

## SECTION 2 – WATERSHED AND WATER SUPPLY SYSTEMS

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### WATERSHED DESCRIPTION

This section provides an overall description of the watershed, which summarizes physical, hydrologic, and land use characteristics. Major watershed characteristics such as soils, geology, biology, and topography have changed little since the original 1998 and 2003 Survey. For a more detailed account of this information, the reader is referred to the 2003 Survey. This section provides a description of the West Valley Water District's (WVWD) existing water supply system, including a brief description of the Oliver P. Roemer Water Filtration Facility (Roemer WFF). There is also a discussion of how water is diverted off Lytle Creek and delivered to the Roemer WFF.

The Lytle Creek watershed is located in the Upper Santa Ana River basin at the easternmost extension of the San Gabriel Mountains and is approximately 60 square miles. Lytle Creek flows in a southeasterly direction where it joins Cajon Creek before finally reaching its confluence with the Santa Ana River near Colton. However, the entire watershed is not tributary to water treated by the WVWD as water is diverted from Lytle Creek at two diversion points which are well upstream of where Lytle and Cajon creeks intersect. The portion of the watershed which is tributary to the two diversion points is shown in Figure 2 -1, and is approximately 47 square miles.

Lytle Creek is a perennial stream that begins at the top of Mt. San Antonio, at an elevation of approximately 10,000 feet and flows eastward in three forks (North Fork, Middle Fork, and South Fork). The area is highly dissected by deep canyons, steep slopes, cliffs, and narrow ridges (United States Forest Service [USFS] Land Management Plan, 2005).

A variety of habitats can be found from chaparral, to lush riparian to high elevation conifers. Vegetation consists of mature stands of mixed conifer with some black oak, scattered areas of scrub oak and chaparral, and some isolated pockets of bigcone Douglas fir (California Wilderness Coalition 2008).

The streams and wilderness areas in the canyon provide important habitats for mountain lion, bear, badger, bighorn sheep, great horned owls, red-tailed hawk, coyotes, kangaroo rats, bald eagles, golden eagles, and a variety of birds.

### Land Ownership

The United States Forest Service (USFS) is the prime landowner in the Lytle Creek watershed, owning approximately 96 percent with the remaining 4 percent unclassified. The private lands in the watershed are associated with the communities of Scotland, Happy Jack, and Lytle Creek.

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### Land use

Most of the land use in the Lytle Creek watershed is vacant, as the majority of the land is owned by the USFS. Approximately 97 percent of the watershed is vacant, 2.2 percent is for open space/recreation, 0.5 percent is residential, and 0.1 percent is public/institutional. There are minimal commercial and no industrial uses in the watershed.

There are no incorporated cities within the watershed. There are several small community clusters such as Scotland, Happy Jack, and Lytle Creek. According to the 2020 Lytle Creek Canyon Recreation Management Plan, the population of the Lytle Creek Community is 900. The residents of Lytle Creek have a strong desire to maintain present mountain lifestyle, preferring development to be mainly residential. They are opposed to commercial development and would like to keep tourism to a minimum (Lytle Creek Community Plan, 2007). There are a few businesses along Lytle Creek Road, such as a grocery store, post office, restaurant, shooting range and fire station.

### Climate and Precipitation

The climate of the watershed ranges from Mediterranean to mountain, from temperate to hot, with cooler temperatures at the higher elevations. Precipitation ranges throughout the watershed, with snow in the winter on the tallest peaks (USFS Land Management Plan, 2005).

Figure 2-2 shows daily precipitation totals from the USFS rain gauge in the Lytle Creek watershed from 2018 to 2022. The highest daily rainfall total was 5.93 inches on November 8, 2022. The highest annual rainfall from 2018 to 2022 was 2019 with an annual total of 56.6 inches, and the lowest year was 2018 at an annual total of 23.18 inches.