

4 SYSTEM WATER USE

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

The Triunfo Sanitation District/Oak Park Water Service (District) currently serves approximately 12,200 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. Usage of water per capita per day ranged between 201 - 246 Gallons per Capita per Day (GPCD) during the baseline period and has since been trending lower, as shown in Figure 4.1.1, with 2015 having the lowest per capita water use in the past 15 years. Consumption has ranged from a low of 144 GPCD in 2015 to a maximum of 246 GPCD in 2004. The average use per day during the period from 1995 through 2015 was 214 gallons per person.

Figure 4.1.1 – Historic Water Use

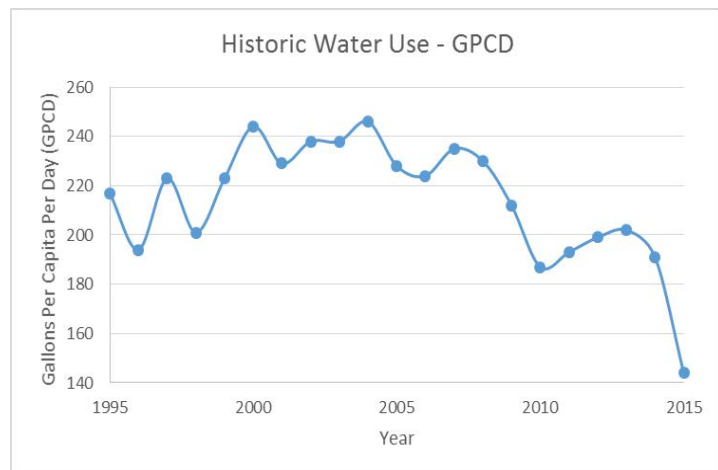


Table 4.1.1: Historic Water Use

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	12,199	238
2004	1,096	12,199	246
2005	1,013	12,201	228
2006	996	12,201	224
2007	1,046	12,201	235
2008	1,025	12,201	230
2009	944	12,201	212
2010	833	12,201	187
2011	861	12,200	193
2012	885	12,200	199
2013	901	12,200	202
2014	851	12,200	191
2015	645	12,200	144

Note: Million Gallons per Year (MGY)

The District's past water use and number of customer connections for the 2005 and 2010 calendar years are shown in Table 4.1.2 and Table 4.1.3, respectively.

Table 4.1.2: Water Deliveries — Actual, 2005

Water use sectors	Metered		Not Metered		Total Volume
	# of Accounts	Volume	# of Accounts	Volume	
Single family	4,346	2,346	0	0	2,346
Multi-family	112	130	0	0	130
Commercial/Institutional/ Government	42	41	0	0	41
Industrial	0	0	0	0	0
Landscape	108	253	0	0	253
Agriculture	0	0	0	0	0
Other	0	0	0	0	0
Total	4,608	2,770	0	0	2,770

Note: Units in acre-feet per year

Table 4.1.3: Water Deliveries — Actual, 2010

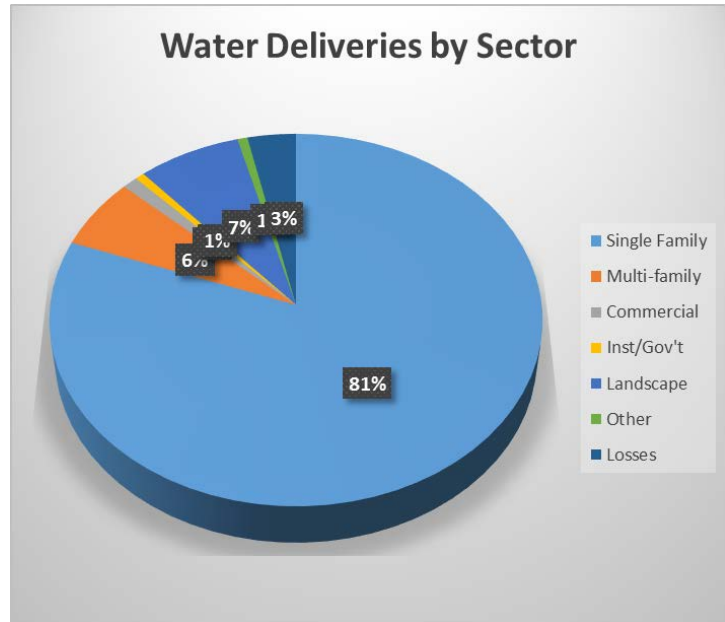
Water use sectors	Metered		Not metered		Total Volume
	# of accounts	Volume	# of accounts	Volume	
Single family	4,345	1,972	0	0	1,972
Multi-family	114	136	0	0	136
Commercial/Institutional/ Government	47	34	0	0	34
Industrial	0	0	0	0	0
Landscape	88	178	0	0	178
Agriculture	0	0	0	0	0
Other	2	11	0	0	11
Total	4,596	2,331	0	0	2,331

Note: Units in acre-feet per year

Current and Projected Water Use by Sector

Figure 4.1.2 –Water Deliveries

In 2015, the District used 1,981 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

Retail water deliveries are projected for the next 20 years, in five year increments, and are broken down by sector. The projections of water use (by sector) are estimated based on the past 5 year water use averages (2011 – 2015), due to the fact that the District’s population is anticipated to remain unchanged throughout the planning horizon.

Residential Sector

Table 4.1.5 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 4.1.4 – 4.1.5. 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 in Landscaping Ordinance No. T16-002, included in

Appendix F of this report, 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 4.1.4 and 4.1.5.

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 are calculated using FY 2013-2014 data and the American Water Works Association (AWWA) water audit methodology and software, giving a ratio of water losses to total water deliveries of 9%. 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%). Please note these projections did not account for the complete metering system change out which was undertaken in May 2015 as it was outside of the 2013-2015 FY study period. Refer to Appendix I for the complete AWWA Water Audit Software calculations and Section 4.1.4 for more information.

Table 4.1.4: Demands for Potable Water - 2015 Actual

Water Use Sectors	Additional Description	Level of Treatment When Delivered	Volume
Single Family	-	Drinking Water	1,597
Multi-Family	-	Drinking Water	122
Commercial	-	Drinking Water	22
Institutional/Governmental	Institutional	Drinking Water	13
Landscape	-	Drinking Water	145
Other	Pool & Recreation	Drinking Water	13
Other	Firefighting, and/or Construction	Drinking Water	1
Losses	Distribution System Losses	Drinking Water	178
Other	Purchases, less sales	Drinking Water	68
TOTAL			2,159

Note: Units in acre-feet per year

Notes: Totals referenced to the 'Consumption by Utility Class Codes Calendar Year 2015'. Total value represents wholesaler invoiced purchases during CY 2015. 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.

Table 4.1.5: Demands for Potable Water - Projected

Water Use Sectors	Additional Description	Projected Water Use			
		2020	2025	2030	2035
Single Family	-	1,965	1,965	1,965	1,965
Multi-Family	-	129	129	129	129
Commercial	-	23	23	23	23
Institutional/Governmental	-	15	15	15	15
Landscape	-	180	180	180	180
Other	Pool & Recreation	11	11	11	11
Other	Firefighting and/or Construction	2	2	2	2
Other	Purchases, less sales	210	210	210	210
TOTAL		2,535	2,535	2,535	2,535

Note: Units in acre-feet per year

Notes: Projected savings goal for 2020 (GPCD) was achieved in 2015 under the state drought emergency order. The 2010-2015 water use averages, for each sector, improves on the projected CUWCC 2020 use target. The projected water use utilized is the 5 yr window sector average. Sectors having high variability & expected to make the most progress are the SF, MF, LNSCP, and Other:Purchases, less sales.

Sales to Outside Agencies

The District does not sell wholesale water to other agencies. Table 4.1.6 is provided to quantify that the District does not intend to sell water to other water agencies within the planning period.

Table 4.1.6: Sales to Other Water Agencies

Water Distributed	2015	2020	2025	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 2013-2014 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 I. In FY 2013-2014, distribution system losses were approximately 3.4% 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	Volume of Water Loss*
07/2012 - 06/2013	178

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.

Note: Audit is based on the fiscal year 2013

Total Water Demands

The total past, current, and future water demands for the District are summarized in Table 4.1.8. Planned expansion to the Oak park Water service 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 Water Demands

Water Type	2015	2020	2025	2030	2035
Potable <i>From Tables 4.1.4 and 4.1.5</i>	2,159	2,535	2,535	2,535	2,535
Recycled Water Demand <i>From Table 6.5.4</i>	1,036	1,120	1,140	1,140	1,140
Total Water Demand	3,195	3,655	3,675	3,675	3,675

Note: Units in acre-feet per year

Note: This table defines the potable use from 2020 as the 5-year average of 2010-2015. The 2015 potable value is the actual use and projected from 2025

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 Oak Park Water Service area being completely built out, no new lower income dwelling units were identified for construction within the planning horizon. Table 4.1.9 is provided to show that no lower income housing has been planned for construction in the community of Oak Park.

Table 4.1.9: 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 4.1.10.

Table 4.1.10: 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.

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 is provided to quantify the district demand projections provided to CMWD for incorporation into Calleguas’ 2015 Urban Water Management Plan for average year conditions.

Table 4.2.1: Retail Agency Demand Projections Provided to Wholesale Suppliers

Wholesaler	2020	2025	2030	2035
Calleguas Municipal Water District	2,535	2,535	2,535	2,535
Total	2,535	2,535	2,535	2,535

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, the Oak Park Water Service 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 efficiency Landscape Ordinance (MWLEO) under the Ventura County Resource Management Agency General Plan with the TSD resolution No. T16-002
- 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.