

EXECUTIVE SUMMARY
FOR
PRELIMINARY DRAFT
WESTERN RIVERSIDE COUNTY MSHCP
ALTERNATIVES DEVELOPMENT DOCUMENT



Prepared for:

COUNTY OF RIVERSIDE
TRANSPORTATION AND LAND MANAGEMENT AGENCY

P.O. Box 1605
4080 Lemon Street
Riverside, CA 92502-1605
Contact: Richard Lashbrook

Prepared by:



605 Third Street
Encinitas, California 92024

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PURPOSE

This Alternatives Development document has been prepared by the County's MSHCP consultant to provide information regarding potential MSHCP alternatives. This document is the work product of the MSHCP consultant and does not represent the opinions of the County, other agencies or stakeholders. This document provides information regarding a range of potential MSHCP alternatives including the following:

- ALTERNATIVE 1:** Species Considered for Conservation in August 9 "Draft MSHCP Proposal" (164 species)
- ALTERNATIVE 2:** Listed, Proposed and Strong Candidate Species
- ALTERNATIVE 2A:** Narrow Endemic Plant Species
- ALTERNATIVE 3:** Listed and Proposed Species
- ALTERNATIVE 4:** Existing Reserves

For each alternative, the following information is provided:

- ! Acreage ranges, by vegetation category;
- ! Map depicting general configuration of alternative;
- ! Species list
- ! Species rationale statements summarizing data used to support preliminary conservation conclusions for each species.

This information, along with supporting technical data contained in this document and appendices, is being provided to the County, cities, Wildlife Agencies, Scientific Review Panel and others to assist in formulating a preferred alternative to be analyzed in detail as the next step in the MSHCP planning process. The range of alternatives presented in this document has been designed to provide the breadth and depth of information necessary to assist stakeholders in evaluating the various choices and options to be considered in formulating the MSHCP preferred alternative. The primary purpose of this document is therefore to provide information to support the incremental, iterative MSHCP planning and preparation process.



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DATA

This document summarizes data sources used to develop MSHCP alternatives at this stage in the MSHCP planning process. Data sources include the extensive database assembled for the overall Riverside County Integrated Project (RCIP), as well as evaluation tools developed specifically for the MSHCP. Evaluation tools developed specifically for the MSHCP include the following: **species accounts, habitat accounts, GIS evaluation tools**. The MSHCP species accounts and habitat accounts are available on the UCR website at <http://ecoregion.ucr.edu/mshcp>. The GIS evaluation tools are presented in this document. The MSHCP evaluation tools will continue to be refined as the MSHCP planning process proceeds.

ALTERNATIVES SUMMARY

For each alternative described in this document, a map is provided depicting general areas potentially conserved under the alternative, along with a table summarizing acreages for conservation under each alternative, by vegetation category. *Exhibits 1 – 5* in this Executive Summary depict the alternatives. *Tables ES-1 through ES-4* provide acreage summaries for Alternatives 1, 2, 3 and 4.

The potential conservation areas depicted on the alternatives maps are purposefully generalized; however, they are intended to indicate areas where conservation may occur under the various alternatives. Key biological and physical features used to delineate the generalized areas depicted on the maps include vegetation, species occurrence data, soils and floodplains. In addition to this mapped information, data obtained through literature review, and biology and natural history information from local biologists, were used to generally define potential conservation areas. Land use issues were also considered in the alternatives development process.



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TABLE ES-1
ALTERNATIVE 1 — VEGETATION SUMMARY

Vegetation Type	Total Acres in Study Area	Total Acres in Existing Reserves	Total Acres of Additional Conservation	Total Acres Conserved	Percent of Total Habitat Acres Conserved in Study Area
Agriculture	169,475	8,483	15,500	23,983	14%
Chaparral	434,938	209,874	42,728	252,602	58%
Cismontane Alkali Marsh	1,266	2	52	54	4%
Coastal Sage Scrub	156,446	34,880	59,232	94,112	60%
Desert Scrubs	14,564	1,310	3,480	4,790	33%
Grassland	154,139	22,490	17,725	40,215	26%
Meadow	537	89	--	89	17%
Meadows and Marshes	478	150	176	326	68%
Montane Coniferous Forest	29,880	20,691	36	20,727	69%
Peninsular Juniper Woodland and Scrub	1,081	277	481	758	70%
Playas and Vernal Pools	7,914	3,246	3,321	6,567	83%
Riparian Scrub, Woodland, Forest	15,028	6,015	3,102	9,117	61%
Riversidean Alluvial Fan Sage Scrub	7,943	1,913	3,620	5,533	70%
Unknown	1,348	1,228	20	1,248	93%
Water	12,206	5,595	1,783	7,378	60%
Woodlands and Forests	33,222	20,408	1,946	22,354	67%
Developed or Disturbed Land	218,262	20,545			
TOTALS	1,258,727	357,196	153,202	510,398	

Note: Acreages represent estimates of areas potentially conserved within the Alternative 1 reserve configuration depicted on the Alternative 1 map.



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TABLE ES-2
ALTERNATIVE 2 — VEGETATION SUMMARY

Vegetation Type	Total Acres in Study Area	Total Acres in Existing Reserves	Total Acres of Additional Conservation	Total Acres Conserved	Percent of Total Habitat Acres Conserved in Study Area
Agriculture	169,475	8,483	14,900	23,383	14%
Chaparral	434,938	209,874	39,614	249,488	57%
Cismontane Alkali Marsh	1,266	2	1	3	0%
Coastal Sage Scrub	156,446	34,880	39,183	74,063	47%
Desert Scrubs	14,564	1,310	151	1,461	10%
Grassland	154,139	22,490	15,215	37,705	24%
Meadow	537	89	--	89	17%
Meadows and Marshes	478	150	102	252	53%
Montane Coniferous Forest	29,880	20,691	25	20,716	69%
Peninsular Juniper Woodland and Scrub	1,081	277	525	802	74%
Playas and Vernal Pools	7,914	3,246	2,934	6,180	78%
Riparian Scrub, Woodland, Forest	15,028	6,015	2,104	8,119	54%
Riversidean Alluvial Fan Sage Scrub	7,943	1,913	2,378	4,291	54%
Unknown	1,348	1,228	6	1,234	92%
Water	12,206	5,595	943	6,538	54%
Woodlands and Forests	33,222	20,408	1,221	21,629	65%
Developed or Disturbed Land	218,262	20,545			
TOTALS	1,258,727	357,196	119,302	476,498	

Note: Acreages represent estimates of areas potentially conserved within the Alternative 2 reserve configuration depicted on the Alternative 2 map.



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TABLE ES-3
ALTERNATIVE 3 — VEGETATION SUMMARY

Vegetation Type	Total Acres in Study Area	Total Acres in Existing Reserves	Total Acres of Additional Conservation	Total Acres Conserved	Percent of Total Habitat Acres Conserved in Study Area
Agriculture	169,475	8,483	14,900	23,383	14%
Chaparral	434,938	209,874	27,014	236,888	54%
Cismontane Alkali Marsh	1,266	2	1	3	0%
Coastal Sage Scrub	156,446	34,880	29,833	64,713	41%
Desert Scrubs	14,564	1,310	--	1,310	9%
Grassland	154,139	22,490	11,211	33,701	22%
Meadow	537	89	--	89	17%
Meadows and Marshes	478	150	80	230	48%
Montane Coniferous Forest	29,880	20,691	25	20,716	69%
Peninsular Juniper Woodland and Scrub	1,081	277	510	787	73%
Playas and Vernal Pools	7,914	3,246	4,137	7,383	93%
Riparian Scrub, Woodland, Forest	15,028	6,015	1,796	7,811	52%
Riversidean Alluvial Fan Sage Scrub	7,943	1,913	2,364	4,277	54%
Unknown	1,348	1,228	6	1,234	92%
Water	12,206	5,595	855	6,450	53%
Woodlands and Forests	33,222	20,408	1,077	21,485	65%
Developed or Disturbed Land	218,262	20,545			
TOTALS	1,258,727	357,196	93,809	451,005	

Note: Acreages represent estimates of areas potentially conserved within the Alternative 3 reserve configuration depicted on the Alternative 3 map.



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TABLE ES-4
ALTERNATIVE 4 — VEGETATION SUMMARY

Vegetation Type	Total Acres in Study Area	Total Acres in Existing Reserves	Percent of Total Habitat Conserved in Study Area
Agriculture	169,475	8,483	5%
Chaparrel	434,938	209,874	48%
Cismontane Alkali Marsh	1,266	2	0%
Coastal Sage Scrub	156,446	34,880	22%
Desert Scrubs	14,564	1,310	9%
Grassland	154,139	22,490	15%
Meadow	537	89	17%
Meadows and Marshes	478	150	31%
Montane Coniferous Forest	29,880	20,691	69%
Peninsular Juniper Woodland and Scrub	1,081	277	26%
Playas and Vernal Pools	7,914	3,246	41%
Riparian Scrub, Woodland, Forest	15,028	6,015	40%
Riversidean Alluvial Fan Sage Scrub	7,943	1,913	24%
Unknown	1,348	1,228	91%
Water	12,206	5,595	46%
Woodlands and Forests	33,222	20,408	61%
Developed or Disturbed Land	218,262	20,545	
TOTALS	1,258,727	357,196	



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Six generalized categories are illustrated on the alternatives maps. These categories are described below:

CORE AREA/SUBSTANTIAL HABITAT BLOCK: This category refers to large, generally intact habitat areas that may be connected to, or isolated from other intact habitat areas or linkages. In some cases, these areas may include substantial or key populations of listed species. In other cases, the primary character of these areas is that of a large, generally intact block of habitat. On the alternatives maps, these areas include the new core areas identified in the August 9 "Draft MSHCP Proposal" (Badlands, Vail Lake/Wilson Creek, Sage/Aguanga) as well as habitat blocks identified in the August 9 "Proposal" (Lakeview Mountains, Double Butte, La Sierra Hills, Jurupa Hills, Norco Hills, Alberhill, Scott Road/I-215 area).

LINKAGE: This category refers to areas that provide linkages connecting habitat blocks or cores. Linkages may include large patches of "live-in" habitat for certain species, as well as facilitating wildlife movement. In some locations, linkages may be comprised of patches of discontinuous habitat. Linkages generally include both upland and wetland components. On the alternatives maps, linkages include areas identified in the August 9 "Draft MSHCP Proposal" such as the upland linkage from Lake Skinner to Lake Mathews, the San Jacinto River linkage, the Tenaja corridor and Murrieta Hills linkages, and linkages connecting the Vail Lake/Wilson Creek and Sage/Aguanga core areas.

CONSTRAINED LINKAGES: This category refers to linkages connecting habitat blocks or core areas that are generally constrained by existing land uses and urbanization. Given existing constraints in these areas, provision of multiple, or redundant linkages between habitat blocks is desirable from a conservation planning standpoint. In some cases, provision of redundant linkages may not be possible. A variety of optional locations for the constrained linkages are shown on the alternatives maps.

OTHER: This category includes locations that don't fit into the definitions of core/substantial habitat block, linkage or constrained linkage. On the alternatives maps, other areas include locations identified in the August 9 "Proposal" such as the Delhi fly area in the northwest portion of the study area, the vernal pool areas in the vicinity of Hemet, and the area south of Lake Elsinore.



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PUBLIC/QUASI PUBLIC: This category includes existing reserves taken from the RCIP land status database, as described in the *April 2000 Description of Existing Reserves* document.

POTENTIAL CONSERVATION AREA SYMBOL: On Alternatives 2 and 3, a circular or oval symbol is shown depicting potential conservation areas in the Vail Lake, Wilson Creek, Anza Valley, Temecula Creek, Reche Canyon and Lambs Canyon Road areas, the latter three areas shown on Alternative 2 only. This symbol indicates areas where conservation would be needed to meet the species conservation objectives of the particular alternative. Acreages for conservation in these areas are included in the acreage estimates for Alternatives 2 and 3 and descriptions of the resources that would need to be conserved in the symbol areas are included in the description of the individual alternatives. Should Alternatives 2 or 3 be pursued for further analysis, refinements to the conservation symbol areas indicating more specifically the boundaries of areas to be conserved would need to be evaluated.

A brief description of each alternative is provided below. Descriptions of the biological and land use considerations associated with the alternatives are presented in *Section 4.6* of the *Alternatives Development Document*.

ALTERNATIVE 1: SPECIES CONSIDERED FOR CONSERVATION IN AUGUST 9, 1999 "DRAFT MSHCP PROPOSAL" (164 SPECIES)

Alternative 1 most closely resembles the areas identified as desirable for conservation in the August 9 "Draft MSHCP Proposal." While considering existing land use and other constraints, this alternative focuses on the draft Planning Agreement language which seeks to "promote the viability and recovery of western Riverside County ecosystems and habitats, and species dependent thereupon, toward a goal of reducing the need to list additional species in the future." This alternative also focuses generally on the broad-based NCCP biological tenets which are as follows:



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- | Conserve focus species and their habitats throughout the planning area
- | Conserve large habitat blocks
- | Conserve habitat diversity
- | Keep reserves contiguous and connected
- | Protect reserves from encroachment and invasion by non-native species

In consideration of these factors, and the MSHCP Advisory Committee direction to develop an alternative that would conserve up to 164 species, this alternative represents the most biologically robust of the alternatives described in this document. If this alternative is selected for further consideration, the degree to which the alternative achieves the goals and principles set forth in the draft Planning Agreement and the NCCP tenets will need to be evaluated in more detail. However, based on the existing available data as described in this document and in materials previously presented to the MSHCP Advisory Committee, and on preliminary analyses completed to date, it appears that this alternative, including incorporation of required HCP and NCCP features such as adaptive management and funding assurances, would satisfy these objectives.

ALTERNATIVE 2: LISTED, PROPOSED AND STRONG CANDIDATE SPECIES

Alternative 2 was developed at the request of the MSHCP Advisory Committee to depict a potential conservation scenario that would address listed, proposed and strong candidate species. A total of 29 listed and proposed species occur in the MSHCP study area including the following: Swainson's hawk, mountain plover, western yellow-billed cuckoo, southwestern willow flycatcher, peregrine falcon, bald eagle, California gnatcatcher, least Bell's vireo, San Bernardino kangaroo rat, Stephens' kangaroo rat, arroyo toad, California red-legged frog, mountain yellow-legged frog, quino checkerspot butterfly, Delhi sands flower loving fly, Riverside fairy shrimp, vernal pool fairy shrimp, Santa Ana sucker, Munz's onion, San Diego ambrosia, San Jacinto Valley crowscale, Nevin's barberry, thread-leaved brodiaea, Vail Lake ceanothus, slender-horned spineflower, Santa Ana River woollystar, San Diego button celery, spreading navarretia, and California Orcutt grass. In addition to the listed and proposed species, this alternative also considers conservation needs for the following seven species identified as "strong candidates" in discussions with the MSHCP Advisory Committee: tricolored blackbird (breeding colony), coastal cactus wren, burrowing owl, southwestern pond turtle, San Bernardino mountain kingsnake, San Diego mountain kingsnake and Los Angeles pocket mouse. The focus of conservation for this alternative is these 36 listed, proposed and strong candidate species.



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It should be noted that this alternative focuses largely on conservation of the 36 species noted above with less consideration of the draft Planning Agreement language and the broad-based NCCP biological tenets highlighted above for Alternative 1. While large habitat blocks and broad linkages are incorporated in this alternative in some areas, to provide for a reserve scenario that would address the conservation needs of the focus species, less emphasis is placed in this alternative on broad-based ecosystem conservation.

New core areas in the Badlands, Vail Lake/Wilson Creek/Sage, and Anza Valley areas identified in the August 9 “Draft MSHCP Proposal,” and depicted in a generalized configuration on the Alternative 1 map, are illustrated with a symbol in the conservation scenario map for Alternative 2. This is due to the fact that these areas would be needed for the conservation of focus species under this alternative. However, the level of conservation would likely be less than that which would occur under Alternative 1. A specific conservation configuration would need to be developed should this alternative be selected for further analysis. The symbols shown generally indicate conservation needs for the following species: Badlands - tricolored blackbird, coastal cactus wren, Los Angeles pocket mouse; Vail Lake/Wilson Creek/Sage - quino checkerspot butterfly, California gnatcatcher, burrowing owl, least Bell’s vireo, arroyo toad, coastal cactus wren, Vail Lake ceanothus, Nevin’s barberry; slender-horned spineflower, Anza Valley - coastal cactus wren, Stephens’ kangaroo rat, Los Angeles pocket mouse, and quino checkerspot butterfly.

Habitat blocks included in Alternative 1 but absent from this alternative include La Sierra Hills, Norco Hills and Jurupa Hills. While the La Sierra Hills and Norco Hills areas represent moderately large blocks of intact habitat and support a variety of species, they do not support substantial populations or meet habitat requirements for the focus species under this alternative and therefore are not included in this alternative. Likewise, the Jurupa Hills do not support substantial populations of the focus species under this alternative. Scattered gnatcatcher observations are, however, known from the Jurupa Hills and this area may contribute to gnatcatcher conservation outside the MSHCP study area. For this reason, the Jurupa Hills may need to be evaluated in greater detail should this alternative be selected for further study.

A variety of linkages and constrained linkages are included in Alternative 1 but absent from this alternative, including substantial linkages east of Lake Skinner and Diamond Valley Lake, the upland portions of the linkage along Temescal Wash north of Alberhill, and the Tenaja corridor linkage, as well as the Cahuilla Creek linkage east of the Vail Lake/Wilson Creek/Sage core area. Constrained linkages absent from this alternative include lower Warm



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Springs and Tualota creeks, a variety of optional linkages along upper Warm Springs Creek and in the French Valley area, linkages to the Santa Ana River via Springbrook Wash and channelized portions of Temescal Wash, and linkages in the Cherry Valley, Banning Bench and Banning Idyllwild panoramic highway areas. Although these linkages would contribute to the overall conservation scenario under Alternative 1, they do not provide substantial support for the focus species under this alternative and so are not depicted under this alternative scenario. The channelized portion of Temescal Creek may support breeding for the Santa Ana sucker and this area may need to be considered for inclusion in the reserve under this alternative.

ALTERNATIVE 2A: NARROW ENDEMIC PLANTS

Alternative 2A has been developed at the request of the MSHCP Advisory Committee to provide information regarding areas that would need to be investigated for conservation under an alternative focusing on narrow endemic plant species. The term *endemic species* means native to a particular geographic area. Endemic does not imply rarity or endangerment; it only refers to geographic distribution. The species coastal California gnatcatcher and San Diego coyote thistle are endemic to southern California and northwestern Baja California, Mexico. Globally, these are small distributions. A very narrowly-distributed species such as the plant species San Jacinto Valley crown-scale is endemic to (found only in) western Riverside County, a much smaller geographic area.

The term *narrow endemic species* has been used in conservation planning to refer to a species that is **restricted to a relatively small geographic area and for which conservation planning decisions would have a substantial effect on the status of the species**. An example of a planning area sensitive plant species for which the term narrow endemic does **not** fit well is chocolate-lily. Because this species is endemic to much of coastal California and northwestern Baja California, Mexico, conservation decisions regarding western Riverside County will have a relatively small effect on the global conservation status of this species.

The focus of Alternative 2A is on the list of narrow endemic plant species distributed to the MSHCP Preserve Science and Design Subcommittee in October 1999. The species list is provided below. *Exhibit 3* depicts six areas that would need to be considered in assembling a reserve for narrow endemic plant species. The locations of the narrow endemic plants with respect to the areas depicted on *Exhibit 3* are noted in parentheses in the list below. The



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letter (F) shown in parentheses in the list below indicates that the species is generally confined to Forest Service Lands.

List A: Plant Species Endemic to Planning Area (7)

- Allium munzii* – Munz’s onion (Area 1)
- Arabis johnstoni* – Johnston’s rock-cress (F)
- Atriplex coronata* var. *notatior* – San Jacinto Valley crownscale (Areas 2, 3, 4)
- Atriplex parishii* – Parish’s brittlescale (Areas 2, 3, 4, 5)
- Calochortus palmeri* var. *munzii* – Munz’s mariposa lily (F)
- Ceanothus ophiochilus* – Vail Lake ceanothus (Area 6)
- Galium angustifolium* ssp. *jacinticum* – San Jacinto Mountains bedstraw (F)

List B: Plant Species for which Planning Area is Critical to Conservation (Not Endemic to Planning Area) (15)

- Ambrosia pumila* – San Diego ambrosia (Areas 1, 2)
- Atriplex serenana* var. *davidsonii* – Davidson’s saltscale (Areas 2, 3, 4)
- Berberis nevinii* – Nevin’s barberry (Area 6)
- Brodiaea filifolia* – thread-leaf brodiaea (Areas 2, 3)
- Dodecahema leptoceras* – slender-horned spineflower (Area 1)
- Dudleya multicaulis* – many-stemmed dudleya (Area 1)
- Eriastrum densifolium* ssp. *sanctorum* – Santa Ana River woollystar (Santa Ana River)
- Hemizonia pungens* ssp. *laevis* – smooth tarplant (Area 3, Salt Creek)
- Lasthenia glabrata* spp. *coulteri* – Coulter’s goldfields (Areas 2, 3)
- Lepechinia cordifolia* – heart-leaf pitcher-sage (F)
- Myosurus minimus* ssp. *apus* – little mousetail (Area 4)
- Navarretia fossalis* – spreading navarretia (Areas 2, 3, 4, 5)
- Orcuttia californica* – California Orcutt grass (Areas 4, 5)
- Satureja chandleri* – San Miguel savory (Santa Rosa Plateau, Steele Rock)
- Trichocoronis wrightii* var. *wrightii* – Wright’s trichocoronis (Areas 2, 3)

The areas shown on *Exhibit 3* depict a potential preserve planning area for narrow endemic plant species. The potential preserve planning area indicates those locations potentially conserved for narrow endemic plants as well as locations outside areas to be conserved. In the locations outside the areas to be conserved, surveys for narrow endemic plant species would need to be conducted under this alternative. In general, it is anticipated that conservation areas for narrow endemic plant species under this alternative would overlap similar areas identified for conservation in Alternative 1.



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The MSHCP Advisory Committee has previously reviewed a draft narrow endemics policy included in the Draft Policy matrix distributed to the Advisory Committee in May 2000. The draft narrow endemics policy matrix described an approach where protocol surveys would be conducted for narrow endemic plants during the appropriate season and, if populations of plants were observed, avoidance and minimization measures would be undertaken in the design of individual projects. Under this alternative, it is anticipated that such surveys would occur in the areas depicted in *Exhibit 3*, in locations outside areas to be conserved. Therefore, as stakeholders review this alternative for consideration, it should be recognized that survey requirements are inherent in the definition of the alternative.

ALTERNATIVE 3: LISTED AND PROPOSED SPECIES

Alternative 3 was developed at the request of the MSHCP Advisory Committee to depict a potential conservation scenario that would address only listed and proposed species. A total of 29 listed and proposed species occur in the MSHCP study area as listed in the description of Alternative 2. It should be noted that this alternative focuses largely on the conservation of the 29 listed and proposed species within the MSHCP study area, with less consideration of the draft Planning Agreement language and the broad-based NCCP biological tenets highlighted above for Alternative 1. While large habitat blocks and broad linkages are incorporated in this alternative in some areas, to provide for a conservation scenario that would address the conservation needs of the listed and proposed species, less emphasis is placed in this alternative on broad-based ecosystem conservation.

New core areas in the Vail Lake/Wilson Creek/Sage, and Anza Valley areas identified in the August 9, 1999 "Draft MSHCP Proposal" and depicted in a generalized configuration on the Alternative 1 map are illustrated with a symbol in the conservation scenario map for Alternative 3. This is due to the fact that these areas would be needed for conservation of the listed and proposed species under this alternative. However, the level of conservation would likely be less than that which would occur under Alternative 1. A specific conservation configuration would need to be developed should this alternative be selected for further analysis. The symbols shown generally indicate conservation needs for the following species: Vail Lake/Wilson Creek/Sage - quino checkerspot butterfly, California gnatcatcher, least Bell's vireo, arroyo toad, Vail Lake ceanothus, Nevin's barberry; slender-horned spineflower, Anza Valley - Stephens' kangaroo rat, quino checkerspot butterfly. Conservation of the Potrero portion of the Badlands is also anticipated in Alternative 3. Conservation in this area is focused on Stephens' kangaroo rat and least Bell's vireo.



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Habitat blocks included in Alternative 2 but absent from this alternative include Double Butte and the Lakeview Mountains. These areas were included in Alternative 2 to improve conservation of strong candidate species such as burrowing owl and Los Angeles pocket mouse. While they represent large blocks of intact habitat and support a variety of species, they do not support substantial populations or meet habitat requirements for the focus species under this alternative and therefore are not included in this alternative. The Jurupa Hills habitat block is not included in either this alternative or in Alternative 2. As stated in the discussion of Alternative 2, scattered gnatcatcher observations are known from the Jurupa Hills and this area may contribute to conservation of the gnatcatcher outside the MSHCP study area. The gnatcatcher is a listed species and one of the focus species under this alternative. For this reason, the Jurupa Hills may need to be evaluated in greater detail should this alternative be selected for further study.

Linkages included in Alternative 2 but absent from this alternative include the Tule Creek linkage and the linkage east of Johnson Ranch and south of Lake Skinner. These linkages were included in Alternative 2 for conservation of Los Angeles pocket mouse and burrowing owl respectively. Since these species are not focus species under this listed and proposed species alternative, they are not included in this alternative.

PRELIMINARY SPECIES ANALYSES

The rationales for the preliminary conservation conclusions for individual species under the various alternatives are described in detail in *Section 5.0 of the Alternatives Development Document*. *Table ES-5* provides a summary of the conservation conclusions for each individual species under Alternatives 1 – 3. While a particular species may be considered to be conserved under all three alternatives, it should be noted that the adaptive management, surveyor other requirements for conservation of a particular species may vary among the alternatives. These varying requirements are described for relevant species in *Section 5.0 of the Alternatives Development Document*. For example, under Alternatives 2 and 3, a narrower linkage is indicated along lower Temescal Wash than under Alternative 1. It, therefore, may require more effort to manage this linkage for the benefit of species under Alternatives 2 and 3 than under Alternative 1. As the MSHCP planning process proceeds toward the development of a preferred alternative, decision makers will need to weigh the factors involved in both assembling the reserve and providing long-term adaptive management.



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The focus of the conservation configuration for the individual alternatives is on the particular species list developed for that alternative (e.g., “listed and proposed species” or “listed, proposed and strong candidate species”). However, as shown in *Table ES-5*, under the alternatives, additional species beyond those that are the focus of the particular alternative would be considered to be conserved. This reflects the fact that an alternative focusing on, say, “listed and proposed species” would also provide a conservation configuration that would support a variety of other species, due to such factors as similar habitat requirements, or the widespread nature of a particular species.

A brief summary of potential species conservation under the Existing Reserves alternative is presented in *Table ES-6*. Should this alternative be selected for further consideration, more detailed analysis of specific species conservation considerations would be required. The information provided in *Table ES-6*, however, provides indication of species not likely to be conserved under this alternative. As shown in the table, of the 29 listed and proposed species, only two bird species (peregrine falcon and western yellow-billed cuckoo) would be considered to be conserved under this alternative. One mammal species, Stephens’ kangaroo rat, would be conserved based on the existing HCP; however, coverage would not be expanded to populations outside the existing HCP area. In addition, two amphibian species, mountain yellow-legged frog and California red-legged frog, and one plant species, San Diego button-celery, could be considered to be conserved based on conservation on Santa Rosa Plateau and on Forest Service lands. The remaining twenty-three listed and proposed species would not be considered to be conserved under this alternative.



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TABLE ES-5 ! SUMMARY OF POTENTIAL SPECIES CONSERVATION: ALTERNATIVES 1, 2, 3

SPECIES Scientific/Common Names	Listing Status State/ Federal	ALTERNATIVES								
		1			2			3		
		Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹
BIRDS										
<i>Accipiter cooperii</i> – Cooper's hawk	SSC / -			U F			U F			U F
<i>Accipiter gentilis</i> – northern goshawk	SSC /			F			F			F
<i>Accipiter striatus</i> – sharp-shinned hawk	SSC / -		U	F		U	F		U	F
<i>Agelaius tricolor</i> –tricolored blackbird (colony)	SSC / -		U			U		U		
<i>Aimophila ruficeps canescens</i> – rufous-crowned sparrow	SSC / -		U			U				U
<i>Ammodramus savannarum perpallidus</i> – grasshopper sparrow	- / -		U		U			U		
<i>Amphispiza belli belli</i> – Bell's sage sparrow	SSC /		U		U			U		
<i>Aquila chrysaetos</i> – golden eagle	SSC /		U	U F	U			U		
<i>Asio flammeus</i> – short-eared owl (breeding)	SSC /			U			U			U
<i>Asio otus</i> – long-eared owl (breeding)	SSC / -			U			U			U
<i>Botaurus lentiginosus</i> – American bittern	- / -		U			U			U	
<i>Buteo regalis</i> – ferruginous hawk	SSC / -			U			U			U



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TABLE ES-5 ! SUMMARY OF POTENTIAL SPECIES CONSERVATION: ALTERNATIVES 1, 2, 3

SPECIES Scientific/Common Names	Listing Status State/ Federal	ALTERNATIVES								
		1			2			3		
		Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹
<i>Buteo swainsoni</i> – Swainson's hawk	ST / -			U			U			U
<i>Campylorhynchus brunneicapillus couesi</i> – coastal cactus wren	SSC / -		U	U F		U	U F	U		
<i>Cathartes aura</i> – turkey vulture (breeding)	- / -			U F			U F	U		
<i>Catharus ustulatus</i> – Swainson's thrush (breeding)	- / -		U	U F		U	U F		U	U F
<i>Chaetura vauxi</i> – Vaux's swift	SSC / -			F			F			F
<i>Charadrius alexandrinus nivosus</i> – western snowy plover (nesting)	SSC / -		U			U			U	
<i>Charadrius montanus</i> – mountain plover	SSC / PT		U	U		U	U		U	U
<i>Circus cyaneus</i> – northern harrier (breeding)	SSC / -		U	U	U			U		
<i>Coccyzus americanus occidentalis</i> – western yellow-billed cuckoo	SE / -		U	U		U	U		U	U
<i>Cypseloides niger</i> – black swift (breeding)	SSC / -			F			F			F
<i>Dendroica petechia brewsteri</i> – yellow warbler	SSC / -		U	U F		U	U F		U	U F
<i>Elanus leucurus</i> – white-tailed kite	- / -		U	U	U			U		
<i>Empidonax traillii extimus</i> – southwestern willow flycatcher	SE / FE		U	U		U	U		U	U
<i>Eremophila alpestris actia</i> – California horned lark	SSC / -		U		U			U		



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		Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹
<i>Falco columbarius</i> – merlin	SSC / -		U			U		U		
<i>Falco mexicanus</i> – prairie falcon (breeding)	SSC / -		U	U	U			U		
<i>Falco peregrinus</i> – peregrine falcon	SE / FE delisted		U	F		U	F		U	F
<i>Glaucidium gnoma</i> – northern pygmy owl	- / -			F			F			F
<i>Haliaeetus leucocephalus</i> – bald eagle	SE / FT*		U	U		U	U		U	U
<i>Icteria virens auricollis</i> – yellow-breasted chat	SSC / -		U	U F		U	U F		U	U F
<i>Ixobrychus exilis hesperis</i> – western least bittern	SSC / -		U	U		U	U		U	U
<i>Lanius ludovicianus</i> – loggerhead shrike	SSC / -		U		U			U		
<i>Melospiza lincolni</i> – Lincoln's sparrow (breeding)	- / -		U	F		U	F		U	F
<i>Nycticorax nycticorax nycticorax</i> – black-crowned night heron	- / -		U			U			U	
<i>Oporornis tolmiei</i> – Macgillivrays warbler	- / -			F			F			F
<i>Oreortyx picta</i> – mountain quail	- / -			F			F			F
<i>Otus flammeolus</i> – flammulated owl	- / -			F			F			F



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		Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹
<i>Pandion haliaetus</i> – osprey	SSC / -		U			U			U	
<i>Phalacrocorax auritus</i> – double-crested cormorant	SSC / -		U			U			U	
<i>Picoides pubescens</i> – downy woodpecker	- / -			U		U	U		U	U
<i>Plegadis chihi</i> – white-faced ibis	SSC / -		U			U			U	
<i>Polioptila californica californica</i> – coastal California gnatcatcher	SSC / FT		U			U			U	U
<i>Progne subis</i> – purple martin	SSC / -			F			F			F
<i>Speotyto cunicularia hypugaea</i> – western burrowing owl	SSC / -		U	U		U	U	U		
<i>Sphyrapicus thyroideus</i> – Williamson's sapsucker	- / -			F			F			F
<i>Strix occidentalis occidentalis</i> – California spotted owl	SSC / -			F			F			F
<i>Tachycineta bicolor</i> – tree swallow	- / -		U	U		U	U		U	U
<i>Toxostoma lecontei</i> – Le Conte's thrasher	SSC / -		U			U			U	
<i>Vermivora ruficapilla</i> – Nashville warbler	- / -			F			F			F
<i>Vireo belli pusillus</i> – least Bell's vireo	SE / FE		U	U		U	U		U	U
<i>Wilsonia pusilla</i> – Wilson's warbler	- / -			F			F			F



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MAMMALS										
<i>Canis latrans clepticus</i> – coyote ²			U			U			U	
<i>Chaetodipus californicus femoralis</i> – Dulzura California pocket mouse	SSC / –		U	U		U	U		U	U
<i>Chaetodipus fallax fallax</i> – northwestern San Diego pocket mouse ²	SSC / –		U	U		U	U		U	U
<i>Dipodomys merriami collinus</i> – Aguanga kangaroo rat	None	U			U			U		
<i>Dipodomys merriami parvus</i> – San Bernardino kangaroo rat	SSC / FE		U	U		U	U		U	U
<i>Dipodomys stephensi</i> – Stephens' kangaroo rat	ST / FE		U	U		U	U		U	U
<i>Glaucomys sabrinus californicus</i> – San Bernardino flying squirrel	SSC / –		U F	U F		U F	U F		U F	U F
<i>Lepus californicus bennettii</i> – San Diego black-tailed jackrabbit	SSC / –		U	U	U			U		
<i>Lynx rufus californicus</i> – bobcat			U	U	U			U		
<i>Mustela frenata latirostra</i> – long-tailed weasel			U	U	U			U		
<i>Neotoma lepida intermedia</i> – San Diego desert woodrat	SSC / –		U	U	U			U		
<i>Onychomys torridus ramona</i> – southern grasshopper mouse	SSC / –	U			U			U		



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<i>Perognathus longimembris brevinasus</i> – Los Angeles pocket mouse	SSC / –		U	U		U	U	U		
<i>Puma concolor</i> – mountain lion	SP / –		U	U	U			U		
<i>Sylvilagus bachmanii</i> – brush rabbit			U			U			U	
<i>Taxidea taxus</i> – American badger		U			U			U		
AMPHIBIANS										
<i>Bufo microscaphus californicus</i> – southwestern arroyo toad	SSC / FE		U	U		U	U		U	U
<i>Ensatina escholtzii klauberi</i> – large-blotched salamander	SSC / –		U	U F		U F	U		U F	U
<i>Rana aurora draytonii</i> – California red-legged frog	SSC / FT		U	U F		U F	U		U F	U
<i>Rana muscosa</i> – mountain yellow-legged frog	SSC / –		U	U F		U F	U		U F	U
<i>Scaphiopus hammondi</i> – western spadefoot toad	SSC / –		U	U	U			U		
<i>Taricha tarosa tarosa</i> – coast range newt	SSC / –		U	U F		U F	U		U F	U
REPTILES										
<i>Anniella pulchra pulchra</i> – California legless lizard			U			U	U	U		



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		Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹
<i>Arizona elegans occidentalis</i> – Coastal glossy snake			U			U	U	U		
<i>Charina bottae umbratica</i> – southern rubber boa	SSC / T		U	U F		U F	U		U F	U
<i>Clemmys marmorata pallida</i> – southwestern pond turtle	SSC / N		U	U		U	U		U	U
<i>Chemidophorus tigris multi scutatus</i> – coastal western whiptail	SSC / N		U			U	U		U	U
<i>Chemidophorus hyperythrus beldingi</i> – orange-throated whiptail	SSC / N		U	U		U	U	U		
<i>Coleonyx variegatus abbottii</i> – San Diego banded gecko	SSC / N		U	U		U	U	U		
<i>Crotalus ruber ruber</i> – northern red diamond rattlesnake	SSC / N		U			U	U		U	U
<i>Diadophis punctatus modestus</i> – San Bernardino ringneck snake	SSC / N		U			U	U	U		
<i>Diadophis punctatus similis</i> – San Diego ringneck snake			U			U	U	U		
<i>Gambelia wislizenii</i> – long-nosed leopard lizard	SSC / N		U	U	U			U		
<i>Lampropeltis zonata parvirubra</i> – San Bernardino Mtn. kingsnake	SSC / N		U	U F		U F	U		U F	U
<i>Lampropeltis zonata pulchra</i> – San Diego Mountain kingsnake	SSC / N		U	U F		U F	U		U F	U
<i>Lichanura trivirgata roseofusca</i> – coastal rosy boa	SSC / N		U			U	U	U		
<i>Phrynosoma coronatum blainville</i> – San Diego horned lizard	SSC / N		U			U	U	U		



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		1			2			3		
		Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹
<i>Salvadora hexalepis virgulata</i> – coast patch-nosed snake			U			U	U		U	U
<i>Sceloporus graciosus vandenburgianus</i> – southern sagebrush lizard	SSC / N		U	F		U F			U F	
<i>Sceloporus orcuttii orcuttii</i> – granite spiny lizard			U	U		U	U	U		
<i>Thamnophis hammondi</i> – two-striped garter snake			U			U	U		U	U
<i>Thamnophis sirtalis infernalis</i> – California red-sided garter snake	SSC / N		U	U	U			U		
<i>Xantusia henshawi henshawi</i> – granite night lizard	SSC / N		U	U		U	U	U		
INVERTEBRATES/CRUSTACEANS										
<i>Branchinecta lynchii</i> – vernal pool fairy shrimp	FT / -		U	U		U	U		U	U
<i>Linderiella santarosae</i> – Santa Rosa Plateau fairy shrimp	FS		U	U		U	U		U	U
<i>Streptocephalus woottoni</i> – Riverside fairy shrimp	FE		U	U		U	U		U	U
INVERTEBRATES/INSECTS										
<i>Euphydryas editha quino</i> – Quino checkerspot butterfly	/ FE		U	U		U	U		U	U
<i>Rhaphiomidas terminatus abdominalis</i> – Delhi sands flower-loving fly	- / FE		U	U		U	U		U	U



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		Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹	Not Conserved	Conserved w/ AMP	Other Considerations ¹
FISH										
<i>Catostomus santaanae</i> – Santa Ana sucker	SSC / PT		U	U		U	U		U	U
<i>Gila orcutti</i> – arroyo chub	SSC / -		U	U		U	U		U	U
<i>Rhinichthys osculus</i> – Santa Ana speckled dace	SSC / -		U	U		U	U		U	U
PLANTS										
<i>Allium munzii</i> – Munz's onion	ST/FE		U	U		U	U		U	U
<i>Ambrosia pumila</i> – San Diego ambrosia	FP		U	U		U	U		U	U
<i>Arabis johnstonii</i> – Johnston's rock cress				UF			UF			UF
<i>Arctostaphylos rainbowensis</i> – Rainbow manzanita			U	UF		U	UF		U	UF
<i>Astragalus pachypus var. jaegeri</i> – Jaeger's milk-vetch			U	UF		U	UF		U	UF
<i>Atriplex coronata var. notation</i> – San Jacinto Valley crown scale	FE		U	U		U	U		U	U
<i>Atriplex coulteri</i> – Coulter's saltbush			U	U		U	U		U	U
<i>Atriplex parishii</i> – Parish's brittle scale			U	U		U	U		U	U



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<i>Atriplex serenana</i> var. <i>dauidsonii</i> – Davidson's saltscale			U	U		U	U		U	U
<i>Berberis nevinii</i> – Nevin's barberry	SE / FE		U	U F		U	U F		U	U F
<i>Brodiaea filifolia</i> – thread-leaved brodiaea	SE / FT		U	U F		U	U F		U	U F
<i>Brodiaea orcuttii</i> – Orcutt's brodiaea ²			U	U F		U	U F		U	U F
<i>Calochortus palmeri</i> var. <i>munzii</i> – Munz's mariposa lily				U F			U F			U F
<i>Calochortus plummerae</i> – Plummer's mariposa lily			U	U F		U	U F		U	U F
<i>Calochortus weedii</i> var. <i>intermedius</i> – intermediate mariposa lily			U	U F		U	U F		U	U F
<i>Caulanthus simulans</i> – Payson's jewelflower			U	U F		U	U F		U	U F
<i>Ceanothus ophiochilus</i> – Vail Lake ceanothus	ST / FT		U	U F		U	U F		U	U F
<i>Chorizanthe leptotheca</i> – peninsular spineflower			U	U F		U	U F		U	U F
<i>Chorizanthe parryi</i> var. <i>parryi</i> – Parry's spineflower			U	U			U		U	U
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> – long-spined spineflower			U	U F		U	U F		U	U F
<i>Chorizanthe procumbens</i> – prostrate spineflower			U	U F		U	U F		U	U F
<i>Convolvulus simulans</i> – small-flowered morning glory			U	U		U	U		U	U



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<i>Dodecahema leptoceras</i> – slender-horned spineflower	SE / FE		U	U F		U	U F		U	U F
<i>Dudleya multicaulis</i> – many-stemmed dudleya			U	U F		U	U F		U	U F
<i>Dudleya viscida</i> – sticky-leaved dudleya				U F			U F			U F
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> – Santa Ana River woollystar	SE / FE		U	U		U	U		U	U
<i>Eryngium aristulatum</i> var. <i>parishii</i> – San Diego button-celery ²	SE / FE		U			U			U	
<i>Galium angustifolium</i> ssp. <i>jacinticum</i> – San Jacinto Mountains bedstraw				U F			U F			U F
<i>Galium californicum</i> ssp. <i>primum</i> – California bedstraw				U F			U F			U F
<i>Harpagonella palmeri</i> var. <i>palmeri</i> – ‘Palmer’s grapplinghook			U	U		U	U		U	U
<i>Hemizonia mohavensis</i> – Mojave tarplant				U F			U F			U F
<i>Hemizonia pungens</i> ssp. <i>laevis</i> – smooth tarplant			U	U		U	U		U	U
<i>Heuchera hirsutissima</i> – shaggy-haired alumroot				U F			U F			U F
<i>Holocarpha virgata</i> ssp. <i>elongate</i> – graceful tarplant				U F			U F			U F
<i>Hordeum intercedes</i> – vernal barley			U	U		U	U		U	U
<i>Hulsea vestita</i> ssp. <i>callicarpha</i> – beautiful hulsea				U F			U F			U F



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<i>Juglans californica</i> var. <i>californica</i> – Southern California black walnut			U	U		U	U		U	U
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> – Coulter's goldfields			U	U		U	U		U	U
<i>Lepechinia cardiophylla</i> – heart-leaved pitcher sage			U	U F		U	U F		U	U F
<i>Lilium humboldtii</i> ssp. <i>ocellatus</i> – ocellated Humboldt lily				U F			U F			U F
<i>Lilium parryi</i> – lemon lily			U	U F		U	U F		U	U F
<i>Limnanthes gracilis</i> var. <i>parishii</i> – Parish's meadowfoam ²			U			U			U	
<i>Microseris douglasii</i> var. <i>platycharpha</i> – small-flowered micro seris			U	U F		U	U F		U	U F
<i>Mimulus clevelandii</i> – Cleveland's bush monkeyflower			U	U F		U	U F		U	U F
<i>Mimulus diffuses</i> – Palomar monkeyflower			U	U F		U	U F		U	U F
<i>Monardella macrantha</i> ssp. <i>hallii</i> – Hall's monardella				U F			U F			U F
<i>Mucronea californica</i> – California spineflower			U	U		U	U		U	U
<i>Muhlenbergia californica</i> – California muhly			U	U F		U	U F		U	U F
<i>Myosurus minimus</i> ssp. <i>apus</i> – little mousetail			U	U		U	U		U	U
<i>Navarretia fossalis</i> – spreading navarretia	FT		U	U		U	U		U	U



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<i>Orcuttia californica</i> – California Orcutt grass	SE / FE		U	U		U	U		U	U
<i>Oxytheca caryophylloides</i> – chickweed oxytheca				U F			U F			U F
<i>Penstemon californicus</i> – California beardtongue				U F			U F			U F
<i>Polygala cornuta var. fishiae</i> – Fish's milkwort				U F			U F			U F
<i>Potentilla rimicola</i> – cliff cinquefoil				U F			U F			U F
<i>Quercus engelmanni</i> – Engelmann oak			U	U F		U	U F		U	U F
<i>Romneya coulteri</i> – Coulter's matilija poppy			U	U F		U	U F		U	U F
<i>Satureja chandleri</i> – San Miguel savory			U	U F		U F	U		U	U F
<i>Trichocoronis wrightii var. wrightii</i> – Wright's trichocoronis			U	U		U	U		U	U

NOTES:

¹ "The purpose of this column is to highlight other considerations that may be of concern to stakeholders as decisions are made regarding those species to be considered for coverage as part of the MSHCP. As the MSHCP planning process has proceeded, stakeholders have expressed concerns regarding survey requirements that may be associated with conservation of certain species, along with avoidance and minimization measures that may need to be considered in response to survey results. Concerns have also been expressed regarding linking species conservation to policy-related issues such as implementation of best management practices to maintain water quality and implementation of floodplain or watershed management policies that might encourage maintenance of existing hydrological conditions that are important to the persistence of certain species. Issues that would need to be addressed as part of these other considerations are described in more detail in the Draft Policy Matrix distributed to the MSHCP Advisory Committee in May 2000. In the August 9 "Draft MSHCP Proposal," these issues were addressed



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TABLE ES-5 ! SUMMARY OF POTENTIAL SPECIES CONSERVATION: ALTERNATIVES 1, 2, 3

under the general heading of "adequately conserved with additional measures." The purpose of the "Other Considerations" column heading in this table is to more specifically highlight for stakeholders those species for which, based on the available information and analyses completed by Dudek & Associates Inc. to date, the following other considerations would be required to achieve MSHCP conservation objectives: additional surveys and associated avoidance and minimization measures; implementation of best management practices; implementation of floodplain management measures. While some of these measures may ultimately be considered to be part of the overall adaptive management program, we have chosen to highlight them in the separate "Other Considerations" column in this table to assist stakeholders in review and consideration of various alternatives and options for the MSHCP. Please refer to the preliminary species analyses contained in Section 5.0 of this document for narrative summaries of preliminary conservation considerations for each individual species."

Habitat and occurrences for a number of species in the MSHCP study area occur primarily within the Cleveland and San Bernardino National Forest. For this reason, conservation of these species is largely dependent upon activities within the National Forest and, in some cases, on activities on private inholdings within the forest. The U.S. Forest Service (USFS) is in the process of developing management plans for the four Southern California national forests, including Cleveland and San Bernardino. This planning effort is known as the Southern California Conservation Strategy. To the extent that effects on species within the MSHCP study area are addressed in the USFS Southern California Conservation Strategy, and on private inholdings within the forest, these species may be considered to be conserved as part of the MSHCP. To identify those species whose conservation may be dependent upon features incorporated in the USFS plans, the letter "F" has been placed in the other considerations column on this table."

² Conserved, but no additional AMPs or other considerations are necessary.

Federal Designations

- FE = Endangered: Species listed as endangered by the U.S. Fish and Wildlife Service
FT = Threatened: Species listed as threatened by the U.S. Fish and Wildlife Service
PT = Proposed Threatened: Species proposed for listing as threatened by the U.S. Fish and Wildlife Service
P = Petitioned as Threatened or Endangered: Species for which the U.S. Fish and Wildlife Service has received a petition for listing as threatened or endangered.

State Designations

- SE = Endangered: Species classified as endangered by the California Fish and Game Commission
ST = Threatened: Species classified as threatened by the California Fish and Game Commission
SSC = Species of Special Concern: Species considered by the California Department of Fish and Game as possibly facing extirpation in California due to declining populations or loss of habitat.

Explanation of California Native Plant Society (1994) Listing:

Lists

- 1A: Presumed extinct in California.
1B: Rare or endangered in California and elsewhere.
2: Rare or endangered in California, more common elsewhere.



Executive Summary

TABLE ES-5 ! SUMMARY OF POTENTIAL SPECIES CONSERVATION: ALTERNATIVES 1, 2, 3

- 3: Need more information
- 4: Plants of limited distribution.

Note: Plants on CNPS list 1B meet California Department of Fish and Game criteria for Rare or Endangered listing.

R-E-D code

E: (Endangerment)

R: (Rarity)

1: Not endangered

2: Endangered in a portion of its range

1: Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.

2: Occurrence confined to several populations or to one extended population.

3: Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

D: (Distribution)

1: More or less widespread outside of California

2: Rare outside California

3: Endemic to California



Executive Summary

**TABLE ES-6
SUMMARY OF POTENTIAL SPECIES CONSERVATION
UNDER EXISTING RESERVES ALTERNATIVE**

Common Name	Scientific Name	Notes
LISTED AND PROPOSED SPECIES		
BIRDS		
bald eagle	<i>Haliaeetus leucocephalus</i>	Not conserved, needs larger foraging area around the lakes that they winter at (such as Lake Elsinore, Lake Perris, Vail Lake, Lake Skinner, Lake Mathews). Need less urbanization within the areas where they winter.
coastal California gnatcatcher	<i>Polioptila californica californica</i>	Not conserved, missing key populations in Alberhill, Sedco Hills, Canyon Lake, and corridor connection to Lake Skinner.
least Bell's vireo	<i>Vireo bellii pusillus</i>	Not conserved, still need other populations in Temecula Creek, Wilson Creek, Santa Margarita River, Potrero Creek, Murrieta Creek, Temescal Wash, San Timoteo Creek, Chino Creek, Alberhill Creek, Tualota Creek; although do get Santa Ana River and Prado, it's missing too many key populations.
mountain plover	<i>Charadrius montanus</i>	Not conserved, need Mystic Lake and foraging area in the Menifee/Winchester/Perris/Nuevo area.
peregrine falcon	<i>Falco peregrinus</i>	Conserved, regular visiting areas are protected at Prado Basin, Santa Ana River, San Jacinto Wildlife Area, Lake Perris, Lake Skinner.
southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Not conserved, although population in Prado Basin and Santa Ana River is protected, all locations are key and this misses the locations in Temecula River, Santa Margarita River, Murrieta Creek.
Swainson's hawk	<i>Buteo swainsoni</i>	Not conserved, because could occur anywhere and don't get sufficient foraging habitat in central part.
western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	Conserved, only populations are in Santa Ana River and Prado Basin.
MAMMALS		
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	Not conserved, populations in Upper San Jacinto & Bautista not included.
Stephens' kangaroo rat	<i>Dipodomys stephensi</i>	Conserved, however, coverage would not be expanded to populations outside of existing HCP area.



Executive Summary

TABLE ES-6 (Continued)
SUMMARY OF POTENTIAL SPECIES CONSERVATION
UNDER EXISTING RESERVES ALTERNATIVE

Common Name	Scientific Name	Notes
AMPHIBIANS		
California red-legged frog	<i>Rana aurora draytonii</i>	Conserved depending on 4-forest plan and Santa Rosa Plateau.
mountain yellow-legged frog	<i>Rana muscosa</i>	Conserved depending on 4-forest plan.
southwestern arroyo toad	<i>Bufo microscaphus californicus</i>	Not conserved, habitat.
INVERTEBRATES/CRUSTACEANS		
Riverside fairy shrimp	<i>Streptocephalus woottoni</i>	Not conserved, Hemet and other potential habitat not conserved.
vernal pool fairy shrimp	<i>Branchinecta lynchii</i>	Not conserved, although conserved at Santa Rosa Plateau, it is not conserved else where.
INVERTEBRATES/INSECTS		
Quino checkerspot butterfly	<i>Euphydryas editha quino</i>	Not conserved, Sage, Wilson Valley, Murrieta and Temecula not included.
Delhi sands flower-loving fly	<i>Rhaphiomidas terminatus abdominalis</i>	Not conserved, Mira Loma, Jurupa not included.
FISH		
Santa Ana sucker	<i>Catostomus santaanae</i>	Not conserved, because the breeding areas for the fish, Temescal Wash and San Timoteo Creek, are not included.
PLANTS		
California Orcutt grass	<i>Orcuttia californica</i>	Not conserved, doesn't include habitat where it is located (Salt Creek).
Munz's onion	<i>Allium munzii</i>	Not conserved, major populations are not captured within boundaries.
Nevin's barberry	<i>Berberis nevinii</i>	Not conserved, area does not encompass Vail Lake.
San Diego button-celery	<i>Eryngium aristulatum var. parishii</i>	Conserved, only populations are in Santa Rosa Plateau Preserve.
San Diego ambrosia	<i>Ambrosia pumila</i>	Not conserved, population at Nichols Road is not included.
San Jacinto Valley crownscale	<i>Atriplex coronata var. notatior</i>	Not conserved, San Jacinto River, Mystic Lake, or Upper Salt Creek are not included.
Santa Ana River woollystar	<i>Eriastrum densifolium ssp. sanctorum</i>	Not conserved, because floodplain along Santa Ana River is not included.
slender-horned spineflower	<i>Dodecahema leptoceras</i>	Not conserved, habitat and population Arroyo Seco, Kolb Creek, and Vail Lake are not included.



Executive Summary

TABLE ES-6 (Continued)
SUMMARY OF POTENTIAL SPECIES CONSERVATION
UNDER EXISTING RESERVES ALTERNATIVE

Common Name	Scientific Name	Notes
spreading navarretia	<i>Navarretia fossalis</i>	Not conserved, San Jacinto River populations not conserved.
thread-leaved brodiaea	<i>Brodiaea filifolia</i>	Not conserved, Population along San Jacinto River is not included.
Vail Lake ceanothus	<i>Ceanothus ophiochilus</i>	Not conserved, Vail Lake populations are not conserved.
OTHER SPECIES		
BIRDS		
American bittern	<i>Botaurus lentiginosus</i>	Not conserved, because only the population in the Santa Ana River is included. The populations in the Mystic Lake are not included
Bell's sage sparrow	<i>Amphispiza bellii bellii</i>	Not conserved, because don't get breeding locations or foraging area in locations such as Canyon Lake, Wildomar, Murrieta, Badlands.
black swift (breeding)	<i>Cypseloides niger</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.
Black-crowned night-heron	<i>Nycticorax nycticorax</i>	Conserved, only breeding populations are in Santa Ana River and Prado Basin.
Burrowing owl	<i>Speotyto cunicularia</i>	Not conserved, because don't get sufficient grassland areas such as Aguanga, sage, Temecula area.
cactus wren	<i>Campylorhynchus brunneicapillus couesi</i>	Not conserved, because don't get breeding locations in patches dominated by cactus such as Anza, Badlands, Temecula area.
California spotted owl	<i>Strix occidentalis occidentalis</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.
California horned lark	<i>Eremophila alpestris actia</i>	Not conserved, because don't get sufficient grassland areas such as Aguanga, sage, Temecula area.
Cooper's hawk	<i>Accipiter cooperii</i>	Not conserved, because don't get breeding locations or foraging habitat in woodland areas such as Temecula Creek, Murrieta Creek, Alberhill, Canyon Lake.
double-crested cormorant	<i>Phalacrocorax auritus</i>	Conserved, only breeding populations are in Santa Ana River and Prado Basin.
downy woodpecker	<i>Picoides pubescens</i>	Not conserved, because don't get breeding locations or foraging habitat in woodland areas such as Temecula Creek, Murrieta Creek, Alberhill, Canyon Lake.



Executive Summary

TABLE ES-6 (Continued)
SUMMARY OF POTENTIAL SPECIES CONSERVATION
UNDER EXISTING RESERVES ALTERNATIVE

Common Name	Scientific Name	Notes
ferruginous hawk	<i>Buteo regalis</i>	Not conserved, because could occur anywhere and don't get sufficient foraging habitat in central part.
flamulated owl	<i>Otus flammeolus</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.
golden eagle	<i>Aquila chrysaetos</i>	Not conserved, because don't know locations for nesting and don't get enough foraging habitat or locations such as Badlands, Potrero, Hemet area, and Banning.
grasshopper sparrow	<i>Ammodramus savannarum</i>	Not conserved, because don't get the grassland areas such as in Lake Elsinore, Canyon Lake, Murrieta, Temecula.
Le Conte's thrasher	<i>Toxostoma lecontei</i>	Not conserved, because don't get desert areas in the Sage, Aguanga area, Wilson valley area.
Lincoln's sparrow	<i>Melospiza lincolnii</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.
loggerhead shrike	<i>Lanius ludovicianus</i>	Not conserved, because don't get foraging habitat in grassland areas such as Temecula Creek, Murrieta Creek, Badlands, Aguanga.
long-eared owl (breeding)	<i>Asio otus</i>	Not conserved, because don't know breeding locations, don't get enough foraging habitat or locations such as Potrero, Temecula Creek.
MacGillivray's warbler	<i>Oporonis tolmiea</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.
merlin	<i>Falco columbarius</i>	Not conserved, because could occur anywhere and don't get sufficient foraging habitat in central part.
mountain quail	<i>Oreortyx picta</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.
Nashville warbler	<i>Vermivora ruficapilla</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.
northern goshawk	<i>Accipiter gentilis</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.



Executive Summary

TABLE ES-6 (Continued)
SUMMARY OF POTENTIAL SPECIES CONSERVATION
UNDER EXISTING RESERVES ALTERNATIVE

Common Name	Scientific Name	Notes
northern harrier (breeding)	<i>Circus cyaneus</i>	Not conserved, because don't know breed in locations and don't get the areas around Lake Elsinore, Temecula, Murrieta areas.
northern pygmy owl	<i>Glaucidium gnoma</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.
osprey	<i>Pandion haliaetus</i>	Conserved, not known to breed in area. Foraging habitat is protected in the open reservoirs such as Lake Perris, Lake Mathews, Lake Skinner.
prairie falcon (breeding)	<i>Falco mexicanus</i>	Not conserved, because could occur anywhere and don't get breeding locations or sufficient foraging habitat in areas such as Mystic Lake and Moreno Valley/ Beaumont/Banning area.
purple martin	<i>Progne subis</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.
rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	Not conserved, don't get sufficient breeding and foraging locations such as Alberhill, Murrieta, Wildomar, Temecula, or the habitat linkages.
sharp-shinned hawk	<i>Accipiter striatus</i>	Not conserved, because don't know locations of breeding and don't get sufficient winter foraging areas in the rest of the area such as Banning, Alberhill, Homeland.
short-eared owl (breeding)	<i>Asio flammeus</i>	Not conserved, because don't know locations of breeding, don't get sufficient foraging habitat such as Lakeview Mts and Mystic lake.
Swainson's thrush	<i>Catharus ustulatus</i>	Not conserved, because only the population in the Santa Ana River is included. The populations in the Temecula, Santa Margarita River and other riparian are not included.
tree swallow	<i>Tachycineta bicolor</i>	Not conserved, because don't get breeding locations or foraging habitat in woodland areas such as Temecula Creek, Murrieta Creek, Alberhill, Canyon Lake.
tricolored blackbird (colony)	<i>Agelaius tricolor</i>	Not conserved, because don't know locations of breeding and don't get past locations such as Mystic Lake and Badlands.
turkey vulture (breeding)	<i>Cathartes aura</i>	Not conserved, because don't know locations of breeding, don't get sufficient foraging habitat such as Lakeview Mts and Badlands.



Executive Summary

TABLE ES-6 (Continued)
SUMMARY OF POTENTIAL SPECIES CONSERVATION
UNDER EXISTING RESERVES ALTERNATIVE

Common Name	Scientific Name	Notes
Vaux's swift	<i>Chaetura vauxi</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.
western snowy plover	<i>Charadrius alexandrinus nivosus</i>	Not conserved, because need areas around Lake Elsinore and Mystic lake.
western least bittern	<i>Ixobrychus exilis hesperis</i>	Not conserved, because need areas around Mystic Lake.
white-faced ibis	<i>Plegadis chihi</i>	Not conserved, because need areas around Mystic Lake.
white-tailed kite	<i>Elanus leucurus</i>	Not conserved, because don't know breeding locations in wooded or riparian areas or foraging habitat in grassland areas such as Temecula Creek, Murrieta Creek, Alberhill, Canyon Lake.
Williamson's sapsucker	<i>Sphyrapicus thyroideus</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.
Wilson's warbler	<i>Wilsonia pusilla</i>	This species is conserved with the existing reserves if the 4-forest management plan addresses both listed and non-listed species identified as part of the MSHCP.
yellow warbler	<i>Dendroica petechia brewsteri</i>	Not conserved, because don't get breeding locations or foraging habitat in woodland areas such as Temecula Creek, Murrieta Creek, Alberhill, Canyon Lake.
yellow-breasted chat	<i>Icteria virens auricollis</i>	Not conserved, because don't get breeding locations or foraging habitat in woodland areas such as Temecula Creek, Murrieta Creek, Alberhill, Canyon Lake.
MAMMALS		
Aguanga kangaroo rat	<i>Dipodomys merriami collinus</i>	Not conserved. Sage and Aguanga areas not conserved
American badger	<i>Taxidea taxus</i>	Not Conserved. Sage, Badlands, Beaumont, Banning, habitat connections not conserved.
bobcat	<i>Lynx rufus californicus</i>	Not Conserved, habitat connections with National Forests, and other key habitat locations, may not be conserved.
brush rabbit	<i>Sylvilagus bachmani</i>	Conserved. Adequate habitat in public lands would be conserved.
coyote	<i>Canis latrans clepticus</i>	Conserved. Species is adaptable to humans and relatively urbanized landscapes.



Executive Summary

TABLE ES-6 (Continued)
SUMMARY OF POTENTIAL SPECIES CONSERVATION
UNDER EXISTING RESERVES ALTERNATIVE

Common Name	Scientific Name	Notes
Dulzura California pocket mouse	<i>Chaetodipus californicus femoralis</i>	Conserved. Much potential habitat in public lands in Cleveland National Forest.
long-tailed weasel	<i>Mustela frenata latirostra</i>	Not conserved. Linkages throughout planning area.
Los Angeles pocket mouse	<i>Perognathus longimembris brevinasus</i>	Not conserved. Drainages such as San Jacinto River, Temecula Creek, San Timoteo Creek, and Reche Canyon are not conserved. Other areas not conserved: Anza, Sage, Aguanga, Lagunga, Badlands, Potrero Valley, Cactus Valley, Banning/Beaumont.
mountain lion	<i>Puma concolor</i>	Not conserved. Habitat linkages between Santa Ana Mountains and Agua Tibia Mountains (etc.) would not be conserved. Badlands would not be conserved.
northwestern San Diego pocket mouse	<i>Chaetodipus fallax fallax</i>	Conserved. Adequate conservation in existing reserve system.
San Bernardino flying squirrel	<i>Glaucomys sabrinus californicus</i>	Conserved. Occurs in San Bernardino National Forest and subject to Forest Plan.
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	Not conserved. Conservation does not include Upper San Jacinto River and Bautista Creek.
San Diego blacktailed jackrabbit	<i>Lepus californicus bennettii</i>	Not conserved. Lack conservation in Lakeview Mountains, Jurupa Hills, along the San Jacinto River, Sage/Aguanga, Vail Lake, and Anza. Habitat connections would not be conserved.
San Diego desert woodrat	<i>Neotoma lepida intermedia</i>	Potentially could be conserved under existing reserve system.
southern grasshopper mouse	<i>Onychomys torridus ramona</i>	Not conserved. Too little data to determine coverage.
AMPHIBIANS		
coast Range Newt	<i>Taricha torosa torosa</i>	Not conserved, habitat
large blotched salamander	<i>Ensatina eschscholtzii klauberi</i>	Conserved, depending on 4-forest plan.
spadefoot toad	<i>Scaphiopus hammondi</i>	Not conserved, habitat
REPTILES		
California legless lizard	<i>Anniella pulchra pulchra</i>	Not conserved, wide spread but limited habitat in current areas.
California red-sided garter snake	<i>Thamnophis sirtalis infernalis</i>	Not conserved, habitat is not captured.
coast patch-nosed snake	<i>Salvadora hexalepis virgultea</i>	Marginally conserved based on habitat.



Executive Summary

TABLE ES-6 (Continued)
SUMMARY OF POTENTIAL SPECIES CONSERVATION
UNDER EXISTING RESERVES ALTERNATIVE

Common Name	Scientific Name	Notes
Coastal glossy snake	<i>Arizona elegans occidentalis</i>	Not conserved
coastal rosy boa	<i>Lichanura trivirgata roseofusca</i>	Probably conserved, sage scrub habitat and rocky chaparral.
coastal western whiptail	<i>Cnemidophorus tigris multiscutatus</i>	Not conserved, does not capture habitat.
granite night lizard	<i>Xantusia henshawi henshawi</i>	Not conserved, does not capture habitat.
granite spiny lizard	<i>Sceloporus orcuttii orcuttii</i>	Not conserved, does not capture habitat.
long-nosed leopard lizard	<i>Gambelia wislizenii</i>	Not conserved, does not capture habitat.
northern red diamond rattlesnake	<i>Crotalus ruber ruber</i>	Probably conserved, sage scrub habitat and rocky chaparral.
orange-throated whiptail	<i>Cnemidophorus hyperythrus beldingi</i>	Not conserved, habitat is not included among boundaries.
San Bernardino Mtn. kingsnake	<i>Lampropeltis zonata parvirubra</i>	Conditionally conserved depending on 4-forest plan.
San Bernardino ringneck snake	<i>Diadophis punctatus modestus</i>	Not conserved, habitat
San Diego banded gecko	<i>Coleonyx variegatus abbottii</i>	Not conserved, most areas not conserved.
San Diego horned lizard	<i>Phrynosoma coronatum blainvillei</i>	Not conserved, habitat
San Diego Mountain kingsnake	<i>Lampropeltis zonata pulchra</i>	Conditionally conserved depending on 4-forest plan.
San Diego ringneck snake	<i>Diadophis punctatus similis</i>	Not conserved, habitat
southern rubber boa	<i>Charina bottae umbratica</i>	Not conserved, habitat
southern sagebrush lizard	<i>Sceloporus graciosus vandenburgianus</i>	Not conserved, habitat
southwestern pond turtle	<i>Clemmys marmorata pallida</i>	Not conserved, habitat
two-striped garter snake	<i>Thamnophis hammondi</i>	Not conserved, habitat
INVERTEBRATES/INSECTS		
Santa Rosa Plateau fairy shrimp	<i>Linderiella santarosae</i>	Conserved



Executive Summary

TABLE ES-6 (Continued)
SUMMARY OF POTENTIAL SPECIES CONSERVATION
UNDER EXISTING RESERVES ALTERNATIVE

Common Name	Scientific Name	Notes
FISH		
arroyo chub	<i>Gila orcutti</i>	Not conserved, because only the population in the Santa Ana River is included. The populations in the Santa Margarita, Temescal Wash, and Temecula Creek are not included.
Santa Ana speckled dace	<i>Rhinichthys osculus</i>	Conserved, because populations in the Santa Ana River and parts of San Jacinto River are included.
PLANTS		
beautiful hulsea	<i>Hulsea vestita ssp. callicarpa</i>	Conserved, depending on 4-forest plan.
California beardtongue	<i>Penstemon californicus</i>	Conserved, depending on 4-forest plan.
California bedstraw	<i>Galium californicum ssp. primum</i>	Conserved, depending on 4-forest plan.
California black walnut		Not conserved, hills east and west of Santa Rosa Plateau, Pedley, Rubidoux.
California muhly	<i>Muhlenbergia californica</i>	Not conserved, Sage Aguanga, Estelle Mountain, Gavilan Hills and Gavilan Plateau, La Paz Canyon, Temescal Canyon, near Prado Dam.
California spine flower	<i>Mucronea californica</i>	Not conserved, Wilderness Canyon.
chickweed oxytheca	<i>Oxytheca caryophylloides</i>	Conserved, depending on 4-forest plan.
Cleveland's bush monkeyflower	<i>Mimulus clevelandii</i>	Yes, because of the included sections of forest.
cliff cinquefoil	<i>Potentilla rimicola</i>	Conserved, depending on 4-forest plan.
Coulter's goldfields	<i>Lasthenia glabrata ssp. coulteri</i>	Not conserved, Mystic Lake, alkali flats between Lake Elsinore and Alberhill, and San Jacinto River.
Coulter's matilija poppy	<i>Romneya coulteri</i>	Not conserved, Alberhill, Lake Skinner, Railroad Canyon, Murrieta, Hot Springs, Temescal Canyon.
Coulter's saltbush	<i>Atriplex coulteri</i>	Not conserved, Murrieta area.
Davidson's saltscale	<i>Atriplex serenana var. davidsonii</i>	Not conserved, Salt Creek and San Jacinto River.
Engelmann oak	<i>Quercus engelmannii</i>	Not conserved, Gavilan Hills, and surrounding Santa Rosa Plateau.
Fish's milkwort	<i>Polygala cornuta var. fishiae</i>	Not conserved, Temecula Canyon and Cole Canyon.
graceful tarplant	<i>Holocarpha virgata ssp. elongata</i>	Not conserved, Cherry St. (Temecula) and Poly Butte.



Executive Summary

TABLE ES-6 (Continued)
SUMMARY OF POTENTIAL SPECIES CONSERVATION
UNDER EXISTING RESERVES ALTERNATIVE

Common Name	Scientific Name	Notes
Hall's monardella	<i>Monardella macrantha ssp. hallii</i>	Yes, habitat captured within Cahuilla Mountain.
heart-leaved pitcher sage	<i>Lepechinia cardiophylla</i>	Not conserved, Alberhill and Lake Elsinore.
intermediate mariposa lily	<i>Calochortus weedii var. intermedius</i>	Not conserved, Crown Valley and west of Vail Lake also NW of Santa Rosa Plateau Preserve.
Jaeger's milk-vetch	<i>Astragalus pachypus var. jaegeri</i>	Not conserved, Vail Lake, Aguanga Valley, Sage, Temecula Canyon, Castile Canyon and the canyon west of Portrero Creek.
Johnston's rock cress	<i>Arabis johnstonii</i>	Conserved, depending on 4-forest plan.
lemon lily	<i>Lilium parryi</i>	Conserved, depending on 4-forest plan.
little mousetail	<i>Myosurus minimus ssp. apus</i>	Not conserved, Salt Creek.
long-spined spineflower	<i>Chorizanthe polygonoides var. longispina</i>	Not conserved, key population surrounding Vail Lake or population surrounding Lake Mathews.
many-stemmed dudleya	<i>Dudleya multicaulis</i>	Not conserved, Key population at Temescal Valley and Gavilan Hills.
Mojave tarplant	<i>Hemizonia mohavensis</i>	Conserved, all known populations in National Forest.
Munz's mariposa lily	<i>Calochortus palmeri var. munzii</i>	Conserved, depending on 4-forest plan.
ocellated Humboldt lily	<i>Lilium humboldtii ssp. ocellatum</i>	Conserved, depending on 4-forest plan.
Orcutt's brodiaea	<i>Brodiaea orcuttii</i>	Conserved, key population on Santa Rosa Plateau Preserve.
Palmer's grapplinghook	<i>Harpagonella palmeri var. palmeri</i>	Not conserved, Lake Skinner, Vail Lake, Hartford Springs Park, Temescal Canyon, Paloma Valley, Good Hope, Reche Canyon, Alberhill and Elsinore Peak.
Palomar monkeyflower	<i>Mimulus diffusus</i>	Not conserved, French Valley, Good Hope, Reche Canyon, Alberhill
Parish's brittlescale	<i>Atriplex parishii</i>	Not conserved, Salt Creek and Winchester Valley.
Parish's meadowfoam	<i>Limnanthes gracilis var. parishii</i>	Yes, located within the Santa Rosa Plateau Preserve.
Parry's spineflower	<i>Chorizanthe parryi var. parryi</i>	Not conserved, Aguanga, Anza Valley, Hartford Springs Park, Cactus Valley, Gavilan Peak, Rawson Canyon, Lakeview Mountains, Reche Canyon Summit, Banning, Crown Valley, Estelle Mountain, Vail Lake, Valle Vista, Frogback Hills, and Gilman Hot Springs Road.
Payson's jewelflower	<i>Caulanthus simulans</i>	Not conserved, Anza Valley, Sage, Aguanga, Black Hills, French Valley, Portola Road, Lake Elsinore, Meadow Brook, Wildomar, Beaumont, Banning, Beaumont, Moreno Valley, Lakeview Mountains.



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TABLE ES-6 (Continued)
SUMMARY OF POTENTIAL SPECIES CONSERVATION
UNDER EXISTING RESERVES ALTERNATIVE

Common Name	Scientific Name	Notes
peninsular spineflower	<i>Chorizanthe leptotheca</i>	Not conserved, Temecula Canyon, Temescal River Valley, Gavilan Plateau, Hemet, Kolb Creek, Vail Lake, Good Hope, and Valle Vista.
Plummer's mariposa lily	<i>Calochortus plummerae</i>	Not conserved, Cali Mesa, Badlands, Banning Canyon all of which contain older populations that should be verified.
prostrate spineflower	<i>Chorizanthe procumbens</i>	Not conserved, but need to verify reports from Sedco Hills, Moreno Valley and Anza; also reported from winchester.
Rainbow manzanita	<i>Arctostaphylos rainbowensis</i>	Not conserved, Gavilan Mountain, Temecula, Wildomar, Margarita Peak and Pechanga areas.
San Jacinto Mountains bedstraw	<i>Galium angustifolium ssp. jacinticum</i>	Conserved, depending on 4-forest plan.
San Miguel savory	<i>Satureja chandleri</i>	Conserved, depending on 4-forest plan.
shaggy-haired alumroot	<i>Huechera hirsutissima</i>	Conserved, depending on 4-forest plan.
small-flowered microseris	<i>Microseris douglasii var. platycharpha</i>	Not conserved, Alberhill, Lake Mathews, Paloma Valley, Vail Lake, and Lake Skinner.
small-flowered morning glory	<i>Convolvulus simulans</i>	Not conserved, Vail Lake, Temescal Canyon, Lake Skinner, Little Valley, Murrieta, Paloma Valley, Tres Cerritos Hills, Salt Creek, San Jacinto River.
smooth tarplant	<i>Hemizonia pungens ssp. laevis</i>	Not conserved, San Jacinto River, Salt Creek, Tres Cerritos Hills, Temecula Creek.
Southern California black walnut	<i>Juglans californica var. californica</i>	Not conserved, hills east and west of Santa Rosa Plateau, Pedley, Rubidoux.
sticky-leaved dudleya	<i>Dudleya viscida</i>	Conserved, depending on 4-forest plan.
vernal barley	<i>Hordeum intercedens</i>	Not conserved, San Jacinto River and Salt Creek.
Wright's trichocoronis	<i>Trichocoronis wrightii var. wrightii</i>	Not conserved, San Jacinto River.



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Exhibits 1



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Exhibit 2



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Exhibit 3



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Exhibit 4



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Exhibit 5

