4 WATER USE CHARACTERIZATION

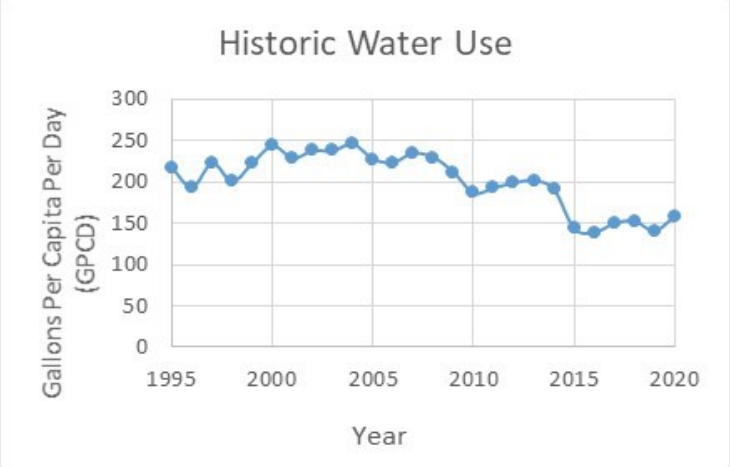
4.1 WATER USE

Urban Water Management Planning Act Requirement:

10608.20(e)(1)&(2) Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: (A) Single-family residential; (B) Multifamily; (C) Commercial; (D) Industrial; (E) Institutional and governmental; (F) Landscape; (G) Sales to other agencies; (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; (I) Agricultural.

Historic Water Use

Figure 4.1.1 – Historic Water Use



The Triunfo Water & Sanitation District (District) currently serves approximately 13,167 people within its service area. With the District designated as built-out, significant growth or increase in water demands are not anticipated in future years.

Key factors that affect water demands are; population growth, increases in land use development, industrial growth and reductions in annual rainfall. For the District, population and rainfall exhibit the greatest influence. Over the last 25 years, usage of water per capita per day ranged between 139 - 246 Gallons per Capita per Day (GPCD). Usage from 2010-2020 has remained relatively lower than usage from 1995-2009 as shown in Figure & Table 4.1.1, with 2016 having the lowest per capita water use in the past 25 years. Consumption has ranged from a low of 139 GPCD in 2016 to a maximum of 246 GPCD in 2004. The average use per day during the period from 1995 through 2020 was 202 gallons per person.

Table 4.1.1: Historic Water Use

Fiscal Year	Gross Water Use (MGY)	Population	Usage Per Capita Day (GPCD)
1995	1,105	13,943	217
1996	977	13,829	194
1997	1,055	12,358	223
1998	916	12,466	201
1999	1,021	12,538	223
2000	1,062	11,925	244
2001	1,008	12,057	229
2002	1,059	12,199	238
2003	1,044	12,401	238
2004	1,096	12,602	246
2005	1,013	12,804	228
2006	996	13,005	224
2007	1,046	13,207	235
2008	1,025	13,408	230
2009	944	13,610	212
2010	833	13,811*	187
2011	861	13,815	193
2012	885	13,819	199
2013	901	13,824	202
2014	851	13,828	191
2015	645	13,832	144
2016	620	13,836	139
2017	667	13,840	150
2018	681	13,845	153
2019	626	13,849	141
2020	708	13,853*	159

Note: Million Gallons per Year (MGY)
Note: As Oak Park is a census-designated place, population growth was estimated based on census year data. Linear growth was estimated for years between 2010 and 2020.

The District's past water use and number of customer connections for the 2010 and 2015 calendar years are shown in Table 4.1.2 and Table 4.1.3, respectively.

Table 4.1.2: Water Deliveries — Actual, 2010

Water use sectors	Metered		Not Metered		Total
	# of Accounts	Volume	# of Accounts	Volume	Volume
Single family	4,086	1,973	0	0	1,973
Multi-family	370	134	0	0	134
Commercial/Institutional	67	36	0	0	36
Industrial	0	0	0	0	0
Landscape	85	179	0	0	179
Agriculture	0	0	0	0	0
Other	3	2	0	0	2
Total	4,611	**2,324**	**0**	**0**	**2,324**

Note: Units in acre-feet per year

Table 4.1.3: Water Deliveries — Actual, 2015

Water use sectors	Metered		Not metered		Total
	# of accounts	Volume	# of accounts	Volume	Volume
Single family	4,063	1,597	0	0	1,597
Multi-family	361	122	0	0	122
Commercial/Institutional	69	35	0	0	35
Industrial	0	0	0	0	0
Landscape	96	145	0	0	145
Agriculture	0	0	0	0	0
Other	7	1	0	0	1
Total	4,596	**1,900**	**0**	**0**	**1,900**

Note: Units in acre-feet per year

Table 4.1.4: Water Deliveries — Actual, 2020

Water use sectors	Metered		Not metered		Total
	# of accounts	Volume	# of accounts	Volume	Volume
Single family	4,070	1,725	0	0	1,725
Multi-family	366	161	0	0	161
Commercial/Institutional	73	26	0	0	326
Governmental	0	0	0	0	0
Landscape	94	212	0	0	212
Agriculture	0	0	0	0	0
Other	3	10	0	0	10
Total	4,606	**2,134**	**0**	**0**	**2,134**

Note: Units in acre-feet per year

Current and Projected Water Use by Sector

In 2020, the District used 2,159 acre-feet of potable water, as measured by metered sales and estimated distribution system losses. Average water deliveries, shown in Figure 4.1.2, are broken down into the following sectors:

- Single Family Residential
- Multi-Family Residential
- Commercial
- Institutional/government
- Landscape Irrigation
- Other (pool and recreation)
- Distribution System Losses

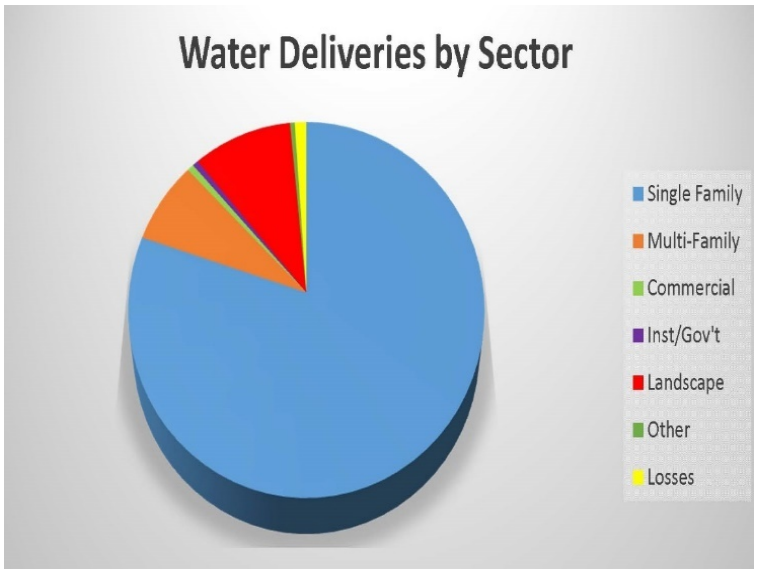


Figure 4.1.2 –Water Deliveries

Retail water deliveries are projected for the next 20 years, in five-year increments, and are broken down by sector. The future estimations of water use (by sector) are extrapolated based on the current (2020) values and anticipated population growth.

Residential Sector

Table 4.1.6 provides estimates for the projected residential water demand for the District. Due to the lack of available space, the District does not have plans for significant new residential development.

Commercial/Institutional/Government Sectors

Current and projected water demands for the District's commercial and institutional/governmental sectors are shown in Tables 4.1.5 – 4.1.6. Commercial users include markets, restaurants, stores, offices, gas stations and other businesses. The Oak Park service area does not have any industrial users.

Landscape Sector

The District uses both potable and recycled water for the landscape sector. Considering the implementation of the Water Conservation Ordinance No. TSD-301, and the District's recycled water system, landscape irrigation is expected to remain stable or show improvements during the

planning horizon. The current and projected water demands for landscape irrigation are shown in Tables 4.1.5 and 4.1.6.

Agricultural Sector

The District does not provide potable water for agricultural uses.

Other

The District's firefighting and site construction water use, as well as pool and recreational use, are included in the *Other* categories, and their projections are included in Tables 4.1.4 and 4.1.5.

Distribution System Losses

The District's distribution system losses were estimates for each of the five past planning years utilizing American Water Works Association (AWWA) water audit methodology and software. Distribution system losses are then projected for the next 20 years using a five-year average ratio of water losses to total water deliveries (8.3%). Refer to Appendix D for the complete AWWA Water Audit Software calculations and Section 4.1.5 for more information.

Table 4.1.5: Demands for Potable Water - 2020 Actual

Water Use Sectors	Additional Description	Level of Treatment When Delivered	Volume
Single Family	-	Drinking Water	1,725
Multi-Family	-	Drinking Water	161
Commercial/ Institutional	-	Drinking Water	26
Governmental	-	Drinking Water	0
Landscape	-	Drinking Water	212
Other	Pool & Recreation	Drinking Water	7
Other	Firefighting, and/or Construction	Drinking Water	3
Losses	Distribution System Losses	Drinking Water	25
Other	Purchases, less sales	Drinking Water	15
		TOTAL	**2,174**

Note: Units in acre-feet per year
Note: Totals referenced to the 'Consumption by Utility Class Codes Calendar Year 2020'. Total value represents wholesaler invoiced purchases during CY 2020. Reservoir capacities are a maximum of 20 AF (6.6 MG). Value conflicts with prior annual report submittal due to 'Purchase, less sales' added to monthly purchase amount - the wholesaler invoice amount.
Note: Coordinates with WUE Table 4-1 R

Table 4.1.6: Demands for Potable Water – Projected

Water Use Sectors	Additional Description	Projected Water Use				
		2020	2025	2030	2035	2040
Single Family	-	1,725	1,739	1,753	1,767	1,781
Multi-Family	-	161	162	164	165	166
Commercial/ Institutional	-	26	26	26	26	26
Governmental	-	0	0	0	0	0
Landscape	-	212	214	215	217	219
Other	Pool & Recreation	7	7	7	7	7
Other	Firefighting and/or Construction	3	3	3	3	3
Losses		25	25	25	26	26
Other	Purchases, less sales	15	15	15	15	16
TOTAL		**2,174**	**2,191**	**2,208**	**2,226**	**2,244**

Note: Units in acre-feet per year
Notes: Coordinated with WUE Table 4-2 R

Sales to Outside Agencies

The District sells wholesale recycled water to California Water Service and the Hidden Valley Municipal Water District. However, the District does not sell any potable water to other agencies. Table 4.1.6 is provided to quantify that the District does not intend to sell potable water to other water agencies within the planning period.

Table 4.1.6: Potable Water Sales to Other Water Agencies

Water Distributed	2020	2025	2030	2035	2040
Not Applicable	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**

Note: Units in acre-feet per year

Distribution System Water Losses

Urban Water Management Planning Act Requirement:

CWC 10631(e)(1) Quantify, to the extent records are available, past and current water use over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including but not necessarily limited to, all of the following uses: …

(J) Distribution system water loss

(3)(A) For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

Distribution system water losses were quantified for FY 2019-2020 using the Department of Water Resources Water Audit Method, calculated by subtracting the total metered deliveries for the year from the total water volume into the system (imported water) less any change in system storage, adjusted for meter accuracy. The worksheets can be found in Appendix D. In FY 2019-2020, distribution system losses were approximately 1.2% of total retail water deliveries. Current system losses are summarized in Table 4.1.7, and projected system losses are included in Table 4.1.5.

Table 4.1.7: 12 Month Water Loss Audit Reporting

Reporting Period Start Date	Volume of Water Loss*
07/2020	Pending Report
07/2019	24.54
07/2018	8.14
07/2017	30.22
07/2016	28.03

Note: Units in acre-feet per year
Note: Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet. Audit is based on the fiscal year 2020
Note: Coordinates with WUE Table 4-4 R

Total Water Demands

The total current and future retail/wholesale water demands for the District are summarized in Table 4.1.8 and 4.1.9. Planned expansion to the TWSD area's recycled water system are expected to increase the total recycled water demand and are discussed further in Chapter 6.

Table 4.1.8: Total Retail Water Demands

Water Type	2020	2025	2030	2035	2040
Potable *From Tables 4.1.4 and 4.1.5*	2,174	2,191	2,208	2,226	2,244
Recycled Water Demand *From Table 6.5.4*	772	778	784	790	797
Total Water Demand	**2,946**	**2,969**	**2,992**	**3,016**	**3,041**

Note: Units in acre-feet per year
Note: Table coordinates with WUE Table 4-3 R

Table 4.1.9: Total Wholesale Water Demands

Water Type	2020	2025	2030	2035	2040
Potable *From Tables 4.1.4 and 4.1.5*	0	0	0	0	0
Recycled Water Demand	509	509	509	509	509
Total Water Demand	**509**	**509**	**509**	**509**	**509**

Note: Units in acre-feet per year
Note: Table coordinates with WUE Table 4-3 W

Water Use for Lower Income Households

Urban Water Management Planning Act Requirement:

10631.1(a) The water use projections required by Section 10631 shall include projected water use for single-family and multi-family residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

The Housing Element of the Ventura County General Plan was used to determine the lower income housing projected water demands within the District's service area. Due to the TWSD area being completely built out, no new lower income dwelling units were identified for construction within the planning horizon. Table 4.1.10 is provided to show that no lower income housing has been planned for construction in the community of Oak Park.

Table 4.1.10: Low-Income Projected Water Demands

Low Income Water Demands	2020	2025	2030	2035
Single-family residential	0	0	0	0
Multi-family residential	0	0	0	0
Total	**0**	**0**	**0**	**0**

Note: Units in acre-feet per year

Estimating Future Water Savings

Urban Water Management Planning Act Requirement:

10631 (e)(4)(A) If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area. (B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following: (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections (ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

The District did not consider future water savings when projecting water use, which is reflected in Table 4.1.11.

Table 4.1.11: Inclusion in Water Use Projections

Are Future Water Savings Included in Projections? (Refer to Appendix K of DWR Guidebook)	Are Lower Income Residential Demands Included In Projections?
No	No

Note: Future projections are weighted toward prior year demands (2010-2015) versus the most current year (2015). No lower income housing is scheduled for construction within the District's service area.
Note: Coordinates with DWR WUE Table 4-5 R

4.2 WATER DEMAND PROJECTIONS

Urban Water Management Planning Act Requirement:

10631(k) Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

The District relies on wholesale water from the Calleguas Municipal Water District (CMWD) as its primary source of potable water. Table 4.2.1 illustrates the wholesale water supply that is anticipated to be available through 2040.

Table 4.2.1: Retail Agency Demand Projections Provided to Wholesale Suppliers

Wholesaler	2025	2030	2035	2040
Calleguas Municipal Water District	2,191	2,208	2,226	2,244
Total	**2,191**	**2,208**	**2,226**	**2,244**

Note: Units in acre-feet per year

4.3 WATER USE REDUCTION PLAN

Urban Water Management Planning Act Requirement:

CWC §10608.29 Urban wholesale water suppliers shall include in the urban water management plans … an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part (10608.36). Urban retail water suppliers are to prepare a plan for implementing the Water Conservation bill of 2009 requirements and conduct a public meeting which includes consideration of economic impacts.

The District has implemented an economical, yet sound, water use reduction plan in order to meet the 20x2020 water use reduction requirements. In 2015-2016, the TWSD completed a major meter replacement program that includes improved event sensitivity, accuracy, and customer use interface. Additional options to reduce water demand in the District include:

- Encouraging the use of recycled water for landscape and irrigation purposes.
- Adoption of the State's Model Water Efficient Landscape Ordinance (MWELO) under the Ventura County Resource Management Agency General Plan.
- Increasing public awareness regarding water conservation requirements and efforts that can easily be implemented to conserve water through methods such as on site reviews with customers, water hotline, and rebate participation.
- Active involvement with the California Urban Water Conservation Council training programs and Best Management Practices progress.