

A. MSHCP Conservation Area Description



7. San Bernardino Mountains Bioregion

- Elevation > 3,000 feet.
- Indicative vegetation types include coniferous forests, montane chaparral, broad-leafed 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

A. MSHCP Conservation Area Description



representativeness of Vegetation Community diversity and function as well as Habitat diversity and function for plant and wildlife species.

The usefulness of the vegetation community data to assess representativeness, diversity and function depends on several assumptions, of which the most important include the following:

- The vegetation classification system accurately represents existing Vegetation Communities in the Plan Area and reflects biologically meaningful differences in species composition or wildlife Habitat characteristics
- The mapping is reasonably accurate in that few mistakes were made in the shape or classification of vegetation types; and
- The classification system and mapping scales were applied consistently throughout the Plan Area.

The mapping classification used in the Plan Area is based on the Holland (1986) terrestrial vegetation descriptions for California. These descriptions are widely used by professional biologists involved in vegetation mapping both at the local and landscape level and generally are accepted by jurisdictions and the resources agencies to represent Vegetation Communities, although many jurisdictions have adopted modified classification systems that are more appropriate for their geographical area. However, the Holland system is not a true quantitative classification system in that it does not have a quantitative rules system for differentiating between vegetation stands. Furthermore, the Holland descriptions have not been formally tested for their ability to represent biologically meaningful differences in plant or animal species composition. On the other hand, because variation in the distribution of most plant and animals has been demonstrated to be somewhat continuous (*e.g.*, Whittaker 1975), it is doubtful that a more rules-based classification would prove any more effective for regional-scale landscape analysis. Based on its current acceptance in the profession, it is appropriate to use Holland's vegetation classifications to describe the distribution of different plant and animal species in the Plan Area.

With regard to the accuracy of the Vegetation Communities map, it must be stated that no objective measurement of the accuracy of the map has been performed (which would require at minimum a stratified, pseudo-random sampling program to determine an error rate), and therefore no valid conclusions can be drawn regarding the accuracy of the map on a polygon-by-polygon basis.

A. MSHCP Conservation Area Description



Although the coastal sage scrub and adjacent vegetation polygons were field-verified by PSBS, the remainder of the vegetation polygons were not systematically field-verified. PSBS conducted a subjective accuracy assessment using a variety of existing vegetation maps (*e.g.*, the Weislander VTM, CNDDDB, and UCR-Minnich maps) and found an acceptable correspondence to the other maps. Although the accuracy of the vegetation data has not been quantitatively tested, it has been qualitatively evaluated at an appropriate level of accuracy for this landscape-level analysis.

The focus for the vegetation mapping by PSBS was largely for coastal sage scrub conservation planning. Thus, it is likely the mapping scale and consistency in classification are adequate for this Vegetation Community. Because the minimum mapping unit of this mapping effort was between approximately one and five acres, it is unlikely that other vegetation type polygons were consistently mapped below one acre. Furthermore, generalizations in vegetation classification and polygon size appear to have been made in areas with widespread vegetation types and smaller units were difficult to determine by aerial photography. For example, large tracts of chaparral in the Plan Area are known to support several different chaparral subassociations, as described by Holland (1986) (*e.g.*, chamise chaparral, scrub oak chaparral, *Ceanothus crassifolius* chaparral, and interior live oak chaparral), but large areas of chaparral were lumped in a general undifferentiated chaparral category. In contrast, coastal sage scrub was mapped as several different associations: Diegan coastal sage scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, and disturbed alluvial scrub. As a result of different precision and scales of mapping, there likely is some variation in the representation of species turnover or diversity at the boundaries of different polygons within and between Vegetation Community types. For the purpose of the MSHCP Conservation Area description, the Vegetation Communities are generalized to broader physiognomic formations, resulting in less specific information about the different associations, but yielding a more valid landscape-level analysis.

3.1.2 MSHCP Conservation Area Vegetation Description

Table 1 shows, in order from highest to lowest, the acreages of Vegetation Communities and land covers that would be conserved in the MSHCP Conservation Area (including existing Public/Quasi-Public Lands). *Exhibit 4* shows the distribution of Vegetation Communities in the Plan Area and MSHCP Conservation Area. Approximately 90% of the MSHCP Conservation Area consists of five generalized vegetation types: chaparral, coastal sage scrub, grassland, woodlands and forests, and montane coniferous forests. Among these, chaparral occupies the largest area, covering approximately 54% of the MSHCP Conservation Area. Agricultural lands make up about 4% of the area, and the remaining generalized vegetation types comprise less than 8% of the MSHCP Conservation Area.