

MORONGO BASIN ALTERNATIVE FUTURES

Badger - Taxidea taxus

About the Species:

The badger is a California Species of Special Concern that requires specialized environments for creating their large burrows. The formerly abundant species is now much less common, but is found across the extent of the Morongo Basin where its preferred open habitat is present. The species is highly sensitive to fragmentation of habitat and road kill is a leading reason for mortality.



Threats:

Badgers are most threatened by roads, which present a threat to most of the species considered in the Wild Planner analysis. As with many species, the badger can benefit from thoughtful development of roads, especially in the linkage design, and the inclusion of crossing structures and the avoidance of barriers in future road design and construction projects. Since the badger needs larger areas of wild lands, the species is threatened by habitat fragmentation that can occur due to development that intrudes on existing badger home ranges.

Habitat:

While considered a habitat specialist, the badger can be associated with drier shrub and forest, desert washes, as well as desert vegetation including creosote, juniper, and sagebrush. The most critical requirement is soil suitable for excavating burrows. Although development has fragmented habitat for badgers within the Morongo Basin, 62 percent of potential badger habitat within the study area qualifies as relatively undisturbed habitat cores. Most of the core habitat is located on the east and west ends of the study area, but several blocks of habitat core are distributed within the basin center, which is relatively more developed than other areas (below).



Badger core habitat.

Potential Development Impacts:

The badger was one of two species considered in the Wild Planner analysis that was analyzed in both of the SC Wildlands Linkage Design studies. While overall badger habitat within the Morongo Basin appears relatively secure, the Wild Planner analysis indicates that linkage in a full build out scenario (which includes some potential development) in the Desert Hot Springs area of the San Bernardino-Little San Bernardino area (following page) could become severely compromised as existing vacant parcels near Desert Hot Springs are developed.



Full build out scenario could severely compromise linkage in the Desert Hot Springs area.

Scenario 4 resulted in the greatest loss of connectivity from current conditions (see right) for badgers in the Joshua Tree–Twentynine Palms linkage with a 7.6 percent increase in landscape resistance followed by Scenario 1 at 4.9 percent. This loss results in a moderate narrowing of movement pathways along the western linkage. It is impossible to predict whether this narrowing would result in significant loss of badger movement through the area (below).

Strategies for Protection:

Since the badger is a habitat specialist, it is important that the footprint of potential large scale developments be considered in light of the habitat available, especially in the Desert Hot Springs linkage area where the linkage itself narrows and potential development could block connectivity. As with other species, it is important to engineer future road development to take into consideration crossing opportunities for the badger as part of road design and improvements.

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Scenario 4 results in greatest loss of connectivity.

References:

Penrod, K., C.R. Cabañero, P. Beier, C. Luke, W. Spencer, and E. Rubin. 2005. South Coast missing linkages project: A linkage design for the San Bernardino-Little San Bernardino connection. Idyllwild: SC Wildlands.

Penrod, K., C.R. Cabañero, P. Beier, C. Luke, W. Spencer, E. Rubin, and C. Paulman. 2008. South Coast missing linkages project: A linkage design for the Joshua Tree-Twentynine Palms connection. Idyllwild: SC Wildlands.

Weigel, S., Ellis C. and B. Brock. 2013. Integrating Scenario Planning Tools with Wildlife Planning Tools:Informing Land Use Planning in a Rural Desert Landscape via the Morongo Basin Alternative Futures Project. Lincoln Institute of Land Policy Working Paper.

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