

SOUTHERN EDWARDS PLATEAU HABITAT CONSERVATION PLAN
ENDANGERED SPECIES ACT
INCIDENTAL TAKE PERMIT ANNUAL REPORT
FOR FY 2018 – 2019
PERMIT NUMBER TE-48571B-0

September 16, 2020

U.S. Fish and Wildlife Service
Austin Ecological Services Field Office
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Austin, Texas 78758

U.S. Fish and Wildlife Service, Region 2
Branch of Environmental Review
P.O. Box 1306, Room 6034
Albuquerque, New Mexico 87103

RE: Annual Report for 2018 - 2019 Fiscal Year required by Endangered Species Act Incidental Take Permit TE-48571B-0 for the Southern Edwards Plateau Habitat Conservation Plan (SEP-HCP)

To whom it may concern:

This letter comprises the annual permit report for the 2018 – 2019 Fiscal Year (October 1, 2018 through September 30, 2019) for the Southern Edwards Plateau Habitat Conservation Plan (SEP-HCP), as required by Box 12. Reporting Requirements and Box 13. ANNUAL REPORT of permit number TE-48571B-0. *“An annual report will describe the previous calendar year's activities in compliance with this permit and Section 12 of the SEP-HCP. Annual reports will be submitted each year for the duration of this permit area.”* SEP-HCP Section 12.1 requires the submission of an annual report *“to document progress towards achieving the goals and objectives of the SEP-HCP and demonstrate compliance with the terms and conditions of the Permit.”*

This report was prepared by Blair Wildlife Consulting, LLC (BWC) on behalf of Bexar County, Texas and the City of San Antonio (the Permittees) and describes compliance with the permit between October 1, 2018 (permit effective date) and September 30, 2019.

In accordance with SEP-HCP Section 12.1, activities for the 2018 – 2019 Fiscal Year (October 1, 2018 through September 30, 2019) are reported below in the following sections and any required supporting information is included as attachments to this letter.

Although the Permit was issued February 5, 2016 and effective as of January 18, 2016, official acceptance and execution of the Permit by the Permittees occurred on April 18, 2017.

1. SEP-HCP PARTICIPANTS AND ENROLLED PROPERTIES

A summary of participation in the SEP-HCP, including a list of Participants and Enrolled Properties and the corresponding acreages covered for incidental take for each of the Covered Species is included below.

A total of twelve Participants / Enrolled Properties occurred during the 2018 – 2019 Fiscal Year. The complete list of Participants and Enrolled Properties is included in **Attachment A**. An exhibit depicting the locations of each of the Enrolled Properties within the Permit Area is also included as part of **Attachment A**. Copies of all Participation Agreements and Participation Certificates for Participants and Enrolled Properties that occurred during the 2018 – 2019 Fiscal Year were provided to the Service at the time in which they were issued to the Participant, and therefore have not been included again as attachments to this report.

Two Participants / Enrolled Properties reported occurrences of previously undiscovered voids or other karst features that were encountered during implementation of covered activities by the Participants/Enrolled Properties during the 2018-2019 Fiscal Year. A summary of the Participants / Enrolled Properties in which previously undiscovered voids or other karst features were encountered during implementation of covered activities during the 2018-2019 Fiscal Year is included below. Additional information, documentation, and coordination are included in the SEP-HCP program files and can be provided upon request.

PARTICIPANT	DISCOVERY DATE	NOTIFICATION DATE	SUMMARY
17-001	3/22/2019 3/25/2019 3/26/2019	3/29/2019 ¹	<p>Three solution features were discovered while excavating for construction of water treatment infrastructure at the enrolled site. None of the features appeared to have had a surface connection (prior to excavation) and are not sensitive recharge features. SWCA evaluated the features and provided follow-up information on their potential to provide suitable habitat for listed karst invertebrates. Construction was halted in the vicinity of the features and BMPs installed. SWCA did not observe any invertebrates, listed species, or any species of similar appearance to listed karst invertebrate species. No air flow was detected from the features at the time of the site visits. No cave crickets (<i>Ceuthophilus</i> spp.), other arthropods, or organic matter was observed in the feature interiors. Furthermore, the feature interiors were dry. No dark zone were present. Thus, SWCA determined that the features did not contain suitable habitat for any of the listed endangered karst invertebrates found in Bexar County.</p> <ul style="list-style-type: none"> » Feature No. 1 was approximately 1.5 feet wide by 2 feet by 5 feet deep. The entrance of the feature was large enough to enter, but the feature restricted at a depth of approximately 3 feet. The bottom of the feature was visible. It was filled with loose gravel and cobble-sized fill. SWCA investigated the interior of the feature for about ½-person hour. » Feature No. 2 was a cluster of small solution cavities exposed in the corner of the basin excavation. Two of the voids extended approximately 2.5 feet laterally into the sidewalls of the excavation. Three cavities extended approximately 2 feet below the excavation floor. Loose gravel and cobble-sized fill was in the bottom of the voids. SWCA investigated the interior of the feature for about ½-person hour. » Feature No. 3 was a small lateral void measuring approximately 0.5-foot by 1-foot, by 2-feet (lateral extent). The feature was approximately 2 feet above the floor of the excavation.
18-004	4/12/2019	4/12/2019	<p>Construction workers encountered the feature during the excavation of a tunnel for a potable water line. Upon the discovery of the feature, construction workers ceased work in the immediate area. Feature No. 1 was encountered in the roof of an excavated tunnel approximately 90 feet underground. The feature was oriented along a clay-lined fracture trending 100°. The feature's dimensions were approximately 4 feet long by 2.3 feet wide by 6.5 feet up into the roof of the tunnel. The entrance of the feature was large enough to enter for inspection. The length and width of the feature varied little up to its top (roof). The feature's walls were lined with clay and contained few speleothems. The top of the feature was visible and terminated to a flat limestone roof. No additional significant void space was visible. SWCA investigated the interior of the feature for about 0.5-person hour. SWCA did not observe any invertebrates, listed species, or any species of similar appearance to listed karst invertebrate species. No air flow was detected from the feature at the time of the site visit. No cave crickets (<i>Ceuthophilus</i> spp.), other arthropods, or organic matter was observed in the feature's interior. Thus, the feature did not contain suitable habitat for any of the listed endangered karst invertebrates found in Bexar County.</p>
	9/5/2019	9/6/2019	<p>Three features were encountered during excavation of the Cornerstone tunnel. The features occur approximately 1,000 feet west of the tunnel entrance near the northwest corner of the intersection of Stone Oak Parkway and Loop 1604, San Antonio, Texas. The features are located approximately 90 feet underground. SWCA investigated the interior of Features 2 and 3 for about 0.5-person hour each. SWCA did not observe any invertebrates, listed species, or any species of similar appearance to listed karst invertebrate species. No air flow was detected from the feature at the time of the site visit. No cave crickets, other arthropods, or organic matter were observed in the feature interiors. Thus, SWCA determined that the features did not contain suitable habitat for any of the listed endangered karst invertebrates found in Bexar County.</p> <ul style="list-style-type: none"> » Feature No. 2 was encountered approximately 20 feet east of station 115 in the side of the Cornerstone tunnel. This feature was encountered in the roof of the excavated tunnel approximately 90 feet underground. The feature's width was approximately 6 feet. The void extended into the tunnel wall approximately 4 feet and extended upward approximately 15 feet. The feature appeared to have

PARTICIPANT	DISCOVERY DATE	NOTIFICATION DATE	SUMMARY
			<p>formed by movement of water downward through the vadose zone. Portions of the feature's walls were lined with flowstone, and the bottom of the feature was filled with clay and loose rocks.</p> <p>» Feature No. 3 was encountered at station 115+13 near the top of the Cornerstone tunnel. The shoring of the tunnel obstructed the view of portions of Feature No. 3; however, most of the void was visible for inspection. This feature is approximately 9.5 feet by 7 feet and extends approximately 10 feet upward. No significant additional significant void space was visible. The bottom of the void exposed in the tunnel wall was filled with red clay and large broken rocks (breakdown).</p> <p>» Feature No. 4 was encountered 90 feet underground approximately 1,850 feet south of the Terminus tunnel entrance near station 185+80. Prior to the shoring of the tunnel, an on-site geologist, Graham Schindel, documented and sketched Feature No. 4. After the shoring of the feature, it was deemed inaccessible for karst invertebrate evaluation owing to obstructions with tunnel shoring and safety concerns. Thus, the presence or absence of suitable habitat within Feature No. 4 is undetermined.</p>

1- The Participant was notified by SEP-HCP that notification of undiscovered voids or other karst features encountered during implementation of covered activities must occur within 24-hrs of discovery.

2. SEP-HCP PRESERVE SYSTEM

A summary of the lands and habitats included in the SEP-HCP preserve system, including the total preserve acres and the acres of suitable habitat for each of the Covered Species is included below.

No GCW or BCV preserves were established during the 2018-2019 Fiscal Year.

As part of the initial conservation actions required prior to beginning enrollment of participants in the SEP-HCP for the Covered Karst Invertebrates, the SEP-HCP established six (6) karst fauna areas (KFA) within Government Canyon State Natural Area (GCSNA) during the 2016 – 2017 Fiscal Year. Two additional KFAs, the Northern Preserve and Panther Springs Park Preserve, were established during the 2017 – 2018 Fiscal Year. The total preserve acres, the acres of suitable habitat for each of the Covered Species, and current status of the Conservation Baseline for the Covered Karst Invertebrates is included in **Attachment B**.

The Permittee's request that the Service provide an update of all other conservation actions completed by other sponsors in order to evaluate the current status towards achievement of the Conservation Baselines¹ as well as any information on new localities for the Covered Karst Invertebrates. The SEP-HCP may provide incidental take authorization for Covered Activities conducted within an Occupied Cave Zone only after certain baseline levels of conservation have been achieved for the Covered Karst Invertebrates that occur in the associated karst feature.

The Conservation Baselines are based on the downlisting criteria described in the Bexar County Karst Invertebrates Recovery Plan (USFWS 2011b). Achievement of the Conservation Baselines will be evaluated and determined on a species-by-species and region-by-region (i.e., by Karst Fauna Regions or "KFRs") basis. All qualifying conservation actions² that have been implemented for the Covered Karst Invertebrates will be considered in the determination, regardless of the sponsor of the conservation action. All karst preserves that the Service deems as contributing towards recovery of the Covered Karst Invertebrates will contribute to the karst Conservation Baseline, even if the preserves were protected by an entity or effort other than the SEP-HCP.

¹ The Conservation Baselines are the minimum requirements needed for each of the Covered Karst Invertebrates within each KFR based on the downlisting criteria described in the Bexar County Karst Invertebrates Recovery Plan (USFWS 2011b).

² Qualifying conservation actions would be any other activity outside of preserve acquisition, which would be considered and approved by the Service as contributing to the conservation baseline for the Covered Species. Examples of qualifying conservation actions could include, but are not limited to: surveying for new localities for the Covered Karst Invertebrates; establishing additional protections to currently known Covered Karst Invertebrate-occupied features; establishing protection of the areas surrounding a feature in the event that additional protective measures cannot be placed on the features entrance, or implementing protective measures necessary to improve the long-term viability of the occupied feature.

3. SEP-HCP PRESERVATION CREDITS LEDGER

The conservation ledger documenting Preservation Credits generated and deducted for the GCW for the 2018 – 2019 Fiscal Year is included in **Attachment C**.

No BCV Preservation Credits were generated or deducted during the 2018 – 2019 Fiscal Year, as the species was delisted by the Service.

4. SEP-HCP FINANCIAL STATUS

A summary of the financial status of the SEP-HCP, including the balance and performance of the non-wasting management endowment is included below.

The Interlocal Agreement executed by the Permittees on February 24, 2017 identifies the annual allocations and responsibilities of each Permittee and was provided to the Service upon execution and was included as part of the 2016 – 2017 Fiscal Year Annual Report.

The non-wasting management endowment was established during the 2017 – 2018 Fiscal Year as the SEP-HCP established two new preserves for the Covered Karst Invertebrates during the reporting period. All contributions were made in accordance with the SEP-HCP endowment requirements.

5. MANAGEMENT ACTIVITIES ON PRESERVE LANDS AND PRESERVE MANAGEMENT PLAN UPDATES

A summary of management activities conducted on SEP-HCP preserve lands and a copy of Preserve Management Plan updates for the previous year are included below.

Management activities conducted on SEP-HCP preserve lands were conducted in accordance with the Government Canyon State Natural Area Karst Fauna Areas Management and Monitoring Plan dated February 6, 2017.

No updates to any Preserve Management Plans were completed during the 2018-2019 Fiscal Year.

6. BIOLOGICAL MONITORING ACTIVITIES ON PRESERVE LANDS AND OTHER SURVEYS OF THE COVERED SPECIES AND THEIR HABITATS

The results of biological monitoring activities conducted on SEP-HCP preserve lands, including all reports documenting surveys of the Covered Species and their habitats are summarized below.

Biological monitoring activities were completed as part of the establishment and management of the Government Canyon State Natural Area Karst Fauna Areas, Northern Preserve, and Panther Springs Park Preserve. All results of the activities were reported as part of the annual reporting requirements for work conducted under Endangered Species Act Section 10[A][1][a] permit TE85077A-1.

7. COMMUNITY EDUCATION AND OUTREACH PROGRAMS AND RESEARCH

A summary of the status of community education and outreach programs and other conservation measures for the Covered Species, including the results of any research conducted with the support of the SEP-HCP are included below.

The SEP-HCP conducts numerous education and outreach events, meetings, and notifications to inform potential applicants of the SEP-HCP program annually. The Permittees also continue to maintain an additional website that contains all necessary information on how to participate in the SEP-HCP; background information on the SEP-HCP, and its administration: <https://www.sanantonio.gov/DSD/Constructing/SEP-HCP>.

Per condition T of the ITP TE48571B-1 and Section 4.5.3 of the SEP-HCP, Karst Participation Certificates will not be offered until the Permittees had secured some level of up-front mitigation for all of the Covered Karst Invertebrate Species. The level and type of mitigation obtained for each species will likely vary. The Permittees worked with the Service in determining when the appropriate level of up-front mitigation had occurred. For species like *C. venii*, with only two known but heavily impacted localities, options remained limited to satisfy the SEP-HCPs up-front mitigation requirements. Therefore, other conservation measures and/or recovery efforts which provide for some increased level of conservation were the only options to help satisfy up-front mitigation requirements. The SEP-HCP Permittees

contracted with Dr. Marshal Hedin of San Diego State University to conduct a genetics study of the *Cicurina* spiders of Bexar County, Texas.

The research proposal and supporting information documented the conservation value of the proposed initial conservation action and proposed an initial conservation action for the Covered Karst Invertebrates within the *Cicurina* genus, more particularly for *Cicurina venii*, that was consistent with the terms and conditions of the SEP-HCP and accompanying ITP. As summarized in the research proposal, the Permittees request the approval of this initial conservation action as the required up-front mitigation for *Cicurina venii*. Additionally, approval of this initial conservation action also contributes to further understanding of the *Cicurina* genus within Bexar County, Texas, including *Cicurina madla* and *Cicurina vespera* (SEP-HCP Covered Karst Invertebrates), as well as *Cicurina baronia* and *Cicurina loftini*, which although not included as a SEP-HCP Covered Species or Voluntarily Conserved Species, also benefit from the upfront mitigation action.

The Service approved the proposed up-front mitigation action and the Permittees initiated and fully funded the *Cicurina* research study on August 17, 2016. The funding and initiation of the *Cicurina* research study satisfied the SEP-HCP's up-front mitigation actions for *Cicurina venii*, as well as benefited *Cicurina madla* and *Cicurina vespera*.

A copy of the research proposal was provided to and approved by the Service, prior to the initiation of the research program. As of June 25, 2018, the research program was completed and findings of the research project published in Hedin, M., S. Derkarabetian, J. Blair, and P. Paquin. 2018. Sequence capture phylogenomics of eyeless *Cicurina* spiders from Texas caves, with emphasis on US federally-endangered species from Bexar County (Araneae, Hahniidae). ZooKeys 769: 49-76. <https://doi.org/10.3897/zookeys.769.25814>.

The paper established new taxonomic synonymies and range extensions for listed and non-listed *Cicurina* species in Bexar County as follows:

I. Species Synonymies

- » *Cicurina venii* Gertsch, 1992 = *Cicurina madla* Gertsch, 1992 - The Braken Bat Cave meshweaver (*Cicurina venii*) is no longer a distinct taxonomic entity with specimens now assigned to Madla's Cave meshweaver (*Cicurina madla*). The former was a single site endemic and Madla's Cave meshweaver would now occupy that location.
- » *Cicurina loftini* Cokendolpher, 2004 = *Cicurina vespera* Gertsch, 1992 - *Cicurina loftini* (no common name) is no longer a distinct taxonomic entity with specimens now assigned to the Government Canyon Bat Cave meshweaver (*Cicurina vespera*). The latter was a single site endemic but with revised taxonomy it subsumes all locations previously assigned to *C. loftini* in northwestern Bexar County.

II. Range Extensions

- » Madla's Cave meshweaver, *C. madla*: Based on revised taxonomy this species now occurs in the Culebra Anticline Karst Fauna Region.
- » Government Canyon Bat Cave meshweaver, *C. vespera*: Based on revised taxonomy its range is extended to 10-15 caves, formerly assigned to *C. loftini* in the Culebra Anticline Karst Fauna Region. This species has also now been documented to co-occur with Madla's Cave meshweaver in two caves. It was originally believed that blind *Cicurinas* did not co-occur. .

8. ADAPTIVE MANAGEMENT RECOMMENDATIONS AND CHANGED CIRCUMSTANCES

Recommended modifications to Preserve Management Plans or the SEP-HCPs conservation programs that may be warranted via the adaptive management process or changed circumstances are included below.

No modifications to Preserve Management Plans or the SEP-HCPs conservation programs occurred during the 2018 – 2019 Fiscal Year via the adaptive management process or changed circumstances.

9. COMPLIANCE-RELATED ISSUES AND ACTIONS

A summary of any compliance-related issues or actions involving Participants, Enrolled Properties, or preserves (including conservation easements) are included below.

No compliance-related issues or actions involving Participants, Enrolled Properties, or preserves (including conservation easements) occurred during the 2018 – 2019 Fiscal Year and no issues occurred within any of the Government Canyon State Natural Area Karst Fauna Areas, Northern Preserve KFA or Panther Springs Park KFA.

10. OTHER INFORMATION OR RECOMMENDATIONS

No other pertinent information or recommendations, as appropriate occurred during the 2017 – 2018 Fiscal Year.

This report summarizes the development, conservation activities, and biological monitoring surveys conducted by the SEP-HCP for the 2018 – 2019 Fiscal Year reporting period. Please contact either myself at 512-415-9772 or Tony Felts at 210-207-0153 if you have any questions or require any additional information.

Sincerely,



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ATTACHMENT A

SEP-HCP PARTICIPANTS AND ENROLLED PROPERTIES

SEP-HCP PARTICIPANTS AND ENROLLED PROPERTIES SUMMARY FY 17-19 (FIGURE 1).

COVERED SPECIES & INCIDENTAL TAKE AUTHORIZATIONS																					
APPLICATION NO.	APPLICANT NAME	ACRES COVERED FOR INCIDENTAL TAKE	DATE ENROLLED	GCW DIRECT IMPACTS ACRES	INDIRECT IMPACTS ACRES	TOTAL GCW ACRES	BCV DIRECT IMPACTS ACRES	INDIRECT IMPACTS ACRES	TOTAL BCV ACRES	KARST ZONE 1	KARST ZONE 2	KARST ZONES 1 & 2 TOTAL	KARST ZONE 3	KARST ZONE 4	KARST ZONES 3 & 4 TOTAL	BAT/SCALES (VENI/VI)	SCURRA MADLA (SCURRA VENI)	SCURRA KESKRA (SCURRA LEFT)	RHADNE EXILIS	RHADNE INFERNALIS	NEOLPTONETA MICROPS
SEP-HCP FY 17-18 (OCT. 1, 2017 - SEPT. 30, 2018) PARTICIPANTS AND ENROLLED PROPERTIES																					
17-001	Vista Ridge Regional Supply Project (VRRSP)*	91.26	20180817	0.00	0.00	N	0.0	0.0	N	41.73	49.53	91.26	0.00	0.00	N	N	N	N	Y	Y	N
17-003	INTCO Dominion - Hilltop & Howell North	12.71	20180907	10.76	23.35	34.11	0.0	0.0	N	0.00	0.00	N	12.71	0.00	12.71	N	N	N	N	N	N
18-004	SAWS North Segment	13.70	20180917	0.00	0.00	N	0.0	0.0	N	6.92	6.78	13.70	0.00	0.00	N	N	N	N	N	N	N
18-001	123 Heuermann Road Tract	6.17	20180925	6.17	13.47	19.64	0.0	0.0	N	6.17	0.00	6.17	0.00	0.00	N	N	N	N	N	N	N
18-002	Cresta Bella Unit 4B	4.66	20181002	4.06	9.77	13.83	0.0	0.0	N	4.66	0.00	4.66	0.00	0.00	N	N	N	N	N	N	N
FY 17-18 TOTAL		128.50		20.99	46.59	67.58	0.00	0.00	0.00	59.48	56.31	115.79	12.71	0.00	12.71	0.00	0.00	0.00	0.00	0.00	0.00
SEP-HCP FY 18-19 (OCT. 1, 2018 - SEPT. 30, 2019) PARTICIPANTS AND ENROLLED PROPERTIES																					
18-005	Cornal ISD Waterline**	0.00	20181002	3.70	4.00	7.70	0.0	0.0	N	0.00	0.00	0.00**	0.00	0.00	N	N	N	N	N	N	N
18-003	COSA PARD Salado Creek Greenway Trail Project	11.74	20181206	0.00	0.00	N	0.0	0.0	N	4.81	6.93	11.74	0.00	0.00	N	N	N	N	N	N	N
18-008	Pulte - Davis Ranch	75.65	20181207	66.25	47.12	113.37	0.0	0.0	N	0.00	0.00	0.00	75.65	0.00	75.65	N	N	N	N	N	N
17-004	Wells Fargo Parcel 1	111.90	20181217	0.00	0.00	N	0.0	0.0	N	0.00	111.90	111.90	0.00	0.00	N	N	N	N	N	N	N
17-005	Wells Fargo Parcel 2	10.00	20181217	0.00	0.00	N	0.0	0.0	N	0.00	10.00	10.00	0.00	0.00	N	N	N	N	N	N	N
18-007	SAWS - CWIP-Bitters, Maltzberger, Pipeline Segment 5-3 and PRV's 2-3	15.15	20181221	0.00	0.00	N	0.0	0.0	N	0.00	0.00	0.00	7.60	0.00	7.60	N	N	N	N	N	N
18-009	Hearwood Davis Ranch	58.51	20190207	56.80	35.50	92.30	0.0	0.0	N	0.00	0.00	0.00	58.51	0.00	58.51	N	N	N	N	N	N
17-002A	HOB Partners, LLC - Deer Canyon Residential Development	37.54	20190327	20.74	94.98	115.72	0.0	0.0	N	0.00	32.84	32.84	4.70	0.00	4.70	N	N	N	N	N	N
19-001	SAWS Segment 5-4 & Halm Blvd	5.99	20190423	0.00	0.00	0.00	0.0	0.0	N	0.00	0.00	0.00	3.69	0.00	3.69	N	N	N	N	N	N
18-006	Steven's Ranch - 494.52 ac	494.52	20190913	0.00	0.00	N	0.0	0.0	N	410.71	83.81	494.52	0.00	0.00	N	N	N	N	N	N	N
19-003	Vantage at Westover Hills	16.15	20190621	0.00	0.00	0.00	0.0	0.0	N	0.00	16.15	16.15	0.00	0.00	0.00	N	N	N	N	N	N
19-004	QT Store No 4062	5.00	20190702	0.00	0.00	0.00	0.0	0.0	N	0.00	5.00	5.00	0.00	0.00	0.00	N	N	N	N	N	N
FY 18-19 TOTAL		842.15		147.49	181.60	329.09	0.00	0.00	0.00	415.52	266.63	682.15	150.15	0.00	150.15	0.00	0.00	0.00	0.00	0.00	0.00
PLAN TO DATE (FY 17-19) TOTAL		970.65		168.48	228.19	396.67	0.00	0.00	0.00	475.00	322.94	797.94	162.86	0.00	162.86	0.00	0.00	0.00	0.00	0.00	0.00

* INCIDENTAL TAKE FOR R. EXILIS AND R. INFERNALIS COVERED THROUGH USFWS SECTION 7 CONSULTATION; ALL GCW IMPACTS MITIGATED SEPARATELY THROUGH SECTION 7 CONSULTATION PROCESS.

** SAME ENROLLMENT AREA AS 17-001

ATTACHMENT B

SEP-HCP PRESERVE SYSTEM SUMMARY

Summary of the Lands and Habitats Included in the SEP-HCP Preserve System, Including the Total Preserve Acres and the Acres of Suitable Habitat for Each of the Covered Species.

SEP-HCP PRESERVE	COVERED SPECIES	KFR	TOTAL ACRES	ACRES OF SUITABLE HABITAT	CRITICAL HABITAT UNIT	PRESERVE TYPE
Surprise Sink and Bone Pile Cave KFA	<i>Rhadine exilis</i> <i>Rhadine infernalis</i> <i>Cicurina madla</i> <i>Neoleptoneta microps</i>	Government Canyon	144	144	1a	High Quality
Government Canyon Bat Cave KFA	<i>Cicurina vespera</i> <i>Neoleptoneta microps</i> <i>Rhadine exilis</i> <i>Rhadine infernalis</i>	Government Canyon	100	100	1b	High Quality
Lost Pothole KFA	<i>Cicurina madla</i>	Government Canyon	100	100	1c	High Quality
Lithic Ridge, Dancing Rattler, and Hackberry Sink KFA	<i>Cicurina madla</i> <i>Rhadine infernalis</i> <i>Rhadine exilis</i>	Government Canyon	224	224	1d	High Quality
Tight KFA	<i>Rhadine exilis</i> <i>Rhadine infernalis</i> <i>Batrisodes ventyivi</i> <i>Cicurina madla</i>	Government Canyon	105	416	1e	High Quality
10K KFA	<i>Cicurina madla</i> <i>Rhadine infernalis</i> <i>Rhadine exilis</i> <i>Batrisodes ventyivi</i>	Government Canyon	100	100	1f	High Quality
Northern Preserve KFA	<i>Cicurina vespera</i> <i>Rhadine infernalis</i>	Culebra Anticline	66.31	66.31	-	Medium Quality
Panther Springs Park Preserve KFA	<i>Cicurina madla</i> <i>Rhadine exilis</i>	Stone Oak	91	91	-	Medium Quality

Conservation Baselines needed for the Covered Karst Invertebrates based on current knowledge of species distribution and establishment of KFAs within the SEP-HCP Permit Area.

Species	Number of KFRs Where Species is Currently Known To Occur	Minimum Configuration of Preserves Needed in Each KFR ¹					Total Number of Preserves Needed			Current Knowledge of Species Distribution					Current Status of Preserves in Each KFR					Current Status of Conservation Baseline and Minimum Configuration of Preserves Needed to Reach Conservation Baseline in Each KFR				
		KFR #1	KFR #2	KFR #3	KFR #4	KFR #5	High Quality	Medium Quality	Total	Govmt Canyon KFR	Helotes KFR	UTSA KFR	Stone Oak KFR	Culebra Anticline KFR	Govmt Canyon KFR	Helotes KFR	UTSA KFR	Stone Oak KFR	Culebra Anticline KFR	Govmt Canyon KFR	Helotes KFR	UTSA KFR	Stone Oak KFR	Culebra Anticline KFR
<i>Rhadine exilis</i>	5	1H +2M	1H +2M	1H +2M	1H +2M	1H + 2M	5	10	15	Y	Y	Y	Y	Y	6H	0	0	1M ^c	1M ^d	Achieved	1H + 2M	1H + 2M	1H + 1M	1H + 1M
<i>Rhadine infernalis</i>	5	1H + 2M	1H + 2M	1H + 2M	1H + 2M	1H + 2M	5	10	15	Y	Y	Y	Y	Y	6H	0	0	0	1H + 1M ^c	Achieved	1H + 2M	1H + 2M	1H + 2M	1M
<i>Batrisesodes venyivi</i>	2 ^a	2H + 1M	1H + 2M	-	-	-	3	3	6	Y	Y	Y ^a	N	N	3H + 1M	0	0	0	0	Achieved	1H + 2M	1H + 2M	-	-
<i>Neoleptoneta microps</i>	1	3H + 3M	-	-	-	-	3	3	6	Y	N	N	N	N	2H	0	0	0	0	1H + 3M	-	-	-	-
<i>Cicurina madla</i> / <i>Cicurina venii</i>	5 ^b	1H + 2M	1H + 2M	1H + 2M	1H + 2M	1H + 2M	5	10	15	Y	Y	Y	Y	Y ^b	6H	0	0	1M ^c	0	Achieved	1H + 2M	1H + 2M	1H + 1M	1H + 2M
<i>Cicurina vespera</i> / <i>Cicurina loftini</i>	2 ^b	2H + 1M	1H + 2M	-	-	-	3	3	6	Y	N	N	N	Y	1H	0	0	0	1H + 2M ^{c d}	1H + 1M	-	-	-	Achieved

¹ H = High Quality Preserve; M = Medium Quality Preserve

^a While the Service has records of this species being known from the UTSA KFR, there is not confirmation of the cave location, therefore at this time; the Service only recognizes this species as occurring in 2 KFRs, and does not recognize the UTSA KFR as having the species.

^b Updated based on Hedin et al. 2018 and correspondence from the Service to the SEP-HCP Permittees dated 8/29/2018 accepting the findings of Hedin, et al. 2018 for the Bexar County Cicurinas as published: Hedin, M., S. Derkarabetian, J. Blair, and P. Paquin. 2018. Sequence capture phylogenomics of eyeless Cicurina spiders from Texas caves, with emphasis on US federally-endangered species from Bexar County (Araneae, Hahniidae). ZooKeys 769: 49-76. <https://doi.org/10.3897/zookeys.769.25814>).

The paper establishes new taxonomic synonymies and range extensions for listed and non-listed Cicurina species in Bexar County as follows:

I. Species Synonymies

- Cicurina venii Gertsch, 1992 = Cicurina madla Gertsch, 1992 - The Braken Bat Cave meshweaver (Cicurina venii) is no longer a distinct taxonomic entity with specimens now assigned to Madla’s Cave meshweaver (Cicurina madla). The former was a single site endemic and Madla’s Cave meshweaver would now occupy that location.
- Cicurina loftini Cokendolpher, 2004 = Cicurina vespera Gertsch, 1992 - Cicurina loftini (no common name) is no longer a distinct taxonomic entity with specimens now assigned to the Government Canyon Bat Cave meshweaver (Cicurina vespera). The latter was a single site endemic but with revised taxonomy it subsumes all locations previously assigned to C. loftini in northwestern Bexar County.

II. Range Extensions

- Madla's Cave meshweaver, C. madla: Based on revised taxonomy this species now occurs in the Culebra Anticline Karst Fauna Region.
- Government Canyon Bat Cave meshweaver, C. vespera: Based on revised taxonomy its range is extended to 10-15 caves, formerly assigned its C. loftini in the Culebra Anticline Karst Fauna Region. This species has also now been documented to co-occur with Madla's Cave meshweaver in two caves. It was originally believed that blind Cicurinas did not co-occur.

^c Northern Preserve KFA (Cluebra Anticline KFR) contains both *C. vespera* and *R. infernalis*; Panther Springs Park Preserve KFA (Stone Oak KFR) contains both *C. madla* and *R. exilis*; the Stevens Ranch Karst Preserve contains *C. vespera* and *R. infernalis*

^d The SAWS APS Karst Preserve contains *C. vespera* & *R. exilis*.

ATTACHMENT C

SEP-HCP PRESERVATION CREDITS LEDGER

SEP-HCP GCW PRESERVATION CREDIT LEDGER

DATE	DESCRIPTION	REFERENCE #	DEBIT	CREDIT	BALANCE	COMMENTS
FY 17-18						
8/10/2018	BCCB GCW Credit Transfer to SEP-HCP on behalf of 18-005-Comal ISD Waterline	18-005	0.00	9.50	9.50	Credits transferred from BCCB to SEP-HCP on behalf of 18-005 on 8/10/2018 Transaction reflected in RIBITS
9/6/2018	BCCB GCW Credit Transfer to SEP-HCP on behalf of 17-003 INTCO Dominion - Hilltop & Howell North	17-003	0.00	32.25	41.75	Credits transferred from BCCB to SEP-HCP on behalf of 17-003 on 9/6/2018 Transaction reflected in RIBITS
9/6/2018	SEP-HCP Application 17-003 INTCO Dominion - Hilltop & Howell North	17-003	32.25	0.00	9.50	Participation Agreement executed on 9/6/2018; Participation Certificate Issued and Enrollment Completed on 9/7/2018
9/17/2018	BCCB GCW Credit Transfer to SEP-HCP on behalf of 18-002 - Cresta Bella Unit 4B	18-002	0.00	13.25	22.75	Credits transferred from BCCB to SEP-HCP on behalf of 18-002 on 9/17/2018 Transaction reflected in RIBITS
9/20/2018	BCCB GCW Credit Transfer to SEP-HCP on behalf of 18-001 - 123 Heuermann Road Tract	18-001	0.00	19.25	42.00	Credits transferred from BCCB to SEP-HCP on behalf of 18-001 on 9/20/2018 Transaction reflected in RIBITS
9/25/2018	SEP-HCP Application 18-001 - 123 Heuermann Road Tract	18-001	19.25	0.00	22.75	Participation Agreement executed on 9/20/2018; Participation Certificate Issued and Enrollment Completed on 9/25/2018
10/2/2018	SEP-HCP Application 18-005 Comal ISD Waterline	18-005	9.50	0.00	13.25	Participation Agreement executed on 10/2/2018; Participation Certificate Issued and Enrollment Completed on 10/2/2018
FY 18-19						
10/2/2018	SEP-HCP Application 18-002 - Cresta Bella Unit 4B	18-002	13.25	0.00	0.00	Participation Agreement executed on 10/2/2018; Participation Certificate Issued and Enrollment Completed on 10/2/2018
12/6/2018	BCCB GCW Credit Transfer to SEP-HCP on behalf of SEP-HCP Application 18-008 - Davis Ranch Take 2	18-008	0.00	156.25	156.25	Credits transferred from BCCB to SEP-HCP on behalf of 18-008 on 12/6/2018 Transaction reflected in RIBITS
12/7/2018	SEP-HCP Application 18-008 - Davis Ranch Take 2	18-008	156.25	0.00	0.00	Participation Agreement executed on 12/6/2018; Participation Certificate Issued and Enrollment Completed on 12/7/2018
1/31/2019	BCCB GCW Credit Transfer to SEP-HCP on behalf of SEP-HCP Application 18-009 - Heartwood Davis Ranch	18-009	0.00	131.50	131.50	Credits transferred from BCCB to SEP-HCP on behalf of 18-009 on 1/31/2019 Transaction reflected in RIBITS
2/6/2019	SEP-HCP Application 18-009 - Heartwood Davis Ranch	18-009	131.50	0.00	0.00	Participation Agreement executed on 2/6/2019; Participation Certificate Issued and Enrollment Completed on 2/7/2019
3/19/2019	BCCB GCW Credit Transfer to SEP-HCP on behalf of SEP-HCP Application 17-002A - Deer Canyon Phase IA	17-002A	0.00	89.00	89.00	Credits transferred from BCCB to SEP-HCP on behalf of 17-002A on 3/19/2019 Transaction reflected in RIBITS
3/19/2019	SEP-HCP Application 17-002A - Deer Canyon Phase IA	17-002A	89.00	0.00	0.00	Participation Agreement executed on 3/26/2019; Participation Certificate Issued and Enrollment Completed on 3/26/2019

SEP-HCP KARST ZONE 1 & 2 ENROLLMENT ACRES NORTHERN PRESERVE LEDGER													
DATE	DESCRIPTION	REFERENCE #	KARST ZONE 1	KARST ZONE 2	KARST ZONE 3	KARST ZONE 4	TOTAL KARST ZONE 1 & 2	TOTAL KARST ZONE 3 & 4	KARST ENROLLMENT ACRES RESERVED	DEBIT (ENROLLMENT ACRES)	CREDIT (ENROLLMENT ACRES)	BALANCE (ENROLLMENT ACRES)	COMMENTS
			ENROLLMENT ACRES	ENROLLMENT ACRES	ENROLLMENT ACRES	ENROLLMENT ACRES	ENROLLMENT ACRES	ENROLLMENT ACRES	ENROLLMENT ACRES	ENROLLMENT ACRES			
FY 17-18													
6/22/2018	Northern Preserve KFA Establishment	-	-	-	-	-	-	-	-	0.00	678.52	678.52	USFWS approval of KFA and award of 678.52 karst enrollment acres received on June 30, 2017
6/22/2018	Stevens Ranch - Karst Enrollment Acres - RESERVED	-	-	-	-	-	-	-	494.52	0.00	0.00	184.00	Per Northern Preserve Donation Agreement executed 4/24/2018
8/16/2018	SEP-HCP Application 17-001 - Vista Ridge Pipeline	17-001	41.73	49.53	0.00	0.00	91.26	0.00	494.52	91.26	0.00	92.74	Participation Agreement Recorded 8/16/2018; Participation Certificate Issued & Enrollment completed 8/17/2018
9/17/2018	SEP-HCP Application 18-004 SAWS CWIP North Segement	18-004	6.92	6.78	0.00	0.00	13.70	0.00	494.52	13.70	0.00	79.04	Participation Agreement Recorded 9/17/2018; Participation Certificate Issued & Enrollment completed 9/17/2018
FY 18-19													
10/2/2018	SEP-HCP Application 18-005 Comal ISD Waterline	18-005	0.00	0.00	0.00	0.00	0.00	0.00	494.52	0.00	0.00	79.04	Enrollment Area is same as 17-001; karst participation not required.
12/21/2018	SEP-HCP Application 18-004 SAWS CWIP North Segement - additional area	18-004B	0.05	0.306	0.306	0.00	0.356	0.306	494.52	0.356	0.00	78.68	Participation Agreement Recorded 12/21/2018; Participation Certificate Issued & Enrollment completed 12/21/2018
3/26/2019	SEP-HCP Application 17-002A - Deer Canyon Phase IA	17-002A	0.00	32.84	4.70	0.00	32.84	4.70	494.52	32.84	0.00	45.84	Participation Agreement Recorded 3/26/2019; Participation Certificate Issued & Enrollment completed 3/26/2019
9/13/2019	SEP-HCP Application 18-006 - Stevens Ranch 494.52 Acres	18-006	410.71	83.81	0.00	0.00	494.52	0.00	0.00	494.52	494.52	45.84	Per Northern Preserve Donation Agreement executed 4/24/2018 Participation Agreement Recorded 9/12/2019; Participation Certificate Issued & Enrollment completed 9/13/2019

SEP-HCP KARST ZONE 1 & 2 ENROLLMENT ACRES PANTHER SPRINGS PRESERVE LEDGER													
DATE	DESCRIPTION	REFERENCE #	KARST ZONE 1	KARST ZONE 2	KARST ZONE 3	KARST ZONE 4	TOTAL KARST ZONE 1	TOTAL KARST ZONE 3	KARST	DEBIT	CREDIT	BALANCE	COMMENTS
			ENROLLMENT	ENROLLMENT	ENROLLMENT	ENROLLMENT	& 2 ENROLLMENT	& 4 ENROLLMENT	ENROLLMENT	(ENROLLMENT	(ENROLLMENT	(ENROLLMENT	
			ACRES	ACRES	ACRES	ACRES	ACRES	ACRES	ACRES RESERVED	ACRES)	ACRES)	ACRES)	
FY 17-18													
9/19/2018	Panther Springs Preserve KFA Establishment	-	-	-	-	-	-	-	-	0.00	471.00	471.00	USFWS approval of KFA and award of 471 karst enrollment acres received on September 19, 2018
9/19/2018	Panther Springs Preserve KFA - Karst Enrollment Acres - RESERVED FOR COSA PARD PROJECTS	-	-	-	-	-	-	-	90.00	0.00	0.00	381.00	Per Panther Springs Approval by Parks Board 7/23/2018
9/25/2018	SEP-HCP Application 18-001 123 Heuermann Road Tract	18-001	6.17	0.00	0.00	0.00	6.17	0.00	90.00	6.17	0.00	374.83	Participation Agreement Recorded 9/24/2018; Participation Certificate Issued & Enrollment completed 9/25/2018
10/2/2018	SEP-HCP Application 18-002 - Cresta Bella Unit 4B	18-002	4.66	0.00	0.00	0.00	4.66	0.00	90.00	4.66	0.00	370.17	Participation Agreement Recorded 10/2/2018; Participation Certificate Issued & Enrollment completed 10/2/2018
FY 18-19													
12/6/2018	SEP-HCP Application 18-003 - COSA PARD Salado Creek Greenway Trail Project	18-003	4.81	6.93	0.00	0.00	11.74	0.00	78.26	11.74	11.74	370.17	Participation Agreement Recorded 12/5/2018; Participation Certificate Issued & Enrollment completed 12/6/2018
12/7/2018	SEP-HCP Application 18-008 Pulte Davis Ranch	18-008	0.00	0.00	75.65	0.00	0.00	75.65	78.26	0.00	0.00	370.17	Participation Agreement Recorded 12/6/2018; Participation Certificate Issued & Enrollment completed 12/7/2018
12/17/2018	SEP-HCP Application 17-004 Wells Fargo Parcel 1	17-004	0.00	111.90	0.00	0.00	111.90	0.00	78.26	111.90	0.00	258.27	Participation Agreement Recorded 12/17/2018; Participation Certificate Issued & Enrollment completed 12/17/2018
12/17/2018	SEP-HCP Application 17-005 Wells Fargo Parcel 2	17-005	0.00	10.00	0.00	0.00	10.00	0.00	78.26	10.00	0.00	248.27	Participation Agreement Recorded 12/17/2018; Participation Certificate Issued & Enrollment completed 12/17/2018
12/21/2018	SEP-HCP Application 18-007 SAWS - CWIP - Bitters, Maltsberger, Pipeline Segment 5-3, and PRV's 2-3	18-007	0.00	0.00	7.60	0.00	0.00	7.60	78.26	0.00	0.00	248.27	Participation Agreement Recorded 12/21/2018; Participation Certificate Issued & Enrollment completed 12/21/2018
2/7/2019	SEP-HCP Application 18-009 Heartwood Davis Ranch	18-009	0.00	0.00	58.51	0.00	0.00	58.51	78.26	0.00	0.00	248.27	Participation Agreement Recorded 2/6/2019; Participation Certificate Issued & Enrollment completed 2/7/2019
4/23/2019	SEP-HCP Application19-001 SAWS Segment 5-4 & Halm Blvd	19-001	0.00	0.00	3.70	0.00	0.00	3.70	78.26	0.00	0.00	248.27	Participation Agreement Recorded 4/23/2019; Participation Certificate Issued & Enrollment completed 4/23/2019
6/21/2019	SEP-HCP Application 19-003 Vantage at Westover Hills	19-003	0.00	16.15	0.00	0.00	16.15	0.00	78.26	16.15	0.00	232.12	Participation Agreement Recorded 6/19/2019; Participation Certificate Issued & Enrollment completed 6/21/2019
7/2/2019	SEP-HCP Application 19-004 QT Store No 4062	19-004	0.00	5.00	0.00	0.00	5.00	0.00	78.26	5.00	0.00	227.12	Participation Agreement Recorded 7/2/2019; Participation Certificate Issued & Enrollment completed 7/2/2019

ATTACHMENT D

SEP-HCP FINANCIAL STATUS

SEP-HCP Account Balance - As of 10/04/2019

SEP-HCP General Program Administration

Account Number	Account Name	2017	Fiscal Year 2018	2019	Cumulative Fund Balance**
4406300	Application Fee - \$2.5K	7,500	22,500	17,500	47,500
4406301	Plan Admin Fee - 10% Tot Mitig Fees	9,126	34,698	232,864	276,688
4406305	Karst Habitat - \$1K per acre	68,445	36,165	252,284	356,894
4901301	Interest on Pooled Investments-Operating	869	3,959	15,710	20,538
4902700	Net Increase in Fair Value of Investment*	(13)	(112)	207	82
5201040	Fees to Professional Contractors***		(52,358)	(107,682)	(160,041)
6101100	Interfund Transfers In	141,750	141,750	141,750	425,250
Grand Total		227,676	186,602	552,634	966,912

Endowment Fund - Government Canyon

Account Number	Account Name	2017	Fiscal Year 2018	2019	Cumulative Fund Balance**
4406305	Karst Habitat - \$1K per acre	-		30,103	30,103
4901301	Interest on Pooled Investments-Operating	-	784	1,674	2,458
4902700	Net Increase in Fair Value of Investment*	-	(20)		(20)
6101100	Interfund Transfers In	33,250	33,250	33,250	99,750
Grand Total		33,250	34,014	65,027	132,290

Endowment Fund - Northern Preserve

Account Number	Account Name	2017	Fiscal Year 2018	2019	Cumulative Fund Balance**
4406305	Karst Habitat - \$1K per acre	22,815	3,425	8,210	34,450
4502280	Contributions from other agencies		165,750		165,750
4901301	Interest on Pooled Investments-Operating		2,263	3,150	5,413
4902700	Net Increase in Fair Value of Investment*		(59)		(59)
Grand Total		22,815	171,379	11,360	205,555

Endowment Fund - Panther Springs Preserve

Account Number	Account Name	2017	Fiscal Year 2018	2019	Cumulative Fund Balance**
4406305	Karst Habitat - \$1K per acre	-	8,630	35,943	44,573
4901301	Interest on Pooled Investments-Operating	-	102	326	427
4902700	Net Increase in Fair Value of Investment*	-	(3)		(3)
Grand Total		-	8,729	36,268	44,997
Total of All Fund Balances					1,349,754

*Denotes loss/depreciation of investments in various markets

**Actual cash in and cash out and does not include value of environmental credits

*** Bexar County Contribution is equal to City contribution

Revenues	1,480,958
Interest	28,836.56
Expenses	(160,041)
Total of All Fund Balances	1,349,754