

development is also indicative of the relative location and intensity of planned development in the watersheds crossed and, therefore, the potential to affect water quality and riverine functions. Alternative 5b is expected to have the greatest potential to affect the hydrologic integrity and beneficial values of the designated floodplain in the project area. Alternatives 7a and 7b are expected to have the least potential to affect these parameters.

#### **4.16.4.7 Summary of Potential Cumulative Impacts of CETAP Alternatives – Winchester-to-Temecula Alternatives**

The percentages of the existing length of blue line stream channel occurring within the bandwidth of the WT alternatives and projected to receive improvements range from a low of 80.7 percent to a high of 95.9 percent (Table 4.16.B). The change in percentages of projected improved blue line stream length occurring upstream for the WT alternatives (reflecting the relative level of projected “developed” land uses within the watersheds affected by each of the various alternatives) range from a low of 15.9 percent to a high of 58.3 percent.

The change in percentages of projected “undeveloped” land use area occurring upstream of the WT alternatives (reflecting the relative level of conversion to projected “developed” land uses within the watersheds affected by each of the various alternatives) ranges from a low of 28.4 percent to a high of 59.8 percent (Table 4.16.D). The percentages of the area within the alternative crossing projected to remain “undeveloped” for the WT alternatives range from a low of 1.0 percent to a high of 28.2 percent.

The change in percentages of projected developed area occurring upstream for the WT alternatives (reflecting the relative level of projected “developed” land uses within the watersheds affected by each of the various alternatives) ranges from a low of -6.4 percent to a high of 27.3 percent (Table 4.16.E). [Since the total developed area increases from the existing to the build out case, in an amount dependent on the extent of land use conversion in the affected area, and the percentages of the total developed area add to 100 percent, a negative value for percent change within one (or even two) of the three divisions (upstream, within the bandwidth, and downstream) is possible, depending on the pattern of land use conversion within the affected HSAs.]

The change in percentages of projected impaired stream length occurring upstream for the WT alternatives (reflecting the relative level of projected “developed” land uses within the watersheds affected by each of the various alternatives) ranges from a low of 15.9 percent to a high of 58.3 percent (Table 4.16.F).

The change in the absolute area of significant slope crossed by each alternative is in direct proportion to the overall change from an “undeveloped” use to a “developed” use. The areas of significant slope >15 percent occurring in the WT alternatives that is projected to change from an “undeveloped” use to a “developed” use range from a low of one ha (two ac) to a high of 66 ha (163 ac) (Table 4.16.G).

The build out of the County General Plan will result in the conversion of a significant area of existing “undeveloped” land use designations to “developed” classifications (Planning Center, 2002). The incremental impact of the proposed WT Corridor alternatives to the effects of that conversion is expected to be minor. In

general, the number of crossings of the blue line streams by roads in the project area is projected to increase by a factor of two to three as a result of projected land use conversions and the building of a road network to serve these converted land uses. These additional stream crossings could result in impacts to hydrology, floodplains, and water quality, and affect stream functions and values, floodplain functions, and hydrology and water quality integrity.

In general, the change in the total number of stream crossings by roads is directly proportional to the overall length of the transportation alternatives, and points to substantial development of roadways to serve the forecast development. Among the build alternatives, Alternative 1 performs the most favorably for criteria related to projected impacts to minimizing the percentage of upstream channelization improvements, minimizing the percentage of upstream developed area, and minimizing the percentage of potentially impaired stream segments in the bandwidth. Alternative 3 also performs well in these three criteria categories. Alternatives 7a and 7b have the least amount of bandwidth area that would potentially be converted to developed uses; however, these alternatives perform poorly in relation to most of the other cumulative impact criteria.

Table 4.16.H presents a summary listing of the qualitative data developed for the cumulative impact evaluation of the proposed alternatives in conjunction with the build out of the General Plan.

#### **4.16.5 Biological Resources**

The cumulative impacts assessment is based on the extent of vegetation within Riverside County documented in the General Plan Existing Setting Report (1999). Foreseeable future projects are the land uses that would be built out under the new General Plan. For this assessment, the total amount of acreage by habitat type of impacts from the build out of the General Plan land uses was calculated. Similarly, impacts of each WT alternative to each of the habitat categories were also calculated. Each alternative's habitat impacts were computed as a percentage of the total impacts from build out of the General Plan; it is noted that the majority of the impacted areas from the alternatives were areas planned as development or other land uses on the General Plan and, therefore, the impact acreages from the General Plan include, for