

California Desert Linkage Evaluation Criteria

GOAL

To rank the conservation value (irreplaceability and vulnerability) of linkages within or associated with the Mojave and Sonoran Ecoregions.

CRITERIA

Criteria for two independent rankings will be used in this analysis:

- Irreplaceability assesses the biological value of the linkage and includes both terrestrial and aquatic value criteria.
- Vulnerability of the linkage evaluates potential threats to the linkage caused by current or potential habitat alteration.

We also include a third ranking, scientific certainty that indicates whether data are available indicating that the movement corridor is used by focal species.

- Scientific Certainty (high, low) that this linkage is used by focal species.

IRREPLACEABILITY

Summary of criteria

1.1 Size of both habitat blocks	35 Points
1.2 Quality of Existing Habitat in Smaller Habitat Block	20 Points
1.3 Quality and Amount of Existing Habitat in Proposed Linkage	10 Points
1.4 Linkage to Other Ecoregions or key to Movement through Ecoregion	20 Points
1.5 Facilitates Seasonal Movement and Climatic Change	8 Points
1.6 Added value for Rare Habitats or Features	<u>7 Points</u>
	<hr/> 100 Points

Explanations of criteria

1.1 Size of both habitat blocks

Large > 2000 km²
Medium < 2000 km² and >300 km²
Small < 300 km²

The Total amount and distribution of points

Large-Large	35 Points
Large-Medium	25 Points
Medium-Medium	18 Points
Large-Small	12 Points
Medium-Small	5 Points
Small-Small	0 Points

Definitions:

Large = habitat block > 2000 km². In large areas, there is a high probability of occurrence of wide-ranging species such as mountain lion (Crooks 1999). Large habitat blocks at least 2,000 km² is the minimum size considered likely to support a population of mountain lions over at least the short term without connections to other occupied blocks.

Medium = habitat blocks between 300 km² and 2000 km². Medium habitat blocks with appropriate habitat have a high probability of occurrence for both mountain lions (Crooks 1999) and bighorn sheep (USFWS 2000). Habitat blocks of this size class will likely support a population of bighorn sheep over at least the short term, but are probably too small to support a mountain lion population for the short term without connections to larger blocks.

Small = habitat blocks < 300 km². Habitat blocks less than 300 km² have a very low probability of supporting bighorn sheep without connections to larger habitat blocks.

1.2 Quality of Existing Habitat in Smaller Habitat Block (20 Points)

Unimpacted	(20 Pts)
Impacted	(10 Pts)
Highly Impacted	(0 Pts)

Definitions:

Unimpacted = Dominated by or readily restorable to natural vegetation, relatively unfragmented, supports habitat for diverse array of native species, high area to perimeter ratio, low to moderate levels of urbanization and agriculture, with low to medium levels of invasive species. “Readily restorable” means that the area still supports native soils and sufficient native vegetative propagules (e.g., seed sources) that degraded habitat areas can be returned to natural vegetative composition with active or passive habitat management. This might include fallow agricultural fields, but would generally exclude extensive cut or fill slopes, paved areas, and highly compacted soils.

Impacted= Native vegetation severely compromised by human activities, obvious fragmentation by roads, highways, urbanization and agriculture, with high levels of invasive species.

Highly Impacted = Relatively little natural habitat or processes remain, linkage is criss-crossed by roads, thoroughly urbanized, with severe levels of invasive species.

1.3 Quality and Amount of Existing Habitat in Proposed Linkage (10 Points)

High Quality/broad Linkage	(10 Points)
Constrained	(5 Points)
Missing Link	(0 Points)

Definitions

High Quality Linkage= large connection between habitat blocks, basically an extension of core habitat connecting two or more habitat blocks. Linkage contains cover/habitat for focal and other target wildlife species that facilitates animal movements and other essential flows between different sections of the landscape.

Constrained= a narrow, impacted, or otherwise tenuous habitat linkage between habitat blocks (includes choke points).

Missing Link = a highly impacted area currently providing essentially no connectivity function (due to intervening development, roadway, etc.), but based on location, one that is critical to restore connectivity function.

1.4 Linkage to Other Ecoregions or key to Movement through Ecoregion (20 pts)

Yes (20 Points)

No (0 Points)

This added value to linkages considered critical to movement between ecoregions or without which movement through the ecoregion (and eventually to other ecoregions) might be precluded.

1.5 Facilitates Seasonal Movement and Climatic Change (8 Points)

(8 points) Yes

(0 points) No

Linkage allows migration or movement of species and ecological processes along a broad environmental gradient, i.e. broad north south connectivity, or at least a 2,000-foot elevational gradient, or major life zones within the ecoregion.

1.6 Added value for Rare Habitats or Features (7 Points)

Yes (7 Points)

No (0 Points)

Definitions

Yes = contains rare habitat or features (e.g., seeps, springs, oasis, mesquite bosque).

No = no added value for rare habitats or features.

VULNERABILITY

The score will be determined by either evaluating known threats (e.g., proposed renewable energy projects) or by selecting the highest number from the original Missing Linkages threats scores for urbanization or roads, if a score was only given for overall threat, than this score will be used instead (1=not severe, 5=severe threat). This process will only rate vulnerability of linkages according to irreversible, hard-line threats (e.g., urbanization, road development); other factors which are reversible, such as OHV

use, will not be considered. In instances where linkages have been combined, the highest threat score of any individual link in the complex will be used.

SCIENTIFIC CERTAINTY

If time permits, we will evaluate the level of scientific certainty that each linkage is used by target species. Participants may also review the linkages after the workshop and send a list of those linkages which they feel have a good level of scientific research to SC Wildlands. Those linkages that no one identifies as having a good or high level of scientific certainty will be assumed to have a low level of certainty.