

Evaluation Approach. The extent of encroachment on designated floodplain areas by the proposed alternatives cannot be completely quantified at the program level of detail. However, tabulation and comparison of the potential magnitude of the floodplain area affected are directly related to the potential impact to beneficial floodplain values. The evaluation seeks to minimize the total area potentially affected, so a lesser value of potential floodplain encroachment is considered better.

Impacts of Alternatives. Figure 4.10.5 presents the potential impacts of the WT alternatives on existing 100 year floodplain areas in each HSA crossed by these alternatives. The combined area of the HSAs crossed by the alternative is presented in Table 4.10.L. Table 4.2.M presents the aggregate area of existing 100 year floodplain within the affected HSAs that falls within the bandwidth, upstream of the alternative, and downstream of the alternative. In general, the area of designated floodplain crossed by each alternative is in direct proportion to the overall length of the alternative, and is reflected in the number of HSAs crossed. Alternative 5a is expected to have the greatest potential to affect the hydrologic integrity and beneficial values of the designated floodplain in the project area. Alternatives 1 and 3 are expected to have the least potential to affect these parameters.

The total floodplain area that may be affected by a transportation alternative is determined primarily by the characteristics of the watersheds crossed and the siting of the alternative. Some of the longer alternatives cross a relatively smaller incremental area compared to the shorter alternatives—Alternative 5b does not cross substantially more floodplain area than the much shorter Alternative 7a. While Alternative 5b does cross a much greater number of USGS blue line streams, the streams in the Gertrudis and Pauba HSAs have very little designated floodplain area associated with them (except for Temecula Creek, in the Pauba HSA). The placement of Alternative H, which is primarily the widening of the existing I-15 and I-215 freeways through the Temecula and Menifee Valleys, results in a large area of floodplain crossed, as the floodplains for Murrieta Creek and Temecula Creek along the route of this alternative are much larger.

4.10.2.9 Criterion FP-2 – Percent of Designated Floodplain Area Crossed

The extent of designated floodplains is associated with topography in the watershed, rainfall patterns in the upper areas of the watershed, and the size of the drainage basin.

Regulatory Concerns. The extent of encroachment on the designated floodplain area associated with USGS blue line streams to be crossed by transportation alternatives may result in the following effects:

- C Effects to the hydrologic integrity of the floodplain system in the area of the crossing, or downstream
- C Ability of the stream system to maintain beneficial floodplain values

Evaluation Approach. Tabulation and comparison of the potential percentage of the total floodplain area affected are directly related to the potential impact to beneficial

floodplain values. The evaluation seeks to minimize the percentage of area potentially affected, so a lesser percentage of potential floodplain encroachment is considered better.

Impacts of Alternatives. Figure 4.10.5 presents the potential impacts of the WT alternatives on existing 100 year floodplain areas in each HSA crossed by these alternatives. The combined area of the HSAs crossed by the alternative is presented in Table 4.10.L. Table 4.2.M presents the aggregate area of existing 100 year floodplain within the affected HSAs that falls within the bandwidth, upstream of the alternative, and downstream of the alternative, as well as the percentage of the total floodplain area that falls within each of the three divisions, for the WT alternatives. The absolute area of floodplain crossed by each alternative is generally in direct proportion to the overall length of the alternative, and is reflected in the number of HSAs crossed. However, the percentage of floodplain area upstream and downstream of the alternative is less directly related to overall alternative length (since it reflects a value in the fixed range of zero through 100 percent), and is an indicator of the relative position of the alternative within the HSAs crossed.

The percentage of the total floodplain area that may be affected by a transportation alternative is determined primarily by the characteristics of the watersheds crossed and the siting of the alternative. Some of the longer alternatives cross a relatively smaller incremental percentage of area compared to the shorter alternatives— Alternative 5b does not cross a substantially greater percentage of the floodplain area than the much shorter Alternative 7a. While Alternative 5b does cross a much greater number of USGS blue line streams, the streams in the Gertrudis and Pauba HSAs have very little designated floodplain area associated with them (except for Temecula Creek, in the Pauba HSA). The placement of Alternative H, which is primarily the widening of the existing I-15 and I-215 freeways through the Temecula and Menifee Valleys, results in a large area of floodplain crossed, increasing the percentage for this alternative. The results for this criterion are similar to those observed for Criterion FP-1. The trend of area affected and percent of total floodplain area affected are similar. This is likely due to the fact that no major floodplain areas are located away from the project area where the WT alternatives are routed—the proposed routes connect areas that have built up around existing floodplain areas.

4.10.2.10 Criterion FP-3 – Length of Crossing of Floodplain

Crossings of streams by transportation alternatives may directly affect floodplain areas and uses, as well as other environmental factors and floodplain functions. The extent of designated floodplains is associated with topography in the watershed, rainfall patterns in the upper areas of the watershed, and the size of the drainage basin.

Regulatory Concerns. The extent of encroachment on the designated floodplain area of crossings by transportation alternatives may result in the following effects:

- C Effects to the hydrologic integrity of the stream system in the area of the crossing, or downstream
- C Effects to beneficial floodplain values
- C Effects to natural floodplain functions