

A. MSHCP Conservation Area Description



2.4 Bioregions

The various interactions between the Plan Area’s diverse abiotic landforms, climate and weather patterns (*e.g.*, prevailing winds, precipitation, temperature) and biotic systems are complex and difficult to analyze on a unified regional scale. To aid in the analysis and discussion of these abiotic and biotic features and phenomena, smaller scale “Bioregions” were defined to represent areas with similar physical and biological features. The Bioregions provide a framework for describing the MSHCP Conservation Area in terms of areas likely to function in a similar manner. Also, the Bioregions provide a way of assessing the spatial and functional representativeness of the MSHCP Conservation Area.

It is important to understand that a comprehensive analysis of the complex interactions between abiotic and biotic features in the Plan Area largely is beyond the scope of this Conservation. An important component of the Adaptive Management program will be continued study of these issues, which will require scientists from many different disciplines such as physiological ecology, soil science and climatology. At this point, the Bioregions are intended to provide a first-cut, coarse-grain portrayal of the natural systems in the Plan Area.

The Bioregions were developed using existing elevation (30-meter digital elevation model [DEM] data), topography (hill shaded DEM mapping), soils (Soil Conservation Service), and local expertise on floristic distributions. As illustrated in *Exhibit 2*, seven general Bioregions were identified in the Plan Area: Santa Ana Mountains, Agua Tibia Mountains, Riverside Lowlands, San Jacinto Foothills, San Jacinto Mountains, Desert Transition, and San Bernardino Mountains. The definitions for the regions are outlined below.

1. Santa Ana Mountains Bioregion

- Elevation generally > 2,000 feet. Lower elevations near the Santa Rosa Plateau and Alberhill were included because of floristic similarities.
- Indicative vegetation types include Diegan coastal sage scrub, mesic chaparral, sparse coniferous vegetation.
- Heavily influenced by coastal climate (fog, rainfall, wind etc.).
- Low disturbance and urban influence.

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2. Agua Tibia Mountains Bioregion

- Elevation generally > 2,000 feet.
- Indicative vegetation types include Diegan coastal sage scrub, mesic chaparral, sparse coniferous vegetation.
- Low disturbance and urban influence.
- Less coastal influence.
- Unique flora.

3. Riverside Lowlands Bioregion

- Elevation generally < 2,000 feet. Estelle Mountain, Gavilan Hills, and Lakeview Mountains were included based on floristic similarities to lower elevation areas.
- Indicative vegetation types include Riversidean sage scrub and annual grasslands.
- Relatively arid and within the Santa Ana Mountains' rain shadow.
- Higher disturbance, Habitat fragmentation and urbanization.

4. San Jacinto Foothills Bioregion

- Elevation between 2,000 and 3,000 feet.
- Indicative vegetation types include Riversidean sage scrub and xeric chaparral associations.
- Less frequent frosts than mountains, snow rare.
- Low disturbance and urban influence.

5. Desert Transition Bioregion

- Elevation > 3,000 feet.
- Indicative vegetation types include red shank chaparral, Big Basin sage scrub, semi-desert chaparral, semi-desert scrub.
- Arid, desert-influenced.
- Low disturbance and urban influence.

6. San Jacinto Mountains Bioregion

- Elevation > 3,000 feet.
- Indicative vegetation types include coniferous forests, montane chaparral, broad-leafed forests.
- Unique flora distinct from San Bernardino Mountains Bioregion.
- Low disturbance and urban influence.

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7. San Bernardino Mountains Bioregion

- Elevation > 3,000 feet.
- Indicative vegetation types include coniferous forests, montane chaparral, broad-leaved forests.
- Unique flora distinct from San Jacinto Mountains Bioregion.
- Low disturbance and urban influence.

3.0 MSHCP CONSERVATION AREA DESCRIPTION

3.1 Generalized Vegetation

3.1.1 Methodology

The vegetation data base was developed by Pacific Southwest Biological Services (PSBS 1995) based on 1992-1993 aerial photographs. The acreage and spatial distribution of Vegetation Communities in the Plan Area are a useful method or surrogate for assessing the biotic representativeness, diversity and function of the MSHCP Conservation Area. For example, a conservation area would be considered representative of the existing biotic conditions in the Plan Area if all of the distinct vegetation types were represented in the MSHCP Conservation Area in proportions similar to their representation in the larger Plan Area. Representativeness of Vegetation Communities itself is a surrogate or index for biotic diversity in the absence of diversity measurements at a finer-grained scale (*e.g.*, the diversity of plant and wildlife families, genera or species). Tying representativeness to biological or ecosystem function (*i.e.*, adequate conservation), however, is much more difficult. Representativeness may be a necessary, but not sufficient, condition to ensure ecosystem function.

At this point, it also is useful to distinguish between “Vegetation Communities” and “Habitats.” The terms often are used interchangeably, but a Vegetation Community precisely refers to definable and consistent assemblages of plant species, whereas Habitat is the native environment of a plant or animal species. An attempt will be made throughout this document to use these terms in their proper context, but at times the distinction between the two becomes blurred. For example, coastal sage scrub is both a Vegetation Community and a Habitat. Furthermore, when using Vegetation Communities as a surrogate for representativeness, it may be used in the context of