

**COFFIN CAVE PRESERVE
OPERATION, MANAGEMENT, AND MONITORING PLAN**

This COFFIN CAVE PRESERVE OPERATION, MANAGEMENT, AND MONITORING PLAN (“Management Plan”) is made by and among Testamentary Trust of Marvin August Andres for Richard Lee Andres (“Landowner”), Williamson County, Texas (“County”) and the U.S. Fish and Wildlife Service (“Service”) (Landowner, County and the Service, collectively, the “Parties”) on the date set forth below.

GENERAL

1.1 Coffin Cave Preserve Conservation Easement. The Parties acknowledge and agree that they enter into this Management Plan in connection with that certain Coffin Cave Conservation Easement from Testamentary Trust of Marvin August Andres for Richard Lee Andres, as Grantor, to the County, as Grantee, with Service as Third Party Beneficiary thereto, pursuant to Endangered Species Act Section 6.

1.2 Performance of Monitoring, Operation and Management, Periodic Review, and Related Items. The Parties agree that County will be responsible for funding and performing (or causing to be performed) the Monitoring, Operation and Management, Periodic Review, and related items (collectively, the “Conservation Actions”) set forth in this Management Plan, as it may be amended from time to time. The County may transfer the responsibility for funding and performing (or causing to be funded or performed) the Conservation Actions to a third party or other entity upon written approval by the Service.

1.3 Periodic Review. The Parties recognize and acknowledge that the physical environmental conditions of the Property can change over time due to a variety of factors and that technological advancements and other new information with regard to management practices may be available in the future. Accordingly, to ensure that the conservation purposes set out in the Conservation Easement and this Management Plan continue to be satisfied, the Parties agree that this Management Plan should be reviewed at least every five years. In connection therewith, the Parties agree to work together in good faith to determine if the Management Plan needs to be modified or updated. The Management Plan can be modified at any time provided such changes do not violate the conservation purposes of the Conservation Easement and either enhance or do not impair such conservation purposes. Any modification of the Management Plan requires the mutual agreement of the Parties and must be in writing and executed by duly authorized representatives of each Party. Any such modified Management Plan shall remain on file with the Parties.

1.4 Conservation Easement Governing Document. In the event of any conflict between any term or provision of the Conservation Easement and this Management Plan, the Conservation Easement controls.

MONITORING

2.1 Routine monthly preserve inspections will include checking for the following:

- 2.1.1 Signs of vandalism, unauthorized entry, and trash dumping.
- 2.1.2 Damage to vegetation within the Coffin Cave preserve.
- 2.1.3 Presence of red imported fire ants (RIFA) proximal to the Coffin Cave main cave entrance within the preserve.

2.2 Annual or less frequent preserve inspections will include:

- 2.2.1 Biospeleological survey of the portion of Coffin Cave within the Conservation Easement area (once every 5 (five) years).
- 2.3.2 RIFA treatment within 344 feet of Coffin Cave main entrance (at least once a year).
- 2.3.3 Monitoring any change in vegetation within the cave buffer using baseline information to evaluate degree of invasion by non-native species and to determine the need for restoration or manipulation of vegetation to maintain a native plant community (once every 3 (three) years).

The results of the biospeleological surveys, RIFA treatment program, vegetation monitoring and all other operation and maintenance activities will be compiled in an annual report and submitted to Williamson County, the Williamson County Conservation Foundation, and the Service.

2.3 Baseline Data. Baseline data will be collected for the portion of Coffin Cave within the Conservation Easement area in relation to species (listed and unlisted) present, karst invertebrate habitat quality, and temperature and relative humidity within the cave. Baseline data will also be collected with the Coffin Cave preserve for the presence/density of RIFA mounds and structure/composition of vegetation. The first year of operation and management may also include, as necessary, gating of the cave.

OPERATION AND MANAGEMENT

Trash removal and damage repair will be conducted as needed for Coffin Cave. If damage to vegetation within the preserve occurs, it will be restored. If damage to vegetation near Coffin Cave becomes a recurring problem, perimeter fencing may be required.

3.1 RIFA Control. The method of exterminating RIFA within the preserve should follow Service approved methods. Initial efforts to remove RIFA mounds may be more extensive, in hopes of eliminating/reducing mounds to a manageable count. In areas where fire ant populations are high, RIFA treatment may be required more often than twice a year (at least spring and fall of each year). Thereafter, if effective, treatment will occur only in the spring.

An increase in the frequency of fire ant control will be required if either of the following conditions are met during any survey: (1) fire ant densities are greater than 40 mounds per acre or (2) there are greater than 40 mounds within 344 ft (the approximate cricket foraging radius) of any karst feature that has listed species or cave crickets. If the density of fire ants does not go below both of the preceding levels after an increase in the frequency of fire ant control, the frequency of fire ant control must be increased again until the density of fire ants is below both of the levels by the next fire ant survey. Additionally, if fire ant mounds are ever observed within 33 ft of any karst feature on the karst preserve or if biological investigations find any fire ants within any cave that has endangered invertebrates or cave crickets, all mounds within 33 ft of that cave entrance must be treated within 15 days.

3.2 Adaptive Management. Adaptive management is an integrated method for addressing uncertainty. Adaptive management of the Coffin Cave preserve will enable management efforts to be focused on observed changes within or affecting Coffin Cave. Adaptive management may require some tasks to be executed more often than projected. If management is demonstrated to be ineffective, the operation, management, and monitoring of the preserve will, subject to available funding, adjust accordingly.

Examples of adaptive management activities may include more intense RIFA control, fencing around caves to prevent vandalism, removal of invasive plant/animal species found to be detrimental to the karst ecosystem, and/or removal of species found to directly/indirectly harm the karst ecosystem. If any additional endangered karst invertebrate caves are discovered within the preserve, such caves will be included in the preserve's approved operation, management, and monitoring plan.

IN WITNESS WHEREOF, the Landowner, County, and Service have executed this Coffin Cave Preserve Operation, Management, and Monitoring Plan, on the date written hereon. By its execution and acceptance of this Management Plan, Landowner, County, and Service accept the third-party rights of enforcement herein.

Approved by: