

3.10 Surface Water Hydrology, Floodplain Encroachment, and Water Quality

Information on the environment potentially impacted by the proposed alternatives is drawn from the Existing Setting Report, previously prepared for the RCIP (LSA, 1999), and Basin Plans for the Santa Ana Regional Water Quality Control Board (SARWQCB) (1995) and the San Diego Regional Water Quality Control Board (SDRWQCB) (1998).

The following information is summarized from the Surface Water Hydrology, Floodplain Encroachment, and Water Quality Technical Report for the Winchester to Temecula (WT) Corridor (LSA, 2002). Please refer to this report for more detailed information on these topics.

3.10.1 Water Resources

Riverside County is limited in its use of water resources by regulation, climate, agricultural practices, population growth, and dependence on imported water. Water supply and water quality are unavoidably linked in a county whose climate is semiarid to arid. The economy of the developed portions of western Riverside County – the inland valley – is sustained in its magnitude primarily by water imported from Northern California and the Colorado River and secondarily by production of local groundwater. The eastern portion of the County – the desert – also relies on water from the Colorado River, Northern California, and local groundwater.

Riverside County is situated within four distinct watershed areas: the Santa Ana River Basin, San Diego Basin, and the East and West Basins of the Colorado River. The East Basin of the Colorado River drains into the Colorado River, the West Basin of the Colorado River drains primarily into the Salton Sea Trough, the Santa Ana River Basin drains into the Pacific Ocean in Orange County, and the San Diego Basin drains into the Pacific Ocean in San Diego County. These large watersheds are further divided into smaller sections by internal surface water drainage areas and groundwater basins (see Figure 3.10.1, Watershed Areas). The proposed alternatives for the WT Corridor cross the Santa Ana River and San Diego basins.

3.10.1.1 Santa Ana River Basin Watershed

The Santa Ana River Basin lies within Los Angeles, Orange, San Bernardino, and Riverside counties, with 400 of its 2,780 square miles located in Riverside County. The northwest portion of Riverside County, north of the Santa Margarita River Watershed and west of the San Jacinto and San Bernardino Mountains, lies within the Santa Ana Watershed and includes the San Jacinto and Santa Ana upper and lower watersheds.

Deep alluvial deposits make up the large groundwater basins in the region. The Santa Ana River and its tributaries recharge several groundwater basins. The San Jacinto river recharges a deep (greater than 2,000 ft) graben as it leaves the mountains and