

# **SECTION 3.0**

## **CONSERVATION PLANNING PROCESS/DESCRIPTION AND AREA PLAN CRITERIA OF THE MSHCP CONSERVATION AREA**

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### **3.1 CONSERVATION PLANNING PROCESS**

#### **3.1.1 Process Background**

The conservation planning process for the MSHCP Plan involved a variety of concurrent and sequential elements. These elements are listed below and summarized in this section.

- Identification of overall MSHCP goals in the context of prior conservation planning efforts, stakeholder objectives and regulatory requirements;
- Compilation of existing data and development of analysis tools;
- Identification of applicable conservation biology principles;
- Review of reserve selection models and methods;
- Development of initial Conceptual Conservation Scenario;
- Informal gap analysis;
- Identification of alternatives and selection of proposed alternative;
- Development and refinement of Conceptual Reserve Design/Criteria Based Plan;
- Description and analysis of selected alternative.

#### **3.1.2 Overall MSHCP Goals and Conservation Planning Context**

*Sections 1.2.3 and 1.2.4* of this document summarize the overall planning and regulatory context within which the MSHCP conservation planning process proceeded. The range of stakeholder objectives to be addressed by the conservation planning process is presented in the planning context presented in *Section 1.2.3*. These various inputs resulted in the overall MSHCP goals and objectives presented in *Section 1.3* of this document and in the policy direction provided by the County Board of Supervisors as noted in *Section 1.3*.

#### **3.1.3 Compilation of Existing Data**

A description of the biological and physical databases is provided in *Section 2.1.1* of this document. In addition to these databases, a variety of other data were assembled as part of the overall RCIP

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process and informed the conservation planning process for the MSHCP. These include digital data layers depicting existing land use, planned land use, status of land ownership, existing and planned roads, utility easements and assessors parcels.

The biological and physical databases described in *Section 2.1.1* were augmented by additional literature reviews and data gathered from a variety of sources. Input also was sought from local biologists. Representatives from the USFWS, UCR, DUDEK, RBF, Los Angeles County Museum, Coachella Valley Association of Governments, Tierra Madre Consultants (now AMEC), Camp Pendleton Amphibians and Reptiles Survey (CPARS), Zoological Society of San Diego, Loma Linda University, County of Riverside, and independent consultants convened for a three-day Habitat assessment workshop on April 27 through 29, 1999. The workshop was followed by a subsequent meeting with Dr. Robert Fisher of San Diego State University and DUDEK regarding species occurrences and general Conservation issues on June 9, 1999. The purpose of the Habitat assessment workshops was several fold: to identify the goals and objectives of the MSHCP; to provide a forum for review of the data available for the planning effort; to discuss the status of the species data and accounts; and to discuss approaches to habitat assessment. A detailed description of the workshops can be found in *Appendix C* of the *August 9, 1999 "Draft MSHCP Proposal"* (DUDEK 1999) on file with the County of Riverside.

On June 30, 1999, a workshop hosted by UCR was conducted to further solicit information regarding species proposed for analysis as part of the MSHCP. Local biologists and other experts familiar with Western Riverside County flora and fauna discussed existing data and data gaps for the species to be addressed as well as other taxa (*e.g.*, insects). A general evaluation of the existing data was made for each of the taxon, data gaps were identified, "hot spots" for species occurrence were noted, and corridors and areas of concern were identified. Habitat management also was discussed.

Other sources contributing to the compilation of existing data included ongoing personal communication with local biologists and biologists with the USFWS and CDFG, querying the CNDDDB, and reviewing Environmental Impact Reports (EIRs) and Biological Technical Reports prepared for specific development projects within the Plan Area. This effort has been ongoing throughout the MSHCP planning process.

Analysis tools developed specifically for the MSHCP included the Bioregions map described in *Section 2.1.2* of this document. An additional analysis tool to evaluate edge-affected areas under existing conditions and associated with potential conservation scenarios was developed. Edge-

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affected lands under existing conditions were identified using the MSHCP vegetation map, Bioregions map and major highways map. These polygon-based data layers were converted to 100-foot pixel grids. Lands were either classified as Habitat or urban/agricultural. Based on distance between urban/agricultural lands and Habitat, “Edge Effects” were defined as follows: 0-250 feet – strongly affected; 251-600 feet – somewhat affected; >600 feet – relatively unaffected. The application of this tool to analysis of the MSHCP Conservation Area is described in greater detail in *Section A* of the MSHCP Reference Document – *Volume II of the MSHCP Plan*.

#### **3.1.4 Applicable Conservation Biology Principles**

General principles of conservation biology are captured by the reserve design tenets described in the NCCP General Process Guidelines and NCCP Act (CDFG 1998). These reserve design tenets provided a framework for the conservation planning process. They can be summarized as follows:

- conserve focus species and their Habitats throughout the Plan Area
- conserve large Habitat blocks
- conserve Habitat diversity
- keep reserves contiguous and connected
- protect reserves from encroachment and invasion by non-native species

The theoretical and empirical underpinnings of the NCCP reserve design tenets can be found in the conservation biology literature, of which key concepts are summarized here.

Although many factors can be incorporated into reserve design and selection, diversity, rarity, naturalness, size and representativeness are the most widely used (Margules *et al.* 1988). Other considerations include island biogeography design principles of MacArthur and Wilson (1963 and 1967): (1) area effect - the larger the preserve, the greater the species richness (*i.e.*, species/area relationship) and the greater the chances of long-term viability of populations (more individuals); (2) isolation or distance effect - the less the distance between reserve units, the greater the opportunity for gene flow, colonization, and rescue effect (*e.g.*, also see Brown and Kodric-Brown 1977); (3) species equilibrium - the number of species that an area can support is determined by a balance between colonization and extinction; and (4) Edge Effect - the larger the ratio of reserve area to reserve perimeter, the lesser the Edge Effect.