

3 SYSTEM DESCRIPTION

3.1 SERVICE AREA PHYSICAL DESCRIPTION

Urban Water Management Planning Act Requirement:
CWC 10631(a) Describe the service area of the supplier.

General Location Overview

Ventura County covers 1.2 million acres of land and is located northwest of Los Angeles County, south of Kern County, and southeast of Santa Barbara County. The western side of Ventura County, which spans 42 miles, borders the Pacific Ocean. The county's land mass north of Highway 126 is mostly mountainous and uninhabited due to the presence of the Los Padres National Forest; this accounts for 46% of the County's area.

The Triunfo Sanitation District's wastewater service area consists of Oak Park, Lake Sherwood, Bell Canyon, and the Westlake Village and North Ranch portions of Thousand Oaks. Oak Park Water Services (OPWS) is a wholly-owned subsidiary of TSD providing potable water to the community of Oak Pak. Figure 3.1.1 illustrates the service area of the Triunfo Sanitation District/Oak Park Water Service (District) in southeast Ventura County.

Water System Overview

The TSD, established on November 12, 1963, is a public entity that supplies potable water via OPWS, provides wastewater collection and treatment services, and treats and sells recycled water to the southeastern portion of Ventura County. As for TSD's organizational structure and governance, TSD is governed by a board of five directors who are elected by voters within TSD's boundaries. TSD serves approximately 30,100 people and, as a whole, covers approximately 50 square miles. However, only 4.1 square miles of the service area are served with potable water. The portion of TSD's service area which receives potable water is Oak Park, which is an unincorporated community within Ventura County. OPWS supplies potable water to this area. OPWS serves over 12,000 Oak Park residents with potable water. Other public and private water purveyors serve the potable water needs of Lake Sherwood, Bell Canyon, and the Westlake Village and North Ranch area residents of Thousand Oaks. The TSD service area encompasses the OPWS service area, which is illustrated by the overlaying of service area maps in Figure 3.1.1.

Figure 3.1.2 provides a closer view of the OPWS service area.

The District supplies potable and recycled water to its end users. Potable water is imported solely from the Calleguas Municipal Water District (representing 2.6% of its delivered water supply), while recycled water is supplied from the Tapia Water Reclamation Facility made available through a Joint Powers Authority between TSD and Las Virgenes Municipal Water District. OPWS oversees potable water distribution in the Oak Park area and TSD oversees recycled water distribution within the Oak Park and the Lake Sherwood areas. An overview of the TSD system and OPWS system are provided in the paragraphs below.

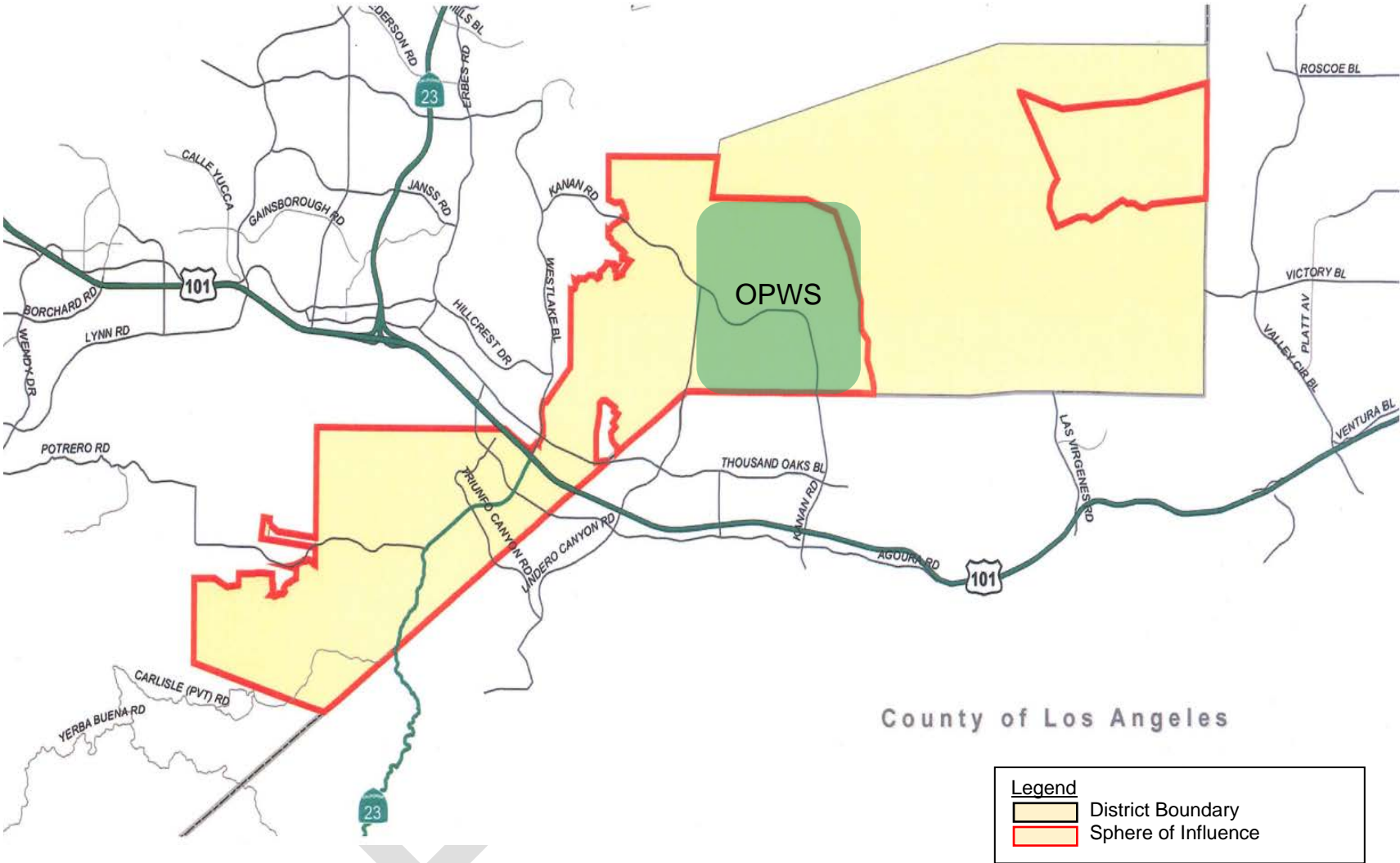
TSD operates 120 miles of pipelines for wastewater collection and manages 12,300 sewer service connections within its service area. The wastewater from these pipelines is fed via five main pump stations to the Tapia Water Reclamation Facility, a major operating facility jointly owned by TSD and the Las Virgenes Municipal Water District. The Tapia Water Reclamation Facility treats 10 million gallons per day of wastewater, and provides recycled water that is used to irrigate public and commercial landscaping such as golf courses, school grounds, highway medians and parks.

OPWS owns and manages four water storage tanks, with a combined capacity of 6.6 million-gallons, and operates 41 miles of pipeline to deliver more than 65 million gallons of potable water each month. Please refer to Table 3.1.1 for a description of the OPWS water storage tanks. OPWS’s network of water storage tanks allows some in-system transfers between reservoirs in the event of water outages. Tank levels in each of the reservoirs are also maintained for Ventura County Fire Department specifications for optimum water quality and for distribution system efficiencies. Also the District has completed the construction of the Oak Canyon Reservoir. In addition, the District upgraded all services metered in 2015. Data from the new meters will be available in May 2017. Presently the total storage volume is equivalent to approximately two days’ worth of supply.

Table 3.1.1: OPWS Water Storage Tanks

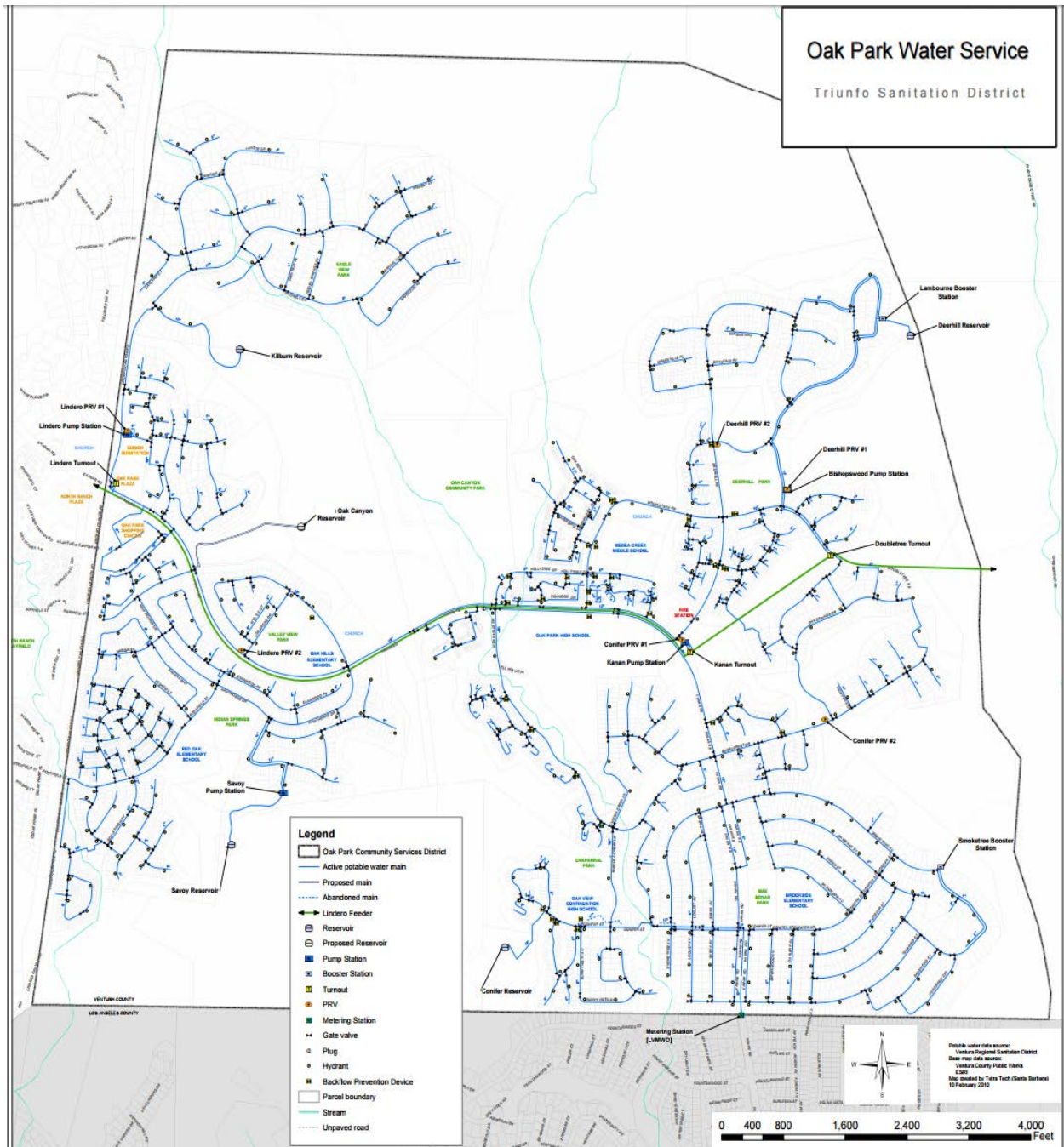
STORAGE TANK NAME	YEAR OF CONSTRUCTION	CONSTRUCTION MATERIAL	CAPACITY (GALLONS)
Oak Canyon	2013	Concrete	2,100,000
Deerhill	1998	Concrete	2,000,000
Savoy	1990	Steel	1,600,000
Kilburn	1986	Steel	860,000

Figure 3.1.1 – TSD Service Area Map¹



¹From the TSD Website-“About Us: Service Area”

Figure 3.1.2 – OPWS Service Area Map¹



¹From the OPWS Website-“About Us: Service Area”

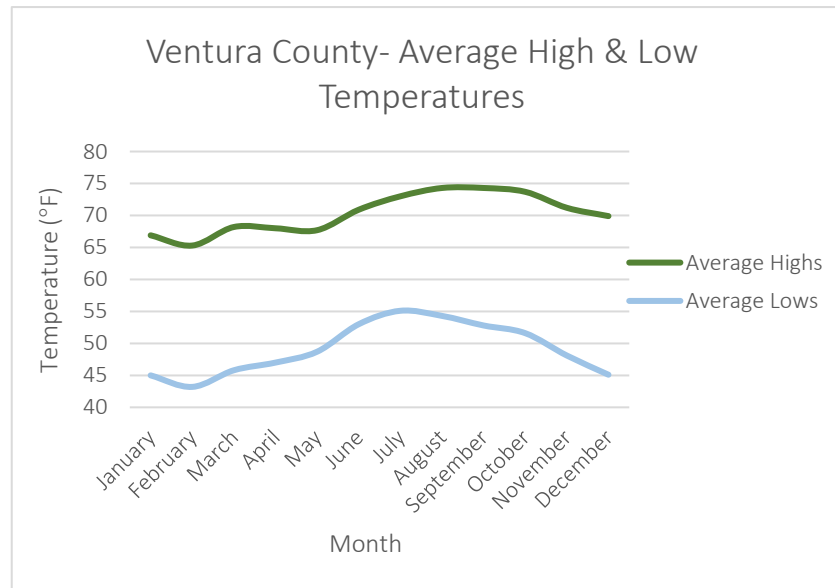
3.2 SERVICE AREA CLIMATE

Urban Water Management Planning Act Requirement:
CWC 10631(a) Describe the service area – climate.

Temperature

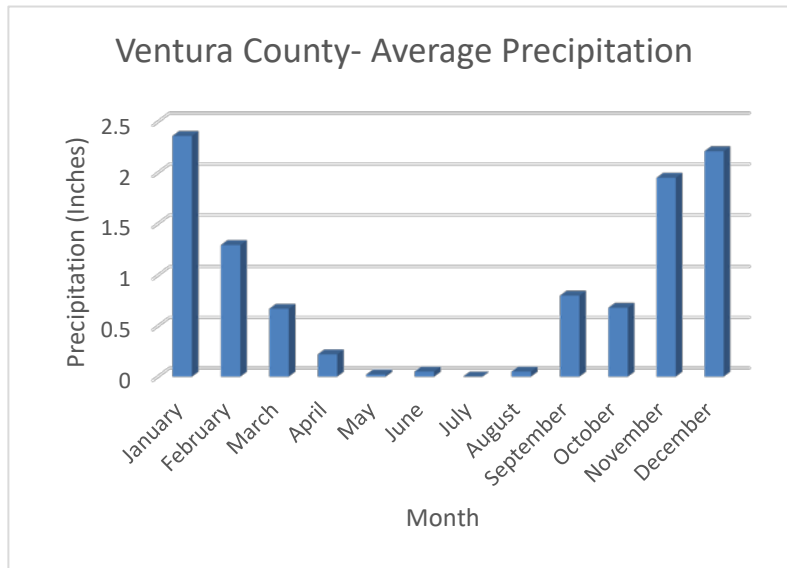
The Southeastern Ventura County’s Mediterranean semi-arid climate is temperate year-round, with warm and dry weather lasting from late spring through early fall. The temperature range is generally moderate as depicted in Figure 3.2.1; the average high temperature is 72.2 °F and the average minimum annual temperature is 49.3 °F.

Figure 3.2.1 – Average Temperatures



Precipitation

Figure 3.2.2 – Average Precipitation



The County’s precipitation is from 10 inches annually with the majority of this rainfall occurring during the winter season (wet period). The average annual monthly precipitation in the County of Ventura is presented in Figure 3.2.2.

Additionally, seasonal variation in temperature, rainfall, and evapotranspiration rate are illustrated in Table 3.2.1.

Table 3.2.1: Climate Data (Period Record: 02/01/2000 to 03/1/2016) and Evapotranspiration Rate (ETo) Data

	AVG. HIGH TEMP (°F)	AVG. LOW TEMP (°F)	AVG. PRECIPITATION (In.)	AVG. ETo (In.)
January	68.5	43.90	2.21	2.60
February	67.5	45.23	2.36	2.66
March	68.9	46.35	1.29	3.84
April	69.5	49.91	.67	4.49
May	71.6	53.98	.22	5.24
June	73.5	57.11	.02	5.20
July	77.2	56.33	.05	5.66
August	78.0	54.49	.00	5.32
September	78.2	51.31	.05	4.21
October	75.3	46.29	.80	3.25
November	72.0	42.91	.68	2.60
December	66.5	44.09	1.95	2.09
Annual	72.2	49.3	10.30	47.16

Note - California Irrigation Management Information System (CIMIS) :<http://www.cimis.water.ca.gov/> Camarillo, Ventura County Station #152

3.3 SERVICE AREA POPULATION

Urban Water Management Planning Act Requirement:

CWC 10631(a) Describe the service area – 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 ... (population projections) shall be in five-year increments to 20 years or as far as data is available.

There are approximately 12,200 people, and approximately 4,500 households, that comprise most of the District's potable water service area, which is the Oak Park community. Recorded, current, and projected population estimates for the District's service area were obtained from the County of Ventura: Dwelling Units and Population by Dwelling Unit Type, Growth/Non-Growth Areas (01/26/11). County estimations show that the community was designated as at 'build out' in the 1990's. According to the county estimates, there will be a slight increase in population between 2015 and 2020, followed by a period of little to no growth between 2020 and 2035 within Oak Park. The community does not anticipate significant additional growth or water demands in the future years. This is illustrated in Table 3.3.1 and Figure 3.3.1 by the low to steady projected growth rate of the population.

Figure 3.3.1 – Projected Population Growth

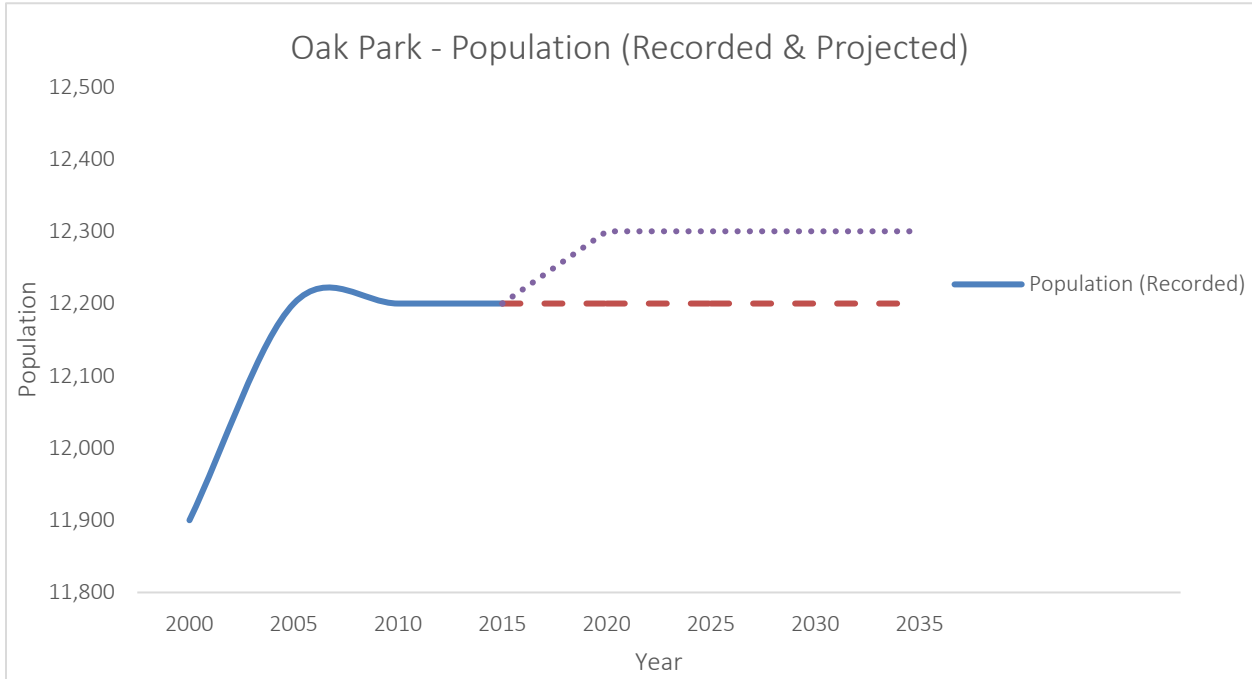


Table 3.3.1: Population — Current and Projected Oak Park Population¹

	2015	2020	2025	2030	2035	DATA SOURCE
Population Served ¹	12,200	12,300	12,300	12,300	12,300	Ventura County Population/Dwelling Unit Data for Growth/Non-Growth Areas (01/26/2011)

¹Population served is defined as population served by the distribution system. Ventura County (01/26/2011) population/dwelling unit data for Growth/Non-Growth areas. Factors, as cumulative through Dec. 31, 2010 are referenced at "12,201". Value to nearest 100 is used for the generally used population - 12,200. The area was designated as at 'build out' in the 1990's. The U.S. Census units (blocks) extend beyond the service area (a subset to the census blocks).

3.4 OTHER DEMOGRAPHIC FACTORS

Urban Water Management Planning Act Requirement:

CWC 10631(a) Describe the service area – other demographic factors affecting the supplier's water management planning

As stated above, the District's serves the Oak Park community. In 2015, the District supplied 4,591 customers, including residential, commercial, institutional and landscape users, with over 1,981 acre-feet of potable water.

The District's service area primarily includes residential customers. However, the District maintains some commercial and institutional customers as well. With most residents employed in other Los Angeles County areas, there are no industrial customers within the District's network of water users. While the developed portions of Oak Park are mostly residential (single-family homes, townhomes, and apartments), shopping/commercial centers have arisen such as the Oak Park Shopping Center which was developed in '90s. Both population growth and water use rates are expected to be flat over the next 20 years. These future trends are supported by Ventura County projected population estimates.