FM2222 Bypass Study

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In February 2018, TxDOT and the USFWS agreed to allow COA BCP to use mitigation fees to conduct hydrogeological studies along FM 2222 and FM 620 in preparation of construction of a bypass road to alleviate traffic. TxDOT issued a $390,655 mitigation fee to COA BCP in August 2018. As a prerequisite for hydrogeological studies in FY20, BCP is locating springs, assessing the presence of salamanders and other subterranean life, and restoring previously filled caves and extending deeper portions of known caves in the area. A report on assessment of AW BCP preserves for aquatic life in FY19 is included in the appendices.

A karst assessment of Stovepipe Karst Preserve (Canyon Creek 3) was conducted from Feb 27-March 2, 2019 by 4Caves, identifying eight karst features (Fox Hole, Canyon Creek Crevasse, Mossy Rock Sink, Gaping Maw, SPF1, Sacred Grove Sink, Slab Sink and SP2) in addition to Stovepipe Cave. From February 12, 2019 until February 26, 2019 Zarria Environmental further evaluated Mossy Rock Sink to a depth of ten feet without reaching the extent of fill to solid rock or open aperture. Additional evaluation is necessary on all eight karst features. The evaluation and restoration is a necessary prerequisite for conducting hydrogeological study of the site and developing cave ecosystems on the preserve. Once restored by removing ranch fill, other caves such as La Crosse Cave have shown healthy rebound of its troglobitic ecosystem. In FY 19, a faunal survey was conducted by AW BCP biologists in Mossy Rock and Stovepipe Caves.

On Park West and Cortaña BCP preserves, only relatively shallow caves are known. Karst assessments revealed numerous karst features that were anthropogenically filled. Spider Cave that is listed on the BCCP federal permit itself only extends to a 10 feet depth with dirt floor. In 1992 the former owner of the Park West tract reported to Nico Hauwert that an extensive cave pit was present adjacent to FM 2222. In 2018 caver Mike Grimm also reported that historically an 80 feet deep pit was present near FM 2222 on Park West. In FY 2019, a karst feature named Elm Tree was found filled with rocks and was evaluated to a depth of 11 feet with dirt-filled floor and side passages remaining. A contract for more extensive karst examination was bid in FY19, although the work is commencing in FY20. In FY 19, a faunal survey was conducted by AW BCP biologists in Spare Rib Cave, Spider Cave, Cortana Cave, and Elm Sink.

After hydraulically significant karst features are revealed and spring locations are mapped, AW BCP expects to inject organic tracers and monitor cave drips and springs to map subsurface catchment areas.

This information can be used to define karst faunal areas where protection can be focused, as described in the 1994 endangered karst invertebrate recovery plan.

Contract Labor Expenditures Through FY 2019

Cost	Task
$6,500	Stovepipe Preserve
$23,507	Salamander assessment
$13,142	Park West
$2,920	Cortana
$46,069	total