

4.11 Biological Resources

4.11.1 Methodology for Impact Evaluation

A detailed explanation of the methods implemented for the Tier 1 Biological Resources impact analysis is provided in Chapter 3.0 of the Biological Resources Technical Report (LSA, 2002). The methodology for the analysis is summarized below.

The methodology employed to evaluate potential impacts on biological resources within the proposed alternatives was developed in order to have enough data to select one alternative route most likely to yield the least environmentally damaging practicable alternative (LEDPA) and to secure concurrence from appropriate local, regional, state, and federal agencies at the Tier 1 level. The level of Tier 1 analysis focuses on determining, on a general level, the extent of impacts to biological resources, including special aquatic sites, waters of the U.S., sensitive nonaquatic habitats, state and federally listed endangered or threatened species, other sensitive species, habitat connectivity, and MSHCP core areas and linkages.

The specific evaluation criteria for biological resources that may be affected by the HCLE CETAP Corridor include the following (refer to Appendix D to the EIS/EIR):

- C Special Aquatic Sites and Associated Habitats
- C Waters of the U.S. and Associated Habitats
- C State and Federal Listed Species, Associated Wildlife Habitats, and Critical Habitat Areas
- C Other Special Interest Species and Associated Habitats
- C Connectivity of Habitats
- C Western Riverside County MSHCP Proposed Preserve Core Areas and Linkages
- C Indirect Effects
- C Cumulative Effects

The Hydrology and Water Quality section of this EIS/EIR utilizes additional evaluation criteria for potential impacts related to surface water hydrology, water quality, and flood plain encroachment, as stated in the NEPA/Section 404 Integration Process Evaluation Criteria (Appendix D).

For purposes of the Tier 1 analysis, it is presumed that, for each alternative, biological resources within each alternative bandwidth would be potentially impacted by the ultimate project. Potential Mitigation Measures to be Considered in Tier 2 were formulated based on standards of avoidance, minimization, and compensation, and on recent and past experience with agency requirements for mitigation.

A focused survey for vernal pools was conducted for each of the HCLE alternatives in areas of heavy clay, alkali, and other soils potentially supporting vernal pools.

Locations of vernal pools and surrounding upland areas that drain into the pools were mapped. Potential impacts to vernal pools, alkali playatas, and clay endemics special

aquatic sites were estimated according to the acreage of indicator soils and acreage of watershed draining into the special aquatic sites within the alternative.

The Tier 1 analysis of impacts to potential waters of the U.S. was conducted by calculating the linear feet of potential waters of the U.S. within each alternative using GIS analysis.

Potential impacts to the preferred MSHCP Alternative were evaluated by overlaying each of the CETAP corridor alternative areas over the criteria area (as shown in Figure 3.11.2). Impact measurements include total number of crossings, the area and linear distance of each alternative within the criteria area, and the location in criteria area.

4.11.2 Impacts

4.11.2.1 Potential Waters of the U.S. and Associated Habitats

The following discussion addresses the relative amount of potential impacts to Waters of the U.S. and associated habitats that the HCLE Corridor alternatives may have. Figure 4.11.1 illustrates the relative degree of impacts to these habitat types per alternative.

Alkali Playas. Alkali playa habitat is not abundant within the HCLE Corridor. Alkali playa only exists within five alternatives. The greatest amount of alkali playa occurs within Alternatives 1a and 1b each at 21 ha (52 ac). Of the five alternatives, Alternatives 4a, 4c, and 4d impact the least amount of alkali playa, at 11 ha (27.2 ac). The remaining alternatives do not impact any alkali playa.

Vernal Pools. Vernal pools are a unique, specialized form of seasonal wetlands that occur in a geographical area extending from southern Oregon through California into northern Baja California. Pool habitats are not homogenous throughout this large area because of regional differences in climate, topography, and soils. Although the pools of southern California share some wide-ranging temporary wetlands species with pools in other parts of the state, they also support species unique to the area (U.S. Fish and Wildlife Service, 1998). It is estimated that up to 90 percent of southern California vernal pools have been destroyed during the past century (Ferren, et al. 1996). Of the 20 threatened or endangered species known from the project study area, nine use vernal pools exclusively or in conjunction with other similar habitat types. Literature sources reviewed for the project analysis do not provide specific information on the extent (i.e., acreage) of vernal pools in western Riverside County. However, given the narrow range of conditions under which they occur and the limited extent that remain, vernal pools are considered to be one of the rarest habitat types in the study area. Thus, while the potential impacts to vernal pools appear to be small on an acreage basis, any impacts to vernal pools have high potential to be substantial.