids	Bee Creek Cave harvestman (Texella reddelli)	Wherever found	Endangered	Austin Ecological Services Field Office	Recovery Plan for Endangered Karst Invertebrates in Travis and Williamson Counties, Texas	Implementation Progress	Final

Arachnids	Bone Cave harvestman (Texella reyesi)	Wherever found	Endangered	Austin Ecological Services Field Office	Recovery Plan for Endangered Karst Invertebrates in Travis and Williamson Counties, Texas	Implementation Progress	Final
Arachnids	Tooth Cave pseudoscorpion (Tartarocreagrís texana)	Wherever found	Endangered	Austin Ecological Services Field Office	Recovery Plan for Endangered Karst Invertebrates in Travis and Williamson Counties, Texas	Implementation Progress	Final
Arachnids	Tooth Cave Spider (Neoleptoneta myopica)	Wherever found	Endangered	Austin Ecological Services Field Office	Recovery Plan for Endangered Karst Invertebrates in Travis and Williamson Counties, Texas	Implementation Progress	Final
Birds	Whooping crane (Grus americana)	Wherever found, except where listed as an experimental population	Endangered	Assistant Regional Director- Ecological Services	Whooping Crane Recovery Plan, Final Third Revision	Implementation Progress	Final Revision 3
Birds	Bald eagle (Haliaeetus leucocephalus)	lower 48 States	Recovery	Illinois-Iowa Ecological Services Field Office	Chesapeake Bay Bald Eagle Recovery Plan	Implementation Progress	Final Revision 1
Birds	Bald eagle (Haliaeetus leucocephalus)	lower 48 States	Recovery	Illinois-Iowa Ecological Services Field Office	Recovery Plan for the Pacific Bald Eagle	Implementation Progress	Final
Birds	Bald eagle (Haliaeetus leucocephalus)	lower 48 States	Recovery	Illinois-Iowa Ecological Services Field Office	Southeastern States Bald Eagle Recovery Plan	Implementation Progress	Final Revision 1
Birds	Bald eagle (Haliaeetus leucocephalus)	lower 48 States	Recovery	Illinois-Iowa Ecological Services Field Office	Southwestern Bald Eagle Recovery Plan	Implementation Progress	Final

Birds	Bald eagle (Haliaeetus leucocephalus)	lower 48 States	Recovery	Illinois-Iowa Ecological Services Field Office	Northern States Bald Eagle Recovery Plan	Implementation Progress	Final
Birds	Piping Plover (Charadrius melodus)	[Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.	Threatened	Office of the Regional Director	Volume I: Draft Revised Recovery Plan for the Northern Great Plains Piping Plover (Charadrius melodus)	Recovery efforts in progress, but no implementation information yet to display.	Draft Revision 1
Birds	Piping Plover (Charadrius melodus)	[Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.	Threatened	Office of the Regional Director	Piping Plover Atlantic Coast Population Revised Recovery Plan	Implementation Progress	Final Revision 1
Birds	Black-capped Vireo (Vireo atricapilla)	Wherever found	Recovery	Arlington Ecological Services Field Office	Black-capped Vireo (Vireo atricapillus) Recovery Plan	Implementation Progress	Final
Birds	Golden-cheeked warbler (=wood) (Dendroica chrysoparia)	Wherever found	Endangered	Austin Ecological Services Field Office	Golden-cheeked Warbler	Implementation Progress	Final
Birds	Red knot (Calidris canutus rufa)	Wherever found	Threatened	New Jersey Ecological Services Field Office			
Clams	False spike (Quincuncina mitchelli)	Wherever found	Under Review	Austin Ecological Services Field Office			

Clams	Texas pimpleback (Quadrula petrina)	Wherever found	Candidate	Texas Coastal Ecological Services Field Office			
Clams	Smooth pimpleback (Quadrula houstonensis)	Wherever found	Candidate	Austin Ecological Services Field Office			
Clams	Texas fatmucket (Lampsilis bracteata)	Wherever found	Candidate	Texas Coastal Ecological Services Field Office			
Flowering Plants	Bracted twistflower (Streptanthus bracteatus)	Wherever found	Candidate	Austin Ecological Services Field Office			
Insects	Kretschmarr Cave mold beetle (Texamaurops reddelli)	Wherever found	Endangered	Austin Ecological Services Field Office	Recovery Plan for Endangered Karst Invertebrates in Travis and Williamson Counties, Texas	Implementation Progress	Final
Insects	Tooth Cave ground beetle (Rhadin persephone)	Wherever found	Endangered	Austin Ecological Services Field Office	Recovery Plan for Endangered Karst Invertebrates in Travis and Williamson Counties, Texas	Implementation Progress	Final

ATTACHMENT D

SPECIES IMPACT TABLE

Table 1: Federal and State Listed Threatened/Endangered Species of Concern in Travis County, Texas

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
AMPHIBIANS						
Austin blind salamander <i>Eurycea waterlooniensis</i>	E		Mostly restricted to subterranean cavities of the Edwards Aquifer; dependent upon water flow/quality from the Barton Springs segment of the Edwards Aquifer; only known from the outlets of Barton Springs (Sunken Gardens (Old Mill) Spring, Eliza Spring, and Parthenia (Main) Spring which forms Barton Springs Pool); feeds on amphipods, ostracods, copepods, plant material, and (in captivity) a wide variety of small aquatic invertebrates	No	No Effect	A Zone 1 Karst area exists within the project area (Please see Attachment G Karst Zone Map). Unlikely to impact species since this species is limited to Barton Springs.
Barton Springs salamander <i>Eurycea sosorum</i>	E	E	Dependent upon water flow/quality from the Barton Springs pool of the Edwards Aquifer; known from the outlets of Barton Springs and subterranean water-filled caverns; found under rocks, in gravel, or among aquatic vascular plants and algae, as available; feeds primarily on amphipods	No	No Effect	A Zone 1 Karst area exists within the project area (Please see Attachment G Karst Zone Map). Unlikely to impact species since this species is limited to Barton Springs.
Houston toad <i>Anaxyrus houstonensis</i>	E	E	Primary habitat is sandy soil which supports populations of <i>Pinus taeda</i> , water in pools, ephemeral pools, stock tanks; breeds in spring especially after rains; burrows in soil of adjacent uplands when inactive; breeds February-June; associated with soils of the Sparta, Carrizo, Goliad, Queen City, Recklaw, Weches, and Willis geologic formations.	No	No Effect	Lack of sandy soils supporting populations of <i>Pinus taeda</i> , water in pools, ephemeral pools, and stock tanks.
Jollyville Plateau salamander <i>Eurycea tonkawae</i>	T		Known from springs and waters of some caves north of the Colorado River	No	No Effect	A Zone 1 Karst area exists within the project area (Please see Attachment G Karst Zone Map). Unlikely to impact species since this species is not found within the project area.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Pedernales River springs salamander <i>Eurycea sp 6</i>	—	SGCN	Global Rank: G1; Endemic; known only from springs	No	No Impact	A Zone 1 Karst area exists within the project area (Please see Attachment G Karst Zone Map). Unlikely to impact species since this species is limited to Barton Springs and Pedernales River springs.
Strecker's chorus frog <i>Pseudacris streckeri</i>	—	SGCN	Global Rank: G5; Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.	No	No Impact	Lack of wooded floodplains and flats, prairies, cultivated fields, and marshes.
Texas salamander <i>Eurycea neotenes</i>	—	SGCN	Global Rank: G1; Troglotic; springs, seeps, cave streams, and creek headwaters; often hides under rocks and leaves in water; restricted to Helotes and Leon Creek drainages	No	No Impact	Lack of springs, seeps, cave streams, and creek headwaters. Project area not located in Helotes and Leon Creek drainages.
Woodhouse's toad <i>Anaxyrus woodhousii</i>	—	SGCN	Global Rank: G5; Extremely catholic up to 5000 feet, does very well (except for traffic) in association with man.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts.
ARACHNIDS						
Bandit Cave spider <i>Cicurina bandida</i>	—	SGCN	Global Rank: G2Q; very small, subterrestrial, subterranean obligate	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Bone Cave harvestman <i>Texella reyesi</i>	E		Small, blind, cave-adapted harvestman endemic to several caves in Travis and Williamson counties; weakly differentiated from <i>Texella reddelli</i>	No	No Effect	A Zone 1 Karst area exists within the project area (Please see Attachment G Karst Zone Map). Unlikely to impact species since the project area is outside the known range of this species.
<i>Eidmannella reclusa</i>	—	SGCN	Global Rank: G1G2; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.
<i>Tartarocreagris altimana</i>	—	SGCN	Global Rank: G1G2; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.
<i>Texella spinoperca</i>	—	SGCN	Global Rank: GNR; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.
<i>Tartarocreagris attenuata</i>	—	SGCN	Global Rank: G1G2; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.
<i>Tartarocreagris domina</i>	—	SGCN	Global Rank: G1G2; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
<i>Tartarocreagris proserpina</i>	—	SGCN	Global Rank: G1G2; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.
<i>Cicurina trivisae</i>	—	SGCN	Global Rank: G1G2Q; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.
<i>Texella mulaiki</i>	—	SGCN	Global Rank: G2G3; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.
<i>Tartarocreagris infernalis</i>	—	SGCN	Global Rank: G2G3; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.
<i>Tartarocreagris intermedia</i>	—	SGCN	Global Rank: G1G2; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.
<i>Texella grubbsi</i>	—	SGCN	Global Rank: G1G2; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Bee Creek Cave harvestman <i>Texella reddelli</i>	E		Small, blind, cave-adapted harvestman endemic to a few caves in Travis and Williamson counties	Yes	May Effect, Not Likely to Adversely Affect	A Zone 1 Karst area exists within the project area (Please see Attachment G Karst Zone Map). Unlikely to impact species based on the limited area of impacts and type of impacts.
Tooth Cave pseudoscorpion <i>Tartarocreagris texana</i>	E		Small, cave-adapted pseudoscorpion known from small limestone caves of the Edwards Plateau	No	No Effect	A Zone 1 Karst area exists within the project area (Please see Attachment G Karst Zone Map). Unlikely to impact species since the project area is outside the known range of this species.
Tooth Cave spider <i>Tayshaneta myopica</i>	E		Very small, cave-adapted, sedentary spider	No	No Effect	A Zone 1 Karst area exists within the project area (Please see Attachment G Karst Zone Map). Unlikely to impact species since the project area is outside the known range of this species.
BIRDS						
Bald Eagle <i>Haliaeetus leucocephalus</i>	DL	T	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	No	No Impact	Lack of nearby large water bodies.
Black rail <i>Laterallus jamaicensis</i>	PT		Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of <i>Salicornia</i>	No	No Effect	Lack of salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Black-capped Vireo <i>Vireo atricapilla</i>	DL	E	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	No	No Effect	Lack of suitable habitat near the proposed project. Bird BMPs will be used during construction to limit the potential for impacts.
Franklin's gull <i>Leucophaeus pipixcan</i>	—	SGCN	Global Rank: G4G5; Habitat description is not available at this time.	No	No Impact	Lack of suitable habitat.
Golden-cheeked Warbler <i>Setophaga chrysoparia</i>	E	E	Juniper-oak woodlands; dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer	No	No Effect	Lack of suitable habitat near the proposed project. Bird BMPs will be used during construction to limit the potential for impacts.
Interior Least Tern <i>Sterna antillarum athalassos</i>	E	E	Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also known to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony	No	No Effect	Lack of nesting habitat.
Mountain Plover <i>Charadriim montanus</i>	—	SGCN	Global Rank: G3; breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous	No	No Impact	Lack of shortgrass prairie, plains, or plowed fields.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Piping plover <i>Charadrius melodus</i>	T	T	Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, 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. 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-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. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.	No	No Effect	Lack of beaches, sandflats, and dunes along Gulf Coast beaches.
Swallow-tailed kite <i>Elanoides forficatus</i>	—	T	Lowland forested regions, especially swampy areas, ranging into open woodland; marshes, along rivers, lakes, and ponds; nests high in tall tree in clearing or on forest woodland edge, usually in pine, cypress, or various deciduous trees	No	No Impact	Lack of lowland forested regions.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Western Burrowing Owl <i>Athene cunicularia hypugaea</i>	—	SGCN	Global Rank: G4; 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	No	No Impact	Lack of open grasslands.
White-faced ibis <i>Plegadis chihi</i>	—	SGCN	Global Rank: G5; Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.	No	No Impact	Lack of freshwater marshes, sloughs, and irrigated rice fields.
Whooping Crane <i>Grus americana</i>	E	E	Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties	No	No Effect	Lack of suitable stopover habitat.
Wood stork <i>Mycteria americana</i>	—	T	Prefers to nest in large tracts of bald cypress (<i>Taxodium distichum</i>) or red mangrove (<i>Rhizophora mangle</i>); forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960	No	No Impact	Lack of bald cypress and red mangroves.
Zone-tailed hawk <i>Buteo albonotatus</i>	—	T	Arid open country, including open deciduous or pine-oak woodland, mesa or mountain county, often near watercourses, and wooded canyons and tree-lined rivers along middle-slopes of desert mountains; nests in various habitats and sites, ranging from small trees in lower desert, giant cottonwoods in riparian areas, to mature conifers in high mountain regions	No	No Impact	Lack of arid open country.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
CRUSTACEANS						
Balcones Cave amphipod <i>Stygobromus balconis</i>	—	SGCN	Global Rank: G2G3; Subaquatic, subterranean obligate amphipod	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.
Ezell's Cave amphipod	—	SGCN	Global Rank: G2G3; Known only from artesian wells	No	No Impact	Lack of artesian wells.
<i>Lirceolus bisetus</i>	—	SGCN	Global Rank: G1G2; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.
FISHES						
Alligator gar <i>Atractosteus spatula</i>	—	SGCN	Global Rank: G3G4; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
American eel <i>Anguilla rostrata</i>	—	SGCN	Global Rank: G4; Coastal waterways below reservoirs to gulf; spawns January to February in ocean, larva move to coastal waters, metamorphose, then females move into freshwater; most aquatic habitats with access to ocean, muddy bottoms, still waters, large streams, lakes; can travel overland in wet areas; males in brackish estuaries; diet varies widely, geographically, and seasonally	No	No Impact	Lack of coastal waterways below reservoirs.
Blue sucker <i>Cycleptus elongatus</i>	—	T	Usually inhabits channels and flowing pools with a moderate current, with bottoms of exposed bedrock sometimes in combination with hard clay, sand, and gravel; generally intolerant of highly turbid conditions. Larger portions of major rivers in Texas; adults winter in deep pools and move upstream in spring to spawn on riffles	No	No Impact	Lack of larger portions of major rivers, and channels and pools with moderate current
Chub shiner <i>Notropis potteri</i>	—	SGCN	Global Rank: G4; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
Guadalupe bass <i>Micropterus treculii</i>	—	SGCN	Global Rank: G3; endemic to perennial streams of the Edwards Plateau region; introduced into Nueces River system.	No	No Impact	Lack of perennial streams.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Guadalupe darter <i>Percina apristis</i>	—	SGCN	Global Rank: G4; Most common over gravel or gravel and sand raceways of large streams and rivers	No	No Impact	Lack of large streams and rivers
Headwater catfish <i>Ictalurus lupus</i>	—	SGCN	Global Rank: G3; Originally throughout streams of the Edwards Plateau and the Rio Grande basin, currently limited to Rio Grande drainage, including Pecos River basin; springs, and sandy and rocky riffles, runs, and pools of clear creeks and small rivers	No	No Impact	Clear creeks present in project area but project is not in the Rio Grande drainage.
Ironcolor shiner <i>Notropis chalybaeus</i>	—	SGCN	Global Rank: G4; Big Cypress Bayou and Sabine River basins; spawns April-September, eggs sink to bottom of pool; pools and slow runs of low gradient small acidic streams with sandy substrate and clear well vegetated water; feeds mainly on small insects, ingested plant material not digested	No	No Impact	Lack of small acidic streams with sandy substrate and clear well vegetated water. Project is not located in Big Cypress Bayou or Sabine River basin.
Sharpnose shiner <i>Notropis oxyrinchus</i>	E		Endemic to Brazos River drainage; also, apparently introduced into adjacent Colorado River drainage; large turbid river, with bottom combination of sand, gravel, and clay-mud	No	No Effect	Lack of large turbid rivers with a bottom combination of sand, gravel, and clay-mud.
Silverband shiner <i>Notropis shumardi</i>	—	SGCN	Global Rank: G5; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
Smalleye shiner <i>Notropis buccula</i>	E		Endemic to upper Brazos River system and its tributaries (Clear Fork and Bosque); apparently introduced into adjacent Colorado River drainage; medium to large prairie streams with sandy substrate and turbid to clear warm water; presumably eats small aquatic invertebrates	No	No Effect	Lack of medium to large perennial streams.
Speckled chub <i>Macrhybopsis aestivalis</i>	—	SGCN	Global Rank: G3G4; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
Texas shiner <i>Notropis amabilis</i>	—	SGCN	Global Rank: G4; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Western creek chubsucker <i>Erimyzon clayiformis</i>	—	T	Habitat includes silt-, sand-, and gravel-bottomed pools of clear headwaters, creeks, and small rivers; often near vegetation; occasionally in lakes (Page and Burr 2011). Spawning occurs in river mouths or pools, riffles, lake outlets, or upstream creeks (Becker 1983, Goodyear et al. 1982). Prefers headwaters, but seldom occurs in springs.	No	No Impact	Lack of silt-, sand-, and gravel-bottomed pools of clear headwaters, creeks, and small rivers.
INSECTS						
a cave obligate beetle <i>Rhadine austinica</i>	—	SGCN	Global Rank: G1G2; Habitat description is not available at this time.	Yes	May Impact	Potential habitat exists within the project area. Unlikely to impact species based on the limited area of impacts and type of impacts.
American bumblebee <i>Bombus pensylvanicus</i>	—	SGCN	Global Rank: G3G4; Habitat description is not available at this time.	Yes	May Impact	Species maybe present in project area but no impacts expected.
Comanche harvester ant <i>Pogonomyrmex comanche</i>	—	SGCN	Global Rank: G2G3; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
Kretschmarr Cave mold beetle <i>Texamaurops reddelli</i>	E		Small, cave-adapted beetle found under rocks buried in silt; small, Edwards Limestone caves in of the Jollyville Plateau, a division of the Edwards Plateau	No	No Effect	A Zone 1 Karst area exists within the project area (Please see Attachment G Karst Zone Map). Unlikely to impact species since the project area is outside the known range of this species.
<i>Andrena scotoptera</i>	—	SGCN	Global Rank: GNR; Habitat description is not available at this time.	Yes	May Impact	Species maybe present in project area but no impacts expected.
<i>Bambus variabilis</i>	—	SGCN	Global Rank: GU; Habitat description is not available at this time.	Yes	May Impact	Species maybe present in project area but no impacts expected.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
<i>Lymantes nadineae</i>	—	SGCN	Global Rank: GNR; Habitat description is not available at this time.	Yes	May Impact	Species maybe present in project area but no impacts expected.
<i>Macrotera parkeri</i>	—	SGCN	Global Rank: GNR; Habitat description is not available at this time.	Yes	May Impact	Species maybe present in project area but no impacts expected.
<i>Neotrichia juani</i>	—	SGCN	Global Rank: G1; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
<i>Xiphocentron messapus</i>	—	SGCN	Global Rank: G1G3; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
<i>Rhadine subterranea</i>	—	SGCN	Global Rank: G2; Habitat description is not available at this time.	Yes	May Impact	Species maybe present in project area but no impacts expected.
<i>Oncopodura fenestra</i>	—	SGCN	Global Rank: G2G3; Habitat description is not available at this time.	Yes	May Impact	Species maybe present in project area but no impacts expected.
Tooth Cave ground beetle <i>Rhadine persephone</i>	E		Resident, small, cave-adapted beetle found in small Edwards Limestone caves in Travis and Williamson counties	No	No Effect	A Zone 1 Karst area exists within the project area (Please see Attachment G Karst Zone Map). Unlikely to impact species since the project area is outside the known range of this species.
MAMMALS						
American Badger <i>Taxidea taxus</i>	—	SGCN	Global Rank: G5; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
Aransas short-tailed shrew <i>Blarina hylophaga plumbea</i>	—	SGCN	Global Rank: G5T1Q; Excavates burrows in sandy soils underlying mottes of live oak trees or in areas with little to no ground cover; 2-3 litters of 4-6 young per year	No	No Impact	Lack of sandy soils underlying mottes of live oak trees.
Big brown bat <i>Eptesicus fuscus</i>	—	SGCN	Global Rank: G5; Any wooded areas or woodlands except south Texas. Riparian areas in west Texas.	Yes	May Impact	Wooded areas located in project area but no impacts expected due to the limited area of impacts.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Big free-tailed bat <i>Nyctinomops macrotis</i>	—	SGCN	Global Rank: G5; 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	No	No Impact	Lack of high canyon walls.
Cave myotis bat <i>Myotis velifer</i>	—	SGCN	Global Rank: G5; 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	Yes	May Impact	Marginal habitat under bridges but no signs of bats were observed. Bat BMPs will be used to limit the potential for impacts.
Eastern red bat <i>Lasiurus borealis</i>	—	SGCN	Global Rank: G3G4; Found in a variety of habitats in Texas. Usually associated with wooded areas. Found in towns especially during migration.	Yes	May Impact	Wooded areas located in project area but no impacts expected due to the limited area of impacts.
Hoary bat <i>Lasiurus cinereus</i>	—	SGCN	Global Rank: G3G4; Known from montane and riparian woodland in Trans-Pecos, forests and woods in east and central Texas.	Yes	May Impact	Wooded areas located in project area but no impacts expected due to the limited area of impacts.
Long-tailed weasel <i>Mustela frenata</i>	—	SGCN	Global Rank: G5; Includes brushlands, fence rows, upland woods and bottomland hardwoods, forest edges & rocky desert scrub. Usually live close to water.	Yes	May Impact	Wooded and brushy areas in project area, but unlikely to impact species based on abundance of acceptable habitat immediately adjacent and throughout region.
Mexican free-tailed bat <i>Tadarida brasiliensis</i>	—	SGCN	Global Rank: G5; Roosts in buildings in east Texas. Largest maternity roosts are in limestone caves on the Edwards Plateau. Found in all habitats, forest to desert.	Yes	May Impact	Species may occur in project area but no impacts are expected due to the limited area of impacts.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Mexican long-tongued bat <i>Choeronycteris mexicana</i>	—	SGCN	Global Rank: G3G4; Only Texas record is from riparian forest; in general—neotropical nectivorous species roosting in caves, mines, and large crevices found in deep canyons along the Rio Grande ; also found in buildings and often associated with big-eared bats (<i>Plecotus</i> spp.); single TX record from Santa	Yes	May Impact	Riparian forests are located in project area but no impacts expected due to the limited area of impacts.
Mink <i>Neovison vison</i>	—	SGCN	Global Rank: G5; Intimately associated with water; coastal swamps & marshes, wooded riparian zones, edges of lakes. Prefer floodplains.	Yes	May Impact	Floodplains are located in the project area but no impacts are expected due to the limited area of impacts.
Mountain lion <i>Puma concolor</i>	—	SGCN	Global Rank: G5; Rugged mountains & riparian zones.	No	No Impact	Lack of mountains. Riparian zones do occur in project area but impacts are limited and in an urban setting.
Plains spotted skunk <i>Spilogale putorius interrupta</i>	—	SGCN	Global Rank: G4T; catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie	Yes	May Impact	Wooded and brushy areas in project area, but unlikely to impact species based on abundance of acceptable habitat immediately adjacent and throughout region.
Southern short-tailed shrew <i>Blarina crarolinensis</i>	—	SGCN	Global Rank: G5; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
Swamp rabbit <i>Sylvilagus aquaticus</i>	—	SGCN	Global Rank: G5; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
Tricolored bat <i>Perimyotis subflavus</i>	—	SGCN	Global Rank: G2G3; Forest, woodland and riparian areas are important. Caves are very important to this species.	Yes	May Impact	Wooded areas located in project area but no impacts expected due to the limited area of impacts.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Western hog-nosed skunk <i>Conepatus leuconotus</i>	—	SGCN	Global Rank: G4; Habitats include woodlands, grasslands & deserts, to 7200 feet, most common in rugged, rocky canyon country; little is known about the habitat of the ssp. <i>telmalestes</i>	No	No Impact	Lack of rugged, rocky canyon country.
MOLLUSKS						
False spike mussel <i>Quadrula mitchelli</i>	—	T	Possibly extirpated in Texas; probably medium to large rivers; substrates varying from mud through mixtures of sand, gravel and cobble; one study indicated water lilies were present at the site; Rio Grande, Brazos, Colorado, and Guadalupe (historic) river basins	No	No Impact	Lack of rivers.
<i>Patera leatherwoodi</i>	—	SGCN	Global Rank: G1; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
<i>Millerelix gracilis</i>	—	SGCN	Global Rank: G2G3; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
<i>Stygopyrgus bartonensis</i>	—	SGCN	Global Rank: G1; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
<i>Phreatodrobia punctate</i>	—	SGCN	Global Rank: G2; Habitat description is not available at this time.	No	No Impact	No suitable habitat in project area.
Smooth pimpleback <i>Quadrula houstonensis</i>	C	T	Small to moderate streams and rivers as well as moderate size reservoirs; mixed mud, sand, and fine gravel, tolerates very slow to moderate flow rates, appears not to tolerate dramatic water level fluctuations, scoured bedrock substrates, or shifting sand bottoms, lower Trinity (questionable), Brazos, and Colorado River basins	No	No Impact	Lack of streams or rivers with mixed mud, sand, and fine gravel substrates.
Texas fatmucket <i>Lampsilis bracteata</i>	C	T	Streams and rivers on sand, mud, and gravel substrates; intolerant of impoundment; broken bedrock and coarse gravel or sand in moderately flowing water; Colorado and Guadalupe River basins	No	No Impact	Lack of streams or rivers with sand, mud, or gravel substrates.
Texas pimpleback <i>Quadrula petrina</i>	C	T	Mud, gravel and sand substrates, generally in areas with slow flow rates; Colorado and Guadalupe River basins	No	No Impact	Lack of streams or rivers with mud, gravel, and sand substrates.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
REPTILES						
American alligator <i>Alligator mississippiensis</i>	—	SGCN	Global Rank: G5; Coastal marshes; inland natural rivers, swamps and marshes; manmade impoundments.	No	No Impact	Lack of coastal marshes, inland natural rivers, swamps, and marshes.
Common garter snake <i>Thamnophis sirtalis</i>	—	SGCN	Global Rank: G5; Irrigation canals and riparian-corridor farmlands in west; marshy, flooded pastureland, grassy or brushy borders of permanent bodies of water; coastal salt marshes.	No	No Impact	Lack of suitable habitats in the project area.
Eastern box turtle <i>Terrapene carolina</i>	—	SGCN	Global Rank: G5; 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. In Maryland bottomland forest, some hibernated in pits or depressions in forest floor (usually about 30 cm deep) usually within summer range; individuals tended to hibernate in same area in different years (Stickel 1989). Also attracted to farms, old fields and cut-over woodlands, as well as creek bottoms and dense woodlands. Egg laying sites often are sandy or loamy soils in open areas; females may move from bottomlands to warmer and drier sites to nest. In Maryland, females used the same nesting area in different years (Stickel 1989).	Yes	May Impact	Forests and forest-brush ecotones are located in project area but no impacts expected due to the limited area of impacts.
Northern spot-tailed earless lizard <i>Holbrookia lacerata lacerata</i>	—	SGCN	Global Rank: G3G4TNR; Habitat description is not available at this time.	No	No Impact	Lack of suitable habitats in the project area.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Slender glass lizard <i>Ophisaurus attenuatus</i>	—	SGCN	Global Rank: G5; Prefers relatively dry microhabitats, usually associated with grassy areas. 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. This species often appears on roads in spring. During inactivity, it occurs in underground burrows. In Kansas, slender glass lizards were scarce in heavily grazed pastures, increased as grass increased with removal of grazing, and declined as brush and trees replaced grass (Fitch 1989). Eggs are laid underground, under cover, or under grass clumps (Ashton and Ashton 1985); in cavities beneath flat rocks or in abandoned tunnels of small mammals (Scalopus, Microtus) (Fitch 1989).	Yes	May Impact	Wooded areas in project area, but unlikely to impact species based on abundance of acceptable habitat immediately adjacent and throughout region.
Spot-tailed earless lizard <i>Holbrookia lacerata</i>	—	SGCN	Global Rank: G3G4; central and southern Texas and adjacent Mexico; moderately open prairie-brushland; fairly flat areas free of vegetation or other obstructions, including disturbed areas; eats small invertebrates; eggs laid underground	No	No Impact	Lack of open prairie with vegetation-free areas.
Texas garter snake <i>Thamnophis sirtalis annectens</i>	—	SGCN	Global Rank: G5; wet or moist microhabitats are conducive to the species occurrence but is not necessarily restricted to them; hibernates underground or under surface cover; breeds March-August	Yes	May Impact	Possible moist microhabitats located near creeks and drainages. Unlikely to impact species based on the limited area of impacts.
Texas horned lizard <i>Phrynosoma cornutum</i>	—	T	Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September	No	No Impact	Lack of arid or semi-arid, open and brushy habitat.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Texas map turtle <i>Graptemys versa</i>	—	SGCN	Global Rank: G4; Rivers with moderate current, abundant aquatic vegetation, and basking logs; also associated oxbows and lakes (Bartlett and Bartlett 1999).	No	No Impact	Lack of rivers with moderate current, abundant aquatic vegetation, and basking logs.
Texas tortoise <i>Gopherus berlandieri</i>	—	T	Open brush with a grass understory is preferred; open grass and bare ground are avoided. Seasonally flooded tidal flats are not utilized. When inactive occupies shallow depressions at base of bush or cactus, sometimes in underground burrows or under objects; longevity greater than 50 years; active March-November; breeds April-November	No	No Impact	Lack of open brush with a grass understory.
Timber (canebreak) rattlesnake <i>Crotalus horridus</i>	—	T	Swamps, floodplains, upland pine and deciduous woodland, riparian zones, abandoned farmland. Limestone bluffs, sandy soil or black clay. Prefers dense ground cover, i.e. grapevines, palmetto.	No	No Impact	Although floodplains and riparian zones do exist, the project area lacks sandy soils. Also, unlikely to impact species based on the limited area of impacts.
Western box turtle <i>Terrapene ornata</i>	—	SGCN	Global Rank: G5; 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; winter burrow depth was 0.5-1.8 meters in Wisconsin (Doroff and Keith 1990), 7-120 cm (average depth 54 cm) in Nebraska (Converse et al. 2002). Eggs are laid in nests dug in soft well-drained soil in open area (Legler 1960, Converse et al. 2002). Very partial to sandy soil.	No	No Impact	Lack of prairie grasslands, pastures, fields, sandhills, and open woodlands.
Western chicken turtle <i>Deirochelys reticularia miaria</i>	—	SGCN	Global Rank: G5T5; Habitat description is not available at this time.	No	No Impact	Lack of suitable habitats in the project area.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
PLANTS						
Arrowleaf milkvine <i>Matelea sagittifolia</i>	—	SGCN	GLOBAL RANK: G3; most consistently encountered in thornscrub in South Texas; Perennial; Flowering March-July; Fruiting April-July & December	No	No Impact	Lack of South Texas thornscrub habitat.
Basin bellflower <i>Campanula reverchonii</i>	—	SGCN	Global Rank: G2; Texas endemic; 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	No	No Impact	Lack of loose gravel, gravelly sand, or sloped rock outcrops.
Bracted twistflower <i>Streptanthus bracteatus</i>	C		Global Rank: G1G2; Texas endemic; shallow, well-drained gravelly clays and clay loams over limestone in oak juniper woodlands and associated openings, on steep to moderate slopes and in canyon bottoms; several known soils include Tarrant, Brackett, or Speck over Edwards, Glen Rose, and Walnut geologic formations; populations fluctuate widely from year to year, depending on winter rainfall; flowering mid April-late May, fruit matures and foliage withers by early summer	Yes	May Effect	Well-drained gravelly clay and clay loams over limestone in juniper woodlands exist within the project area. Unlikely to impact species based on the lack of steep to moderate slopes and canyon bottoms, lack of known soils, and a limited area of impact. No species were observed within the project area during the field investigation.
Buckley tridens <i>Phaseolus texensis</i>	—	SGCN	Global rank: G3G4; Occurs in juniper-oak woodlands on rocky limestone slopes; Perennial; Flowering/Fruiting April-Nov	No	No Impact	Lack of rocky limestone slopes
Canyon bean <i>Phaseolus texensis</i>	—	SGCN	Global Rank: G2; narrowly endemic to rocky canyons in eastern and southern Edwards Plateau occurring on limestone soils in mixed woodlands, on limestone cliffs and outcrops, frequently along creeks	No	No Impact	Lack of rocky canyons within project area.
Canyon mock-orange <i>Philadelphus texensis var. ernestii</i>	—	SGCN	Global Rank: G2; Usually found growing from honeycomb pits on outcrops of Cretaceous limestone exposed as rimrock along mesic canyons, usually in the shade of mixed evergreen-deciduous canyon woodland; flowering April-June, fruit dehiscing September-October	No	No Impact	Lack of honeycomb pits on outcrops of Cretaceous limestone.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Canyon sedge <i>Carex edwardsiana</i>	—	SGCN	Global Rank: G3G4; Habitat description is not available at this time.	No	No Impact	Lack of suitable habitat.
Correll's false dragon-head <i>Physoctegia correllii</i>	—	SGCN	GLOBAL RANK: G2; wet, silty clay loams on stream sides, in creek beds, irrigation channels and roadside drainage ditches; or seepy, mucky, sometimes gravelly soils along riverbanks or small islands in the Rio Grande; or underlain by Austin Chalk limestone along gently flowing spring-fed creek in central Texas; flowering May-September	Yes	May Impact	Silty clay soils exist near Walnut Creek. Unlikely to impact species due to the lack of wet, silty clay loams and a limited area of impact. No species were observed within the project area during the field investigation.
Engelmann's bladderpod <i>Physaria engelmannii</i>	—	SGCN	Global Rank: G4; Grasslands and calcareous rock outcrops in a band along the eastern edge of the Edwards Plateau, ranging as far north as the Red River (Carr 2015).	No	No Impact	Lack of grasslands and calcareous rock outcrops.
Glandular gay-feather <i>Liatrix glanulosa</i>	—	SGCN	Global Rank: G3; Occurs in herbaceous vegetation on limestone outcrops (Carr 2015)	No	No Impact	Lack of limestone outcrops within project area.
Glass Mountains coral-root <i>Hexalectris nitida</i>	—	SGCN	GLOBAL RANK: G3; apparently rare in mixed woodlands in canyons in the mountains of Brewster County, but encountered with regularity, albeit in small numbers, under <i>Juniperus ashei</i> in woodlands over limestone on the Edwards Plateau, Callahan Divide and Lampasas Cutplain; Perennial; Flowering June-September; Fruiting July-September	Yes	May Impact	<i>Juniperus ashei</i> over limestone exist within project area. Unlikely to impact species based on the limited area of impacts. No species were observed within the project area during the field investigation.
Gravelbar brickellbush <i>Brickellia dentata</i>	—	SGCN	GLOBAL RANK: G3; essentially restricted to frequently-scoured gravelly alluvial beds in creek and river bottoms; Perennial; Flowering June-November; Fruiting June-October	No	No Impact	Lack of gravelly alluvial beds in creeks and rivers.
Greenman's bluet <i>Houstonia parviflora</i>	—	SGCN	Global Rank: G3; Habitat description is not available at this time.	No	No Impact	Lack of suitable habitat.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Heller's marbleseed <i>Onosmodium helleri</i>	—	SGCN	GLOBAL RANK: G3; occurs in loamy calcareous soils in oak-juniper woodlands on rocky limestone slopes, often in more mesic portions of canyons; perennial; flowering March-May	Yes	May Impact	Oak-juniper woodlands on limestone slopes exist within the project area. Unlikely to impact species due to the lack of mesic portions of canyons and the limited area of impact. No species were observed within the project area during the field investigation.
Low spurge <i>Euphorbia peploidion</i>	—	SGCN	GLOBAL RANK: G3; occurs in a variety of vernal-moist situations in a number of natural regions; annual; flowering February-April; fruiting March-April	No	No Impact	Lack of vernal-moist areas.
Narrowleaf brickellbush <i>Brickellia eupatorioides var. gracillima</i>	—	SGCN	GLOBAL RANK: G5T3; moist to dry gravelly alluvial soils along riverbanks but also on limestone slopes; perennial; flowering/fruiting April-November	No	No Impact	Lack of riverbanks and limestone slopes.
Net-leaf bundleflower <i>Desmanthus reticulatus</i>	—	SGCN	Global Rank: G3; mostly on clay prairies of the coastal plains of central and south Texas; perennial; flowering April-July; fruiting April-October	No	No Impact	Lack of clay prairies on coastal plains.
Plateau loosestrife <i>Lythrum ovalifolium</i>	—	SGCN	Global Rank: G3G4; banks and gravelly beds of perennial (or strong intermittent) streams on the Edwards Plateau, Llano Uplift and Lampasas Cutplain; perennial; flowering/fruiting April-November	No	No Impact	Lack of perennial streams.
Plateau milkvine <i>Matelea edwardsensis</i>	—	SGCN	Global Rank: G3; occurs in various types of juniper-oak and oak-juniper woodlands; perennial; flowering March-October; fruiting May-June	Yes	May Impact	Juniper-oak woodlands exist within the project area. Unlikely to impact species due to the limited area of impacts. No species were observed within the project area during the field investigation.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Rock grape <i>Vitis rupestris</i>	—	SGCN	Global Rank: G3; occurs on rocky limestone slopes and in streambeds; perennial; flowering March-May; fruiting May-July	Yes	May Impact	Streambeds exist within the project area. Unlikely to impact species due to the lack of limestone slopes and limited area of impacts. No species were observed within the project area during the field investigation.
Scarlet leather-flower <i>Clematis texensis</i>	—	SGCN	Global Rank: G3G4; usually in oak-juniper woodlands in mesic rocky limestone canyons or along perennial streams; perennial; flowering March-July; fruiting May-July	No	No Impact	Lack of mesic rocky limestone canyons and perennial streams.
Spreading lestdaisy <i>Chaetopappa effusa</i>	—	SGCN	Global Rank: G3G4; Limestone cliffs, ledges, bluffs, steep hillsides, sometimes in seepy areas, oak-juniper, oak, or mixed deciduous woods, 300-500 m elevation; Perennial; Flowering (May) July-Oct	No	No Impact	Lack of limestone cliffs, ledges, bluffs, steep hillsides, and sometimes in seepy areas.
Stanfield's beebalm <i>Monarda punctata var. stanfieldii</i>	—	SGCN	Global Rank: G5T3; largely confined to granite sands along the middle course of the Colorado River and its tributaries; perennial	No	No Impact	Lack of sandy soils.
Sycamore-leaf snowbell <i>Styrax platanifolius ssp. platanifolius</i>	—	SGCN	Global Rank: G3T3; 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-August	No	No Impact	Lack of steep rocky banks and ledges along intermittent and perennial streams.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
<p>Texabama croton</p> <p><i>Croton alabamensis var texensis</i></p>	—	SGCN	Global Rank: G3T2; Texas endemic; in duff-covered loamy clay soils on rocky slopes in forested, mesic limestone canyons; locally abundant on deeper soils on small terraces in canyon bottoms, often forming large colonies and dominating the shrub layer; scattered individuals are occasionally on sunny margins of such forests; also found in contrasting habitat of deep, friable soils of limestone uplands, mostly in the shade of evergreen woodland mottes; flowering late February-March; fruit maturing and dehiscing by early June	No	No Impact	Lack of rocky slopes in forested, mesic limestone canyons and small terraces in canyon bottomlands.
<p>Texas almond</p> <p><i>Prunus minutiflora</i></p>	—	SGCN	Global Rank: G3G4; 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 February-May & October; fruiting February-September	Yes	May Impact	Soils possibly calcareous. Unlikely to impact species based on scarcity of species in general, very limited area of disturbance, and lack of grassland and shrubland. No species were observed within the project area during the field investigation.
<p>Texas amorpha</p> <p><i>Amorpha roemeriana</i></p>	—	SGCN	GLOBAL RANK: G3; juniper-oak woodlands or shrublands on rocky limestone slopes, sometimes on dry shelves above creeks; perennial; flowering May-June; fruiting June-October	Yes	May Impact	May occur on dry shelves above the creeks. Unlikely to impact species based on the lack of rocky limestone slopes and limited area of impacts. No species were observed within the project area during the field investigation.

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Texas barberry <i>Berberis swaseyi</i>	—	SGCN	GLOBAL RANK: G3; shallow calcareous stony clay of upland grasslands/shrublands over limestone as well as in loamier soils in openly wooded canyons and on creek terraces; perennial; flowering/fruiting March-June	No	No Impact	Lack of calcareous stony clay of upland grasslands/shrublands over limestone and loamy soils in openly wooded canyons and on creek terraces.
Texas fescue <i>Festuca versuta</i>	—	SGCN	GLOBAL RANK: G3; occurs in mesic woodlands on limestone-derived soils on stream terraces and canyon slopes; perennial; flowering/fruiting April-June	Yes	May Impact	May occur near streams on stream terraces. Unlikely to impact due to the limited area of impacts. No species were observed within the project area during the field investigation.
Texas milk vetch <i>Astragalus reflexus</i>	—	SGCN	GLOBAL RANK: G3; grasslands, prairies, and roadsides on calcareous and clay substrates; annual; flowering February-June; fruiting April-June	Yes	May Impact	May occur on roadsides where calcareous and clay substrates exist. Unlikely to impact due to the limited area of impacts. No species were observed within the project area during the field investigation.
Texas seymeria <i>Seymeria texana</i>	—	SGCN	GLOBAL RANK: G3; found primarily in grassy openings in juniper-oak woodlands on dry rocky slopes but sometimes on rock outcrops in shaded canyons; annual; flowering May-November; fruiting July-November	No	No Impact	Lack of grassy openings in juniper-oak woodlands on dry rocky slopes.
Tree dodder <i>Cuscuta exaltata</i>	—	SGCN	Global Rank: G3; parasitic on various <i>Quercus</i> , <i>Juglans</i> , <i>Rhus</i> , <i>Vitis</i> , <i>Ulmus</i> , and <i>Diospyros</i> species as well as <i>Acacia berlandieri</i> and other woody plants; annual; flowering May-October; fruiting July-October	Yes	May Impact	Oak trees exist in project area. Unlikely to impact species based on very limited area of disturbance and number of trees to be removed. No species were observed within the project area during the field investigation.

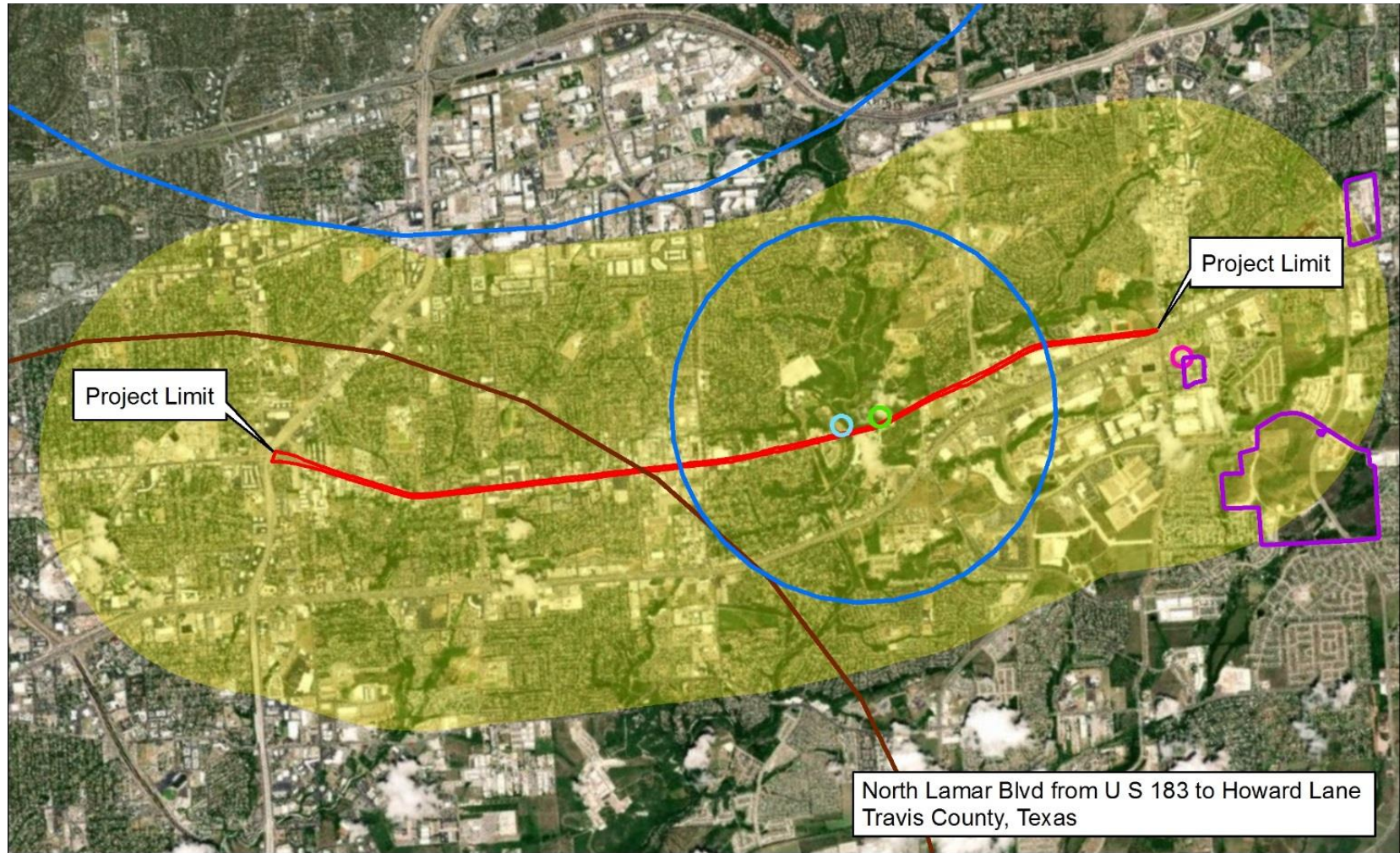
SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT/ IMPACT	PERTINENT PROJECT INFORMATION
Turnip-root scurfea <i>Pediomelum cyphocalyx</i>	—	SGCN	Global Rank: G3G4; Grasslands and openings in juniper-oak woodlands on limestone substrates on the Edwards Plateau and in north-central Texas (Carr 2015).	No	No Impact	Lack of grasslands and openings in juniper-oak woodlands on limestone substrates occur in the project area.
Warnock's coral-root <i>Hexalectris warnockii</i>	—	SGCN	Global Rank: G2G3; in leaf litter and humus in oak-juniper woodlands on shaded slopes and intermittent, rocky creek beds in canyons; in the Trans Pecos in oak-pinyon-juniper woodlands in higher mesic canyons (to 2000 m [6550 ft]), primarily on igneous substrates; in Terrell County under <i>Quercus fusiformis</i> mottes on terraces of spring-fed perennial streams, draining on otherwise rather xeric limestone landscape; on the Callahan Divide (Taylor County), the White Rock Escarpment (Dallas County), and the Edwards Plateau in oak-juniper woodlands on limestone slopes; in Gillespie County on igneous substrates of the Llano Uplift; flowering June-September; individual plants do not usually bloom in successive years	No	No Impact	Lack of slopes and intermittent, rocky creek beds in canyons within project area.
Wright's milkvetch <i>Astragalus wrightii</i>	—	SGCN	Global Rank: G3; Habitat description is not available at this time.	No	No Impact	Lack of suitable habitat in the project area.

E – State or Federal Listed Endangered
 T – State or Federal Listed Threatened
 C – Federal Candidate for Listing
 DL – Federally Delisted
 PT- Proposed Federal Listed Threatened
 “—” – No designation occurring within identified county
 SGCN – Rare, but with no regulatory listing status
 “*” – TPWD T&E species list indicates species could be present in identified county; however, USFWS T&E species list does not indicate a listing status for the species in the county

Sources: U.S. Fish & Wildlife Service (June 3, 2019), Texas Parks & Wildlife Department, Wildlife Division, Diversity and Habitat Assessment Programs, County Lists of Texas Special Species (April 18, 2019 version), and field investigation (July 24, 2018).

ATTACHMENT E

NDD EOID LIST AND TRACKED MANAGED AREAS



- | | |
|--------------------------|----------------------------|
| Project Location | Heller's False Gromwell |
| 1.5 - Mile Buffer | Texas Almond |
| Buckley's Fluffgrass | Texas Gartersnake |
| Glass Mountain Coralroot | Vertisol Blackland Prairie |



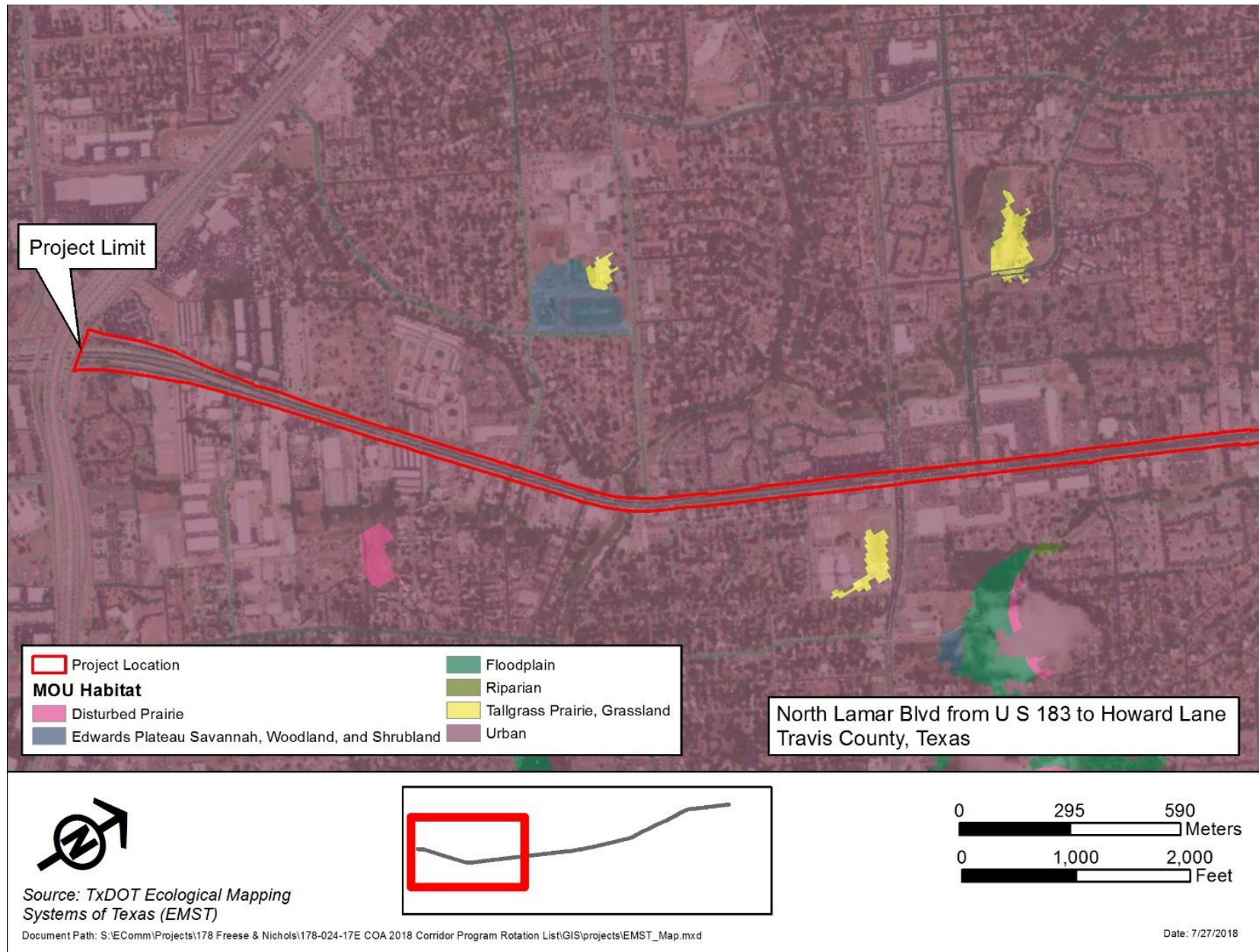
Source: TPWD Texas Natural Diversity Database

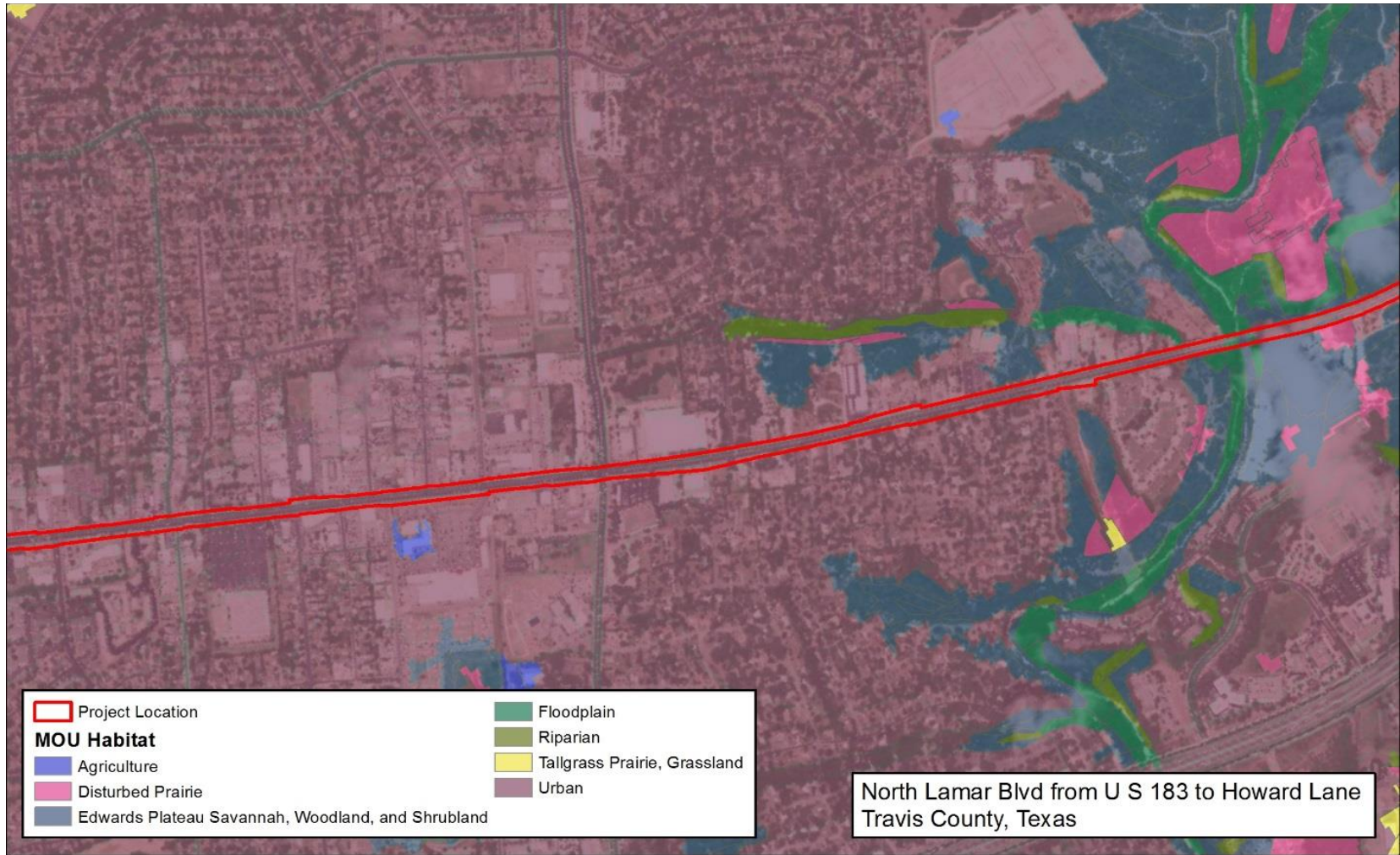
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Date: 7/30/2018

ATTACHMENT F

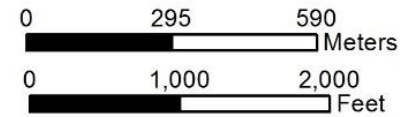
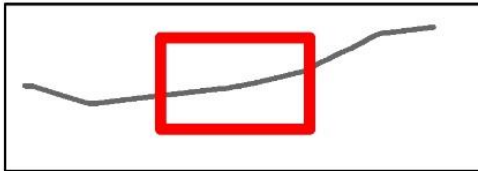
EMST PROJECT AREA MAP AND SUMMARY TABLE



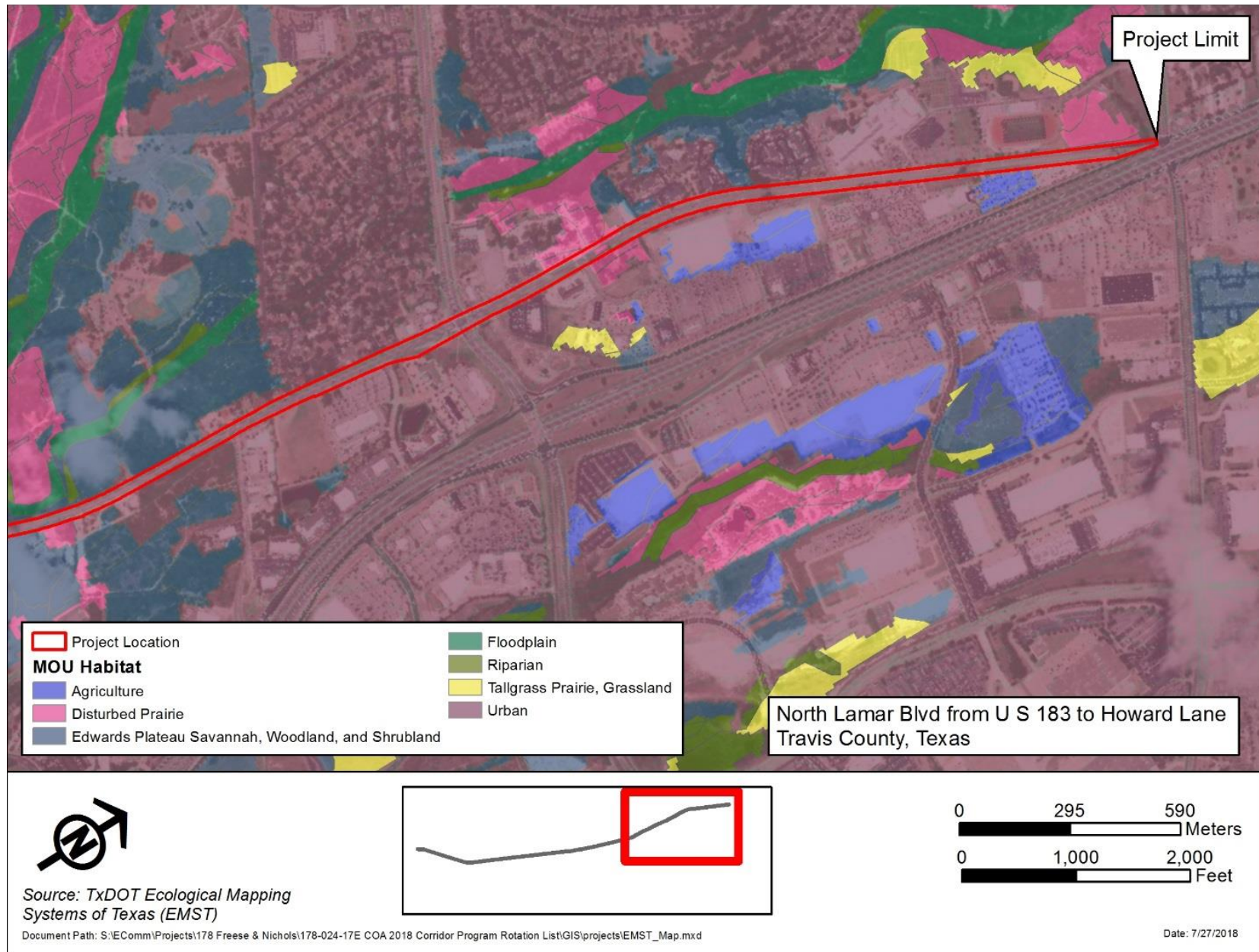


Source: TxDOT Ecological Mapping
Systems of Texas (EMST)

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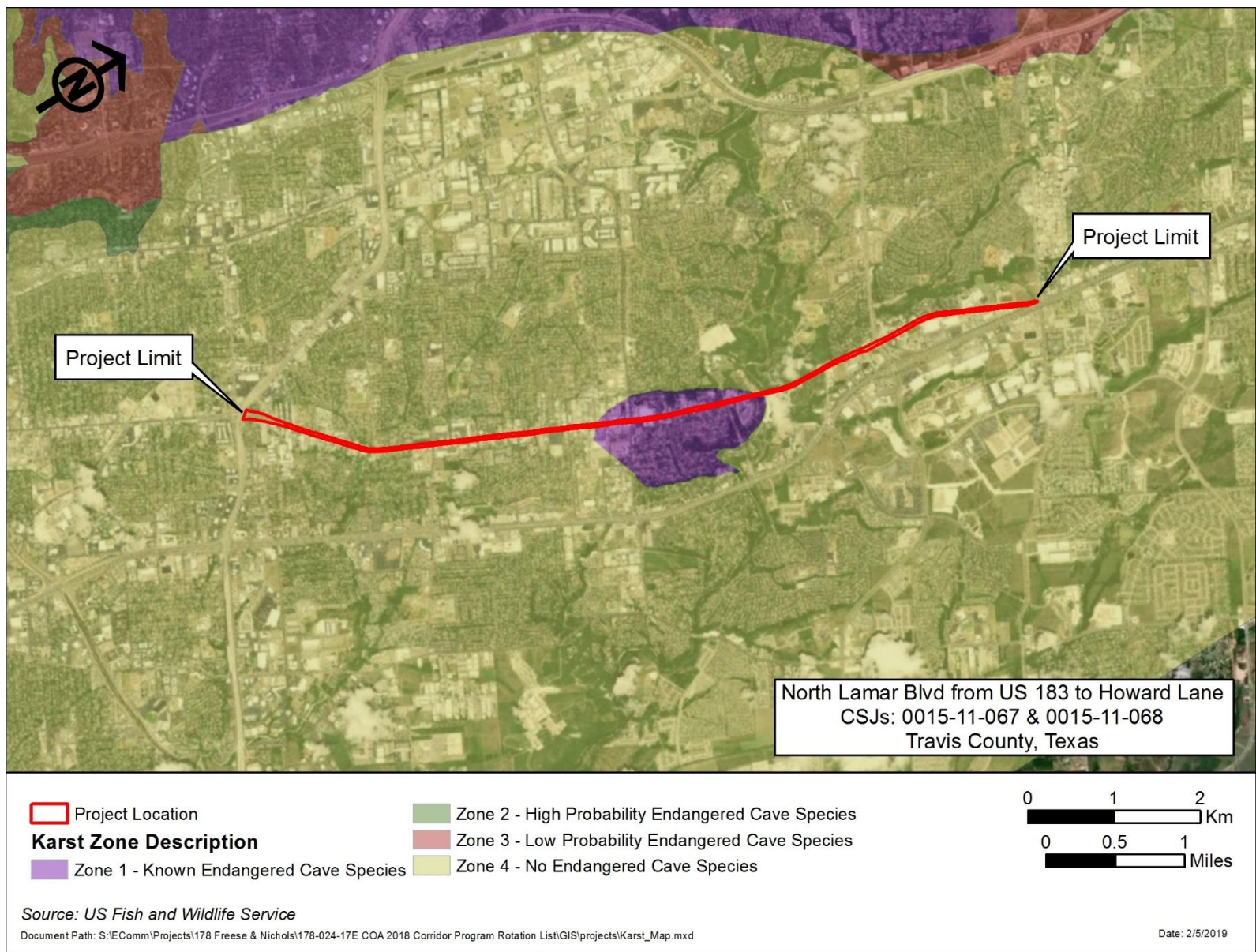
Date: 7/27/2018



EMST Habitat Type	Acres	Observed Habitat Type	Acres
Disturbed Prairie	1.10	Disturbed Prairie	1.10
Edwards Plateau Savannah, Woodland, and Shrubland	0.69	Edwards Plateau Savannah, Woodland, and Shrubland	0.69
Floodplain	0.41	Floodplain	0.41
Urban	83.12	Urban	83.12
Total	85.32		85.32

ATTACHMENT G

KARST ZONE MAP



ATTACHMENT H

TPWD SGCN List

TEXAS BLACKLAND PRAIRIES SPECIES OF GREATEST CONSERVATION NEED						
Scientific Name	Common Name	Status		Abundance Ranking		General Habitat Type(s) in Texas These are VERY broad habitat types as a starting place
		Federal	State	Global	State	
MAMMALS						
<i>Blarina hylophaga plumblea</i>	Elliot's short-tailed shrew			G5T1Q	S1	Savanna/Open Woodland
<i>Geomys attwateri</i>	Attwater's pocket gopher			G4	S4	Shrubland
<i>Lutra canadensis</i>	River otter			G5	S4	Riparian
<i>Mustela frenata</i>	Long-tailed weasel			G5	S5	Forest, Woodland, Desert Scrub, Shrubland, Savanna/Open Woodland
<i>Myotis austroriparius</i>	Southeastern myotis			G3G4	S3	Caves/Karst, Forest, Riparian
<i>Myotis velifer</i>	Cave myotis			G5	S4	Caves/Karst
<i>Puma concolor</i>	Mountain lion			G5	S2	Forest, Woodland, Desert Scrub, Shrubland, Savanna/Open Woodland, Riparian
<i>Spilogale putorius</i>	Eastern spotted skunk			G4T	S4	Savanna/Open Woodland, Grassland
<i>Sylvilagus aquaticus</i>	Swamp rabbit			G5	S5	Riparian, Freshwater Wetland
<i>Tadarida brasiliensis</i>	Brazilian free-tailed bat			G5	S5	Cave/Karst, Artificial Refugia
<i>Taxidea taxus</i>	American badger			G5	S5	Grassland, Desert scrub, Woodland, Savanna/Open Woodland, Forest
<i>Ursus americanus</i>	Black bear	SAT	T	G5	S3	Forest, Woodland, Savanna/Open Woodland, Desert Scrub, Shrubland
BIRDS						
<i>Anas acuta</i>	Northern Pintail			G5	S3B,S5N	Lacustrine, Freshwater Wetland, Saltwater Wetland, Coastal, Marine
<i>Colinus virginianus</i>	Northern Bobwhite			G5	S4B	Grassland, Shrubland, Savanna/Open Woodland
<i>Tympanuchus cupido</i>	Greater Prairie-Chicken (Interior)			G4	S1B	Grassland
<i>Meleagris gallopavo</i>	Wild Turkey			G5	S5B	Shrubland, Savanna/Open Woodland, Forest, Riparian, Agricultural
<i>Ixobrychus exilis</i>	Least Bittern			G5	S4B	Lacustrine, Freshwater Wetland, Saltwater Wetland, Estuary
<i>Egretta thula</i>	Snowy Egret			G5	S5B	Riparian, Riverine, Lacustrine, Freshwater Wetland,

						Saltwater Wetland, Estuary, Coastal, Cultural Aquatic
<i>Egretta caerulea</i>	Little Blue Heron			G5	S5B	Riparian, Riverine, Lacustrine, Freshwater Wetland, Saltwater Wetland, Estuary, Coastal, Cultural Aquatic
<i>Butorides virescens</i>	Green Heron			G5	S5B	Riparian, Riverine, Lacustrine, Freshwater Wetland, Cultural Aquatic
<i>Mycteria americana</i>	Wood Stork		T	G4	SHB,S2N	Riverine, Freshwater wetland
<i>Ictinia mississippiensis</i>	Mississippi Kite			G5	S4B	Woodland, Forest, Riparian, Developed: Urban/Suburban/ Rural
<i>Haliaeetus leucocephalus</i>	Bald Eagle			G5	S3B,S3N	Riparian, Lacustrine, Freshwater Wetland, Saltwater Wetland
<i>Circus cyaneus</i>	Northern Harrier			G5	S2B,S3N	Grassland, Shrubland
<i>Buteo lineatus</i>	Red-shouldered Hawk			G5	S4B	Woodland, Forest, Riparian, Freshwater Wetland
<i>Pluvialis dominica</i>	American Golden-Plover			G5	S3	Grassland, Freshwater Wetland, Agricultural
<i>Charadrius montanus</i>	Mountain Plover	PT		G3	S2	Agricultural, Grassland
<i>Scolopax minor</i>	American Woodcock			G5	S2B,S3N	Woodland, Forest, Riparian
<i>Sternula antillarum</i>	Least Tern	LE*	E*	G4	S3B	Riverine, Lacustrine, Freshwater Wetland, Saltwater Wetland, Estuary, Coastal, Marine, Developed: Industrial
<i>Asio flammeus</i>	Short-eared Owl			G5	S4N	Grassland, Shrubland, Agricultural
<i>Caprimulgus carolinensis</i>	Chuck-will's-widow			G5	S3S4B	Woodland, Forest, Riparian
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker			G5	S3B	Savanna/Open Woodland, Woodland, Forest, Riparian, Developed: Urban/Suburban/Rural
<i>Dryocopus pileatus</i>	Pileated Woodpecker			G5	S4B	Savanna/Open Woodland, Woodland, Forest, Riparian, Developed: Urban/Suburban/Rural
<i>Tyrannus forficatus</i>	Scissor-tailed Flycatcher			G5	S3B	Desert Scrub, Grassland, Shrubland, Agricultural, Developed
<i>Lanius ludovicianus</i>	Loggerhead Shrike			G4	S4B	Desert Scrub, Grassland, Shrubland, Savanna/Open Woodland, Agricultural, Developed
<i>Vireo bellii</i>	Bell's Vireo			G5	S3B	Desert scrub, Shrubland, Riparian
<i>Poecile carolinensis</i>	Carolina Chickadee			G5	S5B	Woodland, Forest, Riparian, Developed: Urban/Suburban/Rural
<i>Thryomanes bewickii (bewickii)</i>	Bewick's Wren			G5	S5B	Shrubland, Savanna/Open Woodland, Woodland,

						Developed: Urban/Suburban/Rural
<i>Cistothorus platensis</i>	Sedge Wren			G5	S4	Grassland, Freshwater Wetland
<i>Hylocichla mustelina</i>	Wood Thrush			G5	S4B	Woodland, Forest, Riparian
<i>Anthus spragueii</i>	Sprague's Pipit	C		G4	S3N	Barren/Sparse Vegetation, Grassland, Shrubland, Agricultural
<i>Dendroica dominica</i>	Yellow-throated Warbler			G5	S4B	Woodland, Forest, Riparian
<i>Protonotaria citrea</i>	Prothonotary Warbler			G5	S3B	Woodland, Forest, Riparian, Lacustrine, Freshwater Wetland
<i>Limnothlypis swainsonii</i>	Swainson's Warbler			G4	S3B	Woodland, Forest, Riparian
<i>Seiurus motacilla</i>	Louisiana Waterthrush			G5	S3B	Woodland, Forest, Riparian
<i>Oporornis formosus</i>	Kentucky Warbler			G5	S3B	Woodland, Forest
<i>Spizella pusilla</i>	Field Sparrow			G5	S5B	Grassland, Shrubland, Savanna/Open Woodland
<i>Ammodramus savannarum</i>	Grasshopper Sparrow			G5	S3B	Grassland, Agricultural
<i>Chondestes grammacus</i>	Lark Sparrow			G5	S4B	Grassland, Shrubland, Savanna/Open Woodland
<i>Ammodramus henslowii</i>	Henslow's Sparrow			G4	S2S3N, S XB	Grassland, Savanna/Open Woodland
<i>Ammodramus leconteii</i>	Le Conte's Sparrow					Grassland
<i>Zonotrichia querula</i>	Harris's Sparrow			G5	S4	Shrubland, Agricultural
<i>Calcarius mccownii</i>	McCown's Longspur			G4	S4	Grassland, Agricultural
<i>Calcarius pictus</i>	Smith's Longspur					Grassland, Agricultural
<i>Piranga rubra</i>	Summer Tanager			G5	S5B	Savanna/Open Woodland, Woodland, Forest, Riparian, Developed: Urban/Suburban/Rural
<i>Passerina ciris</i>	Painted Bunting			G5	S4B	Shrubland, Agricultural
<i>Spiza americana</i>	Dickcissel			G5	S4B	Grassland, Agricultural
<i>Sturnella magna</i>	Eastern Meadowlark			G5	S5B	Grassland, Shrubland, Savanna/Open Woodland
<i>Euphagus carolinus</i>	Rusty Blackbird			G4	S3	Woodland, Forest, Riparian, Lacustrine, Freshwater Wetland
<i>Icterus spurius</i>	Orchard Oriole			G5	S4B	Shrubland, Savanna/Open Woodland, Woodland, Riparian
REPTILES AND AMPHIBIANS						
<i>Anaxyrus (Bufo) woodhousii</i>	Woodhouse's toad			G5	SU	Woodland, Forest, Freshwater Wetland
<i>Apalone mutica</i>	smooth softshell turtle					Riparian, Riverine, Lacustrine, Freshwater Wetland
<i>Apalone spinifera</i>	spiny softshell turtle					Riparian, Riverine, Lacustrine, Freshwater Wetland

<i>Cheylydra serpentina</i>	Common snapping turtle					Riparian, Riverine
<i>Crotalus atrox</i>	Western diamondback rattlesnake				S4	Barren/Sparse Vegetation, Desert Scrub, Grassland, Shrubland, Savanna, Woodland, Caves/Karst
<i>Crotalus horridus</i>	Timber (Canebrake) Rattlesnake		T	G4	S4	Woodland, Forest, Riparian
<i>Graptemys caglei</i>	Cagle's map turtle		T	G3	S1	Riparian, Riverine
<i>Graptemys versa</i>	Texas map turtle			G4	SU	Riparian, Riverine
<i>Heterodon nasicus</i>	Western hognosed snake					Desert Scrub, Grassland, Shrubland
<i>Macrochelys temminckii</i>	alligator snapping turtle		T	G3G4	S3	Riparian, Riverine, Cultural Aquatic
<i>Ophisaurus attenuatus</i>	western slender glass lizard					Grassland, Savanna
<i>Phrynosoma cornutum</i>	Texas horned lizard		T	G4G5	S4	Desert Scrub, Grassland, Savanna
<i>Pseudacris streckeri</i>	Strecker's Chorus Frog			G5	S3	Grassland, Savanna, Woodland, Riparian, Cultural Aquatic, Freshwater Wetland
<i>Sistrurus catenatus</i>	massasauga					Grassland, Barren/Sparse Vegetation, Shrubland, Coastal
<i>Terrapene carolina</i>	Eastern box turtle			G5	S3	Grasslands, Savanna, Woodland
<i>Terrapene ornata</i>	Ornate box turtle			G5	S3	Grassland, Barren/Sparse Vegetation, Desert Scrub, Savanna, Woodland
<i>Thamnophis sirtalis annectans</i>	Texas Garter Snake (Eastern/Texas/ New Mexico)			G5	S2	Riparian, around lacustrine and cultural aquatic sites
<i>Trachemys scripta</i>	Red-eared slider					Riparian, Riverine, Lacustrine, Freshwater Wetland, Cultural Aquatic
FRESHWATER FISHES						
<i>Anguilla rostrata</i>	American eel			G4	S5	streams and reservoirs in drainages connected to marine environments
<i>Atractosteus spatula</i>	alligator gar					near surface habitats in slack water and backwater habitats of rivers. Preferred pool, pool-bank snag, pool-channel snag, pool-snag complex, pool-edge, and pool-vegetation habitat
<i>Cycleptus elongatus</i>	Blue sucker		T	G3G4	S3	large, deep rivers, and deeper zones of lakes
<i>Etheostoma fonticola</i>	Fountain darter	LE	E	G1	S1	Thermally constant (21-24 °C) springs and the upper San Marcos (Hays Co.) and Comal

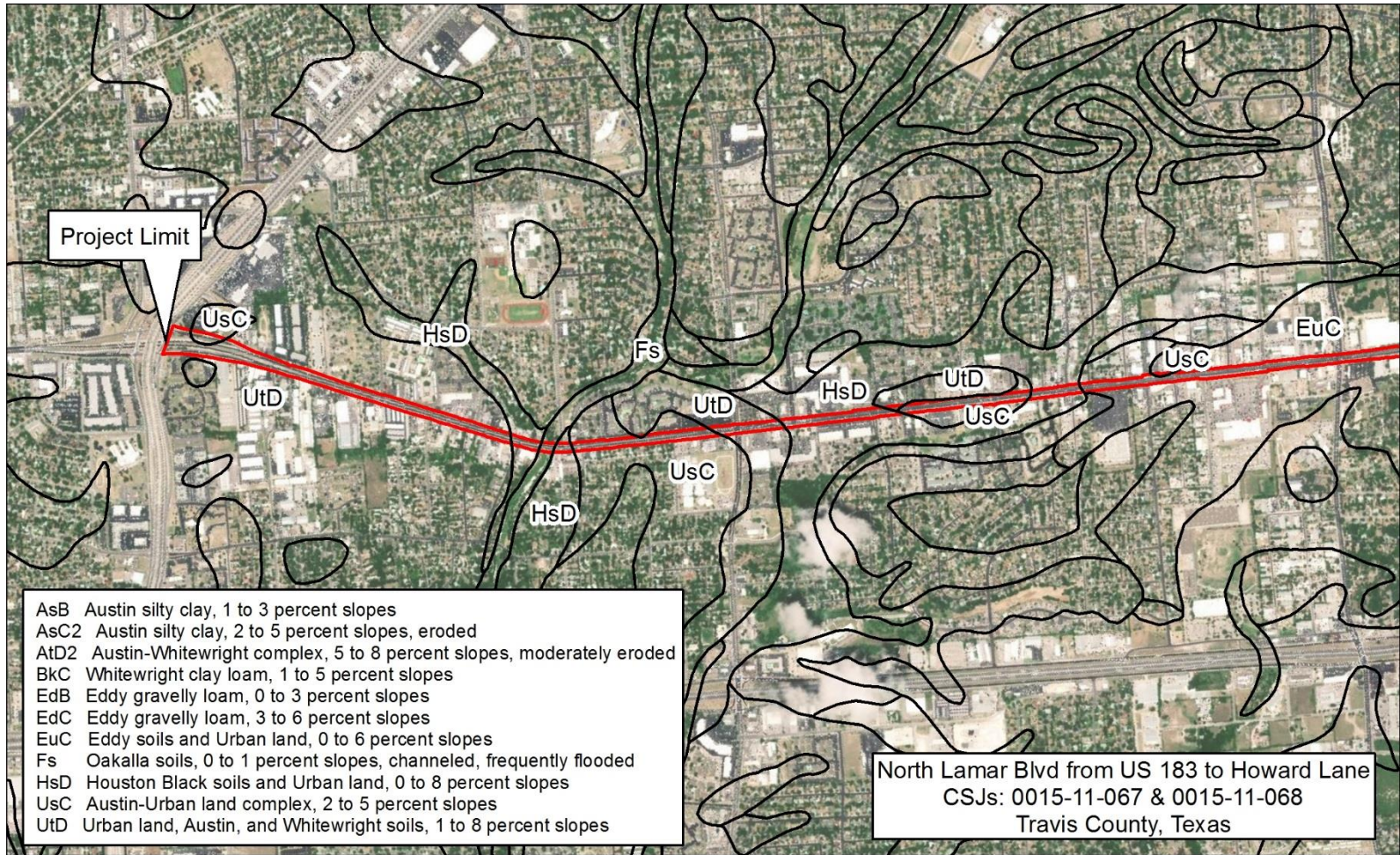
						(Comal Co.) rivers, usually in dense beds of <i>Vallisneria</i> , <i>Elodia</i> , <i>Ludwigia</i> and other aquatic plants; substrate normally mucky
<i>Macryhbopsis storeriana</i>	Silver chub					Broad rivers with low gradient which flow through old mature valley; bottoms gravel to silt, but more common over silt or mud, turbid water with very soft sand/silt substrate Normally inhabits pools, will move to riffle if siltation is heavy; when large streams very turbid or depositing unusually large amounts of silt, will temporarily migrate into clearer streams of higher gradients; when waters were very clear individuals move to deeper water
<i>Micropterus treculii</i>	Guadalupe bass			G3	S3	small lentic environments; commonly taken in flowing water
<i>Notropis atrocaudalis</i>	Blackspot shiner					more abundant near headwaters; runs and pools over all types of substrates, generally avoiding areas of backwater and swiftest currents
<i>Notropis bairdi</i>	Red River shiner					turbid waters of broad, shallow channels of main stream, over bottom mostly of silt and shifting sand; streambeds with widely fluctuating flows subject to high summer temperatures, high rates of evaporation, and high concentrations of dissolved solids; tolerant of high salinities
<i>Notropis buccula</i>	Small eye shiner	C		G2Q	S2	turbid waters of broad, sandy channels of main stream, over substrate consisting mostly of shifting sand; broad condition tolerances (turbidity, salinity, oxygen).
<i>Notropis chalybaeus</i>	Ironcolor shiner					small to medium sized streams that drain pine woodlands; acid, tannin-stained, non-turbid sluggish Coastal Plain streams and rivers of low to moderate gradient; often at the upstream ends of pools, with a moderate to sluggish current, and sand, mud, silt, or detritus substrata; usually associated with aquatic vegetation; in the San Marcos River (Hays Co.), a disjunct population is restricted to clear, spring-fed

						waters with abundant aquatic vegetation
<i>Notropis oxyrhynchus</i>	Sharpnose shiner	C		G3	S3	Moderate current velocities and depths, sand bottom
<i>Notropis potteri</i>	Chub shiner		T	G4	S3	turbid, flowing water with silt or sand substrate; tolerant of high salinities
<i>Notropis shumardi</i>	Silverband shiner					Large rivers, smaller tributaries and oxbow lakes that frequently reconnect to Brazos River mainstem; main channel with moderate to swift current velocities and moderate to deep depths; associated with turbid water over silt, sand, and gravel; tolerant of high turbidity
<i>Percina apristis</i>	Guadalupe darter					riffles; most common under or around boulders in the main current; moderately turbid water; absent in collections from the clearest waters tributary to the Guadalupe, namely spring heads and the main river west of Kerrville
<i>Polyodon spathula</i>	Paddlefish		T	G4	S3	Large river systems and tributaries; deep water channel habitats; low-gradient areas of moderate to large-sized rivers, sluggish pools, backwaters, bayous, and oxbows with abundant zooplankton; large reservoirs if connected to/can access free-flowing streams in the spring for spawning
<i>Satan eurystomus</i>	Widemouth blindcat		T	G1	S1	Karst: Subterranean waters
<i>Trogloglanis pattersoni</i>	Toothless blindcat		T	G1	S1	Karst: Subterranean waters
INVERTEBRATES						
<i>Bombus pensylvanicus</i>	American bumblebee			GU	SU*	Grassland, Savanna/Open Woodland
<i>Chimarra holzenthali</i>	Holzenthali's Philopotamid caddisfly			G1G2	S1	Riparian, Riverine
<i>Cotinis boylei</i>	A scarab beetle			G2*	S2*	Grassland, Shrubland, Woodland
<i>Nicrophorus americanus</i>	American Burying Beetle	LE		G1	S1	Grassland, Savanna/Open Woodland
<i>Potamilus amphichaenus</i>	Texas heelsplitter		T	G1G2	S1	Riverine
<i>Procambarus regalis</i>	Regal burrowing crayfish			G2G3	S2?*	Freshwater Wetland, Grassland
<i>Procambarus steigmani</i>	Parkhill prairie crayfish			G1G2	S1S2*	Freshwater Wetland, Grassland

<i>Pseudocentropiloides morihari</i>	A mayfly			G2G3	S2?*	Riverine, Riparian
<i>Sphinx eremitoides</i>	Sage sphinx			G1G2	S1?*	Grassland
<i>Susperatus tonkawa</i>	A mayfly			G1	S1*	Riparian, Riverine
PLANTS						
<i>Agalinis densiflora</i>	Osage Plains false foxglove			G3	S2	Savanna/Open Woodland - Outcrops
<i>Astragalus reflexus</i>	Texas milk vetch			G3	S3	Savanna/Open Woodland
<i>Calopogon oklahomensis</i>	Oklahoma grass pink			G3	S1S2	Savanna/Open Woodland; Grassland; Freshwater Wetland
<i>Carex edwardsiana</i>	canyon sedge			G3G4 S3S4	S3S4	Woodland (slopes above Riparian)
<i>Carex shinersii</i>	Shinner's sedge			G3?	S2	Grassland
<i>Crataegus dallasiana</i>	Dallas hawthorn			G3Q	S3	Riparian (creeks in the Blackland Prairie)
<i>Cuscuta exaltata</i>	tree dodder			G3	S3	Woodland
<i>Dalea hallii</i>	Hall's prairie-clover			G3	S3	Savanna/Open Woodland; Grassland
<i>Echinacea atrorubens</i>	Topeka purple-coneflower			G3	S3	Savanna/Open Woodland
<i>Hexalectris nitida</i>	Glass Mountains coral-root			G3	S3	Woodland
<i>Hexalectris warnockii</i>	Warnock's coral-root			G2G3	S2	Woodland
<i>Hymenoxys pygmaea</i>	Pygmy prairie dawn			G1	S1	Barren/Sparse Vegetation with Grassland matrix (saline prairie)
<i>Liatris glandulosa</i>	glandular gay-feather			G3	S3	Savanna/Open Woodland
<i>Paronychia setacea</i>	bristle nailwort			G3	S3	Savanna/Open Woodland
<i>Phlox oklahomensis</i>	Oklahoma phlox			G3	SH	Savanna/Open Woodland
<i>Physaria engelmannii</i>	Engelmann's bladderpod			G3	S3	Savanna/Open Woodland
<i>Polygonella parksii</i>	Parks' jointweed			G2	S2	Savanna/Open Woodland (sandhills); Grassland
<i>Prunus texana</i>	Texas peachbush			G3G4	S3S4	Savanna/Open Woodland; Grassland
<i>Thalictrum texanum</i>	Texas meadow-rue			G2	S2	Savanna/Open Woodland; Riparian (bottomland forest)
<i>Zizania texana</i>	Texas wild rice	LE	E	G1	S1	Riverine (spring-fed, clear, thermally constant, moderate current, sand to gravel substrate)

ATTACHMENT I

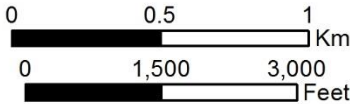
NRCS WEB SOIL SURVEY MAP



- AsB Austin silty clay, 1 to 3 percent slopes
- AsC2 Austin silty clay, 2 to 5 percent slopes, eroded
- AtD2 Austin-Whitwright complex, 5 to 8 percent slopes, moderately eroded
- BKc Whitwright clay loam, 1 to 5 percent slopes
- EdB Eddy gravelly loam, 0 to 3 percent slopes
- EdC Eddy gravelly loam, 3 to 6 percent slopes
- EuC Eddy soils and Urban land, 0 to 6 percent slopes
- Fs Oakalla soils, 0 to 1 percent slopes, channeled, frequently flooded
- HsD Houston Black soils and Urban land, 0 to 8 percent slopes
- UsC Austin-Urban land complex, 2 to 5 percent slopes
- UtD Urban land, Austin, and Whitwright soils, 1 to 8 percent slopes

North Lamar Blvd from US 183 to Howard Lane
 CSJs: 0015-11-067 & 0015-11-068
 Travis County, Texas

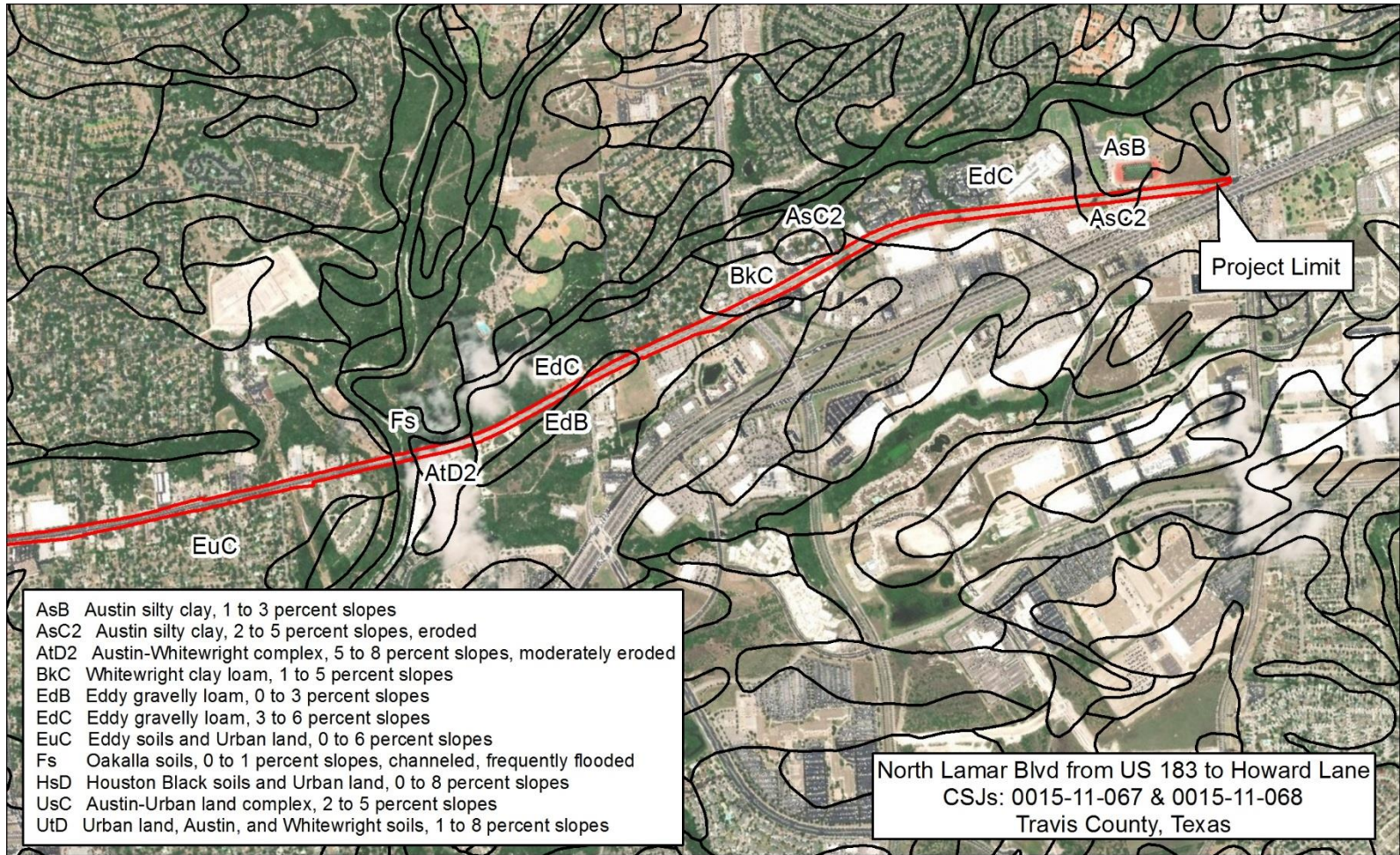
Project Location



Source: 2018 USDA NRCS Digital Soils Database

Document Path: S:\EComm\Projects\178 Freese & Nichols\178-024-17E COA 2018 Corridor Program Rotation List\GIS\projects\Soils_Map.mxd

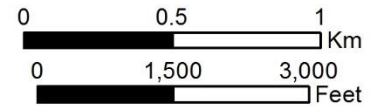
Date: 12/20/2018



- AsB Austin silty clay, 1 to 3 percent slopes
- AsC2 Austin silty clay, 2 to 5 percent slopes, eroded
- AtD2 Austin-Whitewright complex, 5 to 8 percent slopes, moderately eroded
- BkC Whitewright clay loam, 1 to 5 percent slopes
- EdB Eddy gravelly loam, 0 to 3 percent slopes
- EdC Eddy gravelly loam, 3 to 6 percent slopes
- EuC Eddy soils and Urban land, 0 to 6 percent slopes
- Fs Oakalla soils, 0 to 1 percent slopes, channeled, frequently flooded
- HsD Houston Black soils and Urban land, 0 to 8 percent slopes
- UsC Austin-Urban land complex, 2 to 5 percent slopes
- UtD Urban land, Austin, and Whitewright soils, 1 to 8 percent slopes

North Lamar Blvd from US 183 to Howard Lane
 CSJs: 0015-11-067 & 0015-11-068
 Travis County, Texas

Project Location



Source: 2018 USDA NRCS Digital Soils Database

Document Path: S:\EComm\Projects\178 Freese & Nichols\178-024-17E COA 2018 Corridor Program Rotation List\GIS\projects\Soils_Map.mxd

Date: 12/20/2018

ATTACHMENT J

PHOTOS



View of Little Walnut Creek and North Lamar Boulevard facing northeast standing on the south bank on July 24, 2018.



View of Little Walnut Creek facing west from bridge on North Lamar Boulevard on July 24, 2018.



Typical urban setting near North Lamar Boulevard at Payton Gin Road facing northeast on July 24, 2018.



View of a concrete lined unnamed tributary to Walnut Creek facing northeast on July 24, 2018 near the entrance to Walnut Creek Baptist Church.



View of Walnut Creek and North Lamar Boulevard facing northeast on July 24, 2018.



View of Walnut Creek facing east from under North Lamar Boulevard on July 24, 2018.



Vegetation setting along Walnut Creek's south bank facing east towards North Lamar Boulevard on July 24, 2018.



View facing south near the intersection of North Lamar Boulevard and Walnut Creek Park Road on July 24, 2018.



View facing north near the intersection of North Lamar Boulevard and Walnut Creek Park Road on July 24, 2018.



Vegetation along North Lamar Boulevard near Walnut Creek Park Road on July 24, 2018.



Vegetation along North Lamar Boulevard near Walnut Creek Park Road on July 24, 2018.



Vegetation along North Lamar Boulevard near Walnut Creek Park Road on July 24, 2018.



Form Species Analysis

Project Name: **COA North Lamar Corridor Project**

CSJ(s): **0015-11-067, 0015-11-068**

County(ies): **Travis**

Date Analysis Completed: **12/2/19**

Prepared by: **Troy Olney**

[Click here to enter text.](#)

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 under the Endangered Species Act.
- This project requires consultation with or authorization from the USFWS under the Endangered Species Act.

For a project that requires federal authorization or approval, if the completed project-specific species analysis spreadsheet indicates, "May affect," for any 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 consists solely of maintenance activities that are of a type or type(s) covered by the Maintenance Program Environmental Assessment, and therefore no coordination with TPWD is required.
- This project does not consist solely of maintenance activities that are of a type or type(s) covered by the Maintenance Program Environmental Assessment, and therefore a Tier I Site Assessment is required.

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 nest 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**.