

A. MSHCP Conservation Area Description



The over-representation of chaparral, coastal sage scrub, and montane coniferous forest occurs because high absolute percentages of these communities are conserved and because relatively low percentages of grasslands and agricultural lands are conserved. Most of the vegetation types show a slight over-representation. The only Vegetation Community that shows substantial under-representation is grassland. Desert scrubs show a slight under-representation. Because agricultural lands have lower conservation value, under-representation is not important. A more fine-scaled analysis of under-represented vegetation types is provided at the end of this section.

3.2 Uncollapsed Vegetation

Although the vegetation classifications in the uncollapsed vegetation data base contain some inconsistencies, they are the best available resource to describe the representation of the largest variety of vegetation associations (including rare types). Approximate acreages for the uncollapsed vegetation types mapped within the Plan Area and the MSHCP Conservation Area are presented in *Table 3*.

**TABLE 3
CONSERVATION OF UNCOLLAPSED VEGETATION TYPES**

Vegetation Community	Plan Area (Acres)	MSHCP Conservation Area (Acres)	Percent Conserved
Lodgepole Pine	578	578	100.0
Montane Riparian Scrub	6	6	100.0
Subalpine Coniferous	27	27	100.0
Tamarisk Scrub	272	272	100.0
Southern Interior Basalt Vernal Pool	55	55	100.0
Black Oak Forest	8	8	100.0
Arundo/Riparian Forest	493	491	99.6
Semi-desert Succulent Scrub	2,430	2,356	97.0
Unknown Woodland	199	193	97.0
Broadleaved Upland Forest	2,375	2,280	96.0
Valley and Foothill Grassland	2,736	2,626	96.0
Sonoran Wash Scrub	21	20	95.2
Coastal and Valley Freshwater Marsh	391	366	93.6
Vernal Pool	19	17	89.5
Southern Cottonwood/Willow Riparian	6,759	5,943	87.9
Mixed Evergreen Forest	4,467	3,915	87.7

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TABLE 3 (Continued)
CONSERVATION OF UNCOLLAPSED VEGETATION TYPES

Vegetation Community	Plan Area (Acres)	MSHCP Conservation Area (Acres)	Percent Conserved
Alkali Playa	7,840	6,680	85.2
Open Water/Reservoir/Pond	12,206	10,339	84.7
Southern California White Fir	3,871	3,224	83.3
Disturbed Alluvial	1,393	1,116	80.1
Montane Riparian Forest	286	216	75.7
Oak Woodland	20,066	15,084	75.2
Riparian Forest	1,311	924	70.5
Southern Riparian Woodland	2	1	68.7
Lower Montane Coniferous Forest	7,688	5,007	65.1
Chaparral	362,837	233,212	64.3
Riversidean Alluvial Fan Sage Scrub	6,551	4,118	62.9
Riparian Scrub	3,346	2,091	62.5
Dense Engelmann Oak Woodland	4,110	2,429	59.1
Jeffrey Pine	13,274	7,749	58.4
Sonoran Desert Scrub	284	162	56.9
Peninsular Juniper Woodland and Scrub	1,082	609	56.3
Red Shank Chaparral	71,727	39,014	54.4
Marsh	87	47	54.2
Riversidean Sage Scrub	135,953	73,261	53.9
Mule Fat Scrub	651	338	51.8
Southern Willow Scrub	1,713	843	49.2
Coast Live Oak Woodland	6,660	3,083	46.3
Diegan Coastal Sage Scrub	15,816	6,561	41.5
Coastal Scrub	4,678	1,894	40.5
Montane Meadow	168	61	36.5
Southern Sycamore/Alder Riparian Woodland	190	69	36.5
Non-native Grassland	151,403	40,191	26.5
Big Sagebrush Scrub	11,852	2,471	20.8
Chamise Chaparral	358	53	14.7
Wet Montane Meadow	369	26	7.0
Cismontane Alkali Marsh	1,266	44	3.4
Semi-Desert Chaparral	19	0	0.0
Dry Montane Meadow	7	0	0.0

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Forty-seven of the 49 mapped vegetation types are represented within the MSHCP Conservation Area (1,112 acres of unknown cover type is excluded from this analysis). The two vegetation types not represented in the area are dry montane meadow and semi-desert chaparral. However, both of these vegetation types comprise only small areas in the Plan Area: 19 acres for semi-desert chaparral and 7 acres for dry montane meadow. Assuming a somewhat arbitrary conservation threshold of 50%, 36 of the 49 vegetation types surpass this threshold. The apparent low conservation (*i.e.*, < 50%) of several vegetation types may be misleading because the uncollapsed community may be redundant with another community that would be conserved at higher levels, or the community simply may be under-mapped in the Plan Area. These Vegetation Communities and others that are conserved at levels less than 50% are discussed below.

Big sagebrush scrub: A total of 2,471 acres of 11,852 acres (20.8%) in the Plan Area would be conserved under the MSHCP. An examination of the distribution of big sagebrush scrub shows that most of it occurs outside the MSHCP Conservation Area in the Anza Valley. Approximately 5,190 acres of big sagebrush scrub is on Indian Land and approximately 2,000 acres occur on private land north of Indian Land. Other patches of big sagebrush scrub up to 275 acres in size are scattered around the Anza Valley on private lands.

Chamise chaparral: A total of 53 acres of the mapped total of 358 acres (14.7%) would be conserved under the MSHCP. Seven patches of chamise chaparral were delineated within the Plan Area at Estelle Mountain, west of Steele Peak, Meadowbrook, southeast of Table Mountain, and in the Lakeview Mountains west of Hemet. The area not included in the MSHCP Conservation Area is located west of Steele Peak. The small acreage of mapped chamise chaparral in the Plan Area likely is an artifact of the variations in mapping used for compiling the vegetation map. Because of the difficulty in differentiating different subassociations of chaparral from aerial photography, many stands of chamise chaparral likely occur within the much larger “undifferentiated” chaparral category, which comprises 363,000 acres in the Plan Area. Chamise chaparral is a widespread vegetation type and chamise (*Adenostoma fasciculatum*) is a strongly dominant component of much of the chaparral in Western Riverside County. This relatively small area of chamise chaparral therefore should not be considered unique and its low level of Conservation is not a concern. When combined with undifferentiated chaparral, 64% (233,265 acres) of chaparral would be conserved under the MSHCP.

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Cismontane alkali marsh: Only 44 acres of the 1,266 acres (3.4%) in the Plan Area would be conserved under the MSHCP. Cismontane alkali marsh was mapped in two general localities: along Cahuilla Creek on Indian Land in the Anza Valley adjacent to State Highway 371 and upstream from Lake Mathews along the Colorado River aqueduct. Approximately 1,066 acres of the cismontane alkali marsh occur on Indian Land in the Anza Valley. Several small patches of alkali marsh ranging in size from 10 to 75 acres occur on private land in the Anza Valley and a 14-acre patch is present east of Lake Mathews. Much of the largest mapped patches of cismontane alkali marsh would not be conserved under the MSHCP because of its occurrence on Indian Lands. However, cismontane alkali marsh commonly occurs in small patches within other riparian Vegetation Communities so it is possible that additional acreage may be conserved within the MSHCP Conservation Area. More detailed mapping would be necessary to determine the extent of this additional acreage and whether it would be biologically meaningful with regard to species Conservation and MSHCP Conservation Area function.

Coast live oak woodland: A total of 3,083 acres of 6,660 acres (46.3%) would be conserved in the MSHCP Conservation Area. About 1,670 acres of the coast live oak woodland that occur outside of the MSHCP Conservation Area are on lands designated as Rural/Mountainous regions and thus some additional Conservation of these areas would be likely. The remainder of coast live oak woodland occurs in private holdings or on Indian Lands. The lower Conservation of this Vegetation Community probably also is related to artifacts in the vegetation map classification. The geographic distribution of the more broadly defined “oak woodlands” vegetation type is frequently concurrent with coast live oak woodlands. Although this coarse vegetation description likely includes some higher elevation oak woodlands [*e.g.*, those dominated by canyon live oak (*Quercus chrysolepis*), interior live oak (*Quercus wislizenii*) or black oak (*Quercus kelloggii*)], much of its lower elevation distribution coincides with coast live oak woodland. It is likely that a large portion of the generalized oak woodland (probably 30 to 50%) is the same association as coast live oak woodland. Given that 75% of the more broadly defined oak woodlands would be preserved under the MSHCP, it is likely that the overall Conservation of coast live oak woodland is greater than 50%.

Dry montane meadow: None of the 7 acres of mapped as dry montane meadow would be conserved under the MSHCP. This vegetation occurs within one 7-acre patch located on Indian Land adjacent to the proposed MSHCP Conservation Area. However, dry meadow may be more

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widespread than indicated by the vegetation data base. Montane meadow is a similar vegetation type, although it is mapped as a separate community. Also, because dry montane meadow is typically limited to small patches, much of its distribution may not have been mapped. Small vegetation patches likely were not discernable because of the regional mapping scale; *i.e.*, they tend to occur in patches less than the minimum mapping unit of about one acre based on aerial photo interpretation. The distribution of dry montane meadow thus probably is under-represented by the vegetation map. Additional acreage also may occur within the National Forest and thus would be considered conserved.

Diegan coastal sage scrub: A total of 6,561 acres out of 15,816 acres (41.5%) of Diegan coastal sage scrub would be conserved under the MSHCP. Diegan coastal sage scrub located outside of the MSHCP Conservation Area occurs in the southwestern and southern portions of the Plan Area along the base of the Santa Ana and Agua Tibia Mountain ranges and on the Santa Rosa Plateau between the Santa Rosa Plateau Ecological Reserve and the Santa Margarita Ecological Reserve. Other patches up to 210 acres in size occur on private lands east of the City of Temecula and south of Temecula Creek.

Montane meadow: A total of 61 acres of 168 acres (36.5%) of montane meadow would be conserved under the MSHCP. Montane meadows are distributed largely within the San Bernardino National Forest. Meadows outside the MSHCP Conservation Area largely occur on private inholdings within the National Forest and to a smaller extent on Indian Lands and Rural/Mountainous-designated lands. Montane meadow is a more general vegetation category that is analogous to dry montane meadow that is addressed above. Neither mapped type is well represented within the MSHCP Conservation Area. Smaller-sized patches of this vegetation type may exist in flatter areas near drainages within the National Forest. More detailed mapping would be required to determine any additional extent of montane meadow in the MSHCP Conservation Area.

Wet montane meadow: A total of 26 acres of 369 acres (7.0%) of wet montane meadow would be conserved under the MSHCP. The areas outside the MSHCP Conservation Area and existing private lands are comprised of numerous separate meadows ranging in size from approximately 13 acres to 187 acres located on private inholdings in the San Bernardino National Forest in the San Jacinto Mountains. Smaller-sized patches of this Habitat likely exist near drainages within the National Forest. More detailed mapping would be required to determine the extent of wet montane meadow in the MSHCP Conservation Area.

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Non-native grassland: A total of 40,191 acres of 151,403 acres (26.5%) of non-native grassland would be conserved under the MSHCP. Most of the non-native grasslands outside of the MSHCP Conservation Area or existing Public/Quasi-Public Lands occur in relatively small, scattered patches on private lands distributed throughout the Plan Area. However, two prominent areas supporting relatively large, contiguous blocks of unconserved non-native grassland are the Banning-Beaumont area and the Anza Valley. The Banning-Beaumont area supports approximately 14,000 acres of grassland in at least five relatively large areas ranging in size from 1,000 to 6,000 acres. The Anza Valley supports at least two large, contiguous areas of grassland approximately 1,550 and 3,100 acres in size, about one-half of which occurs on Indian Lands.

Because non-native grasslands result from physical disturbance (fire, grazing, clearing, etc.) and are dominated by widespread non-native species, they are not intrinsically important reservoirs of native plant diversity. Non-native grasslands, however, are important for overall biological diversity because they provide important Habitat value for wildlife, including many sensitive animal species [e.g., Stephens' kangaroo rat (*Dipodomys stephensi*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), grasshopper sparrow (*Ammodramus savannrum*), California horned lark (*Eremophila alpestris actia*), burrowing owl (*Athene cunicularia*), and many other raptor species]. They also provide natural Habitat connections and restoration opportunities for native plant communities.

Semi-desert chaparral: Less than 0.1 acre of 19 acres (<0.1 %) of semi-desert chaparral would be conserved under the MSHCP. Of the four mapped patches of semi-desert chaparral, all occur on private lands outside the MSHCP Conservation Area, except for a small portion that overlaps with a narrow patch of Public/Quasi-Public Land. This Habitat is not common within the Plan Area, but is fairly common on the upper eastern slopes of the San Jacinto and Palomar Mountain ranges. Some areas of this Vegetation Community may have been lumped with undifferentiated chaparral in the eastern portion of the Plan Area. More detailed mapping of semi-desert chaparral would be required to determine if there is adequate representation in the MSHCP Conservation Area.

Southern Sycamore/Alder Riparian Woodland: Less than 69 acres of 190 acres (36.5%) of southern sycamore/alder riparian woodland would be conserved under the MSHCP. Southern sycamore/alder riparian woodland was mapped in 14 different patches ranging in size from 2 to 92 acres. The largest patch occurs on private lands in the Agua Tibia

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Mountains. Several of the smaller patches also occur on private lands in the southwestern portion of the Plan Area.

Coastal Scrub: A total of 1,894 acres of 4,678 acres (40.5%) of coastal scrub would be conserved under the MSHCP. Coastal scrub was mapped in three general localities in the Plan Area: within the San Bernardino National Forest south of the San Jacinto River, near Soboba Hot Springs, and in the Banning-Beaumont Pass area. The largest portion of coastal scrub occurs within the Pass region, and much of this vegetation type in this area occurs on Indian lands (955 acres). In addition, 848 acres of coastal scrub is present on Rural Mountainous lands in this area, and it is likely that some additional Conservation of coastal scrub would result in these areas.

Southern Willow Scrub: A total of 843 acres of 1,713 acres (49.2%) of southern willow scrub would be conserved by the MSHCP. Southern willow scrub is present in many small patches scattered throughout the western portion of the Plan Area. The majority of southern willow scrub not located within the MSHCP Conservation Area is concentrated within and just east of the City of Riverside.

3.3 Conservation within Bioregions

The total acreage and percentage of Conservation in the Additional Reserve Lands and existing Public/Quasi-Public Lands for each of the seven Bioregions is presented in *Table 4*. The table also shows the acreage and percentage of the Bioregions on Indian Land and designated Rural/Mountainous land use. The portions of the Bioregions outside of the Additional Reserve Lands, Public/Quasi-Public Lands, Indian Lands and Rural/Mountainous designations have been categorized as “Out,” and includes natural areas assumed to be eligible for future Development.

Large overall percentages and acreages of the Agua Tibia Mountains (80%, 10,130 acres), San Jacinto Mountains (72%, 134,000 acres), San Jacinto Foothills (65%, 72,240 acres) and the Santa Ana Mountains (61%, 85,810 acres) Bioregions would be conserved under the MSHCP. With the exception of the San Jacinto Foothills Bioregion, the majority of Conservation within these Bioregions is in existing Public/Quasi-Public Land. This Habitat is not common within the Plan Area, but is fairly common on the upper eastern slopes of the San Jacinto and Palomar Mountain ranges. Some areas of this Vegetation Community may have been lumped with undifferentiated chaparral in the eastern portion of the Plan Area. More detailed mapping of semi-desert chaparral