

2.0 Plan Area Description and Setting



2.1.2 Bioregions

The review of databases and literature shows that the existing vegetation database for the Plan Area does not adequately reflect the considerable variety of plant and animal species in Western Riverside County. Grinnell (1993) described biotic or “life” zones for Southern California, but the scale of these life zones is generally too coarse to be useful for analyzing potential biotic variation within the Plan Area. To address this limitation and better depict potential variation within and among species, a biogeographical map (referred to here simply as Bioregions) was created to help describe diversity of Habitats on a regional scale within the Plan Area; this was done under the assumption that regional diversity in conserved areas translates directly into biological and genetic diversity. By ensuring regional representation of species and redundancy of resources, there is some buffer against the effects of natural and anthropogenic catastrophic events, such as wildfires, floods, and disease, on conserved areas.

Using existing information on soils (Soil Conservation Service), elevation (30-meter digital elevation map data [DEM]), topography (hill-shaded DEM mapping), and local expertise, a draft map that roughly demarcates the general Bioregions within the MSHCP Plan Area was drawn. Existing levels of human disturbance (urbanization, intensive agriculture, grazing, etc.) were considered because they have had a substantial effect on the current biota of the Plan Area. While discrete Bioregion boundaries cannot capture the natural continuum or gradient of environmental changes and transitions within the Plan Area, these boundaries roughly represent areas where species turnover and Habitat zone transitions are pronounced in relation to changes in landform and other environmental features. Because continuous climatic maps showing precipitation and air temperature (maximums, minimums, averages) were not available, landform and elevation were used as surrogates for these variables in order to draw the initial map. DUDEK staff and subconsultants knowledgeable about the distribution of plant and animal species in Western Riverside County then fine-tuned the boundaries where elevation and landforms did not accurately reflect changes in species and Habitat distributions. This methodology is similar to the approach used to develop Bioregions for San Diego County. The validity of these Bioregions was initially tested by examining the distribution of vegetation types and sensitive species that fall within them. On the basis of existing data, it was determined that the Bioregions appear to reflect the different suites of species and Vegetation Communities in the Plan Area. Certainly, field studies to confirm or modify these Bioregions would be desirable. As a work in progress, these boundaries are subject to change based on further analyses, scientific study, and input from experts familiar with Western Riverside County.

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Seven distinct Bioregions were identified: Santa Ana Mountains, Riverside Lowlands, San Jacinto Foothills, Agua Tibia Mountains, Desert Transition, San Bernardino Mountains, and San Jacinto Mountains (*Figure 2-6*). The characteristic features of each Bioregion are described below.

SANTA ANA MOUNTAINS BIOREGION. The Santa Ana Mountains Bioregion extends south of State Route 91 (SR-91) to the Riverside/San Diego County line and occurs west of Interstate 15 (I-15). It encompasses the Cleveland National Forest and areas north of the Santa Margarita River. This Bioregion generally occurs at elevations above 600 m (2,000 ft.) and supports Diegan coastal sage scrub, mesic chaparral, and sparse coniferous vegetation. The Santa Ana Mountains Bioregion is heavily influenced by coastal climate factors, such as fog, rainfall, and wind. This Bioregion is relatively undisturbed and not urbanized.

RIVERSIDE LOWLANDS BIOREGION. The Riverside Lowlands Bioregion characterizes areas east of the Santa Ana Mountains Bioregion, south of the Riverside/San Bernardino County line, west of Diamond Valley Lake, Lake Skinner, and Gilman Hot Springs, and north of the Riverside/San Diego County line. This Bioregion encompasses Estelle Mountain, Lake Mathews, Reche Canyon/Badlands, the San Jacinto Valley, Gavilan Hills, Lakeview Mountains, and French Valley. The Riverside Lowlands Bioregion generally occurs at elevations below 600 m (2,000 ft) and is characterized by Riversidian sage scrub and annual grasslands.

The relatively arid climate is in part the result of the rain shadow cast by the Santa Ana Mountains. A high level of disturbance and urbanization are noted within this Bioregion.

SAN JACINTO FOOTHILLS BIOREGION. The San Jacinto Foothills Bioregion generally includes areas north of SR-79, east of the Riverside Lowlands Bioregion and west of the San Jacinto Mountains Bioregion. This Bioregion encompasses Vail Lake, Sage, and Cactus Valley. The San Jacinto Foothills Bioregion occurs at elevations of 600-900 m (2,000-3,000 ft) and is dominated by Riversidean sage scrub and xeric chaparral associations. This Bioregion receives less frequent frost and snow than the mountainous areas. This Bioregion has not been heavily disturbed or urbanized.

AGUA TIBIA MOUNTAINS BIOREGION. The Agua Tibia Mountains Bioregion extends south from SR-79 to the Riverside/San Diego County line. It encompasses the Agua Tibia Mountains and generally occurs at elevations above 600 m (2,000 ft). This Bioregion supports Diegan

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coastal sage scrub, mesic chaparral, and sparse coniferous vegetation. The Agua Tibia Mountains Bioregion has not been heavily disturbed or urbanized.

DESERT TRANSITION BIOREGION. The Desert Transition Bioregion is located in the southeastern portion of the Plan Area and encompasses the Cahuilla Indian Reservation and Lake Riverside area. The Desert Transition Bioregion generally occurs at elevations above 900 m (3,000 ft) and is arid and desert-influenced. This Bioregion supports red shank chaparral, big basin sage scrub, and semi-desert succulent scrub Habitats. This Bioregion has not been heavily disturbed or urbanized.

SAN BERNARDINO MOUNTAINS BIOREGION. The San Bernardino Mountains Bioregion is located in the northeastern portion of the Plan Area and encompasses areas north of I-10 within the Pass Area Plan; it generally occurs at elevations above 900 m (3,000 ft). This Bioregion supports coniferous forests, montane chaparral, and broad-leaved forest. The San Bernardino Mountains Bioregion is floristically distinct from the San Jacinto Mountains Bioregion. This Bioregion has not been heavily disturbed or urbanized.

SAN JACINTO MOUNTAINS BIOREGION. The San Jacinto Mountains Bioregion occurs in the eastern portion of the Plan Area and encompasses the San Bernardino National Forest, Pine Cove, Idyllwild, and upper San Jacinto River and Bautista Canyon Creek. This Bioregion supports coniferous forests, montane chaparral, and broad-leaved forest; it generally occurs at elevations above 900 m (3,000 ft). The San Jacinto Mountains Bioregion is floristically distinct from the San Bernardino Mountains Bioregion. This Bioregion has not been heavily disturbed or urbanized.

2.1.3 Vegetation Communities

The MSHCP vegetation map described in *Section 2.1.1* incorporates 50 Vegetation Community classifications. For purposes of MSHCP planning and analysis, the 50 classifications were collapsed to 14; both categories are summarized in *Table 2-1*.