

SAN BERNARDINO AND AGUANGA KANGAROO RAT SURVEYS

Phase 1: Habitat Assessment

Habitat assessments for the San Bernardino kangaroo rat (*Dipodomys merriami parvus*; SBKR) and Aguanga kangaroo rat (*D. merriami collinus*; AKR) shall be conducted by a qualified biologist, defined as a biologist who possesses a Memorandum of Understanding (MOU) with the California Department of Fish and Game (CDFG) for live-trapping of the San Bernardino kangaroo rat. For habitat assessments for the San Bernardino kangaroo rat, the biologist must also possess a federal Section 10(a) incidental take permit. The project area will be systematically surveyed on foot to determine the presence and map the distribution of any suitable habitat for the SBKR/AKR within the project boundaries. Suitable habitat for the SBKR/AKR includes Riversidean sage scrub, coastal sage scrub, Riversidean alluvial fan sage scrub, desert scrub, chaparral, and grassland, typically found within or adjacent to, but not limited, sandy washes or areas of windblown sand. Because diagnostic surface sign of the SBKR/AKR (e.g., burrows, scat, tracks, etc.) can be difficult to detect and differentiate from the sympatric (overlapping) Dulzura kangaroo rat (*D. simulans*) and Stephens' kangaroo rat (*D. stephensi*), the absence of such sign is not evidence of absence and, conversely, the presence of diagnostic kangaroo rat sign is not evidence of presence of SBKR/AKR. Suitable habitat areas for the SBKR/AKR will be identified and mapped. At the completion of the Phase 1 task, the biologist will advise the project applicant if a trapping program is needed to confirm the presence/absence of the SBKR/AKR in the project area.

Phase 2: Live-trapping Study for the San Bernardino Kangaroo Rat and Aguanga Kangaroo Rat

A live-trapping program for the SBKR/AKR will be conducted in mapped suitable habitat (as described above) in the project area by a qualified biologist, as defined above. The trapping protocol as specified by the USFWS for the SBKR shall be used for both the SBKR and AKR. Trapping guidelines are as follows:

- The live-trapping program shall be conducted over five (5) consecutive nights if no SBKR/AKR are captured. The trapping program at a given site shall be terminated if an SBKR/AKR is trapped prior to the fifth night. If more than one site is present in a project area, trapping would continue up to five nights in areas where SBKR/AKR have not yet been trapped.
- At a given site, all traps must be located in areas that best typify SBKR/AKR habitat. Traps shall be checked at least twice per night, once near midnight and again at sunrise. Animals will be held only so long as to identify to species, sex, and age-class and then released at the trap site. Trapping will be conducted under mild weather conditions, with minimum temperatures greater than 50⁰ Fahrenheit and atmospheric conditions relatively dry, and calm. Trapping shall not be conducted in extended periods of wind, rain or fog that may jeopardize the lives of SBKR/AKR.

- All traps shall be 9-inch or 12-inch Sherman live traps or traps of similar design and efficiency. Sherman 9-inch traps may only be used if they were purchased before March 13, 1990. Such similar non-Sherman traps shall be approved by the CDFG and Carlsbad Fish and Wildlife Office (CFWO) (for SBKR only) prior to their use. All trap models shall be modified to eliminate or substantially reduce the risk of injury (e.g., tail lacerations). No batting may be used in traps. Traps that have been used for trapping outside Riverside County shall be sterilized before use in Riverside County.
- No mutilation marking scheme (e.g., toe-clipping, ear clipping) shall be allowed. No invasive technique (e.g., PIT-tagging) will be allowed unless authorized by the CDFG and USFWS Portland Regional Office (for SBKR only).

Following the live-trapping study, the biologist shall submit all trapping reports and associated information required by the CDFG MOU and federal Section 10(a) permit.

PLANTS