



## MEMORANDUM

**To:** Sherri Kuhl, Division Manager Wildlands Conservation

**From:** Nico M. Hauwert, Ph.D., PG. Austin Water Balcones Canyonland Preserve Program Manager

**Date:** November 5, 2019

**Subject:** Acquisition of Lot Containing BCCP Federal Permit Whirlpool Cave

### Summary

Whirlpool Cave is the third largest volume (42,600 cubic feet) of the 62 federal permit caves, behind Airmen's and Blowing Sink Caves. It contains species of concern *Cicurina bandida* and *Rhadine austinca* and several other species of extremely rare endemic cave invertebrates. In 2018 it was the cave most utilized for education traffic with 1,632 people, more than half of those serving City of Austin education programs. Whirlpool Cave and the land over it recharges to Barton Springs six miles away, with a measured first tracer arrival of 3 to 4 days.

While Texas Cave Management Association (TCMA) has owned the entrance of Whirlpool Cave since 1988, the majority of the cave and its largest room is estimated by cave mapping to underlie an adjacent private 4.7 acre lot (TCAD parcel number 324368; Parcel ID: 0415300407; Legal Description: ABS 2 SUR 17 ANDERSON T ACR 4.695 Deed Book ID 12554, Page 00221 Venturina Biggs owner, Figure 1)

On January 14, 2012 the lot was appraised at \$266,000 on behalf of Travis County, which offered to buy the lot for this amount. The owner declined the offer.

In 2019, AW BCP approached the owner for acquisition of the lot as required by the federal permit completion. On May 7, 2019 the lot now appraised at a value of \$490,000. On August 15, 2019, following a meeting with the lot owner Ms. Reina Biggs, an offer of \$490,000 plus closing costs paid was extended on AW's behalf by COA Real Estate. On September 25, 2019, a representative for the owner announced that the offer was accepted.

### Benefits of acquisition

- If the majority of the third largest volume cave on the federal BCCP permit is privately owned, the surface area cannot be protected and properly managed. (Figure 1). Acquisition into the BCCP would be a major compliance accomplishment.
- Surface management according to the land management plan can finally be implemented. Under BCP acquisition, active land management can be performed on the surface including treatment for invasive tawny crazy ants and red imported fire ants, removal of exotic vegetation, insuring no pesticides or other toxic chemicals are applied on the surface, conducting surface restoration including planting nutritious vegetation to support a healthy surface and subsurface ecosystem, planting trees to support a canopy that suppresses red imported fire ants, reduces evapotranspiration during droughts, and sequesters carbon.

- Restoration of other artificially filled caves on the lot can enhance cave ecosystem and potentially provide additional education caves for guided tours.
- Austin Water BCP is currently negotiating a formal agreement with the adjacent TCMA and would be the best entity to manage the lot for the federal permit. AW BCP staff have worked with TCMA and participated in managing Whirlpool Cave since 1993 and have both a great familiarity with the site and developed strong trust with TCMA.
- Whirlpool Cave is a major educational and recreational facility for City of Austin programs. AW BCP can support this while insuring federal species protection is met.
- Whirlpool Cave Preserve can potentially be the City of Austin's 4<sup>th</sup> official cave preserve that is required by the 1996 Habitat Conservation Plan to be established for the 62 permit caves, and the second managed by AW BCP, in this case co-managed with TCMA.
- The acquisition site is located on the Barton Springs Zone. On June 16, 1999, five pounds of eosine dye poured in Whirlpool Cave adjacent to this site initially reached Barton Springs within 3 to 4 days. A tracer injection on February 3, 2012 in the Arbor Hills water quality pond just north of this site reached Barton Springs in less than four days. Whirlpool Cave actively recharges floodwater and the acquisition site is likely to have additional caves.
- AW BCP in partnership with Public Works, Hill Country Conservancy, Texas Department of Transportation, and Texas Cave Management Association are planning future opportunities for the public to celebrate caves and their ecosystems with a cave mural and seating area on the adjacent underpass along the Violet Crown Trail.

### Federal Permit Compliance Information

Since 1996, Whirlpool Cave has been out of compliance with the federal permit, since only a small portion of the surface overlying the cave can be managed and no formal agreement with TCMA has been established. The subsurface extent can be more precisely located using cave radio location.

The 1996 federal permit (PRT-78841) require that the BCCP partners “*acquire and manage, or implement formal management agreements...adequate to preserve the environmental integrity of...Whirlpool Cave* (p. 7).

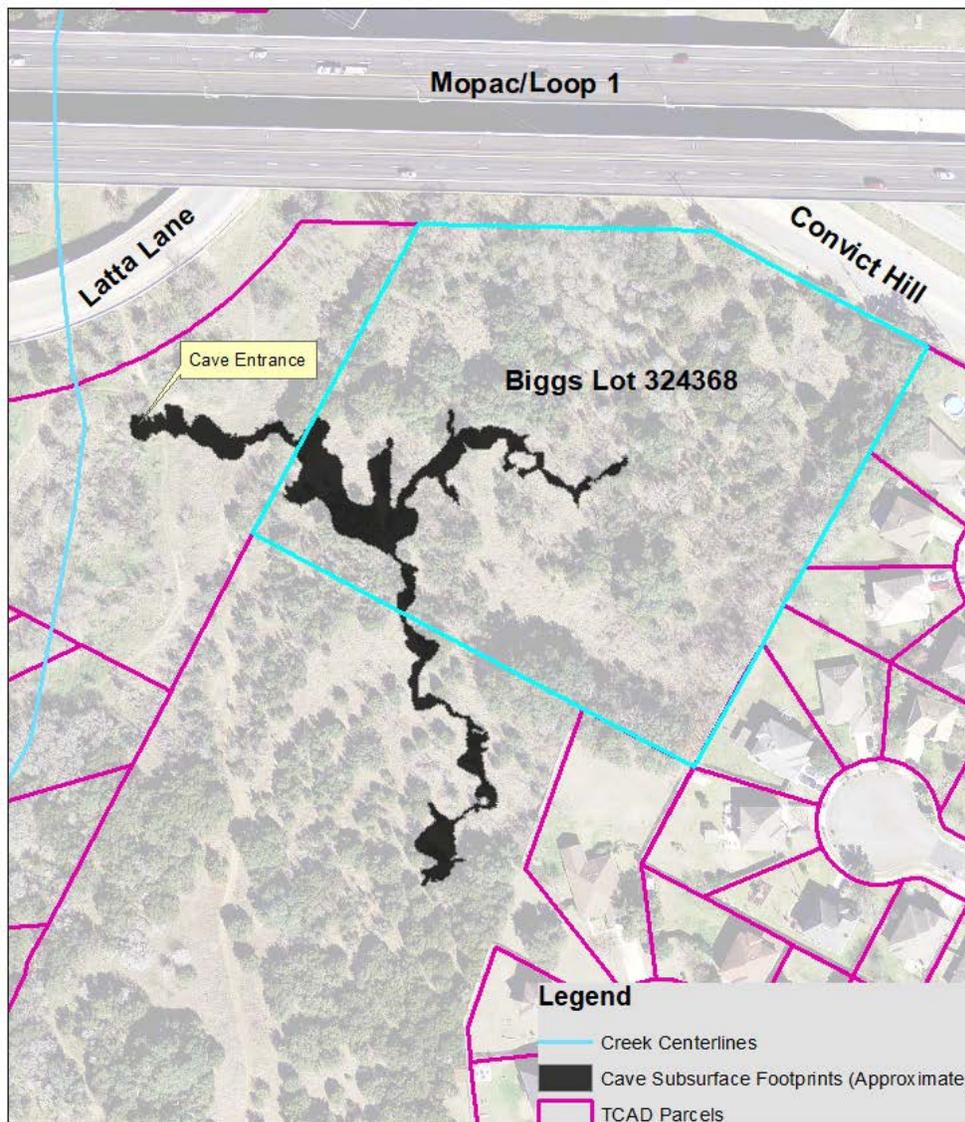
The permit also directs “*J. The funds collected under this Permit will be expended for land or easement acquisition and other preserve system needs in accordance with the following criteria:*

*3. Dispensing of funds from the BCCP Fund Account should be accomplished **as soon as there are adequate funds to complete a transaction** or implement a strategy for acquisition, taking into account **opportunity, preserve priority and development threat.**” (p. 5)*

The BCCP Habitat Conservation Plan/Environmental Impact Statement 2-27: *The proposed karst preserves encompass important caves and cave clusters distributed over the extent of potential karst habitat, based on a strategy to protect the federally-listed cave invertebrates as well as a longer list of rare and local species that may be listed in the future. Karst preserves will be appropriate in size and configuration in order for the species in the preserve to be covered by the permit. To be considered "protected," a karst fauna area must contain a large enough expanse of continuous karst and surface area to maintain the integrity of the karst ecosystem on which each species depends. The size and configuration of each karst fauna area must be adequate to maintain moist, humid conditions, air flow, and stable temperatures in the air-filled*

voids; maintain an adequate nutrient supply; prevent contamination of surface and groundwater entering the ecosystem; prevent or control the invasion of exotic species, such as fire ants; and allow for movement of the karst fauna and nutrients through the interstitium between karst features. In most instances, this will entail protecting the entire surface and sub-surface drainage area of each cave and enough of the surface vegetation community to support small animals and buffer against red imported fire ant infestations that can eliminate native ant populations.

**Figure 1.** Map of Georeferenced Subsurface Extent of Whirlpool Cave in Relation to Proposed Acquisition of Biggs Lot 324368



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This product has been produced by the Wildland Conservation Division for the sole purpose of geographic reference. No warranty is made by the City of Austin regarding specific accuracy or completeness.

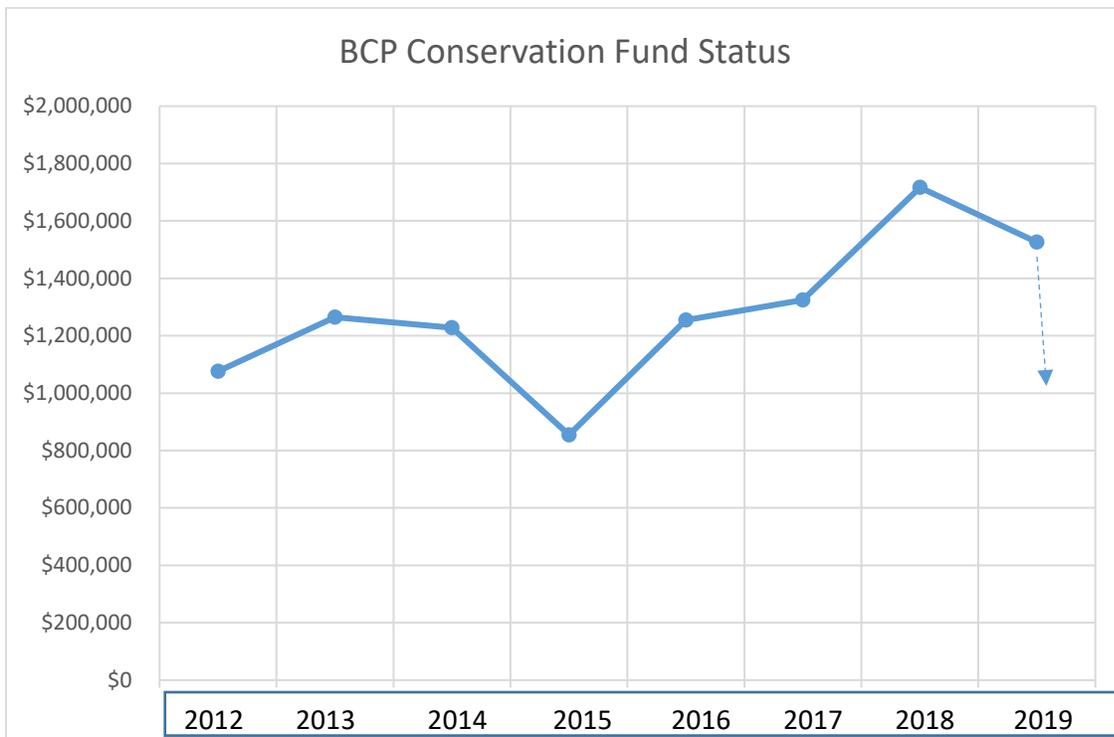




**Funding**

Now that the City of Austin’s offer has been accepted and a purchase price of \$490,000 plus closing costs (estimated at \$30,000) has been established, AW BCP is seeking funding partners to purchase the lot.

Even if a funding partnership is not located, AW BCP can fund the purchase and closing costs entirely from its 7960 2200 1100 BCP Conservation Fund. The purchase from this source alone would bring the fund down to approximately \$1 million. We can apply \$170,000 from this fiscal year’s amended budget toward the purchase, with the remainder coming from savings. The federal permit directs that if an acquisition opportunity arises and funding is available, then purchase of such land should be accomplished. Since the purchase is not specifically budgeted for the fiscal year FY20, a budget amendment and City Council approval is required.



If you have any question or comments regarding Whirlpool Cave or its acquisition, please contact me at 512-972-1661.

**Nico M. Hauwert, Ph.D., Professional Geoscientist, Program Manager**

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