

## MEMORANDUM

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**To:** Environment Element Group  
**From:** Mike Howard  
**Subject:** San Bernardino RCIS – Revised Draft Recommendations for Planning Boundary and Focal Species  
**Date:** October 3, 2017

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This memorandum summarizes the revised draft recommendations related to the planning boundary and Focal Species for the Regional Conservation Investment Strategy (RCIS) being developed for San Bernardino County. These recommendations are refinements to draft materials provided to the Environment Element Group (EEG) in June 2017. Refinements are based on the following considerations:

1. EEG participants' input and extensive research leading to a formal statement of purpose;
2. Detailed review of the intentions and principles described in the RCIS Framework document;
3. Feedback from the EEG Survey received June-September 2017.

### **RCIS Planning Boundary**

Recommendations:

- Divide San Bernardino County into four RCIS Planning Subareas: Valley, Mountain, West Desert, and East Desert (Figure 1);
- Given the limited availability of planning resources, limit this RCIS to the two subareas with most impact on conservation and mitigation priorities: Valley and West Desert;
- Leave open the possibility of pursuing RCIS planning in other subareas in the future.

Subarea boundaries were based primarily on the generally accepted Region boundaries often used in Countywide planning efforts (i.e., Valley, Mountain, and Desert); however, Desert was further subdivided into West Desert (where most development is likely to occur) and East Desert (where nearly all of the land is outside of local jurisdiction). EEG input on the boundary between West Desert and East Desert was incorporated, including the addition of the Ord Mountain area into the West Desert Subarea. The recommended RCIS focus area of the Valley and West Desert is shown in Figure 2.

Several EEG participants inquired about the potential to include the entire County in the current RCIS planning effort, noting in particular the importance of the resources in the eastern desert and the mitigation opportunities that exist in that region. Expanding beyond the Valley and West Desert is currently infeasible due to limited available resources; however, the importance of the resources and the mitigation opportunities in these areas will be recognized and described in the context of the RCIS document. Of particular note, EEG input identified grazing lease relinquishment on public lands as a mitigation tool that should be incorporated into the RCIS conservation strategy. This mitigation tool, like other conservation options to be developed under the RCIS, would not be limited by the RCIS planning boundary. In other words, impacts from projects/actions within the RCIS boundary would not be required to mitigate within the RCIS boundary; therefore, mitigation opportunities in the East Desert would not be limited by the RCIS boundary.

## **RCIS Focal Species**

Recommendation:

- Develop individual Focal Species lists for the Valley Subarea and for the West Desert Subarea in order to focus the RCIS on the unique resources of each subarea.

With the geographic focus of the RCIS planning defined as the Valley and West Desert subareas, a Focal Species list was developed for each subarea. The focal species lists for each subarea were developed using a three-part approach:

- a. *Identify Potential Species:* This first step involved gathering information on special-status species and other species of conservation interest and their habitat affiliations for the Valley and West Desert subareas that would benefit from RCIS planning.
  - This initial task was completed as part of the *Preliminary Draft Focal Species Selection Process*, which was part of the RCIS Survey that went out to the EE Group in June 2017.
- b. *Incorporate Stakeholder Input:* Input from the EEG and other interested parties was considered in developing the Focal Species list, including through EEG meetings, the EEG survey, and direct communications with interested stakeholders. In addition to input regarding specific species, comments were also received on the selection process. Although the *Preliminary Draft Focal Species Selection Process* outlined a process for narrowing hundreds of species down to a manageable and effective draft working species list, stakeholders noted that the process had logic gaps and/or involved subjective, inconsistent inclusions/exclusions.

- In order to address comments on the selection process, Focal Species purpose statements were developed for each subarea. The purpose statement for each subarea would be used to prioritize species and finalize the Focal Species lists.
- c. *Finalize Species Lists with Emphasis on Focal Species Purpose:* Use the following purpose statements to prioritize species for inclusion as focal species.

**Valley Subarea Focal Species** – Focal Species in the Valley Subarea are species that most often require mitigation under state and/or federal permitting and environmental review processes and species that best represent the remaining important habitat areas of the Valley, most notably areas of Riversidean alluvial fan sage scrub, riparian and wetland habitats, transitional foothill habitats, and grasslands, such that developing an RCIS conservation strategy for the focal species benefits the whole suite of species that depend on those habitats.

**West Desert Subarea Focal Species** – Focal species in the West Desert Subarea are species that most often require mitigation under state and/or federal permitting and environmental review processes and species that best represent the important landscape features, ecological processes, and habitats of the West Desert, such that developing an RCIS conservation strategy for the focal species benefits the whole suite of species that depend on those features, processes, and habitats.

Using the approach summarized above, the Focal Species list for the Valley includes 17 species, and the Focal Species list for the West Desert includes 25 species (6 species are common to both subareas) (Table 1). Revisions to the RCIS Area and input from the EE Group were key considerations in developing these lists.

Table 2a and Table 2b provide a summary of each Focal Species, including federal/state status, rationale for inclusion, and a description of their distribution and habitat use. These summaries demonstrate the importance of each species to serve as a Focal Species to represent the habitats and ecological functions of the Valley and West Desert. Table 3 synthesizes the species habitat associations and vegetation community mapping for the Valley and West Desert areas into aggregated, functional Habitat Groups. These Habitat Groups provide a straightforward way of grouping and organizing species and vegetation communities information, and also illustrates that the selected Focal Species are representative of the key resources in each subarea.

As described in the preliminary draft species selection process distributed with the EEG Survey, hundreds of potential species were assessed and filtered to develop the earlier preliminary draft working species list. In response to the preliminary draft list, EEG survey responses identified numerous species that should be included or removed from the Focal Species list. Table 4 provides a list and brief rationale of these species considered but not included as Focal Species.

Memorandum

Subject: San Bernardino RCIS - Revised Draft Recommendations for Planning Boundary and Focal Species

**Table 1. Draft Valley and West Desert Focal Species Lists**

Valley Subarea Focal Species List	West Desert Subarea Focal Species List
<i>Amphibian and Reptile</i>	<i>Amphibian and Reptile</i>
Blainville's horned lizard	Agassiz's desert tortoise
San Diego ringneck snake	arroyo toad
<i>Bird</i>	Blainville's horned lizard
Bell's sparrow	Mohave fringe-toed lizard
burrowing owl	western pond turtle
coastal California gnatcatcher	<i>Bird</i>
least Bell's vireo	burrowing owl
southwestern willow flycatcher	golden eagle
tricolored blackbird	Le Conte's thrasher
white-tailed kite	least Bell's vireo
yellow-billed cuckoo	southwestern willow flycatcher
<i>Mammal</i>	Swainson's hawk
San Bernardino kangaroo rat	tricolored blackbird
Los Angeles pocket mouse	yellow-billed cuckoo
<i>Fish</i>	<i>Mammal</i>
Arroyo chub	desert bighorn sheep
Santa Ana Sucker	desert kit fox
<i>Invertebrate</i>	Mohave ground squirrel
Delhi Sands flower-loving fly	Mojave river vole
<i>Plant</i>	pallid bat
Santa Ana River woollystar	Townsend's big-eared bat
slender-horned spineflower	<i>Plant</i>
	Alkali mariposa lily
	Barstow woolly sunflower
	Joshua tree
	Mojave monkeyflower
	Parish's daisy
	Short-joint beavertail

**Table 2a**  
**Valley Subarea Focal Species Summaries**

Common Name	Scientific Name	Status	Rationale and Description
<i>Amphibian and Reptile</i>			
Blainville's horned lizard	<i>Phrynosoma blainvillii</i>	SSC; SWAP	<ul style="list-style-type: none"> <li>State species of special concern typically requiring mitigation; also serves as a dispersal-limited indicator species in the transitional habitats of the foothills and remaining open habitats of the Valley.</li> <li>Valley Distribution: Widely distributed in remaining suitable habitat areas.</li> <li>Habitat Group: Riversidean Alluvial Fan Sage Scrub; Transitional Scrub, Chaparral, and Woodland; Grassland.</li> </ul>
San Diego ringneck snake	<i>Diadophis punctatus similis</i>	None	<ul style="list-style-type: none"> <li>Species serves as an umbrella species for Riversidean alluvial fan sage scrub habitats in the Valley.</li> <li>Valley Distribution: Widely distributed in remaining suitable habitat areas.</li> <li>Habitat Group: Riversidean Alluvial Fan Sage Scrub.</li> </ul>
<i>Bird</i>			
Bell's sparrow	<i>Artemisiospiza belli</i>	WL	<ul style="list-style-type: none"> <li>Watch list species that serves as an umbrella species for Riversidean alluvial fan sage scrub and transitional habitats in the Valley</li> <li>Valley Distribution: Widely distributed in remaining suitable habitat areas.</li> <li>Habitat Group: Riversidean Alluvial Fan Sage Scrub; Transitional Scrub, Chaparral, and Woodland.</li> </ul>
burrowing owl	<i>Athene cunicularia</i>	SSC; SWAP	<ul style="list-style-type: none"> <li>State species of special concern typically requiring agency coordination and mitigation; declining species vulnerable to habitat loss in the Valley.</li> <li>Valley Distribution: Widely distributed.</li> <li>Habitat Groups: Riversidean Alluvial Fan Sage Scrub; Transitional Scrub, Chaparral, and Woodland; Grassland; Developed and Agriculture. Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows.</li> </ul>
coastal California gnatcatcher	<i>Polioptila californica californica</i>	FT / SSC; SWAP	<ul style="list-style-type: none"> <li>Federally-listed species typically requiring agency coordination and mitigation; declining species vulnerable to habitat loss of the remaining scrub communities in the foothills and alluvial fans of the Valley.</li> <li>Valley Distribution: Widely distributed in remaining suitable habitat areas.</li> <li>Habitat Group: Transitional Scrub, Chaparral, and Woodland; Riversidean Alluvial Fan Sage Scrub. Species nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat.</li> </ul>

**Table 2a**  
**Valley Subarea Focal Species Summaries**

Common Name	Scientific Name	Status	Rationale and Description
least Bell's vireo	<i>Vireo bellii pusillus</i>	FE / SE; SWAP	<ul style="list-style-type: none"> <li>Federally- and state-listed species typically requiring agency coordination and mitigation; also serves as an indicator species for habitat quality of riparian communities in the Valley.</li> <li>Valley Distribution: Occurs in suitable habitat of the Santa Ana River corridor and its tributaries, the Prado Basin, and other features supporting riparian habitat.</li> <li>Habitat Group: Riparian and Wetland. Species nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season.</li> </ul>
southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	FE / SE; SWAP	<ul style="list-style-type: none"> <li>Federally- and state-listed species typically requiring agency coordination and mitigation; also serves as an indicator species for habitat quality of riparian communities in the Santa Ana River.</li> <li>Valley Distribution: Occurs in suitable habitat of the Santa Ana River corridor and San Timoteo Creek.</li> <li>Habitat Group: Riparian and Wetland. Species nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration.</li> </ul>
tricolored blackbird	<i>Agelaius tricolor</i>	SC; SWAP	<ul style="list-style-type: none"> <li>State candidate species typically requiring agency coordination and mitigation; also serves as a resource-limited indicator species for wetland communities in the Valley.</li> <li>Valley Distribution: Known from scattered locations in remaining suitable wetland features of the Valley.</li> <li>Habitat Group: Riparian and Wetland; Developed and Agriculture. Species nests near fresh water, emergent wetland with cattails, tules, or blackberry; forages in grasslands, woodland, and agriculture.</li> </ul>
white-tailed kite	<i>Elanus leucurus</i>	FP	<ul style="list-style-type: none"> <li>State fully protected species typically requiring agency coordination; declining species vulnerable to habitat loss in the Valley.</li> <li>Valley Distribution: Widely distributed in remaining suitable habitat areas.</li> <li>Habitat Group: Transitional Scrub, Chaparral, and Woodland; Riparian and Wetland; Grassland. Species nests in woodland, riparian, and individual trees near open lands; forages opportunistically in a variety of habitats</li> </ul>
yellow-billed cuckoo	<i>Coccyzus americanus</i>	FT / SE; SWAP	<ul style="list-style-type: none"> <li>Federally- and state-listed species typically requiring agency coordination and mitigation; also serves as an indicator species for habitat quality of riparian</li> </ul>

**Table 2a**  
**Valley Subarea Focal Species Summaries**

Common Name	Scientific Name	Status	Rationale and Description
			<p>communities</p> <ul style="list-style-type: none"> <li>Valley Distribution: Known from riparian habitats of the Santa Ana River and other tributaries.</li> <li>Habitat Group: Riparian and Wetland; Nests dense, wide riparian woodlands and forest with well-developed understories.</li> </ul>
<i>Mammal</i>			
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	FE / SSC; SWAP	<ul style="list-style-type: none"> <li>Federally-listed species typically requiring agency coordination and mitigation; also serves as a process-limited indicator species of the fluvial processes that maintain the successional habitats required by the species.</li> <li>Valley Distribution: Narrowly distributed in suitable habitat of the Santa Ana River, Lytle Creek, and Cajon Wash floodplains.</li> <li>Habitat Group: Riversidean Alluvial Fan Sage Scrub. Species uses sparse scrub and alluvial fan sage scrub habitats on gravelly and sandy soils near river and stream terraces</li> </ul>
Los Angeles pocket mouse	<i>Perognathus longimembris brevinasus</i>	SSC	<ul style="list-style-type: none"> <li>State species of special concern typically requiring agency coordination and mitigation; declining species vulnerable to habitat loss in the Valley.</li> <li>Valley Distribution: Occurs in suitable habitat of the Santa Ana River, Lytle Creek, and Cajon Wash floodplains.</li> <li>Habitat Group: Riversidean Alluvial Fan Sage Scrub; Grassland. Species uses sparse scrub, alluvial fan sage scrub, and grassland habitats on gravelly and sandy soils near river and stream terraces.</li> </ul>
<i>Fish</i>			
Arroyo chub	<i>Gila orcuttii</i>	SSC	<ul style="list-style-type: none"> <li>State species of special concern; also serves as as a process-limited indicator species for the aquatic and riverine processes of the Santa Ana River and other creeks in the Valley</li> <li>Valley Distribution: Known from the Santa Ana River and other tributaries.</li> <li>Habitat Group: Riparian and Wetland.</li> </ul>
Santa Ana Sucker	<i>Catostomus santaanae</i>	FT / SSC	<ul style="list-style-type: none"> <li>Federally-listed species typically requiring agency coordination and mitigation; also serves as a process-limited indicator species for the aquatic and riverine processes of the Santa Ana River and the aquatic community the river system supports.</li> <li>Valley Distribution: Narrowly distributed in suitable habitat of the Santa Ana River.</li> </ul>

**Table 2a**  
**Valley Subarea Focal Species Summaries**

Common Name	Scientific Name	Status	Rationale and Description
			<ul style="list-style-type: none"> <li>Habitat Group: Riparian and Wetland. Species uses aquatic habitat characterized by small, shallow, cool, clear streams less than 7 meters in width and a few centimeters to more than a meter in depth; substrates are generally coarse gravel, rubble and boulder.</li> </ul>
<i>Invertebrate</i>			
Delhi Sands flower-loving fly	<i>Rhaphiomidas terminatus abdominalis</i>	FE	<ul style="list-style-type: none"> <li>Federally-listed species typically requiring agency coordination and mitigation; also serves as a resource-limited indicator species for dune and blown-sand communities in the Valley.</li> <li>Valley Distribution: Narrowly distributed in suitable habitat and soils in the vicinity of Colton.</li> <li>Habitat Group: Grassland. Species known from areas with Delhi fine sandy soils and dunes, often with sand verbena and sparse cover. Most known sites mapped as grassland.</li> </ul>
<i>Plant</i>			
Santa Ana River woollystar	<i>Eriastrum densifolium ssp. sanctorum</i>	FE/CE/1B.1	<ul style="list-style-type: none"> <li>Federally- and state-listed species typically requiring agency coordination and mitigation; an imperiled species vulnerable to habitat loss in the Valley.</li> <li>Valley Distribution: Narrowly distributed in suitable habitat of the Santa Ana River, Lytle Creek, and Cajon Wash floodplains.</li> <li>Habitat Group: Riversidean Alluvial Fan Sage Scrub. Species found in sparse scrub and alluvial fan sage scrub habitats on gravelly and sandy soils near river and stream terraces.</li> </ul>
slender-horned spineflower	<i>Dodecahema leptoceras</i>	FE/CE/1B.2	<ul style="list-style-type: none"> <li>Federally- and state-listed species typically requiring agency coordination and mitigation; an imperiled species vulnerable to habitat loss in the Valley.</li> <li>Valley Distribution: Narrowly distributed in suitable habitat of the Santa Ana River, Lytle Creek, and Cajon Wash floodplains.</li> <li>Habitat Group: Riversidean Alluvial Fan Sage Scrub. Species found in sparse scrub and alluvial fan sage scrub habitats on sandy soils near river and stream terraces.</li> </ul>

Notes

Status: FE-Federal Endangered; FT-Federal Threatened; SE-State Endangered; ST-State Threatened; SC-State Candidate; FP-State Fully Protected; SSC-State Species of Special Concern; BGEPA-Bald and Golden Eagle Protection Act Species; SWAP-State Wildlife Action Plan Species of Greatest Conservation Need; 1B.1 and 1B.2-California Rare Plant Rank: Plants rare, threatened, or endangered in California and Elsewhere.

Umbrella species: typically a wide-ranging species with life history and habitat requirements that include those of many other species.

Indicator species: Species that are particularly vulnerable to or dependent upon specific threats or ecological processes, such that they are an indicator of those threats/processes.



See Table 3 for additional detail about the Habitat Groups.

**Table 2b**  
**West Desert Subarea Focal Species Summaries**

Common Name	Scientific Name	Status	Rationale and Description
<i>Amphibian and Reptile</i>			
Agassiz's desert tortoise	<i>Gopherus agassizii</i>	FT / ST; SWAP	<ul style="list-style-type: none"> <li>Federally-listed species typically requiring agency coordination and mitigation; also serves as an umbrella species for the desert scrub communities in the West Desert.</li> <li>West Desert Distribution: Widely distributed.</li> <li>Habitat Group: Desert Scrub. Species uses a variety of arid scrub and wash habitats on alluvial fans, bajadas, canyon bottoms, and rocky hillsides.</li> </ul>
arroyo toad	<i>Anaxyrus californicus</i>	FE / SSC; SWAP	<ul style="list-style-type: none"> <li>Federally-listed species typically requiring agency coordination and mitigation; also serves a process-limited indicator species for the aquatic and riverine processes in the Mojave River and its tributaries.</li> <li>West Desert Distribution: Narrowly distributed in the foothills of the San Bernardino Mountains and Victor Valley in the Mojave River corridor and its tributaries.</li> <li>Habitat Group: Riparian and Wetland. Species uses stream channels for breeding and adjacent stream terraces and uplands for foraging and wintering.</li> </ul>
Blainville's horned lizard	<i>Phrynosoma blainvillii</i>	SSC; SWAP	<ul style="list-style-type: none"> <li>State species of special concern typically requiring mitigation; also serves as a dispersal-limited indicator species in the transitional habitats of the foothills of the West Desert.</li> <li>West Desert Distribution: Widely distributed in suitable habitat areas of the San Bernardino Mountain foothills.</li> <li>Habitat Group: Transitional Scrub, Chaparral, and Woodland; Grassland. Species uses sandy open areas in a variety of semi-arid habitats.</li> </ul>
Mohave fringe-toed lizard	<i>Uma scoparia</i>	SSC; SWAP	<ul style="list-style-type: none"> <li>State species of special concern typically requiring mitigation; also serves as a process-limited indicator species for sand transport processes associated with dunes and other sand features.</li> <li>West Desert Distribution: Occurs in suitable habitat areas of the lower Mojave River Valley and the Morongo Basin.</li> <li>Habitat Group: Dune and Playa. Species uses loose wind-blown sand dunes, flats with sandy hummocks, washes, and banks of rivers.</li> </ul>
western pond turtle	<i>Actinemys marmorata</i>	SSC	<ul style="list-style-type: none"> <li>State species of special concern typically requiring mitigation; also serves a process-limited indicator species for the aquatic and riverine processes in the Mojave River and its tributaries.</li> </ul>

**Table 2b**  
**West Desert Subarea Focal Species Summaries**

Common Name	Scientific Name	Status	Rationale and Description
			<ul style="list-style-type: none"> <li>West Desert Distribution: Narrowly distributed in the Mojave River corridor and its tributaries.</li> <li>Habitat Group: Riparian and Wetland. Species uses slow-moving permanent or intermittent streams, ponds, small lakes, reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter.</li> </ul>
<i>Bird</i>			
burrowing owl	<i>Athene cunicularia</i>	SSC; SWAP	<ul style="list-style-type: none"> <li>State species of special concern typically requiring agency coordination and mitigation; declining species vulnerable to habitat loss in the West Desert.</li> <li>West Desert Distribution: Widely distributed.</li> <li>Habitat Groups: Desert Scrub; Transitional Scrub, Chaparral, and Woodland; Grassland; Developed and Agriculture. Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows.</li> </ul>
golden eagle	<i>Aquila chrysaetos</i>	BGEPA / FP	<ul style="list-style-type: none"> <li>Bald and Golden Eagle Protection Act and state fully protected species typically requiring agency coordination and mitigation; also serves as an area-limited indicator species that requires large foraging areas to maintain their populations.</li> <li>West Desert Distribution: Widely distributed.</li> <li>Habitat Groups: All except Developed and Agriculture; Dunes and Playas. Nests and winters in hilly, open/semi-open areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats.</li> </ul>
Le Conte's thrasher	<i>Toxostoma lecontei</i>	SSC; SWAP	<ul style="list-style-type: none"> <li>State species of special concern typically requiring mitigation; declining species vulnerable to habitat loss in the West Desert.</li> <li>West Desert Distribution: Widely distributed in suitable habitat areas of the Victor Valley, Morongo Basin, and San Bernardino Mountain foothills</li> <li>Habitat Group: Desert Scrub; Transitional Scrub, Chaparral, and Woodland. Nests and forages in open desert wash, desert scrub, alkali desert scrub and Joshua tree woodlands in the Mojave Desert.</li> </ul>
least Bell's vireo	<i>Vireo bellii pusillus</i>	FE / SE; SWAP	<ul style="list-style-type: none"> <li>Federally- and state-listed species typically requiring agency coordination and mitigation; also serves as an indicator species for habitat quality of riparian communities in the West Desert.</li> <li>West Desert Distribution: Occurs in suitable habitat of the Mojave River corridor and its tributaries, the Morongo Basin, and other features supporting riparian habitat.</li> </ul>

**Table 2b**  
**West Desert Subarea Focal Species Summaries**

Common Name	Scientific Name	Status	Rationale and Description
			<ul style="list-style-type: none"> <li>Habitat Group: Riparian and Wetland. Species nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season.</li> </ul>
southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	FE / SE; SWAP	<ul style="list-style-type: none"> <li>Federally- and state-listed species typically requiring agency coordination and mitigation; also serves as an indicator species for habitat quality of riparian communities in the West Desert.</li> <li>West Desert Distribution: Occurs in suitable habitat of the Mojave River corridor and its tributaries.</li> <li>Habitat Group: Riparian and Wetland. Species nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration.</li> </ul>
Swainson's hawk	<i>Buteo swainsoni</i>	ST; SWAP	<ul style="list-style-type: none"> <li>State-listed species typically requiring agency coordination and mitigation</li> <li>West Desert Distribution: Migratory species known to use riparian and agricultural trees along the Mojave River corridor; forages in adjacent agriculture and grasslands.</li> <li>Habitat Group: Riparian and Wetland; Developed and Agriculture</li> </ul>
tricolored blackbird	<i>Agelaius tricolor</i>	CE; SWAP	<ul style="list-style-type: none"> <li>State candidate species typically requiring agency coordination and mitigation; also serves as a resource-limited indicator species for wetland communities in the West Desert.</li> <li>West Desert Distribution: Known from suitable habitat areas of the Mojave River corridor and its tributaries and in agricultural fields and other features supporting suitable habitat areas.</li> <li>Habitat Group: Riparian and Wetland; Developed and Agriculture. Species nests near fresh water, emergent wetland with cattails, tules, or blackberry; forages in grasslands, woodland, and agriculture.</li> </ul>
yellow-billed cuckoo	<i>Coccyzus americanus</i>	FT / SE; SWAP	<ul style="list-style-type: none"> <li>Federally- and state-listed species typically requiring agency coordination and mitigation; also serves as an indicator species for habitat quality of riparian communities</li> <li>West Desert Distribution: Known from riparian habitats of the Mojave River.</li> <li>Habitat Group: Riparian and Wetland; Nests dense, wide riparian woodlands and forest with well-developed understories.</li> </ul>
<i>Mammal</i>			

**Table 2b**  
**West Desert Subarea Focal Species Summaries**

Common Name	Scientific Name	Status	Rationale and Description
desert bighorn sheep	<i>Ovis canadensis nelsoni</i>	FP; SWAP	<ul style="list-style-type: none"> <li>State fully protected species typically requiring agency coordination and mitigation; also serves as an area-limited indicator species requiring habitat connectivity between occupied mountain ranges to maintain their populations.</li> <li>West Desert Distribution: Widely distributed.</li> <li>Habitat Group: Transitional Scrub, Chaparral, and Woodland; Desert Scrub. Species uses steep slopes and cliffs, rough and rocky topography, sparse vegetation; also canyons, washes and alluvial fans.</li> </ul>
desert kit fox	<i>Vulpes macrotis arsipus</i>	NA	<ul style="list-style-type: none"> <li>Species of increasing conservation interest; also serves as an area-limited indicator species with relatively large home ranges that are vulnerable to habitat loss in the desert scrub communities of the West Desert.</li> <li>West Desert Distribution: Widely distributed.</li> <li>Habitat Group: Desert Scrub. Species uses a variety of arid scrub habitats on alluvial fans, bajadas, and hillsides.</li> </ul>
Mohave ground squirrel	<i>Xerospermophilus mohavensis</i>	ST; SWAP	<ul style="list-style-type: none"> <li>State-listed species typically requiring agency coordination and mitigation; declining species vulnerable to habitat loss and fragmentation in the West Desert.</li> <li>West Desert Distribution: Widely distributed in suitable desert scrub habitats west of the Mojave River.</li> <li>Habitat Group: Desert Scrub. Species uses habitat dominated by creosote bush and burrobrush, desert sink scrub, and desert saltbush scrub</li> </ul>
Mojave river vole	<i>Microtus californicus mohavensis</i>	SSC; SWAP	<ul style="list-style-type: none"> <li>State species of special concern typically requiring mitigation; also serves a resource-limited indicator species for the buffer habitats adjacent to the Mojave River.</li> <li>West Desert Distribution: Narrowly distributed in suitable habitat of the Mojave River corridor and its tributaries.</li> <li>Habitat Group: Riparian and Wetland. Species uses wet, weedy, herbaceous areas along the Mojave River</li> </ul>
pallid bat	<i>Antrozous pallidus</i>	SSC; SWAP	<ul style="list-style-type: none"> <li>State species of special concern typically requiring mitigation.</li> <li>West Desert Distribution: Widely distributed.</li> <li>Habitat Group: All. Most common in open dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees.</li> </ul>
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SSC; SWAP	<ul style="list-style-type: none"> <li>State species of special concern typically requiring mitigation.</li> <li>West Desert Distribution: Widely distributed.</li> </ul>

**Table 2b**  
**West Desert Subarea Focal Species Summaries**

Common Name	Scientific Name	Status	Rationale and Description
			<ul style="list-style-type: none"> <li>Habitat Group: Desert Scrub; Riparian and Wetland. Roosts in limestone caves and lava tubes, also man-made structures and tunnels in close proximity to foraging areas characterized by mesic habitats coniferous and deciduous forests and riparian habitats.</li> </ul>
<i>Plant</i>			
alkali mariposa-lily	<i>Calochortus striatus</i>	1B.2	<ul style="list-style-type: none"> <li>Rare plant species typically requiring mitigation and vulnerable to habitat loss in the West Desert.</li> <li>West Desert Distribution: Habitat specialist known from specific locations with suitable conditions throughout West Desert.</li> <li>Habitat Group: Desert Scrub; Riparian and Wetland. Species uses seeps, washes, and saltbush scrub habitats with seasonally moist alkaline soils.</li> </ul>
Barstow woolly sunflower	<i>Eriophyllum mohavense</i>	1B.2	<ul style="list-style-type: none"> <li>Rare plant species typically requiring mitigation and vulnerable to habitat loss in the West Desert.</li> <li>West Desert Distribution: Narrowly distributed in suitable habitat in vicinity Kramer Junction and Edwards Air Force Base.</li> <li>Habitat Group: Desert Scrub. Species uses saltbush scrub, Mojavean desert scrub and playas.</li> </ul>
Joshua tree	<i>Yucca brevifolia</i>	NA	<ul style="list-style-type: none"> <li>Species of increasing conservation interest typically requiring mitigation; also serves as an umbrella species for the transitional communities in the West Desert and an indicator of climate change.</li> <li>West Desert Distribution: Widely distributed in foothills and transitional areas of the San Bernardino Mountains and Morongo Basin.</li> <li>Habitat Group: Transitional Scrub, Chaparral, and Woodland. Species occurs in Joshua tree woodland.</li> </ul>
Mojave monkeyflower	<i>Mimulus mohavensis</i>	1B.2	<ul style="list-style-type: none"> <li>Rare plant species typically requiring mitigation and vulnerable to habitat loss in the West Desert.</li> <li>West Desert Distribution: Narrowly distributed in suitable habitat in vicinity of the Granite Mountains, Ord Mountains and Silver Mountains south of Barstow.</li> <li>Habitat Group: Desert Scrub. Species found in sandy or gravelly washes in desert scrub.</li> </ul>
Parish's daisy	<i>Erigeron parishii</i>	FT / 1B.1	<ul style="list-style-type: none"> <li>Federally-listed plant species typically requiring agency coordination and mitigation; serves as an indicator of habitat quality for the suite of carbonate plant species of the</li> </ul>

**Table 2b**  
**West Desert Subarea Focal Species Summaries**

Common Name	Scientific Name	Status	Rationale and Description
			San Bernardino Mountains <ul style="list-style-type: none"> <li>• West Desert Distribution: Relatively narrowly distributed in suitable habitat of the northern slopes of the San Bernardino Mountains and foothills in vicinity of Lucerne Valley and Morongo Basin.</li> <li>• Habitat Group: Transitional Scrub, Chaparral, and Woodland; Desert Scrub. Found in carbonate soils in pinyon-juniper woodland, Joshua tree woodland, and desert scrub.</li> </ul>
short-joint beavertail	<i>Opuntia basilaris</i> var. <i>brachyclada</i>	1B.2	<ul style="list-style-type: none"> <li>• Rare plant species typically requiring mitigation and vulnerable to habitat loss in the transitional habitats of the West Desert</li> <li>• West Desert Distribution: Known from the Victor Valley and foothills of the San Bernardino Mountains</li> <li>• Habitat Group: Transitional Scrub, Chaparral, and Woodland.</li> </ul>

Notes

Status: FE-Federal Endangered; FT-Federal Threatened; SE-State Endangered; ST-State Threatened; FP-State Fully Protected; SSC-State Species of Special Concern; BGEPA-Bald and Golden Eagle Protection Act Species; SWAP- State Wildlife Action Plan Species of Greatest Conservation Need; 1B.1 and 1B.2-California Rare Plant Rank: Plants rare, threatened, or endangered in California and Elsewhere.

Umbrella species: typically a wide-ranging species with life history and habitat requirements that include those of many other species.

Indicator species: Species that are particularly vulnerable to or dependent upon specific threats or ecological processes, such that they are an indicator of those threats/processes. See Table 3 for additional detail about the Habitat Groups.

**Table 3**  
**Habitat Groups for the Focal Species in the Valley Subarea and West Desert Subarea**

Habitat Group	General Vegetation Communities	Focal Species
<i>Valley Subarea (319,559 acres)</i>		
<b>Riversidean Alluvial Fan Sage Scrub</b> Valley Acreage: 18,840	Riversidean Alluvial Fan Sage Scrub	San Diego ringneck snake Blainville's horned lizard Bell's sparrow burrowing owl coastal California gnatcatcher San Bernardino kangaroo rat Los Angeles pocket mouse Santa Ana River woollystar slender-horned spineflower
<b>Riparian and Wetland</b> Valley Acreage: 2,879	Riparian Wetlands and Waters	least Bell's vireo southwestern willow flycatcher tricolored blackbird white-tailed kite yellow-billed cuckoo Arroyo chub Santa Ana Sucker
<b>Transitional Scrub, Chaparral, and Woodland</b> Valley Acreage: 36,061	Chaparral Coastal Scrub Forest and Woodlands Juniper Woodlands	Blainville's horned lizard Bell's sparrow burrowing owl coastal California gnatcatcher white-tailed kite
<b>Grassland</b> Valley Acreage: 37,339	Native Grasslands Non-native Grasslands	Blainville's horned lizard burrowing owl white-tailed kite Delhi Sands flower-loving fly
<b>Developed and Agriculture</b> Valley Acreage: 224,440	Agriculture Barren Developed and Disturbed Areas Eucalyptus Naturalized Forest	burrowing owl tricolored blackbird
<i>West Desert Subarea (3,259,078 acres)</i>		
<b>Desert Scrub</b> West Desert Acreage: 2,501,894	Sonoran and Mojavean Desert Scrub Alkali Scrub	Agassiz's desert tortoise burrowing owl golden eagle desert bighorn sheep desert kit fox Le Conte's thrasher Mohave ground squirrel pallid bat Townsend's big-eared bat alkali mariposa-lily Barstow woolly sunflower Mojave monkeyflower

**Table 3**  
**Habitat Groups for the Focal Species in the Valley Subarea and West Desert Subarea**

Habitat Group	General Vegetation Communities	Focal Species
		Parish's daisy
<b>Riparian and Wetland</b> West Desert Acreage: 36,843	Riparian and Desert Wash Wetlands and Waters	arroyo toad western pond turtle golden eagle least Bell's vireo southwestern willow flycatcher Swainson's hawk tricolored blackbird yellow-billed cuckoo Mojave river vole pallid bat Townsend's big-eared bat alkali mariposa-lily
<b>Dune and Playa</b> West Desert Acreage: 77,224	Desert Dunes Playas	Mohave fringe-toed lizard pallid bat
<b>Transitional Scrub, Chaparral, and Woodland</b> West Desert Acreage: 296,984	Chaparral Coastal Scrub Forest and Woodlands Great Basin Scrub Joshua Tree Woodland Juniper Woodlands Riversidean Alluvial Fan Sage Scrub	Blainville's horned lizard burrowing owl golden eagle desert bighorn sheep pallid bat Joshua tree Le Conte's thrasher Mojave monkeyflower Parish's daisy Short-joint beavertail
<b>Grassland</b> West Desert Acreage: 68,958	Native Grassland Non-native Grassland	Blainville's horned lizard burrowing owl golden eagle pallid bat
<b>Developed and Agriculture</b> West Desert Acreage: 277,175	Agriculture Barren Developed and Disturbed Areas	burrowing owl Swainson's hawk tricolored blackbird pallid bat

Notes

Individual Focal Species may be members of more than one habitat group



**Table 4**  
**Other Species Considered but not included as Focal Species**

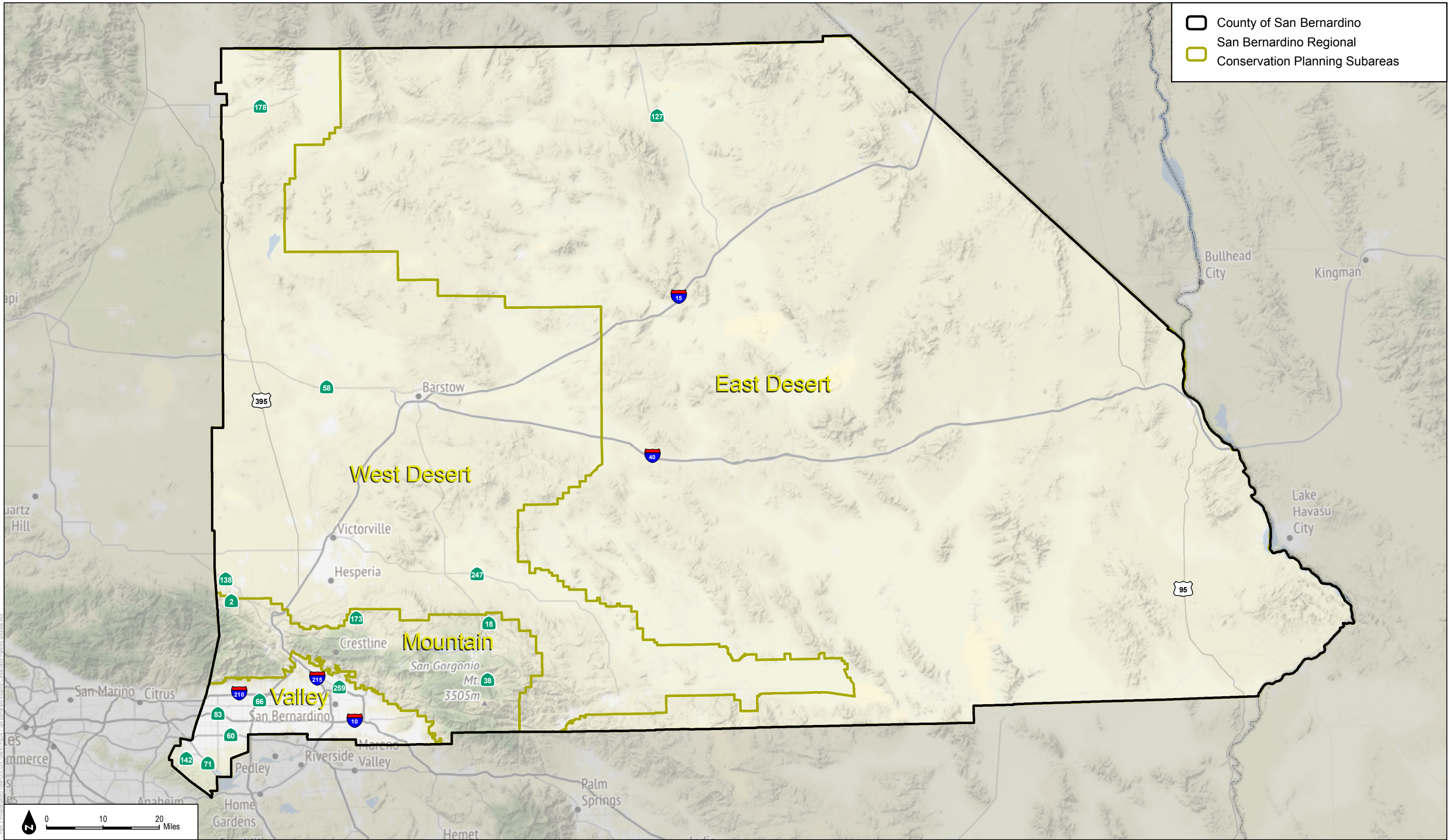
Species	Rationale
<i>Amphibian and Reptile</i>	
Southern mountain yellow-legged frog	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Southern rubber boa	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Two-striped garter snake	Occurs in primarily Mountain region with a few locations remaining in the Valley subarea.
Western spadefoot	Current distribution in the County limited to a few locations remaining in the Valley and scattered locations in the Mountain foothills; uses river floodplains, vernal pools, and other seasonally ponded features.
<i>Bird</i>	
California spotted owl	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Eared grebe	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Ferruginous hawk	Watch list species known from the Valley and West Desert regions; agency coordination and mitigation typically not required for this species unless nesting.
Gray jay	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Mountain plover	Wintering species that uses grasslands and agricultural habitats and known from only a few scattered occurrences in the Valley and West Desert regions. Other species were determined to best represent the Grassland and Developed/Agriculture Habitat Groups.
Pinyon jay	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Southern California rufous-crowned sparrow	Watch list species known from scattered Valley locations with suitable scrub habitat; agency coordination and mitigation typically not required for this species.
Zone-tailed hawk	Widespread species known from the southwestern U.S.; agency coordination and mitigation typically not required for this species unless nesting
<i>Mammal</i>	
American badger	Species of special concern known from scattered locations in the Valley and West Desert in open grassland and scrub habitats; Other species were determined to best represent the Grassland; Desert Scrub; and Transitional Scrub, Chaparral, and Woodland Habitat Groups.
Mountain lion	Wide-ranging generalist species with very large home ranges known from the Valley and West Desert regions; agency coordination and mitigation typically not required for this species.
Ringtail	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
<i>Fish</i>	
Mohave tui chub	Extremely imperiled species with very limited distribution known from 5 remaining refugia locations, including locations in the West Desert region. Other species were determined to best represent the Riparian and Wetland Habitat Group in the West Desert Subarea.
Santa Ana speckled dace	Known from the creeks in the Mountain region of the County; outside Valley and West Desert subareas.
Unarmored threespine stickleback	Known from the creeks in the Mountain region of the County; Santa Ana sucker determined to best represent aquatic species of the Riparian and Wetland Habitat Group of the Valley Subarea.
<i>Invertebrate</i>	

**Table 4**  
**Other Species Considered but not included as Focal Species**

Species	Rationale
Quino checkerspot butterfly	Likely extirpated from San Bernardino County.
San Emigdio blue butterfly	Known from Inyo County south through Los Angeles County and the Mojave Desert; agency coordination and mitigation typically not required for this species.
Victorville shoulder-band snail	Narrowly distributed species known from the Mojave River; other species were determined to best represent the Riparian and Wetland Habitat Group in the West Desert Subarea.
<i>Plant</i>	
Big Bear Valley sandwort	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Birdfoot checkerbloom	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
California dandelion	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Cushenbury milk-vetch	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Cushenbury oxytheca	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Gambel's watercress	Last observed from a single population in San Bernardino County (Valley Subarea) in 1910.
Lane Mountain milk-vetch	Known from primarily federal lands in the central Mojave Desert.
Marsh sandwort	Likely extirpated from San Bernardino County.
Mojave paintbrush	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Nevin's barberry	In San Bernardino County, known from just 2 locations of a single individual each (Valley region); cultivated species.
San Bernardino aster	Several historic occurrences in the Valley region, but these are from early 1900s and likely extirpated.
San Bernardino Mountains bladderpod	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Slender-petaled thelypodium	Occurs in primarily Mountain region; outside Valley and West Desert subareas.
Southern mountain buckwheat	Occurs in primarily Mountain region; outside Valley and West Desert subareas.

Notes

Species listed in this table include those species originally included on the preliminary draft working list of Focal Species and those species for which EE Group survey responses recommended for inclusion. As described in the selection process for the preliminary draft working list, hundreds of other potential species were originally assessed, filtered out, and not included in this table.



**FIGURE 1**

Preliminary Draft -San Bernardino Regional Conservation Planning Subareas

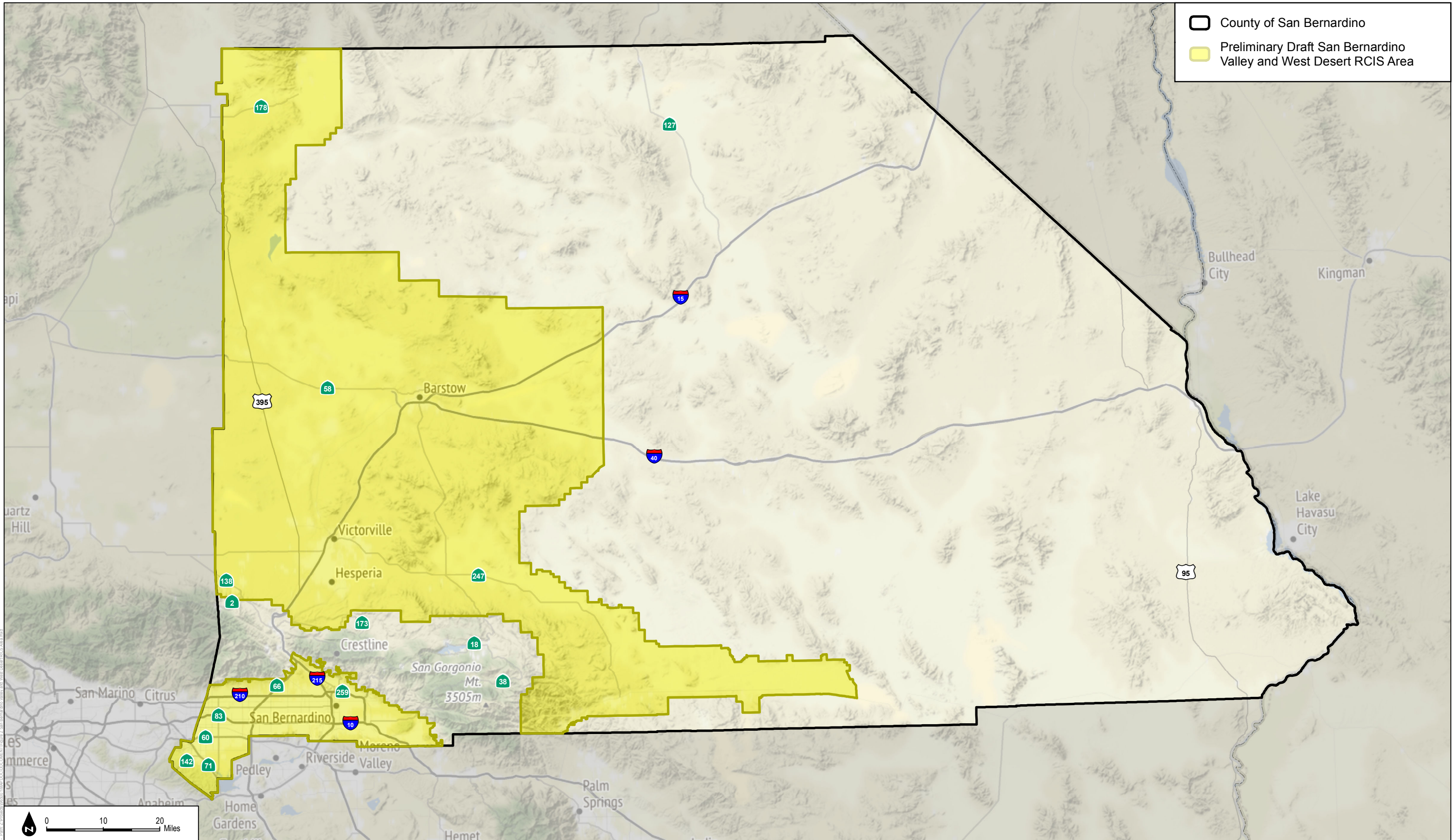
**Draft working map for discussion purposes only**

SOURCE: Bing Maps, 2017



Western San Bernardino County RCIS





**FIGURE 2**

Preliminary Draft - San Bernardino Valley and West Desert RCIS Area



SOURCE: Bing Maps, 2017

Western San Bernardino County RCIS

**Draft working map for discussion purposes only**