

## 3 System Description

### **CWC 10631(a)**

*Describe the service area of the supplier...*

VWD was formed on March 12, 1955 as a water-only district by a group of local farmers who recognized a need for a more substantial water supply to serve the area than the groundwater found in the San Marcos and Twin Oaks Valleys. Originally named the San Marcos County Water District, VWD was initially established as an independent special district pursuant to §30000 et seq., Division 12 of the CWC, with the purpose of bringing outside water into the area through the development and operation of a public water supply system that tapped Colorado River water. With the passage of a \$998,000 bond issue in 1956, water system construction began. Initially, water deliveries from the SDCWA to the San Marcos County Water District were handled through the Buena Colorado Municipal Water District. In 1981, the San Marcos County Water District became a member of the SDCWA, from which it now receives nearly all of its potable water supply. On May 1, 1989, the San Marcos County Water District's name was changed to the Vallecitos Water District.

### 3.1 Climate

#### **CWC 10631(a)**

*Describe the service area of the supplier, including... climate...*

VWD is located in a semi-arid coastal desert environment, which is characteristically Mediterranean with mild temperatures throughout the year. Prolonged rainstorms are rare. More than 80 percent of the region's rainfall occurs between December and March. The historic average for the area, based on data since 1981, is about 13 inches of rainfall annually, with monthly mean temperatures ranging between 51 degrees during the winter and high of 83 degrees during the summer.

### 3.2 Service Area Population, Demographics, and Socioeconomics

#### **CWC 10631(a)**

*Describe the service area of the supplier, including current and projected population ... The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.*

VWD is located in northern San Diego County, bounded by OMWD to the south, CMWD to the west, Vista Irrigation District to the northwest, Rainbow Municipal Water District to the north, Valley Center Municipal Water District to the northeast, Rincon MWD to the east, and the City of Escondido to the southeast. VWD's service area includes corridors on two major freeways. Interstate 15 stretches along VWD's eastern boundary and State Highway 78 transverses through the middle of its service area.

Approximately 8,845 acres, of VWD’s 27,517 total acres, are currently residential and represent the majority of VWD’s water demands. Most of this is single-family homes, although recent development is trending more toward multi-family residential. VWD’s residential population has steadily raised over the past 4 decades. According to the San Diego Association of Governments forecast, VWD’s residential population has steadily raised over the past 4 decades. According to the San Diego Association of Governments forecast, VWD’s water service population will continue to increase from 105,741 in 2020 to 127,195 by the year 2045. Table 3-1 shows the current and projected water service population in 5-year increments over the next 20 years.

**Table 3-1. Population – Current and Projected**

	2020	2025	2030	2035	2040	2045 (opt)
<b>Population Served</b>	105,741	108,371	110,484	111,370	120,813	127,195

Notes: As estimated by the San Diego Association of Governments using Series 14 Growth Forecast (version 17) population data and data received by SDCWA.

VWD’s 2020 Comprehensive Annual Financial Report noted that the portions of the City of San Marcos and San Diego County within VWD’s service area had a 2020 median per capita income of \$66,271 with a reported unemployment rate of 6.1 percent. The largest employers within the County of San Diego, making up nearly 10 percent of total employment, include the Naval Base San Diego, University of California San Diego, Sharp Healthcare, the County of San Diego, and San Diego Unified School District.

### 3.3 Water Service

VWD serves a 27,517 acre (45 square miles) potable water service area, as illustrated in Figure 1-1. VWD has approximately 22,522 water meters that delivered over 4,400 MG of potable water in 2020, not including losses. Currently, VWD delivers water through 356 miles of pipeline and operates 10 pump stations and 19 potable water storage reservoirs ranging in size from 350,000 gallons to 40 MG. VWD’s total operational storage capacity is 120.5 MG. In 2020, VWD provided an average of 12.1 MGD of potable water for residential, commercial, light industrial, institutional, construction, landscape irrigation, and agricultural uses. The water service area is approximately 60 percent built-out, and additional development is anticipated throughout the timeline of the UWMP.

### 3.4 Wastewater and Recycled Water Service

In 1958, an improvement district was formed to finance the construction of a wastewater collection system. A second improvement district was formed that same year to finance the construction of a wastewater treatment plant, which was completed in 1961. This treatment plant, now known as the MRF, was retrofitted in the early 1980s with upgraded treatment technologies and a wastewater treatment and recycled water production capacity of up to 2.25 MGD. Upgrades completed in 2008 brought MRF to its current 5.0 MGD capacity.

Today, VWD serves a sewer service area of 14,750 acres (23 square miles) that is currently much smaller in size than the water service area, as shown in Figure 1-2. This

sewer service area can be expanded to the same size as VWD's water service area through annexation of the additional parcels. However, because of its rural nature and land use designations, the Northern Tributary Area is an area that is likely to remain on septic systems; therefore, it is not likely to be an area where VWD's wastewater infrastructure will be expanded to in the future. The total size of the ultimate sewer service area is expected to be approximately 17,400 acres (square miles). The wastewater service area is approximately 65 percent built-out, and additional development is anticipated throughout the timeline of the UWMP.

VWD has over 20,600 sewer service connections with 4 lift stations and 255 miles of pipeline. The average wastewater flow in VWD's service area is currently 7.5 MGD. This wastewater is conveyed to either the EWPCF or to MRF for treatment. VWD owns approximately 23 percent of EWPCF. Expansion of MRF was completed in 2008, increasing its recycled water production capacity to 5 MGD. The CMWD and OMWD purchase 4.5 MGD for non-potable purposes such as landscape irrigation.

Although VWD produces up to 5 MGD of recycled water at MRF and maintains the 54 MG Mahr Reservoir for recycled water storage, VWD does not maintain a recycled water service area within its sphere of influence. All the recycled water produced is sold to CMWD and OMWD. CMWD originally contracted for up to 2.0 MGD during peak summer months and, in 2003, increased that amount to 3.0 MGD. As part of that agreement, VWD also provides CMWD with up to 32 MG of recycled water storage in the Mahr Reservoir. OMWD also contracts for up to 1.5 MGD of recycled water and 16 MG of recycled water storage in the Mahr Reservoir. Excess recycled water is disposed of through a failsafe pipeline that connects to the ocean outfall at the EWPCF.



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