

## **APPENDIX G**

### **Analysis of Jeopardy and Destruction or Adverse Modification of Critical Habitat for Federally Listed Species**

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## TECHNICAL MEMORANDUM

To: Erik Huebner, Environmental Affairs, Lower Colorado River Authority (LCRA), on behalf of LCRA Transmission Services Corporation (LCRA TSC)

CC: Lyn Clancy, LCRA Managing Associate General Counsel, on behalf of LCRA TSC  
Alan Glen, Nossaman LLP

From: Amanda Aurora, SWCA Environmental Consultants

Date: July 5, 2019

Re: LCRA TSC Transmission System Habitat Conservation Plan – Analysis of Jeopardy and Destruction or Adverse Modification of Critical Habitat

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LCRA Transmission Services Corporation (LCRA TSC) has prepared a draft Habitat Conservation Plan (HCP) that supports an application for an incidental take permit (ITP) under the Endangered Species Act (ESA) that will be submitted to the U.S. Fish and Wildlife Service (USFWS).<sup>1</sup> The Plan Area for this HCP includes 241 of the 254 counties in Texas (see Figure 1 of the HCP). The HCP addresses LCRA TSC activities that involve the construction, operation, upgrade, decommissioning, repair and maintenance of electrical transmission lines, substations, access roads, and related infrastructure and facilities within the Plan Area (the LCRA TSC Activities). However, only those specific instances of one or more LCRA TSC Activities performed within a specific geographic area during a specific time and for which LCRA TSC desires to use the HCP and ITP to authorize incidental take of certain Covered Species become the Covered Activities that would be subject to the provisions of the HCP and ITP.

USFWS identifies 107 federally threatened or endangered species occur or may occur within the Plan Area (see Table 1; there are no species proposed for listing at the time of this writing). Designated critical habitats (as defined in Section 3(5)(A) of the ESA) associated with 38 federally listed species and proposed critical habitats associated with 2 federally listed species also occur within the Plan Area (see Table 1).

Section 7(a)(2) of the ESA (Section 7) requires that federal agencies (hereafter, the “action agencies”) ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species in the wild or result in the destruction or adverse modification of critical habitat (16 USC §1536(a)(2)), and the ESA and its implementing regulations further require that where a federal action may affect listed species or critical habitat, the action agencies consult with USFWS to meet their obligation under Section 7. USFWS considers its issuance of an ITP a federal action to which the

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<sup>1</sup> Capitalized or other defined terms used in this technical memorandum are defined in the Glossary to the LCRA TSC HCP.

consultation requirement of ESA Section 7 applies (USFWS and NMFS 2016). With respect to the issuance of ITPs, the USFWS functions as both the “action” agency and the “resource” agency, such that the USFWS consults with itself concerning the effects of its issuance of the ITP. According to the HCP Handbook, the consultation must include, among other things, an assessment of the impacts and likelihood of jeopardy and any adverse modification of Critical Habitat for all listed species (USFWS and NMFS 2016).

To assist the USFWS with its Section 7 consultation, this technical memorandum reviews whether the proposed issuance of the ITP is likely to jeopardize the continued existence of any listed species (excluding Covered Species); Covered Species (whether listed or not); or species proposed for listing. This technical memorandum also reviews whether the proposed issuance of the ITP is likely to result in the destruction or adverse modification of any designated or proposed critical habitat. The USFWS and NMFS encourage ITP applicants to provide such information in an HCP (USFWS and NMFS 2016:7–5 and 7–17).

## JEOPARDY ANALYSIS

Regulations implementing the ESA define the term “jeopardize the continued existence of” as meaning “to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species” (50 CFR §402.02). Therefore, as applied to the USFWS’ proposed issuance of an ITP, the jeopardy analysis essentially examines two, sequential tests:

1. The potential for Covered Activities to reduce the reproduction, numbers, or distribution of a listed species (Jeopardy Test 1), and, if so;
2. The potential for any such reductions in the reproduction, numbers, or distribution of a listed species to appreciably reduce the likelihood of both survival and recovery of that species in the wild (Jeopardy Test 2).

As described below and in Table 1 to this technical memorandum, the issuance of the ITP would not jeopardize the continued existence of any listed species; Covered Species (whether listed or not); or species proposed for listing.

## WILDLIFE SPECIES

The HCP uses a Habitat Surrogate to estimate and track incidental take using the acres of habitat that is directly or indirectly modified by a Covered Activity as a surrogate for the number of individuals actually taken. Incidental take associated with the Covered Activities, by way of killing, wounding, or harming individuals of listed wildlife species, has the potential to reduce the reproduction, numbers, or distribution of such species. Therefore, Jeopardy Test 1 for listed wildlife species may be reasonably approximated by a determination of whether incidental take is likely to occur because of the Covered Activities. LCRA TSC included as Covered Species in the HCP those listed wildlife species (and one additional unlisted wildlife species that has been petitioned for listing) for which the Covered Activities

are likely to cause incidental take.<sup>2</sup> LCRA TSC excluded certain listed karst invertebrate species that are included as covered species in other habitat conservation plans through which LCRA TSC may obtain coverage. The Covered Species meet Jeopardy Test 1 and warrant a review under Jeopardy Test 2.

LCRA TSC did not include as Covered Species those listed wildlife species that are unlikely to be incidentally taken by the Covered Activities or that are included as covered species in other habitat conservation plans through which LCRA TSC may obtain coverage. Listed wildlife species that are not likely to be incidentally taken by the Covered Activities do not meet Jeopardy Test 1, since individuals of these species are not likely to be killed, wounded, or harmed and, therefore, the species is not likely to experience a reduction in reproduction, numbers, or distribution. See Appendix B of the HCP for additional discussion about the selection of the Covered Species for the HCP. The HCP also includes commitments by LCRA TSC to implement General Minimization Measures applicable to all Covered Activities that provide assurances that the Covered Activities are not likely to incidentally take listed wildlife species that are not Covered Species (or any such take would be addressed through other ESA compliance options, such as another HCP).

For Covered Species, the HCP provides information to evaluate Jeopardy Test 2. The HCP includes an assessment of the impacts of the maximum amount of incidental take requested by LCRA TSC (see Chapter 5.3), identifies the maximum amount of Mitigation that LCRA TSC would implement to address incidental take (see Chapter 6.1.2), describes voluntary Avoidance Measures (see Chapter 6.2 and Appendix D), describes General and Species-specific Minimization Measures (see Chapter 6.4 and Appendix D), and provides guidance for implementing Mitigation (see Chapter 6.5 and Appendix D). The conservation benefits of these measures further decrease the potential for any appreciable reduction in the likelihood of both survival and recovery of any Covered Species in the wild.

Notably, the maximum amount of incidental take requested by LCRA TSC in the HCP, measured in terms of a Habitat Surrogate, does not exceed 3% of the total estimated amount of potential habitat for any Covered Species, either within the Plan Area or across the entire range of the species. In most cases, the requested amount of take does not exceed 1% of the total estimated amount of potential habitat for a Covered Species. Therefore, the amount of take that would be authorized by the ITP is in each case a very small proportion of the total amount of potential habitat for each Covered Species in the Plan Area or across its range, indicating that the potential for authorized incidental take to appreciably reduce the likelihood of both survival and recovery of that species in the wild is unlikely—even in the absence of any conservation measures.

For federally listed wildlife species and the unlisted Covered Species that may occur in the Plan Area, each is either:

- 1) not likely to experience a reduction in its reproduction, numbers, or distribution (i.e., incidental take is not likely) or

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<sup>2</sup> LCRA TSC excluded from the Covered Species of the HCP certain listed karst invertebrate species that are included as covered species in other habitat conservation plans through which LCRA TSC may obtain coverage.

- 2) the reduction of its reproduction, numbers, or distribution (as measured by the Habitat Surrogate) affects such a small proportion of the total amount of available potential habitat and the adverse impacts of incidental take are further reduced by the conservation benefits of the HCP's Conservation Program,

that the issuance of the ITP would not reasonably be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of any such federally listed wildlife species in the wild.

Table 1 provides a brief review of the Jeopardy Tests for each federally listed wildlife species or unlisted Covered Species that may occur in the Plan Area.

## PLANT SPECIES

LCRA TSC did not include federally listed plants as Covered Species because: (1) LCRA TSC does not anticipate that the LCRA TSC Activities would violate the ESA with respect to listed plants on non-federal lands; (2) in the unlikely event that LCRA TSC Activities would occur on federal lands, effects to listed plants would be addressed pursuant to Section 7 in those specific instances; and (3) USFWS guidance states that because "[i]mpacts to plants do not fall under the definition of 'take'...[USFWS] cannot authorize incidental take of plants" (USFWS and NMFS 2016:7–2). Therefore, additional analysis is needed to address Jeopardy Test 1 for listed plants.

For most of the federally listed plant species that may occur in the Plan Area, destruction of individual plants is likely avoided due to the limited potential for exposure of the plant species to LCRA TSC Activities based on known range, distribution, or habitat of the species in relation to the likely locations of Covered Activities (see Appendix B and Chapter 4.3.2 of the HCP). Furthermore, occurrences of federally listed plants that do not overlap with the habitats of one or more Covered Species are not likely to be exposed to Covered Activities (i.e., a LCRA TSC Activity that is not likely to incidentally take a Covered Species would not become a Covered Activity in the HCP).

Table 1 identifies the federally listed plant species that may overlap with habitats for one or more Covered Species and that could, in certain circumstances, be exposed to Covered Activities and meet Jeopardy Test 1. This analysis relies on the general species information in Appendix B of the HCP, additional range information for listed species from the USFWS's Environmental Conservation Online System database (<https://ecos.fws.gov/ecp>; accessed between August 3 and August 5, 2018), and additional information about the Covered Species summarized in Appendix D of the HCP and SWCA (2018).

For the federally listed plant species that might be exposed to Covered Activities, the likelihood that any potential destruction of individuals would appreciably reduce the likelihood of both survival and recovery of that species in the wild (Jeopardy Test 2) is first substantially reduced by the limited footprint of subsurface disturbances associated with the Covered Activities. Table 7 of the HCP describes the typical extents of subsurface disturbances associated with LCRA TSC Facilities. These subsurface disturbances include modifications to the soil surface and soil profile by actions such as surface grading or excavation that could destroy individuals of a federally listed plant species, if present. LCRA TSC estimates the extent of subsurface disturbances over previously unmodified lands

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associated with its LCRA TSC Activities (only a portion of which will become Covered Activities), as affecting approximately 5,252 acres across the entire Plan Area (which covers nearly 163 million acres) over 30 years. This extent of subsurface disturbance is less than 0.005% of the acreage of the Plan Area or 1 acre of new subsurface disturbance for every 31,036 acres of the Plan Area. Furthermore, the linear nature and/or relatively small footprint of the LCRA TSC Activities (i.e., ROWs that are typically 120 feet wide and site-based Facilities that are typically 10 acres) means that these disturbances will be widely distributed across the landscape and not concentrated in any one area such that a particular population of a listed or proposed for listing plant species is likely to be substantially at risk of destruction.

Some individuals of listed or proposed for listing plant species could also be destroyed by surface disturbances associated with the LCRA TSC Activities, for example by being cut or trimmed during vegetation clearing or crushed by vehicles operating in ROWs. However, many plants can withstand occasional alteration of their physical forms as an adaptation to herbivory or periods of inhospitable weather like seasonal drought or freezing temperature. Therefore, it is reasonable to assume that most surface disturbances would present less of a risk to listed or proposed for listing plant species than subsurface disturbances, and that the LCRA TSC Activities overall present a relatively low risk for destroying a substantial number of individuals of a listed or proposed for listing plant species.

This already low risk is further decreased for those listed and proposed for listing plant species that are relatively common or numerous. The loss of a small proportion of the population of a relatively abundant plant species (i.e., populations with individuals numbering in the thousands to even millions) would not be expected to jeopardize the continued existence of that plant species. Similarly, the loss of one population of plants might have little or no effect on the fate of other populations in different locations.

For those listed plant species that may be exposed to Covered Activities (i.e., those that meet Jeopardy Test 1), the already unlikely destruction of a substantial number of individual plants during the conduct of Covered Activities is minimized by the application of General Minimization Measures (see HCP Chapter 6.4.1). These General Minimization Measures include a commitment by LCRA TSC when planning for and implementing Covered Activities—to the extent practicable—to avoid subsurface disturbances at previously documented localities of a listed or proposed for listing plant species and to minimize the impact of surface disturbances by implementing raised cutting or mowing heights in areas known to be occupied by such plant species. In circumstances where this is not practicable to implement such measures, then LCRA TSC will coordinate with USFWS in advance of the Covered Activity to identify and implement other practicable conservation measures that may be necessary to avoid jeopardizing the continued existence of the listed or proposed for listing plant species. LCRA TSC will consider the best available information on the reported distributions of listed or proposed for listing plant (i.e., the current baseline status of the species) in implementing these General Minimization Measures, such as may be available from the Texas Natural Diversity Database or USFWS reports. However, LCRA TSC does not expect to perform surveys for plant species when planning for Covered Activities.

Through a combination of lack of exposure to Covered Activities, the inherently low likelihood of significantly adverse population-level effects from the Covered Activities (e.g., widely distributed disturbances, small subsurface disturbance footprints), and the application of General Minimization

Measures, LCRA TSC does not believe that the Covered Activities will reduce the baseline status of any listed or proposed for listing plant species to the point where LCRA TSC would appreciably reduce the likelihood of both survival and recovery of that plant species in the wild. Therefore, the HCP reasonably avoids the potential for jeopardizing the continued existence of listed plant species.

## CRITICAL HABITAT ANALYSIS

USFWS regulations define “destruction or adverse modification of critical habitat” to mean “a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features” (50 CFR §402.02). The USFWS explains that this it is likely to conclude that destruction or adverse modification of critical habitat has occurred if “the action results in an alteration of the quantity or quality of the essential physical or biological features of designated critical habitat, or that precludes or significantly delays the capacity of that habitat to develop those features over time, and if the effect of the alteration is to appreciably diminish the value of critical habitat for the conservation of the species” (81 Federal Register 7216). Like the jeopardy analysis, the critical habitat analysis essentially involves the evaluation of two, sequential tests:

1. The potential for Covered Activities to directly or indirectly alter (or delay or preclude development of) the physical or biological features essential to the conservation of the listed species (Critical Habitat Test 1), and, if so;
2. The potential for any such alterations to appreciably diminish the value of critical habitat for the conservation of the listed species (Critical Habitat Test 2).

In general, Critical Habitat Test 1 can be assessed by determining if existing LCRA TSC Facilities occur within a unit of critical habitat and whether Covered Activities are likely to cross areas of critical habitat. It is not likely that the Covered Activities will directly or indirectly alter Critical Habitat under one or more of the following circumstances:

1. Critical habitat units do not currently contain LCRA TSC Facilities (note: LCRA TSC attempts to avoid placing Structures within critical habitat, when possible);
2. Critical habitat units are in areas that are not likely to receive much New Construction (see those parts of the Plan Area that are within the Outside ERCOT Activity Zone or Other Counties Activity Zone, described in Chapter 4.3.2 of the HCP);
3. Critical habitat units do not overlap with the habitat of a Covered Species (i.e., LCRA TSC Activities that do not impact the habitat of a Covered Species are unlikely to become Covered Activities); or
4. The configuration of the critical habitat units makes such areas readily avoidable (i.e., are small or narrow, such that the critical habitat unit may be spanned or otherwise avoided by micrositings).

Where Covered Activities may occur within and alter critical habitat, the HCP Conservation Program provides information to help assess Critical Habitat Test 2. The likelihood that the Covered Activities would appreciably diminish the value of critical habitat for the conservation of the associated listed species is reduced by those aspects of the HCP Conservation Program that promote the avoidance or



minimization of impacts to critical habitat (i.e., these measures strongly encourage LCRA TSC to limit the extent of disturbances within critical habitat, even if critical habitat cannot be completely avoided).

The HCP Conservation Program includes General Minimization Measures that are applicable to all Covered Activities that call for avoiding disturbances to the most essential components of critical habitat for Covered Species that are karst invertebrates, *Eurycea* salamanders, or aquatic invertebrates. LCRA TSC will avoid creating disturbances within 50 feet of Occupied or Assumed Occupied Karst Features and Spring Features, whether part of critical habitat or not, which substantially avoids or minimizes potentially adverse effects to those habitat features that are most strongly associated with species presence and that are most essential to their conservation. Similarly, other General Minimization Measures substantially avoid or minimize potentially adverse effects on wetland, riparian, and aquatic habitats—thereby benefiting critical habitats that incorporate such features, such as critical habitats for listed fish.

The species-specific portion of the HCP Conservation Program (see Appendix D of the HCP) also contains conservation measures that avoid or diminish the significance of potential alterations to critical habitat for other Covered Species. The HCP prescribes substantially greater Mitigation Ratios for disturbances within critical habitat for all of the applicable Covered Species except for the Houston toad (see HCP Chapter 6.6.8 and Appendix D). For the Houston toad, which has broadly defined critical habitat, the Special Cases Enrollment Scenario encourages the avoidance of important breeding habitat features (see HCP Appendix D) that substantially reduces the likelihood of Covered Activities appreciably reducing the value of critical habitat for this species.

For each species with designated or proposed Critical Habitat, Table 1 describes how the Covered Activities would not destroy or adversely modify Critical Habitat or proposed Critical Habitat for any listed species.

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Table 1. Jeopardy and Adverse Modification of Critical Habitat Tests

Ref. No.	Scientific Name	Common Name	Taxon	Federal Status	Jeopardy Analysis Test 1	Jeopardy Analysis Test 2	Likely to Jeopardize the Continued Existence of the Species?	Jeopardy Analysis Notes	Critical Habitat	Critical Habitat Analysis Test 1	Critical Habitat Analysis Test 2	Likely to Destroy or Adversely Modify Critical Habitat?	Critical Habitat Analysis Notes
1.	<i>Eurycea waterlooensis</i>	Austin blind salamander	Amphibians	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely as impacts to deep aquifer habitat is not expected and the application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Travis County with 1 Critical Habitat Unit containing 120 acres, including surface and subsurface components.	Yes	No	No	No existing LCRA TSC Facilities occur in Critical Habitat for this species, but existing Facilities are approximately 2 miles from Critical Habitat. Not a Covered Species due to the very low likelihood of modifying the deep aquifer habitat used by this species (see HCP Appendix B). Impacts to surface Critical Habitat are minimized by HCP General Minimization Measures related to waterway protection and avoidance of Occupied or Assumed Occupied Spring Features (see HCP Chapter 6.4.1).
2.	<i>Eurycea sosorum</i>	Barton Springs salamander	Amphibians	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 1% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures that include avoidance of Occupied or Assumed Occupied Spring Features, and Mitigation of up to 2 Conservation Credits (see HCP Chapter 6 and Appendix D).	No	N/A	N/A	N/A	
3.	<i>Notophthalmus meridionalis</i>	Black-spotted newt	Amphibians	Petitioned for Listing: Findings Not Yet Made	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
4.	<i>Eurycea robusta</i>	Blanco blind salamander	Amphibians	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
5.	<i>Eurycea latitans</i>	Cascade Caverns salamander	Amphibians	Petitioned for Listing with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
6.	<i>Eurycea tridentifera</i>	Comal blind salamander	Amphibians	Petitioned for Listing: Findings Not Yet Made	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
7.	<i>Eurycea sp. 8</i>	Comal Springs salamander	Amphibians	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
8.	<i>Eurycea naufragia</i>	Georgetown salamander	Amphibians	T	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.5% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures that include avoidance of Occupied or Assumed Occupied Spring Features, and Mitigation of up to 1 Conservation Credit (see HCP Chapter 6 and Appendix D).	Proposed in Williamson County as 14 units of Critical Habitat containing 1,031 acres with surface and subsurface components.	Yes	No	No	No LCRA TSC Facilities currently occur in Proposed Critical Habitat. Special Rule for this species strongly incentivizes avoidance of proposed Critical Habitat. HCP includes General Minimization Measures (including waterway protection and avoidance of Occupied or Assumed Occupied Spring Features) and Species-specific Minimization Measures and a Special Cases Enrollment Scenario for assessing greater amounts of Mitigation that further minimize any alterations to Proposed Critical Habitat (see HCP Chapter 6 and Appendix D). Proposed Critical Habitat is

Table 1. Jeopardy and Adverse Modification of Critical Habitat Tests

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													dispersed across 14 separate units, which isolate potential alterations to only the affected unit(s).
9.	<i>Anaxyrus (syn. Bufo) houstonensis</i>	Houston toad	Amphibians	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.1% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures, and Mitigation of up to 617 Conservation Credits (see HCP Chapter 6 and Appendix D).	Designated in Bastrop and Burleson Counties as 84,475 acres in 2 units.	Yes	No	No	Existing LCRA TSC Facilities occur in Critical Habitat for this species. HCP includes General and Species-specific Minimization Measures and a Special Cases Enrollment Scenario for assessing greater amounts of Mitigation for impacts around breeding ponds that minimize the magnitude of alterations to Critical Habitat (see HCP Chapter 6 and Appendix D).
10.	<i>Eurycea tonkawae</i>	Jollyville Plateau salamander	Amphibians	T	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.5% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures that include avoidance of Occupied or Assumed Occupied Spring Features, and Mitigation of up to 11 Conservation Credits (see HCP Chapter 6 and Appendix D).	Designated in Travis and Williamson Counties as 4,331 acres in 32 units with surface and subsurface components.	Yes	No	No	Existing LCRA TSC Facilities occur in Critical Habitat for this species. HCP includes General Minimization Measures (including waterway protection and avoidance of Occupied or Assumed Occupied Spring Features) and Species-specific Minimization Measures and a Special Cases Enrollment Scenario for assessing greater amounts of Mitigation for impacts within Critical Habitat that minimize the magnitude of alterations to Critical Habitat (see HCP Chapter 6 and Appendix D). Critical Habitat is dispersed across 32 separate units, which isolate potential alterations to only the affected unit(s).
11.	<i>Rhinophrynus dorsalis</i>	Mexican burrowing toad	Amphibians	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
12.	<i>Smilisca baudinii</i>	Mexican treefrog	Amphibians	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
13.	<i>Eurycea chisholmensis</i>	Salado Springs salamander	Amphibians	T	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.5% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures, and Mitigation of up to 1 Conservation Credit (see HCP Chapter 6 and Appendix D).	Proposed in Bell County as 372 acres in 4 units with surface and subsurface components.	Yes	No	No	No LCRA TSC Facilities currently occur in proposed Critical Habitat. HCP includes General Minimization Measures (including waterway protection and avoidance of Occupied or Assumed Occupied Spring Features) and Species-specific Minimization Measures and a Special Cases Enrollment Scenario for assessing greater amounts of Mitigation for impacts within proposed Critical Habitat that minimize any alterations to proposed Critical Habitat (see HCP Chapter 6 and Appendix D). Proposed Critical Habitat is dispersed across 4 separate units, which isolate potential alterations to only the affected unit(s).
14.	<i>Eurycea nana</i>	San Marcos salamander	Amphibians	T	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 1% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures that include avoidance of Occupied or Assumed Occupied Spring Features, and Mitigation of up to 1 Conservation Credit (see HCP Chapter 6 and Appendix D).	Designated in Hays County as 20.9 acres in 1 unit.	Yes	No	No	Existing LCRA TSC Facilities cross this Critical Habitat. Configuration of Critical Habitat is long and narrow, which provides opportunity for spanning to avoid significant alterations. HCP includes General Minimization Measures (including waterway protection and avoidance of Occupied or Assumed Occupied Spring Features) and Species-specific Minimization Measures and a Special Cases Enrollment

Table 1. Jeopardy and Adverse Modification of Critical Habitat Tests

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													Scenario for assessing greater amounts of Mitigation for impacts within Critical Habitat that minimize any alterations to Critical Habitat (see HCP Chapter 6 and Appendix D).
15.	<i>Hypopachus variolosus</i>	Sheep frog	Amphibians	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
16.	<i>Siren sp 1</i>	South Texas siren (large form)	Amphibians	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
17.	<i>Typhlomolge (syn. Eurycea) rathbuni</i>	Texas blind salamander	Amphibians	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely as impacts to deep aquifer habitat is not expected and the application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
18.	<i>Eurycea neotenes</i>	Texas salamander	Amphibians	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
19.	<i>Leptodactylus fragilis</i>	White-lipped frog	Amphibians	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
20.	<i>Texella reddelli</i>	Bee Creek Cave harvestman	Arachnids	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.1% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures that include avoidance of Occupied or Assumed Occupied Karst Features, and Mitigation of up to 17 Conservation Credits (see HCP Chapter 6 and Appendix D).	No	N/A	N/A	N/A	
21.	<i>Texella reyesi</i>	Bone Cave harvestman	Arachnids	E; petitioned for delisting	No	No	No	Not an HCP Covered Species. HCP includes a commitment to rely on other mechanisms for ESA compliance (e.g., Section 7 interagency consultation or other existing HCPs), as necessary and appropriate.	No	N/A	N/A	N/A	
22.	<i>Cicurina venii</i>	Braken Bat Cave meshweaver	Arachnids	E	No	No	No	Not an HCP Covered Species. Recent research indicates this may not be a valid taxon (see HCP Appendix B).	Designated in Bexar County as 217 acres in 1 unit.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and Critical Habitat occurs within the plan area of the Southern Edwards Plateau HCP. At this time, LCRA TSC does not expect to perform LCRA TSC Activities involving New Construction in Bexar County. Therefore, Covered Activities are not expected within this unit of Critical Habitat (see HCP Chapter 6.3.2).
23.	<i>Texella cokendolpheri</i>	Cokendolpher Cave harvestman	Arachnids	E	No	No	No	Not an HCP Covered Species. HCP includes a commitment to rely on other mechanisms for ESA compliance (e.g., Section 7 interagency consultation or other existing HCPs), as necessary and appropriate.	Designated in Bexar County as 247 acres in 1 unit.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and Critical Habitat occurs within the plan area of the Southern Edwards Plateau HCP. At this time, LCRA TSC does not expect to perform LCRA TSC Activities involving New Construction in Bexar County. Therefore, Covered Activities are not expected to occur within this unit of Critical Habitat (see HCP Chapter 6.3.2).
24.	<i>Cicurina vespera</i>	Government Canyon Bat Cave meshweaver	Arachnids	E	No	No	No	Not an HCP Covered Species. HCP includes a commitment to rely on other mechanisms for ESA compliance (e.g., Section 7 interagency consultation or other	Designated in Bexar County as 100 acres in 1 unit.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and Critical Habitat occurs within the plan area of the Southern Edwards Plateau HCP. At this

Table 1. Jeopardy and Adverse Modification of Critical Habitat Tests

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								existing HCPs), as necessary and appropriate.					time, LCRA TSC does not expect to perform LCRA TSC Activities involving New Construction in Bexar County. Therefore, Covered Activities are not expected to occur within this unit of Critical Habitat (see HCP Chapter 6.3.2).
25.	<i>Tayshaneta microps</i>	Government Canyon Bat Cave spider	Arachnids	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.05% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures that include avoidance of Occupied or Assumed Occupied Karst Features, and Mitigation of up to 2 Conservation Credit (see HCP Chapter 6 and Appendix D).	Designated in Bexar County as 100 acres in 1 unit.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and Critical Habitat occurs within the plan area of the Southern Edwards Plateau HCP. At this time, LCRA TSC does not expect to perform LCRA TSC Activities involving New Construction in Bexar County. Therefore, Covered Activities are not expected to occur within this unit of Critical Habitat (see HCP Chapter 6.3.2).
26.	<i>Cicurina madla</i>	Madla Cave meshweaver	Arachnids	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.05% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures that include avoidance of Occupied or Assumed Occupied Karst Features, and Mitigation of up to 2 Conservation Credits (see HCP Chapter 6 and Appendix D).	Designated in Bexar County as 1,884 acres in 12 units.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and Critical Habitat occurs within the plan area of the Southern Edwards Plateau HCP. At this time, LCRA TSC does not expect to perform LCRA TSC Activities involving New Construction in Bexar County. Therefore, Covered Activities are not expected to occur within this unit of Critical Habitat (see HCP Chapter 6.3.2).
27.	<i>Cicurina baronia</i>	Robber Baron Cave meshweaver	Arachnids	E	No	No	No	Not an HCP Covered Species. HCP includes a commitment to rely on other mechanisms for ESA compliance (e.g., Section 7 interagency consultation or other existing HCPs), as necessary and appropriate.	Designated in Bexar County as 100 acres in 1 unit.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and Critical Habitat occurs within the plan area of the Southern Edwards Plateau HCP. At this time, LCRA TSC does not expect to perform LCRA TSC Activities involving New Construction in Bexar County. Therefore, Covered Activities are not expected to occur within this unit of Critical Habitat (see HCP Chapter 6.3.2).
28.	<i>Cicurina loftini</i>	no common name	Arachnids	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species. May not be a valid taxon (see HCP Appendix B).	No	N/A	N/A	N/A	
29.	<i>Tartarocreagris texana</i>	Tooth Cave pseudoscorpion	Arachnids	E	No	No	No	Not an HCP Covered Species. HCP includes a commitment to rely on other mechanisms for ESA compliance (e.g., Section 7 interagency consultation or other existing HCPs), as necessary and appropriate.	No	N/A	N/A	N/A	
30.	<i>Tayshaneta myopica</i>	Tooth Cave spider	Arachnids	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.1% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures that include avoidance of Occupied or Assumed Occupied Karst Features, and Mitigation of up to 2 Conservation Credits (see HCP Chapter 6 and Appendix D).	No	N/A	N/A	N/A	
31.	<i>Falco peregrinus anatum</i>	American peregrine falcon	Birds	Delisted	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
32.	<i>Falco peregrinus tundrius</i>	Arctic peregrine falcon	Birds	Delisted	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	

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33.	<i>Tympanuchus cupido attwateri</i>	Attwater's greater prairie-chicken	Birds	E	No	No	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
34.	<i>Peucaea aestivalis</i>	Bachman's sparrow	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
35.	<i>Haliaeetus leucocephalus</i>	Bald eagle	Birds	Delisted	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
36.	<i>Laterallus jamaicensis</i>	Black rail	Birds	Petitioned for Listing with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	
37.	<i>Vireo atricapilla</i>	Black-capped vireo	Birds	Delisted	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
38.	<i>Pelecanus occidentalis</i>	Brown pelican	Birds	Delisted	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
39.	<i>Glaucidium brasilianum cactorum</i>	Cactus ferruginous pygmy-owl	Birds	Delisted	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
40.	<i>Buteogallus anthracinus</i>	Common black-hawk	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
41.	<i>Numenius borealis</i>	Eskimo curlew	Birds	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
42.	<i>Setophaga chrysoparia</i>	Golden-cheeked warbler	Birds	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects no more than 0.2% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures, and Mitigation of up to 6,384 Conservation Credits (see HCP Chapter 6 and Appendix D).	No	N/A	N/A	N/A	
43.	<i>Vermivora chrysoptera</i>	Golden-winged warbler	Birds	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
44.	<i>Buteo plagiatus</i> (syn. <i>Asturina nitida</i> )	Gray hawk	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
45.	<i>Sterna antillarum athalassos</i>	Interior least tern	Birds	E	No	No	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
46.	<i>Tympanuchus pallidicinctus</i>	Lesser prairie-chicken	Birds	Petitioned for Listing as E with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	
47.	<i>Strix occidentalis lucida</i>	Mexican spotted owl	Birds	T	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated -Not in Plan Area	N/A	N/A	N/A	
48.	<i>Falco femoralis septentrionalis</i>	Northern aplomado falcon	Birds	E, Petitioned for Critical Habitat:	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities and	Petitioned	N/A	N/A	N/A	



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				Findings Not Yet Made				with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.					
49.	<i>Camptostoma imberbe</i>	Northern beardless-tyrannulet	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
50.	<i>Charadrius melodus</i>	Piping plover	Birds	T	Yes	No	No	HCP Covered Species. Incidental take authorization affects no more than 0.05% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures, and Mitigation of up to 11 Conservation Credits (see HCP Chapter 6 and Appendix D).	Designated in Cameron, Willacy, Kenedy, Kleberg, Nueces, Aransas, Calhoun, Matagorda, Galveston, San Patricio, and Brazoria Counties, Texas. In Texas, Critical Habitat totals 139,029 acres in 37 units.	Yes	No	No	Existing LCRA TSC Facilities cross Critical Habitat for this species. HCP includes General Minimization Measures and Species-specific Minimization Measures and a Special Cases Enrollment Scenario for assessing greater amounts of Mitigation for impacts within Critical Habitat that minimize any alterations to Critical Habitat (see HCP Chapter 6 and Appendix D). Critical Habitat is dispersed across 37 separate units, which isolate potential alterations to only the affected unit(s).
51.	<i>Calidris canutus rufa</i>	Red knot	Birds	T	Yes	No	No	HCP Covered Species. Incidental take authorization affects no more than 0.05% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures, and Mitigation of up to 11 Conservation Credits (see HCP Chapter 6 and Appendix D).	No	N/A	N/A	N/A	
52.	<i>Picoides borealis</i>	Red-cockaded woodpecker	Birds	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.01% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures, and Mitigation of up to 270 Conservation Credits (see HCP Chapter 6 and Appendix D).	No	N/A	N/A	N/A	
53.	<i>Amazona viridigenalis</i>	Red-crowned parrot	Birds	Candidate	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
54.	<i>Egretta rufescens</i>	Reddish egret	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
55.	<i>Pachyrhamphus aglaiae</i>	Rose-throated becard	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
56.	<i>Sterna fuscata</i>	Sooty tern	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
57.	<i>Empidonax traillii extimus</i>	Southwestern willow flycatcher	Birds	E, Petitioned for Delisting: 90 Day Substantial	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities (species is a rare occurrence in Texas) and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated -Not in Plan Area	N/A	N/A	N/A	
58.	<i>Elanoides forficatus</i>	Swallow-tailed kite	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
59.	<i>Peucaea botterii texana</i>	Texas Botteri's sparrow	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
60.	<i>Setophaga pitiayumi</i>	Tropical parula	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
61.	<i>Coccyzus americanus</i>	Western yellow-billed cuckoo	Birds	T	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities (species is a rare occurrence in Texas) and with application of HCP	Proposed in Hudspeth, Presidio, and Brewster Counties, Texas, as 9,053 acres in 2 units.	No	N/A	No	No existing LCRA TSC Facilities occur in proposed Critical Habitat and the known range and distribution of Covered Species do not co-occur with proposed Critical Habitat. Covered Activities are



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								General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.					not likely to impact proposed Critical Habitat for this species.
62.	<i>Plegadis chihi</i>	White-faced ibis	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
63.	<i>Geranoaetus (syn. Buteo) albicaudatus</i>	White-tailed hawk	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
64.	<i>Grus americana</i>	Whooping crane	Birds	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 1% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures including line marking, and Mitigation of up to 447 Conservation Credits (see HCP Chapter 6 and Appendix D).	Designated in Aransas, Refugio, and Calhoun Counties, Texas, as 472,435 acres in 1 unit.	Yes	No	No	No existing LCRA TSC Facilities occur in Critical Habitat for this species. HCP includes General Minimization Measures (including line markers) and Species-specific Minimization Measures and a Special Cases Enrollment Scenario for assessing greater amounts of Mitigation for impacts within Critical Habitat that minimize any alterations to Critical Habitat (see HCP Chapter 6 and Appendix D).
65.	<i>Mycteria americana</i>	Wood stork	Birds	T	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
66.	<i>Buteo albonotatus</i>	Zone-tailed hawk	Birds	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
67.	<i>Gammarus hyalelloides</i>	Diminutive amphipod	Crustaceans	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Reeves and Jeff Davis Counties, Texas as 3.7 acres in 4 units.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and the known range and distribution of Covered Species do not co-occur with Critical Habitat. Covered Activities are not likely to impact proposed Critical Habitat for this species.
68.	<i>Orconectes maletae</i>	Kisatchie painted crayfish	Crustaceans	Petitioned for Listing with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	
69.	<i>Stygobromus pecki</i>	Peck's cave amphipod	Crustaceans	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 1% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures including avoidance of Occupied and Assumed Occupied Spring and Karst Features, and Mitigation of up to 1 Conservation Credit (see HCP Chapter 6 and Appendix D).	Designated in Comal and Hays Counties, Texas, as 138 acres in 2 units with surface and subsurface components.	Yes	No	No	Existing LCRA TSC Facilities occur in Critical Habitat for this species. HCP includes General Minimization Measures (including waterway protection and avoidance of Occupied or Assumed Occupied Spring Features) and Species-specific Minimization Measures and a Special Cases Enrollment Scenario for assessing greater amounts of Mitigation for impacts within Critical Habitat that minimize the magnitude of alterations to Critical Habitat (see HCP Chapter 6 and Appendix D). Critical Habitat is dispersed across 2 separate units, which isolate potential alterations to only the affected unit(s).
70.	<i>Gammarus pecos</i>	Pecos amphipod	Crustaceans	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Pecos County, Texas, as 178.6 acres in 1 unit.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and the known range and distribution of Covered Species do not co-occur with Critical Habitat. Covered Activities are not likely to impact proposed Critical Habitat for this species.

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71.	<i>Procambarus regalis</i>	Regal burrowing crayfish	Crustaceans	Petitioned for Listing with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	
72.	<i>Notropis girardi</i>	Arkansas River shiner	Fishes	T	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated -Not in Plan Area	N/A	N/A	N/A	
73.	<i>Macrhybopsis tetranema</i>	Arkansas River speckled chub	Fishes	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
74.	<i>Gambusia gaigei</i>	Big Bend gambusia	Fishes	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities. See HCP Appendix B.	No	N/A	N/A	N/A	
75.	<i>Percina maculata</i>	Blackside darter	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
76.	<i>Gambusia senilis</i>	Blotched gambusia	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
77.	<i>Cycleptus elongatus</i>	Blue sucker	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
78.	<i>Pteronotropis hubbsi</i>	Bluehead shiner	Fishes	Petitioned for Listing with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	
79.	<i>Notropis simus simus</i>	Bluntnose shiner	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
80.	<i>Ictalurus sp. 1</i>	Chihuahua catfish	Fishes	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
81.	<i>Notropis chihuahua</i>	Chihuahua shiner	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
82.	<i>Gambusia heterochir</i>	Clear Creek gambusia	Fishes	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
83.	<i>Cyprinodon elegans</i>	Comanche Springs pupfish	Fishes	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
84.	<i>Cyprinodon eximius</i>	Conchos pupfish	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
85.	<i>Dionda diaboli</i>	Devils River minnow	Fishes	T	No	N/A		Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Val Verde and Kinney Counties, Texas, as 16.5 stream miles in 2 units.	Yes	No	No	Existing LCRA TSC Facilities cross Critical Habitat for this species. Not a Covered Species due to the very low likelihood of modifying the aquatic habitat used by this species (see HCP Appendix B). Impacts to surface Critical Habitat are minimized by HCP General Minimization Measures related to waterway protection (see HCP Chapter 6.4.1).

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86.	<i>Etheostoma fonticola</i>	Fountain darter	Fishes	E	No	N/A		Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Hays County, Texas as 70 acres in 1 unit.	Yes	No	No	Existing LCRA TSC Facilities cross Critical Habitat for this species. Not a Covered Species due to the very low likelihood of modifying the aquatic habitat used by this species (see HCP Appendix B). Impacts to surface Critical Habitat are minimized by HCP General Minimization Measures related to waterway protection (see HCP Chapter 6.4.1).
87.	<i>Cyprinodon bovinus</i>	Leon Springs pupfish	Fishes	E	No	N/A		Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Pecos County, Texas in 1 unit.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and the known range and distribution of Covered Species do not co-occur with Critical Habitat. Covered Activities are not likely to impact proposed Critical Habitat for this species.
88.	<i>Ctenogobius claytonii</i>	Mexican goby	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
89.	<i>Campostoma ornatum</i>	Mexican stoneroller	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
90.	<i>Cyprinella sp. 2</i>	Nueces shiner	Fishes	Petitioned for Listing: 12 Month Not Warranted	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
91.	<i>Microphis brachyurus</i>	Opossum pipefish	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
92.	<i>Polyodon spathula</i>	Paddlefish	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
93.	<i>Gambusia nobilis</i>	Pecos gambusia	Fishes	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
94.	<i>Cyprinodon pecosensis</i>	Pecos pupfish	Fishes	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
95.	<i>Cyprinella lepida</i>	Plateau shiner	Fishes	Petitioned for Listing: 12 Month Not Warranted	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
96.	<i>Macrhybopsis australis</i>	Prairie chub	Fishes	Petitioned for Listing with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	
97.	<i>Cyprinella proserpina</i>	Proserpine shiner	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
98.	<i>Gila pandora</i>	Rio Grande chub	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
99.	<i>Etheostoma grahami</i>	Rio Grande darter	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
100.	<i>Hybognathus amarus</i>	Rio Grande silvery minnow	Fishes	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given likely extirpation from Texas. See HCP Appendix B.	Designated -Not in Plan Area	N/A	N/A	N/A	
101.	<i>Awaous banana</i>	River goby	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
102.	<i>Fundulus jenkinsi</i>	Saltmarsh topminnow	Fishes	Petitioned for Listing: 90	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	

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				Day Substantial									
103.	<i>Gambusia clarkhubbsi</i>	San Felipe gambusia	Fishes	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
104.	<i>Gambusia georgei</i>	San Marcos gambusia	Fishes	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given presumed extinction in the wild. See HCP Appendix B.	Designated in Hays County, Texas as 43 acres in 1 unit.	Yes	No	No	No existing LCRA TSC Facilities occur in Critical Habitat for this species. Not a Covered Species due to the very low likelihood of modifying the aquatic habitat used by this species (see HCP Appendix B). Impacts to surface Critical Habitat are minimized by HCP General Minimization Measures related to waterway protection (see HCP Chapter 6.4.1).
105.	<i>Notropis oxyrhynchus</i>	Sharpnose shiner	Fishes	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Baylor, Crosby, Fisher, Garza, Haskell, Kent, King, Knox, Stonewall, Throckmorton, and Young Counties, Texas as 1,002 river miles in 5 units.	Yes	No	No	No existing LCRA TSC Facilities occur in Critical Habitat for this species. Not a Covered Species due to the very low likelihood of modifying the aquatic habitat used by this species (see HCP Appendix B). Impacts to surface Critical Habitat are minimized by HCP General Minimization Measures related to waterway protection (see HCP Chapter 6.4.1).
106.	<i>Scaphirhynchus platyrhynchus</i>	Shovelnose sturgeon	Fishes	T- Similarity of appearance to the pallid sturgeon ( <i>Scaphirhynchus albus</i> ) <sup>1</sup>	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
107.	<i>Notropis buccula</i>	Smalleye shiner	Fishes	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Baylor, Crosby, Fisher, Garza, Haskell, Kent, King, Knox, Stonewall, Throckmorton, and Young Counties, Texas as 1,002 river miles in 5 units.	Yes	No	No	No existing LCRA TSC Facilities occur in Critical Habitat for this species. Not a Covered Species due to the very low likelihood of modifying the aquatic habitat used by this species (see HCP Appendix B). Impacts to surface Critical Habitat are minimized by HCP General Minimization Measures related to waterway protection (see HCP Chapter 6.4.1).
108.	<i>Pristis pectinata</i>	Smalltooth sawfish	Fishes	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given likely extirpation from Texas. See HCP Appendix B.	No	N/A	N/A	N/A	
109.	<i>Trogloglanis pattersoni</i>	Toothless blindcat	Fishes	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
110.	<i>Erimyzon oblongus</i>	Western Creek chubsucker	Fishes	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
111.	<i>Satan eurystomus</i>	Widemouth blindcat	Fishes	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
112.	<i>Rhadine exilis</i>	A ground beetle	Insects	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.05% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and	Designated in Bexar County as 2,363 acres in 15 units.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and Critical Habitat occurs within the plan area of the Southern Edwards Plateau HCP. At this

<sup>1</sup> USFWS. 2010. Threatened status for shovelnose sturgeon under the similarity of appearance provisions of the E Species Act. Washington, D.C.

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								Species-specific Minimization Measures, and Mitigation of up to 2 Conservation Credit (see HCP Chapter 6 and Appendix D).					time, LCRA TSC does not expect to perform LCRA TSC Activities involving New Construction in Bexar County. Therefore, Covered Activities are not expected to occur within this Critical Habitat (see HCP Chapter 6.3.2).
113.	<i>Rhadine infernalis</i>	A ground beetle	Insects	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.05% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures, and Mitigation of up to 2 Conservation Credit (see HCP Chapter 6 and Appendix D).	Designated in Bexar County as 2,955 acres in 19 units.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and Critical Habitat occurs within the plan area of the Southern Edwards Plateau HCP. At this time, LCRA TSC does not expect to perform LCRA TSC Activities involving New Construction in Bexar County. Therefore, Covered Activities are not expected to occur within this Critical Habitat (see HCP Chapter 6.3.2).
114.	<i>Nicrophorus americanus</i>	American burying beetle	Insects	E, Petitioned for Delisting: 90 Day Substantial	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities. See HCP Appendix B.	No	N/A	N/A	N/A	
115.	<i>Batrisodes texanus</i>	Inner Space Cavern mold beetle	Insects	E	No	No	No	Not an HCP Covered Species. HCP includes a commitment to rely on other mechanisms for ESA compliance (e.g., Section 7 interagency consultation or other existing HCPs), as necessary and appropriate.	No	N/A	N/A	N/A	
116.	<i>Batrisodes cryptotexanus</i>	Dragonfly Cave mold beetle	Insects	-	No	No	No	Not an HCP Covered Species. HCP includes a commitment to rely on other mechanisms for ESA compliance (e.g., Section 7 interagency consultation or other existing HCPs), as necessary and appropriate.	No	N/A	N/A	N/A	
117.	<i>Stygoparnus comalensis</i>	Comal Springs dryopid beetle	Insects	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities. See HCP Appendix B.	Designated in Comal and Hays Counties, Texas, as 139 acres in 2 units.	Yes	No	No	Existing LCRA TSC Facilities occur in Critical Habitat for this species. HCP includes General Minimization Measures (including waterway protection and avoidance of Occupied or Assumed Occupied Spring Features) and Species-specific Minimization Measures and a Special Cases Enrollment Scenario for assessing greater amounts of Mitigation for impacts within Critical Habitat that minimize the magnitude of alterations to Critical Habitat (see HCP Chapter 6 and Appendix D). Critical Habitat is dispersed across 2 separate units, which isolate potential alterations to only the affected unit(s).
118.	<i>Heterelmis comalensis</i>	Comal Springs riffle beetle	Insects	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.01% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures including avoidance of Occupied and Assumed Occupied Spring and Karst Features, and Mitigation of up to 1 Conservation Credits (see HCP Chapter 6 and Appendix D).	Designated in Comal and Hays Counties, Texas, as 54 acres in 2 units.	Yes	No	No	Existing LCRA TSC Facilities occur in Critical Habitat for this species. HCP includes General Minimization Measures (including waterway protection and avoidance of Occupied or Assumed Occupied Spring Features) and Species-specific Minimization Measures and a Special Cases Enrollment Scenario for assessing greater amounts of Mitigation for impacts within Critical Habitat that minimize the magnitude of alterations to Critical Habitat (see



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													HCP Chapter 6 and Appendix D). Critical Habitat is dispersed across 2 separate units, which isolate potential alterations to only the affected unit(s).
119.	<i>Haideoporus texanus</i>	Edwards Aquifer diving beetle	Insects	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
120.	<i>Batrisodes venyivi</i>	Helotes mold beetle	Insects	E	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.05% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures, and Mitigation of up to 2 Conservation Credit (see HCP Chapter 6 and Appendix D).	Designated in Bexar County as 595 acres in 3 units.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and Critical Habitat occurs within the plan area of the Southern Edwards Plateau HCP. At this time, LCRA TSC does not expect to perform LCRA TSC Activities involving New Construction in Bexar County. Therefore, Covered Activities are not expected to occur within this Critical Habitat (see HCP Chapter 6.3.2).
121.	<i>Texamaurops reddelli</i>	Kretschmarr Cave mold beetle	Insects	E	No	No	No	Not an HCP Covered Species. HCP includes a commitment to rely on other mechanisms for ESA compliance (e.g., Section 7 interagency consultation or other existing HCPs), as necessary and appropriate.	No	N/A	N/A	N/A	
122.	<i>Automeris louisiana</i>	Louisiana eyed silkmoth	Insects	Petitioned for Listing with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	
123.	<i>Danaus plexippus plexippus</i>	Monarch butterfly	Insects	Petitioned for Listing T with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	
124.	<i>Lepidostoma morsei</i>	Morse's little plain brown sedge	Insects	Petitioned for Listing with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	
125.	<i>Somatochlora margarita</i>	Texas emerald	Insects	Petitioned for Listing with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	
126.	<i>Lirceolus smithii</i>	Texas troglobitic water slater	Insects	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
127.	<i>Rhadine persephone</i>	Tooth Cave ground beetle	Insects	E	No	No	No	HCP Covered Species. Incidental take authorization affects less than 0.15% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures that include avoidance of Occupied or Assumed Occupied Karst Features, and Mitigation of up to 2 Conservation Credits (see HCP Chapter 6 and Appendix D).	No	N/A	N/A	N/A	
128.	<i>Ursus americanus</i>	Black bear	Mammals	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	

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129.	<i>Mustela nigripes</i>	Black-footed ferret	Mammals	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given extirpation from Texas. See HCP Appendix B.	Designated -Not in Plan Area	N/A	N/A	N/A	
130.	<i>Oryzomys couesi</i>	Coues' rice rat	Mammals	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
131.	<i>Herpailurus yagouaroundi cacomitli</i>	Gulf Coast jaguarundi	Mammals	E, Petitioned for Critical Habitat: Findings Not Yet Made	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given possible extirpation from Texas. See HCP Appendix B.	Petitioned	N/A	N/A	N/A	
132.	<i>Canis lupus</i>	Gray wolf	Mammals	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given extirpation from Texas. See HCP Appendix B.	Designated -Not in Plan Area	N/A	N/A	N/A	
133.	<i>Panthera onca</i>	Jaguar	Mammals	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given lack of documented localities and at best extreme rarity in Texas. See HCP Appendix B.	Designated -Not in Plan Area	N/A	N/A	N/A	
134.	<i>Ursus americanus luteolus</i>	Louisiana black bear	Mammals	Delisted	N/A	N/A	N/A	Species has been delisted.	No	N/A	N/A	N/A	
135.	<i>Leopardus wiedii</i>	Margay	Mammals	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
136.	<i>Leptonycteris nivalis</i>	Mexican long-nosed bat	Mammals	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities. See HCP Appendix B.	No	N/A	N/A	N/A	
137.	<i>Leopardus pardalis</i>	Ocelot	Mammals	E, Petitioned for Critical Habitat: Findings Not Yet Made	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.01% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures, and Mitigation of up to 165 Conservation Credits (see HCP Chapter 6 and Appendix D).	Petitioned	N/A	N/A	N/A	
138.	<i>Peromyscus truei comanche</i>	Palo Duro mouse	Mammals	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
139.	<i>Corynorhinus rafinesquii</i>	Rafinesque's big-eared bat	Mammals	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
140.	<i>Canis rufus</i>	Red wolf	Mammals	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given extirpation from Texas. See HCP Appendix B.	No	N/A	N/A	N/A	
141.	<i>Lasiurus ega</i>	Southern yellow bat	Mammals	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
142.	<i>Euderma maculatum</i>	Spotted bat	Mammals	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
143.	<i>Dipodomys elator</i>	Texas kangaroo rat	Mammals	Petitioned for Listing with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	
144.	<i>Perimyotis subflavus</i>	Tri-colored bat	Mammals	Petitioned for Listing: Under review	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
145.	<i>Trichechus manatus</i>	West Indian manatee	Mammals	E, Petitioned for increased protections: Findings Not Yet Made; Petition to Revise Critical Habitat: 90 Day	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities. See HCP Appendix B.	Designated -Not in Plan Area	N/A	N/A	N/A	

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				Substantial; Petition for Downlisting: 90 Day Substantial									
146.	<i>Nasua narica</i>	White-nosed coati	Mammals	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
147.	<i>Pseudotryonia adamantina</i>	Diamond tryonia	Mollusks	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Pecos County, Texas as 178.6 acres in 1 unit.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and the known range and distribution of Covered Species do not co-occur with Critical Habitat. Covered Activities are not likely to impact proposed Critical Habitat for this species.
148.	<i>Fusconaia (syn. Quincuncina) mitchelli</i>	False spike	Mollusks	Petitioned for Listing: 90 Day Substantial	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
149.	<i>Radiocentrum ferrissi</i>	Fringed mountainsnail	Mollusks	Petitioned for Listing: 90 Day Not Substantial	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
150.	<i>Quadrula aurea</i>	Golden orb	Mollusks	Candidate	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
151.	<i>Tryonia circumstriata</i>	Gonzales tryonia	Mollusks	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Pecos County, Texas as 178.6 acres in 1 unit.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and the known range and distribution of Covered Species do not co-occur with Critical Habitat. Covered Activities are not likely to impact proposed Critical Habitat for this species.
152.	<i>Pleurobema riddellii</i>	Louisiana pigtoe	Mollusks	Petitioned for Listing: 90 Day Substantial	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
153.	<i>Truncilla cognata</i>	Mexican fawnsfoot	Mollusks	Petitioned for Listing: 90 Day Substantial	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
154.	<i>Phreatodrobia imitata</i>	Mimic cavesnail	Mollusks	Petitioned for Listing: 90 Day Substantial	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
155.	<i>Arkansia wheeleri</i>	Ouachita rock pocketbook	Mollusks	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General	No	N/A	N/A	N/A	



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								Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.					
156.	<i>Assiminea pecos</i>	Pecos assiminea snail	Mollusks	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Reeves and Jeff Davis Counties, Texas as 444.4 acres in 2 units.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and the known range and distribution of Covered Species do not co-occur with Critical Habitat. Covered Activities are not likely to impact proposed Critical Habitat for this species.
157.	<i>Pyrgulopsis texana</i>	Phantom Cave springsnail	Mollusks	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Reeves and Jeff Davis Counties, Texas as 3.7 acres in 4 units.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and the known range and distribution of Covered Species do not co-occur with Critical Habitat. Covered Activities are not likely to impact proposed Critical Habitat for this species.
158.	<i>Tryonia cheatumi</i>	Phantom tryonia	Mollusks	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	Designated in Reeves and Jeff Davis Counties, Texas as 3.7 acres in 4 units.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and the known range and distribution of Covered Species do not co-occur with Critical Habitat. Covered Activities are not likely to impact proposed Critical Habitat for this species.
159.	<i>Potamilus metnecktayi</i>	Salina mucket	Mollusks	Petitioned for Listing: Findings Not Yet Made	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
160.	<i>Lampsilis satura</i>	Sandbank pocketbook	Mollusks	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
161.	<i>Quadrula houstonensis</i>	Smooth pimpleback	Mollusks	Candidate	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
162.	<i>Obovaria jacksoniana</i>	Southern hickorynut	Mollusks	-	N/A	N/A		Species not federally listed—jeopardy analysis does not apply.	No	N/A	N/A	N/A	
163.	<i>Lampsilis bracteata</i>	Texas fatmucket	Mollusks	Candidate	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
164.	<i>Truncilla macrodon</i>	Texas fawnsfoot	Mollusks	Candidate	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
165.	<i>Potamilus amphichaenus</i>	Texas heelsplitter	Mollusks	Petitioned for Listing: Findings Not Yet Made	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
166.	<i>Popenaias popeii</i>	Texas hornshell	Mollusks	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General	No	N/A	N/A	N/A	

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								Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.					
167.	<i>Fusconaia askewi</i>	Texas pigtoe	Mollusks	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
168.	<i>Quadrula petrina</i>	Texas pimpleback	Mollusks	Candidate	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
169.	<i>Fusconaia lananensis</i>	Triangle pigtoe	Mollusks	Petitioned for Listing: 90 Day Substantial	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities, low potential for impact, and with application of HCP General Minimization Measures. See HCP Chapter 6.4.1 and Appendix B.	No	N/A	N/A	N/A	
170.	<i>Thymophylla tephroleuca</i>	Ashy dogweed	Plants	E	No	N/A	No	Exposure to Covered Activities is not expected since the known range of this species does not overlap with the known range or distribution of any Covered Species. The Covered Activities will have no effect on this species.  However, LCRA TSC has Facilities within the range of this species. To the extent practicable, LCRA TSC will voluntarily seek to avoid impacts to this species that may be associated with LCRA TSC Activities that are not Covered Activities by coordinating with USFWS to avoid known populations and coordinating with National Wildlife Refuge staff when crossing Refuge properties. With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.	No	N/A	N/A	N/A	
171.	<i>Salvia pentstemonoides</i>	Big red sage	Plants	Petitioned for Listing: 90 Day Substantial	Yes	No	No	This species is not federally listed and a jeopardy analysis is not required.	No	N/A	N/A	N/A	
172.	<i>Echinocereus reichenbachii</i> var <i>albertii</i>	Black lace cactus	Plants	E	Yes	No	No	This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species. To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing the continued existence of this species. Such minimization measures may include raising mowing heights to no less than 8 inches, deferring Disturbances until outside of the seasonal blooming period (avoid the period between April and June), and minimizing	No	N/A	N/A	N/A	

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								subsurface Disturbances near waterways. With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.					
173.	<i>Streptanthus bracteatus</i>	Bracted twistflower	Plants	Candidate	Yes	No	No	This species is not federally listed and a jeopardy analysis is not required.	No	N/A	N/A	N/A	
174.	<i>Genistidium dumosum</i>	Brush-pea	Plants	Petitioned for Listing: 90 Day Substantial	No	N/A	No	This species is not federally listed and a jeopardy analysis is not required.	No	N/A	N/A	N/A	
175.	<i>Coryphantha ramillosa</i>	Bunched Cory cactus	Plants	T	No	N/A	No	Exposure to Covered Activities is not expected since the known range of this species does not overlap with the known range or distribution of any Covered Species. The Covered Activities will have no effect on this species.  However, LCRA TSC may have Facilities within the range of this species. To the extent practicable, LCRA TSC will voluntarily seek to avoid impacts to this species that may be associated with LCRA TSC Activities that are not Covered Activities by coordinating with USFWS to avoid known populations on federal lands, and within the limits of previously documented populations raising mowing heights to no less than 8 inches and deferring Disturbances until outside of the seasonal blooming period (avoid the period between August and November).	No	N/A	N/A	N/A	
176.	<i>Paronychia congesta</i>	Bushy whitlowwort	Plants	Petitioned for Listing: 90 Day Substantial	No	N/A	No	This species is not federally listed and a jeopardy analysis is not required.	No	N/A	N/A	N/A	
177.	<i>Pediomelum pentaphyllum</i>	Chihuahua scurfpea	Plants	Petitioned for Listing: 90 Day Substantial	No	N/A	No	This species is not federally listed and a jeopardy analysis is not required.	No	N/A	N/A	N/A	
178.	<i>Hexalectris revoluta</i>	Chisos coralroot	Plants	Petitioned for Listing: 90 Day Substantial	No	N/A	No	This species is not federally listed and a jeopardy analysis is not required.	No	N/A	N/A	N/A	
179.	<i>Echinocereus chisoensis</i> var <i>chisoensis</i>	Chisos Mountains hedgehog cactus	Plants	T	No	N/A	No	Exposure to Covered Activities is not expected since the known range of this species does not overlap with the known range or distribution of any Covered Species. The Covered Activities will have no effect on this species.  However, LCRA TSC may have Facilities within the range of this species. To the extent practicable, LCRA TSC will voluntarily seek to avoid impacts to this species that may be associated with LCRA TSC Activities that are not Covered Activities by coordinating with USFWS to avoid known populations on federal lands, and within the limits of previously documented populations raising mowing heights to no less than 8 inches and	No	N/A	N/A	N/A	

Table 1. Jeopardy and Adverse Modification of Critical Habitat Tests

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								deferring Disturbances until outside of the seasonal blooming period (avoid the period between March and April).					
180.	<i>Physostegia correllii</i>	Correll's false dragon-head	Plants	Petitioned for Listing with Critical Habitat: 90 Day Substantial	Yes	No	No	This species is not federally listed and a jeopardy analysis is not required.	Petitioned	N/A	N/A	N/A	
181.	<i>Cyperus cephalanthus</i>	Cryptic flatsedge	Plants	Petitioned for Listing: 90 Day Not Substantial	Yes	No	No	This species is not federally listed and a jeopardy analysis is not required.	No	N/A	N/A	N/A	
182.	<i>Echinocereus davisii</i>	Davis' green pitaya	Plants	E	No	N/A	No	Exposure to Covered Activities is not expected since the known range of this species does not overlap with the known range or distribution of any Covered Species. The Covered Activities will have no effect on this species.  However, LCRA TSC may have Facilities within the range of this species. To the extent practicable, LCRA TSC will voluntarily seek to avoid impacts to this species that may be associated with LCRA TSC Activities that are not Covered Activities by coordinating with USFWS to avoid known populations on federal lands, and within the limits of previously documented populations deferring Disturbances until outside of the seasonal blooming period (avoid the period between March and April).	No	N/A	N/A	N/A	
183.	<i>Donrichardsia macroneuron</i>	Don Richard's spring moss	Plants	Petitioned for Listing: 90 Day Substantial	Yes	No	No	This species is not federally listed and a jeopardy analysis is not required.	No	N/A	N/A	N/A	
184.	<i>Geocarpon minimum</i>	Earth fruit (Tinytim)	Plants	T	No	N/A	No	Exposure to Covered Activities is not expected since the known range of this species does not overlap with the known range or distribution of any Covered Species. The Covered Activities will have no effect on this species.  However, LCRA TSC may have Facilities within the range of this species. To the extent practicable, LCRA TSC will voluntarily seek to avoid impacts to this species that may be associated with LCRA TSC Activities that are not Covered Activities by avoiding previously documented populations, particularly those that occur on protected or public lands.	No	N/A	N/A	N/A	
185.	<i>Festuca ligulata</i>	Guadalupe fescue	Plants	E	No	N/A		Exposure to Covered Activities is not expected due to the remote and restricted range that does not overlap with the known range or distribution of any Covered Species or existing LCRA TSC Facilities. Covered Activities will have no effect on this species.	Designated in Brewster County, Texas, as 7,815 acres in 5 subunits.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and the known range and distribution of Covered Species do not co-occur with Critical Habitat. Covered Activities are not likely to impact proposed Critical Habitat for this species.
186.	<i>Schoenoplectus hallii</i>	Hall's bulrush	Plants	Petitioned for Listing with Critical Habitat: 90	No	N/A	No	This species is not federally listed and a jeopardy analysis is not required.	Petitioned	N/A	N/A	N/A	

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				Day Substantial									
187.	<i>Fissidens hallii</i>	Hall's pocket moss	Plants	Petitioned for Listing with Critical Habitat: 90 Day Substantial	Yes	No	No	This species is not federally listed and a jeopardy analysis is not required.	Petitioned	N/A	N/A	N/A	
188.	<i>Quercus hinckleyi</i>	Hinckley's oak	Plants	T	No	N/A	No	Exposure to Covered Activities is not expected since the known range of this species does not overlap with the known range or distribution of any Covered Species. The Covered Activities will have no effect on this species.  However, LCRA TSC may have Facilities within the range of this species. To the extent practicable, LCRA TSC will voluntarily seek to avoid impacts to this species that may be associated with LCRA TSC Activities that are not Covered Activities by coordinating with USFWS to avoid known populations on federal lands.	No	N/A	N/A	N/A	
189.	<i>Frankenia johnstonii</i>	Johnston's frankenia	Plants	Delisted	N/A	N/A		This species has been delisted.	No	N/A	N/A	N/A	
190.	<i>Abronia macrocarpa</i>	Large-fruited sand-verbena	Plants	E	Yes	No	No	This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species. To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing the continued existence of this species. Such minimization measures may include deferring Disturbances until outside of the seasonal blooming period (avoid the period between February and mid-June).  With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.	No	N/A	N/A	N/A	
191.	<i>Agalinis calycina</i>	Leoncita false-foxglove	Plants	Petitioned for Listing: 90 Day Substantial	No	N/A	No	This species is not federally listed and a jeopardy analysis is not required.	No	N/A	N/A	N/A	
192.	<i>Potamogeton clystocarpus</i>	Little Aguja pondweed	Plants	E	No	N/A	No	Exposure to Covered Activities is not expected since the known range of this species does not overlap with the known range or distribution of any Covered Species. The Covered Activities will have no effect on this species.	No	N/A	N/A	N/A	
193.	<i>Sclerocactus mariposensis</i>	Lloyd's mariposa cactus	Plants	T	Yes	No	No	Exposure to Covered Activities is not expected since the known range of this species does not overlap with	No	N/A	N/A	N/A	

Table 1. Jeopardy and Adverse Modification of Critical Habitat Tests

								<p>the known range or distribution of any Covered Species. The Covered Activities will have no effect on this species.</p> <p>However, LCRA TSC may have Facilities within the range of this species. To the extent practicable, LCRA TSC will voluntarily seek to avoid impacts to this species that may be associated with LCRA TSC Activities that are not Covered Activities by coordinating with USFWS to avoid known populations on federal lands.</p>					
194.	<i>Agalinis navasotensis</i>	Navasota false foxglove	Plants	Petitioned for Listing: 90 Day Substantial	Yes	No	No	This species is not federally listed and a jeopardy analysis is not required.	No	N/A	N/A	N/A	
195.	<i>Spiranthes parksii</i>	Navasota ladies' tresses	Plants	E, Petitioned for Delisting: 90 Day Not Substantial	Yes	No	No	<p>This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species.</p> <p>To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species, particularly those on protected lands. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing the continued existence of this species. Such minimization measures may include raising mowing heights to no less than 12 inches and deferring Disturbances until outside of the seasonal blooming and seed-set period (avoid the period between October and December).</p> <p>With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.</p>	No	N/A	N/A	N/A	
196.	<i>Hibiscus dasycalyx</i>	Neches River rose-mallow	Plants	T	Yes	No	No	<p>This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species.</p> <p>To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing the continued existence of this species. Such minimization measures may include deferring Disturbances until outside of the seasonal blooming period (avoid the period between June and August), and minimizing subsurface</p>	Designated in Nacogdoches, Houston, Trinity, Cherokee, and Harrison Counties, Texas, as 166.5 acres in 11 units.	Yes	No	No	<p>No existing LCRA TSC Facilities occur in Critical Habitat and the known range and most Critical Habitat Units are small (less than 10 acres) and may be readily avoided by Covered Activities. HCP General Minimization Measures also include measures to minimize impacts to listed plant species that also minimize impacts to Critical Habitat (see HCP Chapter 6.4.1). Critical Habitat is dispersed across 11 separate units, which isolate potential alterations to only the affected unit(s).</p>



Table 1. Jeopardy and Adverse Modification of Critical Habitat Tests

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								Disturbances near waterways and wetlands. With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.					
197.	<i>Escobaria (syn. Coryphantha) minima</i>	Nellie Cory cactus	Plants	E	No	N/A	No	Exposure to Covered Activities is not expected since the known range of this species does not overlap with the known range or distribution of any Covered Species. The Covered Activities will have no effect on this species. However, LCRA TSC may have Facilities within the range of this species. To the extent practicable, LCRA TSC will voluntarily seek to avoid impacts to this species that may be associated with LCRA TSC Activities that are not Covered Activities by coordinating with USFWS to avoid known populations on federal lands.	No	N/A	N/A	N/A	
198.	<i>Helianthus paradoxus</i>	Pecos/Puzzle sunflower	Plants	T	No	N/A	No	Exposure to Covered Activities is not expected since the known range of this species does not overlap with the known range or distribution of any Covered Species. The Covered Activities will have no effect on this species. However, LCRA TSC has Facilities within the range of this species. To the extent practicable, LCRA TSC will voluntarily seek to avoid or minimize impacts to this species that may be associated with LCRA TSC Activities that are not Covered Activities by avoiding Disturbances within 50 feet of previously documented populations of this species or deferring Disturbances within the limits of known populations until outside of the seasonal blooming and seed-set period (avoid the period between June and November).	Designated in Pecos County, Texas, as 240 acres in 1 unit.	No	N/A	No	No existing LCRA TSC Facilities occur in Critical Habitat and the known range and distribution of Covered Species do not co-occur with Critical Habitat. Covered Activities are not likely to impact proposed Critical Habitat for this species.
199.	<i>Asclepias prostrata</i>	Prostrate milkweed	Plants	Petitioned for Listing: 90 Day Substantial	No	N/A	No	This species is not federally listed and a jeopardy analysis is not required.	No	N/A	N/A	N/A	
200.	<i>Symphyotrichum puniceum var. scabriceule</i>	Rough-stemmed aster	Plants	Petitioned for Listing with Critical Habitat: 90 Day Substantial	No	N/A	No	This species is not federally listed and a jeopardy analysis is not required.	Petitioned	N/A	N/A	N/A	
201.	<i>Helianthus occidentalis</i> ssp. <i>plantagineus</i>	Shinner's sunflower	Plants	Petitioned for Listing with Critical Habitat: 90 Day Substantial	Yes	No	No	This species is not federally listed and a jeopardy analysis is not required.	Petitioned	N/A	N/A	N/A	
202.	<i>Hoffmannseggia tenella</i>	Slender rushpea	Plants	E	Yes	No	No	This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species. To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis,	No	N/A	N/A	N/A	

Table 1. Jeopardy and Adverse Modification of Critical Habitat Tests

								other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing the continued existence of this species. Such minimization measures may include raising mowing heights to no less than 8 inches or deferring Disturbances until outside of the seasonal blooming period (avoid the period between April and November). With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.					
203.	<i>Eriocaulon koernickianum</i>	Small-headed pipewort	Plants	Petitioned for Listing with Critical Habitat: 90 Day Substantial	Yes	No	No	This species is not federally listed and a jeopardy analysis is not required.	Petitioned	N/A	N/A	N/A	
204.	<i>Ambrosia cheiranthifolia</i>	South Texas ambrosia	Plants	E	Yes	No	No	This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species. To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing the continued existence of this species. Such minimization measures may include deferring Disturbances until outside of the seasonal blooming period (avoid the period between July and November). With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.	No	N/A	N/A	N/A	
205.	<i>Astrophytum asterias</i>	Star cactus	Plants	E	Yes	No	No	This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species. To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing	No	N/A	N/A	N/A	



Table 1. Jeopardy and Adverse Modification of Critical Habitat Tests

								<p>the continued existence of this species. Such minimization measures may include raising mowing heights to no less than 5 inches.</p> <p>With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.</p>					
206.	<i>Cryptantha crassipes</i>	Terlingua Creek cat's-eye	Plants	E	No	N/A	No	<p>Exposure to Covered Activities is not expected since the known range of this species does not overlap with the known range or distribution of any Covered Species. The Covered Activities will have no effect on this species.</p> <p>However, LCRA TSC may have Facilities within the range of this species. To the extent practicable, LCRA TSC will voluntarily seek to avoid impacts to this species that may be associated with LCRA TSC Activities that are not Covered Activities by avoiding Disturbances within 50 feet of previously documented populations or raising mowing heights to no less than 12 inches.</p>	No	N/A	N/A	N/A	
207.	<i>Ayenia limitaris</i>	Texas ayenia	Plants	E	Yes	No	No	<p>This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species.</p> <p>To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species, particularly populations on protected lands.</p> <p>With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.</p>	No	N/A	N/A	N/A	
208.	<i>Leavenworthia texana</i>	Texas golden gladecress	Plants	E	Yes	No	No	<p>This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species; however, adverse effects are unlikely given the low likelihood of LCRA TSC Activities in the counties within the range of this species.</p> <p>To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species, particularly monitored populations. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing the continued existence of this species. Such minimization</p>	Designated in Sabine and San Augustine Counties, Texas, as 1,353 acres in 4 units.	Yes	No	No	<p>No existing LCRA TSC Facilities occur in Critical Habitat. HCP General Minimization Measures also include measures to minimize impacts to listed plant species that also minimize impacts to Critical Habitat (see HCP Chapter 6.4.1). Critical Habitat is dispersed across 4 separate units, which isolate potential alterations to only the affected unit(s).</p>

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								measures may include avoiding the use of herbicides. With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.					
209.	<i>Callirhoe scabriuscula</i>	Texas poppy-mallow	Plants	E	Yes	No	No	This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species. To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing the continued existence of this species. Such minimization measures may include deferring Disturbances until outside of the seasonal blooming and seed-set period (avoid the period between April and June). With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.	No	N/A	N/A	N/A	
210.	<i>Hymenoxys texana</i>	Texas prairie dawn	Plants	E	Yes	No	No	This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species; however, adverse effects are unlikely given the low likelihood of LCRA TSC Activities in the counties within the range of this species. To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species. With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.	No	N/A	N/A	N/A	
211.	<i>Bartonia texana</i>	Texas screwstem	Plants	Petitioned for Listing with Critical Habitat: 90 Day Substantial	Yes	No	No	This species is not federally listed and a jeopardy analysis is not required.	Petitioned	N/A	N/A	N/A	
212.	<i>Styrax texanus</i> (Syn. <i>Styrax platanifolius</i> ssp <i>texanus</i> )	Texas snowbells	Plants	E	Yes	No	No	This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species. To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are	No	N/A	N/A	N/A	

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								not Covered Activities) within 50 feet of previously documented populations of this species, particularly populations on protected lands.  With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.					
213.	<i>Phlox nivalis ssp texensis</i>	Texas trailing phlox	Plants	E	Yes	No	No	This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species; however, adverse effects are unlikely given the low likelihood of LCRA TSC Activities in the counties within the range of this species.  To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing the continued existence of this species. Such minimization measures may include raising mowing heights to no less than 12 inches.  With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.	No	N/A	N/A	N/A	
214.	<i>Trillium texanum</i>	Texas trillium	Plants	Petitioned for Listing with Critical Habitat: 90 Day Substantial	Yes	No	No	This species is not federally listed and a jeopardy analysis is not required.	Petitioned	N/A	N/A	N/A	
215.	<i>Zizania texana</i>	Texas wild rice	Plants	E	No	N/A	No	This species is known to occur within the known range or distribution of Covered Species, but is an aquatic plant that is unlikely to be exposed to Covered Activities or other LCRA TSC Activities. The Covered Activities will have no effect on this species.	Designated in Hays County, Texas, as 85 acres in 1 unit.	Yes	No	No	Existing LCRA TSC Facilities cross Critical Habitat for this species. Very low likelihood of modifying the aquatic habitat used by this species (see HCP Appendix B). Impacts to Critical Habitat are minimized by HCP General Minimization Measures related to waterway protection (see HCP Chapter 6.4.1).
216.	<i>Amsonia tharpii</i>	Tharp's blue-star	Plants	Petitioned for Listing: 90 Day Substantial	No	N/A	No	This species is not federally listed and a jeopardy analysis is not required.	No	N/A	N/A	N/A	
217.	<i>Sclerocactus brevihamatus ssp. tobuschii</i>	Tobusch fishhook cactus	Plants	E, Proposed for Downlisting	Yes	No	No	This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species.  To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented	No	N/A	N/A	N/A	

Table 1. Jeopardy and Adverse Modification of Critical Habitat Tests

								populations of this species. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing the continued existence of this species. Such minimization measures may include raising mowing heights to no less than 5 inches. With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.					
218.	<i>Manihot walkerae</i>	Walker's manioc	Plants	E	Yes	No	No	This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species. To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing the continued existence of this species. Such minimization measures may include deferring Disturbances until outside of the seasonal blooming period (avoid the period between April and September). With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.	No	N/A	N/A	N/A	
219.	<i>Physaria pallida</i>	White bladderpod	Plants	E	Yes	No	No	This species is known to occur within the known range or distribution of Covered Species and the Covered Activities may affect this species; however, adverse effects are unlikely given the low likelihood of LCRA TSC Activities in the counties within the range of this species. To the extent practicable, LCRA TSC will avoid performing Covered Activities (and, on a voluntary basis, other LCRA TSC Activities that are not Covered Activities) within 50 feet of previously documented populations of this species. Where avoidance is not practicable, LCRA TSC will implement those minimization measures during the conduct of Covered Activities that are necessary to avoid jeopardizing the continued existence of this species. Such minimization measures may include deferring Disturbances until outside of the seasonal blooming period (avoid the period between April and May).	No	N/A	N/A	N/A	

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								With these avoidance and minimization measures, the Covered Activities are unlikely to appreciably reduce the likelihood of both survival and recovery of that species in the wild.					
220.	<i>Physaria thamnophila</i>	Zapata bladderpod	Plants	E	Yes	No	No	Exposure to Covered Activities is not expected since the known range of this species does not overlap with the known range or distribution of any Covered Species. The Covered Activities will have no effect on this species.  However, LCRA TSC has Facilities within the range of this species. To the extent practicable, LCRA TSC will voluntarily seek to avoid impacts to this species that may be associated with LCRA TSC Activities that are not Covered Activities by coordinating with USFWS to avoid known populations and coordinating with National Wildlife Refuge staff when crossing Refuge properties.	Designated in Starr County, Texas, as 5,160 acres in 8 units.	No	N/A	N/A	Existing LCRA TSC Facilities cross Critical Habitat for this species, but the known range and distribution of Covered Species do not co-occur with Critical Habitat. Covered Activities are not likely to impact proposed Critical Habitat for this species.
221.	<i>Macrochelys temminckii</i>	Alligator snapping turtle	Reptiles	Petitioned for Listing with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	
222.	<i>Eretmochelys imbricata</i>	Atlantic hawksbill sea turtle	Reptiles	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities. See HCP Appendix B.	Designated -Not in Plan Area	N/A	N/A	N/A	
223.	<i>Coniophanes imperialis</i>	Black-striped snake	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
224.	<i>Nerodia harteri</i>	Brazos water snake	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
225.	<i>Graptemys caglei</i>	Cagle's map turtle	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
226.	<i>Trimorphodon vilkinsonii</i>	Chihuahuan Desert lyre snake	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
227.	<i>Kinosternon hirtipes murrayi</i>	Chihuahuan mud turtle	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
228.	<i>Nerodia paucimaculata</i>	Concho water snake	Reptiles	Delisted	N/A	N/A	N/A	Species has been delisted.	No	N/A	N/A	N/A	
229.	<i>Sceloporus arenicola</i>	Dunes sagebrush lizard	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
230.	<i>Chelonia mydas</i>	Green sea turtle	Reptiles	T	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities. See HCP Appendix B.	No	N/A	N/A	N/A	
231.	<i>Lepidochelys kempii</i>	Kemp's ridley sea turtle	Reptiles	E, Petitioned for Critical Habitat: Findings Not Yet Made	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities. See HCP Appendix B.	No	N/A	N/A	N/A	
232.	<i>Dermochelys coriacea</i>	Leatherback sea turtle	Reptiles	E	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities. See HCP Appendix B.	Designated -Not in Plan Area	N/A	N/A	N/A	
233.	<i>Caretta caretta</i>	Loggerhead sea turtle	Reptiles	T	No	N/A	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities. See HCP Appendix B.	Designated -Not in Plan Area	N/A	N/A	N/A	

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234.	<i>Pituophis ruthveni</i>	Louisiana pine snake	Reptiles	T	Yes	No	No	Not an HCP Covered Species. Incidental take not likely given limited exposure to Covered Activities. See HCP Appendix B.	No	N/A	N/A	N/A	
235.	<i>Phrynosoma hernandesi</i>	Mountain short-horned lizard	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
236.	<i>Leptodeira septentrionalis septentrionalis</i>	Northern cat-eyed snake	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
237.	<i>Cemophora coccinea copei</i>	Northern scarlet snake	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
238.	<i>Crotaphytus reticulatus</i>	Reticulate collared lizard	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
239.	<i>Coleonyx reticulatus</i>	Reticulated gecko	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
240.	<i>Pseudemys gorzugi</i>	Rio Grande cooter	Reptiles	Petitioned for Listing: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
241.	<i>Liochlorophis vernalis</i>	Smooth green snake	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
242.	<i>Drymobius margaritiferus</i>	Speckled racer	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
243.	<i>Holbrookia lacerata</i>	Spot-tailed earless lizard	Reptiles	Petitioned for Listing with Critical Habitat: 90 Day Substantial	Yes	No	No	HCP Covered Species. Incidental take authorization affects less than 0.1% of potential habitat (see HCP Table 15). HCP includes voluntary Avoidance Measures, General and Species-specific Minimization Measures, and Mitigation of up to 492 Conservation Credits (see HCP Chapter 6 and Appendix D).	Petitioned	N/A	N/A	N/A	
244.	<i>Phrynosoma cornutum</i>	Texas horned lizard	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
245.	<i>Drymarchon melanurus erebennus</i>	Texas indigo snake	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
246.	<i>Cemophora coccinea lineri</i>	Texas scarlet snake	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
247.	<i>Gopherus berlandieri</i>	Texas tortoise	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
248.	<i>Crotalus horridus</i>	Timber rattlesnake	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
249.	<i>Tantilla cucullata</i>	Trans-Pecos black-headed snake	Reptiles	-	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	No	N/A	N/A	N/A	
250.	<i>Deirochelys reticularia miaria</i>	Western chicken turtle	Reptiles	Petitioned for Listing with Critical Habitat: 90 Day Substantial	N/A	N/A	N/A	Species not federally listed. Not an HCP Covered Species.	Petitioned	N/A	N/A	N/A	