

6.4 Western Burrowing Owl (*Athene cunicularia hypugaea*) – Category SL

Management Units with Known Occurrences

Western burrowing owl breeds in grasslands and open scrub from southern Canada south into the western United States and northern Mexico (Macias-Duarte 2011). This species was once common throughout San Diego County (Unitt 2004), but began declining in the early 1900s with increasing urban and rural development, and by the late 1970s numbered only around 250 to 300 pairs (Lincer and Bloom 2007). In 2007, an estimated 47 pairs of resident burrowing owls remained in San Diego County.

Recent (since 2000) locations of nesting burrowing owl (defined as detections between March and August) are derived from multiple sources. CDFW conducted a use survey of artificial and known historic natural burrows in 2010, 2011, and 2012. In addition, incidental sighting data are available from SANBIOS (2012) and Caltrans (provided by M. Galloway 2012). A survey for raptors in San Diego County was conducted by WRI between 2001 and 2003 (WRI 2005), which included burrowing owl, but the data were not used because sites listed appeared to already be accounted for in the above sources or were on nonconserved lands. The San Diego Zoo Institute for Conservation Research has been monitoring core areas of the Otay Mesa population since 2013 (San Diego Zoo Insitutute for Conservation Research 2016) and, in collaboration with the Institute for Ecological Modeling and Management, initiated a scientific, ecologically relevant strategy for relocating California ground squirrels to improve grassland habitat focused on aiding the recovery of western burrowing owls and their grassland ecosystem in 2011 (Hennessy et al. 2015). No County-wide occurrence monitoring data exist for burrowing owl and numbers of owls in the various datasets cannot be used to determine occurrence size due to varying levels of effort and potential for double counting. Therefore, numbers of burrowing owls detected are not provided in the MSP tables.

Based on the above sources, nesting burrowing owls have recently been detected on Conserved Lands in MUs 3 and 5 (refer to online map: <http://arcg.is/2kFRjx7>) with winter observations of owls in MUs 4 and 6. Outside the MSPA, burrowing owls nest at U.S. Naval Base North Island, though successful nesting has not been observed since 2011 (San Diego Zoo Insitutute for Conservation Research 2016).

Nesting burrowing owls have been reported recently (2010) in artificial burrows on and adjacent to the Ramona Grasslands Open Space Preserve in MU5. This area represents the only other relatively large, intact area in the MSPA where multiple burrowing owl pairs are known to nest in recent history. There have been no recent reported detections of nesting burrowing owls on Conserved Lands in MUs 2, 7, 8, 10, and 11.

Management Categorization Rationale

Burrowing owl should be managed as a Species Management Focus Category SL Species due to a high risk of loss from Conserved Lands in the MSPA. This designation is due to its limited distribution within the MSPA, small breeding occurrences, recent loss of occurrences from Conserved Lands, lack of suitable nesting habitat, and high degree of threat (see Vol. 1, Table 2-4).

Threats to burrowing owl include increased nonnative grass and forb cover leading to a reduction in suitable, open nesting and foraging habitat. Burrowing owl is also vulnerable to predation by coyotes, raptors, and other predators. Second generation rodenticides could impact owls through indirect ingestion from prey (see Klute et al. 2003). Within the MSPA, there is the potential for electrocution at the Otay Mesa State Prison (official name: Richard J. Donovan State Correctional Facility; refer to annual reports for the Statewide Lethal Electrified Fence Project; AECOM and Ascent Environmental 2010).

Management and Monitoring Approach

The overarching goal for western burrowing owl is to protect, enhance, and restore occupied and historically occupied habitat to create resilient, self-sustaining populations that provide for persistence over the long term (>100 years).

For the 2017–2021 planning cycle, the management and monitoring approach for the western burrowing owl is to:

- (1) Continue the research study of breeding burrowing owls, foraging, threats, artificial and natural burrows, movements, and habitat assessments to inform management at existing occupied and future potential nodes. Include translocated owls in the study to determine effectiveness of translocation and to gather information to inform continued management at new nodes.

- (2) Annually inspect artificial and natural burrows and occupied habitat to determine management needs using a regional "IMG" protocol. The monitoring should include considerations for retrofitting existing artificial burrows with the most current design to maximize fledgling success, removal/closing of burrows at poorly performing sites, and addition of burrows to maximize success.
- (3) Conduct management actions identified through the IMG regional protocol monitoring, including protecting populations from disturbance; removing invasive plants; cleaning, repairing, and fortifying burrows within the known occupied and suitable habitat; retrofitting existing artificial burrows with the most current design to maximize fledgling success; removal/closing of burrows at poorly performing sites; and addition of burrows to maximize success.
- (4) Finalize the Burrowing Owl Conservation and Management Plan that includes results from the research study and habitat assessments, recommendations for the establishment of at least two nodes and enhancement of existing occurrences to ensure persistence on Conserved Lands, and establishment of a captive breeding population as a source for burrowing owls.
- (5) Implement highest-priority management actions from the Burrowing Owl Conservation and Management Plan and monitor the effectiveness of management actions implemented.

For details and the most up-to-date goals, objectives, and actions, go to the MSP Portal Western Burrowing Owl summary page: https://portal.sdmmp.com/view_species.php?taxaid=687093.

Western Burrowing Owl References

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