

Unit 15

Unit 15 contains four occupied caves (Table 3). The unit occurs within and is surrounded by large-lot residential development. This unit contains all of the components described above.

Unit 16

Unit 16 includes one occupied cave (Table 3). The surface of this unit consists of several large privately owned, undeveloped tracts. The unit is surrounded on three sides by privately owned undeveloped land. Loop 1604, a major roadway, goes through the eastern part of the unit and lies above the eastern portion of the subsurface drainage area associated with the cave. This unit contains all of the components described above.

Unit 17

Unit 17 consists of several large privately owned undeveloped tracts with a few small roads and is surrounded by privately owned undeveloped land. La Cantera's Madla's Cave management area occurs within this unit and contains the one occupied cave in the unit (Table 3). This cave and the approximately 2 ha (5 ac) surrounding the cave is under a conservation easement acquired by La Cantera under a section 10(a)(1)(B) permit, which requires that this cave and the surrounding lands be managed in perpetuity for the conservation of the species. We did not include this cave, as well as the associated lands covered by the permit, in the designation of critical habitat (*see* "Lands Covered Under Existing Conservation Plans" section). This unit was delineated to encompass the portions of the cave cricket foraging area plus buffer and 16 ha (40-ac) vegetative area that extend outside of the management area protected under the La Cantera HCP. The majority of the unit overlies a contiguous deposit of Zone 1 karst-bearing rock with a small portion of Zone 3, which underlies part of the cave cricket foraging area and associated buffer area.

Unit 18

Unit 18 includes two occupied caves (Table 3). The surface of this unit consists of large privately owned undeveloped tracts and several smaller residential lots developed with homes. Unit 18 is surrounded on three sides by residential and commercial development and on the fourth side by a large undeveloped tract. This unit contains all of the components described above. The majority of the unit overlies a contiguous deposit of Zone 1 karst-bearing rock and a small

portion of Zone 3 as defined in Veni (2002), which underlies part of the cave cricket foraging area and buffer.

Unit 19

This unit contains one cave (Table 3). Genesis Cave is one of only two locations currently known to contain *Rhadine infernalis infernalis* (Table 1) and is therefore particularly important for the conservation of the species. Genesis Cave is the deepest explored cave in Bexar County, extending below the water table, and has been mapped down to 78 m (256 ft) (Veni 1988).

The majority of the land within this unit has been developed for residential and/or commercial uses. As a result of the extensive existing development within this unit, the surface vegetation has been reduced and degraded and only small vegetated areas remain. Therefore, this unit does not contain the primary constituent element of a healthy surface plant community and was delineated to encompass the cave, its footprint, the surface and subsurface drainage area, and a portion of the cave cricket foraging area with potential for being restored to native vegetation. The cave is surrounded by approximately 2 acres of undeveloped land, which is adjacent to several small parcels of undeveloped land. We believe that these areas, by themselves, are not sufficient to maintain a healthy plant community and that intensive management will likely be needed to provide nutrients and water to the listed species in this cave. However, these small undeveloped areas surrounding the cave may provide foraging area for crickets inhabiting Genesis Cave and should be managed to benefit the species.

Unit 20

This unit contains one occupied cave (Table 3). Robber Baron Cave is the only known location for two of the nine listed species (Table 1) and because the cave is located within an area that is geologically isolated from other karst areas in the San Antonio region, these two species are not likely to occur outside this area (Veni 1994). Therefore, this cave is particularly important for the conservation of these species. Robber Baron Cave is by far the longest cave in Bexar County consisting of approximately 1.51 km (0.94 mi) of passages known within a square area approximately 100 m (328 ft) on each side (Veni 1988). Prior to the extensive development that has occurred in the area, the cave's footprint was estimated to extend at least 100 m (328 ft) farther east to a water well, 600 m (1,969 ft) southwest to a now-sealed extensive maze cave, and about 1.2 km (0.75 mi)

to the southwest to another well (Veni 1988). The estimated footprint of the cave now extends underneath numerous residential and commercial developments. The Texas Cave Management Association (TCMA) now owns and manages the cave entrance and about 0.2 ha (0.5 ac) surrounding the opening. TCMA, in cooperation with the Service's Partners for Fish and Wildlife Program, is currently working to replace the existing cave gate, which consists of a concrete bunker created to deter access, with a new gate that will facilitate exchange of air and nutrients into the cave as well as restrict access. TCMA also plans to restore the grounds immediately surrounding Robber Baron Cave to a more natural state and repair the perimeter fence to regulate access.

The majority of the surface land within this unit has been developed for residential and/or commercial uses. As a result of the extensive existing development within this unit, the surface vegetation has been reduced and degraded and only small vegetated areas remain. Therefore, this unit does not contain the primary constituent element of a healthy surface plant community. The unit was designated to encompass the cave; the cave footprint, both the known and estimated extent; and the surface and subsurface drainage area. Vegetation surrounding the cave entrance consists primarily of nonnative species used for residential landscaping. Intensive management will likely be needed to provide nutrients and water to the listed species in this cave.

Unit 21

Unit 21 contains three occupied caves (Table 3). The majority of this unit occurs within the City of San Antonio's Stone Oak property, purchased under the Proposition 3 program. Several residential lots also occur within the unit boundaries. This unit contains all of the components described above, with the exception of the majority of the over 5,600-ac surface drainage area associated with Springtail Crevice Cave as defined by Veni (2002). This drainage area was not included in this final determination because it was not identified in the proposed rule and therefore was not available for public comment, and because of time deadlines associated with the legal settlement agreement to complete this designation, we did not have time to republish the critical habitat proposal to include this area and allow public comment on it. Although not included in the critical habitat area, minimizing impacts to the surface drainage area associated with this cave may be important for the conservation of the species in that cave.