

The Santa Ana River is the principal river in the Santa Ana Watershed. It originates in the San Bernardino Mountains and travels southwest approximately 60 miles where it reaches the Pacific Ocean near Huntington Beach. Historically, the Santa Ana River flowed perennially; however, the river is now ephemeral throughout most of its course due to the construction of dams, irrigation and water supply diversions, and groundwater pumping. Flows in the Santa Ana River are “effluent dominated.” Without effluent discharges from area wastewater treatment plants into the river, surface flow within Riverside County would be rare during dry weather. A minimum flow to protect downstream water rights and groundwater recharge (measured at Prado Dam) is maintained by wastewater discharge to the river. Immediately following winter rains, the Santa Ana River's flow is augmented by natural runoff. The duration of flow depends on the intensity and duration of the precipitation. Flooding in 1938 led to the construction of Prado Dam, which was followed by further hydrologic modification to the river in San Bernardino and Riverside counties to divert flows for water supply or percolation to groundwater basins.

The San Jacinto River is the principal river in the San Jacinto Watershed. It originates in the San Jacinto Mountains and flows northwest for the first half of its course and then southwest. The San Jacinto River occasionally reaches Canyon Lake, and more rarely Lake Elsinore. As noted above, water from Lake Elsinore may discharge into Temescal Wash, which is a tributary of the Santa Ana River. In this way, the Santa Ana and San Jacinto watersheds are linked.

The surface water storage areas in this area of Riverside County are Lake Hemet, periodically Mystic Lake, Canyon Lake, and Lake Elsinore. Drinking water storage is also available in Lake Mathews and Lake Perris.

3.10.2 Floodplains and Flooding

Executive Order 11988, Floodplain Management, was issued with the President's Environmental message on May 2, 1977. The major requirements of this Executive Order are to avoid support of floodplain development; to prevent uneconomic, hazardous, or incompatible use of floodplains; to restore and preserve the natural and beneficial floodplain values; and to be consistent with the standards and criteria of the National Flood Insurance Program.

A floodway is the channel of a stream, including any adjacent areas, that must be kept free of encroachment so that a 100 year flood can be carried without substantial increase in flood heights. According to the Federal Emergency Management Agency (FEMA), an area that is designated as Zone A is a 100 year flood area. A 100 year flood is defined as a flood with a magnitude that is expected to be equaled or exceeded once on the average during any 100 year period, or a flood that has a one percent chance of occurring in any given year. The 100 year flood was adopted as the national standard by the Federal Insurance Administration (FIA) for floodplain management, and for insurance purposes.

3.10.3 Water Quality

In the past, some of the water quality problems that have occurred in Riverside County were related to inadequate subsurface sewage disposal, waste disposal management of

the Santa Ana River, agricultural problems, such as citricultural runoff in the western county and increasing salinity of the desert groundwater basins, sediment buildup of water bodies from construction-related erosion, lake water quality problems, and “non-point” source pollution due to urban stormwater system runoff.

The Regional Water Quality Control Boards (RWQCBs) that oversee water quality in the County have determined that water supply plans and groundwater management are the most important components in water quality management planning. RWQCBs seek to protect the long-term beneficial uses of a region’s water supply. To this end, they regulate the quality of water that can be discharged into a lake or stream or that is used to recharge a groundwater basin. The designated beneficial uses in the County are as follows:

- C Municipal and domestic supply
- C Industrial service supply
- C Groundwater recharge
- C Agricultural supply
- C Hydropower generation
- C Non-contact recreation
- C Industrial process supply
- C Freshwater replenishment
- C Water contact recreation
- C Commercial and sport fishing
- C Cold freshwater habitat
- C Wildlife habitat
- C Aquaculture
- C Limited warm freshwater habitat
- C Rare, threatened, or endangered species
- C Spawning, reproduction, and development
- C Preservation of biological habitats of special significance.

3.10.3.1 Steep Slopes

Hillside areas typically offer a variety of amenities, such as reduced densities, rural character, significant views of valleys and hills, and proximity to large natural open space areas. However, if land development or supporting infrastructure (such as the proposed CETAP alternatives) are improperly planned and designed, the very amenities that people seek as the benefits of hillside living can be damaged. In addition, the cumulative effects of improper hillside development can be significant destruction of an area’s natural beauty, erosion, degradation of water quality, increased runoff and flooding problems, slope failures, fire hazards, high utility costs, lack of safe access for emergency vehicles, loss of sensitive biological habitats, and high costs for maintenance of public improvements.