2020

PART 2: LOCAL AGENCY UWMPs

UPPER SANTA ANA RIVER WATERSHED

INTEGRATED REGIONAL URBAN WATER MANAGEMENT PLAN

WEST VALLEY WATER DISTRICT

2020 IRUWMP

Part 2 Chapter 10

WVWD 2020 UWMP

JUNE 30, 2021

Prepared by Water Systems Consulting, Inc.

WSC

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10 RETAIL URBAN WATER MANAGEMENT PLAN
West Valley Water District

This chapter describes information specific to West Valley Water District, its supplies, demands and water use efficiency programs. The information and analysis in this chapter is supplemental to the regional information presented in Part 1 of the 2020 IRUWMP and is provided to meet West Valley Water District's reporting requirements for 2020 under the UWMP Act.

10.1 System Description

West Valley Water District (WVWD) is a County Water District, a public agency of the State of California, organized and existing under the County Water District Law (Division 12, Section 30000 of the Water Code) of the State of California.

WVWD provides domestic water service to customers throughout southwestern San Bernardino County and a small portion of northern Riverside County, as part of the greater San Bernardino-Riverside-Ontario metropolitan area. The service area, approximately 50 miles east of downtown Los Angeles, generally includes the cities of Fontana, Rialto, Colton, Jurupa Valley, Bloomington, and other unincorporated areas of San Bernardino County. WVWD's service area is divided into northern and southern sections, with the central portion in between served by the City of Rialto.

IN THIS SECTION

WVWD is a retail public water supplier that meets the definition of an urban water supplier with over 23,000 municipal water service connections in 2020. The District provides potable water service to nearly 90,000 residents, as well as a myriad of commercial, industrial, and institutional establishments.

The District operates a domestic water distribution system that consists of 21 groundwater wells, 25 separate storage reservoirs across eight pressure zones, for a total storage over 72 million gallons (MG), and over 375 miles of transmission and distribution pipelines.

WVWD's service area is shown in **Figure 10-1**.

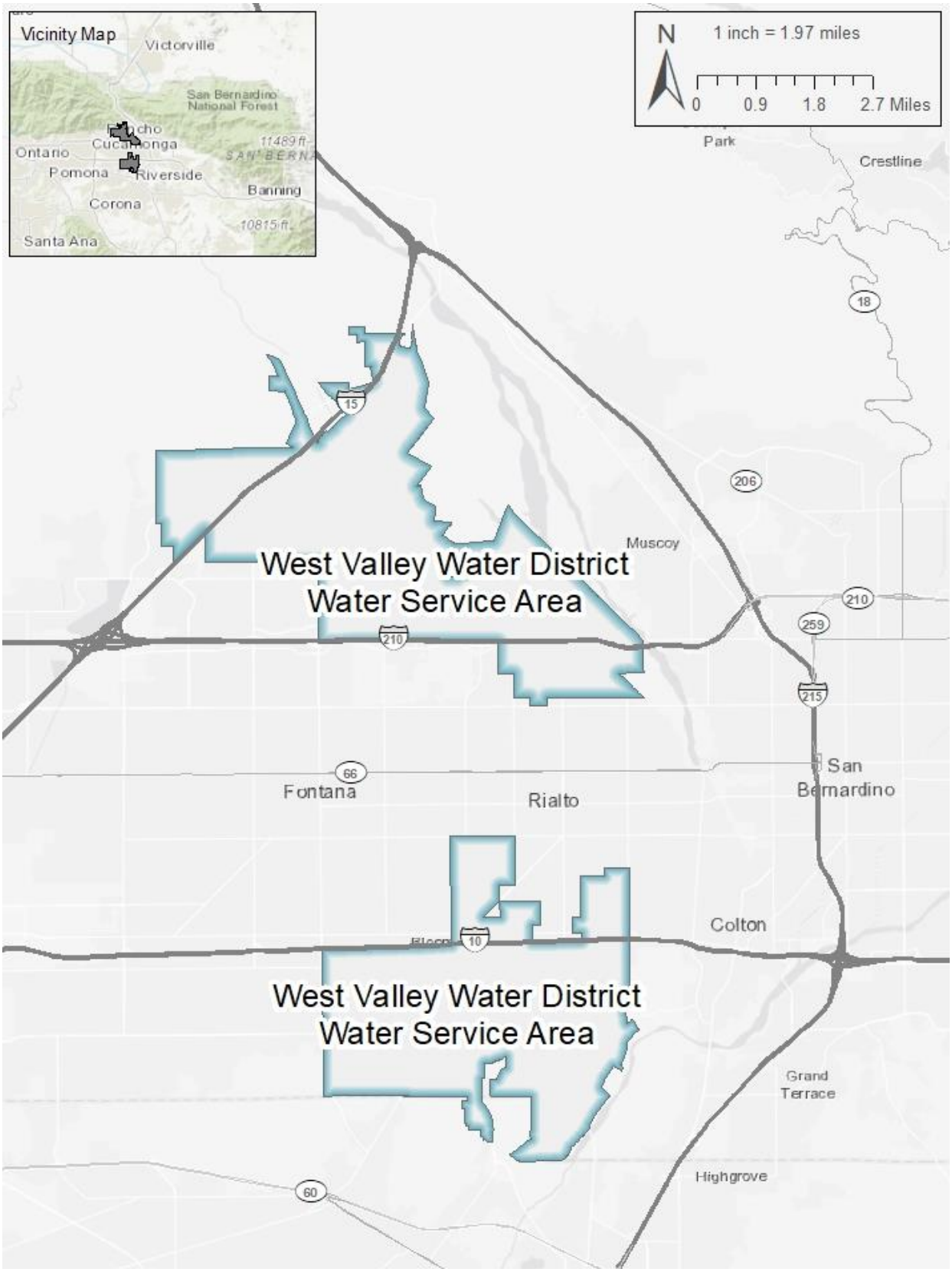


Figure 10-1: West Valley Water District Water Service Area Map

10.1.1 Population

For the purposes of consistent reporting of population estimates, the California Department of Water Resources (DWR) has developed a GIS-based tool (DWR Tool) to estimate the population within a water agency's service area using census data and number of water service connections. The DWR Tool was used to intersect the service area boundary with census data to provide population estimates for 1990, 2000, and 2010. The DWR Tool uses the number of service connections in those prior census years, where available, to calculate a persons-per-connection factor, which is then projected forward to estimate population in a given year using the number of connections in that year. The service area population for 2020 was estimated in the DWR Tool using the number of connections in 2010 and 2020.

To align with population projections in other recent planning documents, the 2020 WVWD Water Facilities Master Plan (WFMP) was used as the basis for estimating the population for future years. The WFMP projected the population in each year from 2018 to 2046, using a growth rate between 4.4% and 3.6% between 2018 and 2023, and a 1.5% growth rate after 2023. Using these assumptions from the WFMP, a uniform geometric growth rate of 2.84% was calculated for the period of 2020 and 2025. The 2.84% annual growth rate was applied to the DWR Tool 2020 population output to determine the 2025 population projection for this UWMP. The 1.5% annual growth rate was applied to the 2025 population projection to determine population projections for each 5-year period after 2025. Estimated 2020 and future year population is shown in **Table 10-1**.

WVWD prepared its WFMP population projection for years 2018-2023 based on District staff's knowledge of upcoming developments as well as land use data. Furthermore, WVWD prepared its population projection for years 2024 through 2046 based on data from the Southern California Association of Governments (SCAG) 2012 Regional Transportation Plan which, with GIS analysis, was used to determine the population growth rate of 1.5% within the WVWD service area. SCAG prepared demographic forecasts based on land use data for their region through extensive processes that emphasize input from local planners and is done in coordination with local or regional land use authorities, incorporating essential information to reflect anticipated future populations and land uses. SCAG's projections undergo extensive local review, incorporate zoning information from city and county general plans, and are supported by Environmental Impact Reports.

As a comparison, a GIS analysis performed on SCAG's population data from the 2020 Connect SoCal Plan resulted in a future growth rate of 1.4% within the WVWD service area, just slightly below the SCAG projection from the 2012 Regional Transportation Plan. WVWD opted to use a future growth rate of 1.5% in order to maintain consistency throughout planning documents and because rapid growth has been occurring in the service area.

Table 10-1: DWR 3-1R Current and Projected Population

POPULATION SERVED	2020	2025	2030	2035	2040	2045
Total	**89,101**	**102,490**	**110,410**	**118,943**	**128,136**	**138,039**

10.1.2 Land Use

Per the 2020 WFMP, 29% of land within the WVWD service area is residential, 2% is commercial, 5% is public and institutional, 20% is industrial, 2% is utilities and other rights of way, 1% is landscape irrigation, 10% is open space, and 31% is vacant and undeveloped land.

10.2 Water Use

This section describes current and projected water uses within WVWD's service area. WVWD serves potable water for municipal and industrial use, and currently does not serve recycled or other non-potable water.

10.2.1 Water Use by Sector

WVWD categorizes its water customers into ten categories for the purposes of billing: Single Family, Multi-Family, Commercial, Industrial, Institutional, Landscape Irrigation, Hydrant, Golf Course, Fire Service, and Agricultural Irrigation. Hydrant connections are not actually permanent service connections but represent the amount of individual accounts that were opened that receive water directly from fire hydrants, such as for construction water. The number of active connections in each category from 2016 to 2020 are shown in **Table 10-2**.

WVWD delivers wholesale water through an interconnection with Marygold Mutual Water Company.

Table 10-2: West Valley Water District 2016-2020 Connections by Customer Class

CUSTOMER CLASS	2016	2017	2018	2019	2020
Single Family	19,385	19,814	20,280	20,759	21,362
Multi-Family	159	159	159	158	179
Commercial	525	532	541	551	571
Industrial	70	70	70	69	67
Institutional	97	97	97	97	95
Landscape Irrigation	343	357	377	396	421
Hydrant[1]	64	73	90	99	88
Golf Course	1	1	1	-	-
Fire Service	300	311	323	343	360
Agricultural Irrigation	10	10	8	8	8
Wholesale Water	1	1	1	1	1
TOTAL	**20,890**	**21,351**	**21,856**	**22,381**	**23,063**

[1]Hydrant connections represent accounts opened temporarily to receive delivery of water from hydrants.

10.2.1.1 Past Water Use

WVWD's actual water use by customer class from 2016-2020 is shown in **Table 10-3**. WVWD's water consumption by customer class in the last five years is shown in **Figure 10-2**. Approximately 62% of WVWD's total deliveries were to residential connections.

Table 10-3: 2016-2020 Actual Water Use (AF)

CUSTOMER CLASS	2016	2017	2018	2019	2020
Single Family	9,614	10,624	11,027	10,493	12,049
Multi-Family	469	468	472	487	481
Commercial	1,395	1,544	1,659	1,618	1,689
Industrial	661	725	732	592	623
Institutional	789	954	984	830	860
Landscape Irrigation	1,383	1,642	1,740	1,664	2,161
Hydrant	169	258	586	385	272
Golf Course	-	-	-	-	-
Fire Service	1	4	4	3	5
Agricultural Irrigation	105	101	92	63	70
Water Losses	1,243	545	1,016	2,011	1,889
TOTAL	**15,830**	**16,866**	**18,311**	**18,148**	**20,098**

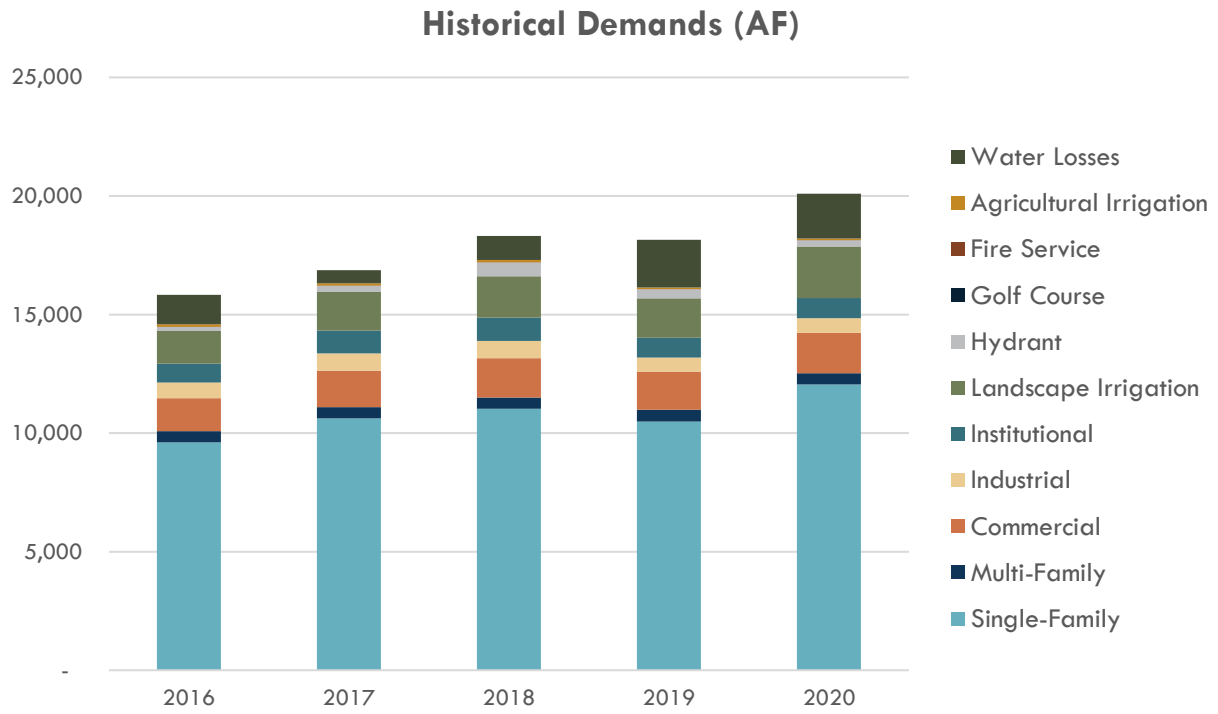


Figure 10-2: WVWD 2016-2020 Water Consumption by Customer Class (AF)

10.2.1.2 Distribution System Water Losses

Distribution system water losses are the physical potable water losses from the water system, calculated as the difference between water produced and the amount of water billed to customers plus other authorized uses of water.

Sources of water loss include:

- **Leaks from water lines.** Leakage from water pipes is a common occurrence in water systems. A significant number of leaks remain undetected over long periods of time as they are very small; however, these small leaks contribute to the overall water loss. Aging pipes typically have more leaks.
- **Water used for flushing and fire hydrant operations.**
- **Unauthorized uses or theft of water.**
- **Customer Meter Inaccuracies.** Customer meters can under-represent actual consumption in the water system.

WVWD monitors its water loss and prepares an annual AWWA Water Audit, attached in **Part 4, Appendix J-8**, to estimate the volume of water loss. The results of the water audits from 2016 to 2019 are shown in **Table 10-4**. The 2020 water loss is estimated based on the difference between production and consumption for 2020.

WVWD will complete a 2020 AWWA Water Audit by October 1, 2021 in accordance with reporting requirements to the State.

Table 10-4: DWR 4-4R 12 Month Water Loss Audit Reporting (AF)

REPORT PERIOD START DATE		
MM	YYYY	VOLUME OF WATER LOSS
1	2016	1,906
1	2017	2,176
1	2018	1,664
1	2019	1,802
1	2020	1,889 (Estimated)

In the past 5 years, WVWD's water loss has ranged from 9% - 13% of water sales. For the purposes of future water use projections, water loss is assumed to be 12% of projected water sales.

WVWD is committed to managing system water losses to reduce water waste and will endeavor to meet the future water loss performance standard that is being developed by the State Water Board. Programs to manage water loss are described in **Section 10.8.1.5**. These programs will increase the efficiency of the water distribution system by decreasing future water losses; however, water losses cannot be prevented entirely.

10.2.2 Projected Water Use

A demand forecast tool was developed to estimate future demands based on individual customer categories and connections, with the ability to forecast how future changes in indoor and outdoor water use may impact overall water use within each different customer type for current and future customers.

The tool has three steps to project demand:

1. Establish a demand factor per connection for each customer class based on historical consumption data.
2. Project the number of new connections anticipated for each customer class in each 5-year period after 2020.
3. Modify demand factors as appropriate to account for expected changes in future water use.

The demand factors for each customer class were based on connection and demand data from calendar year 2020, which was reviewed against demand factors from other years and determined to be a reasonable representation of average demands. The number of future new

connections for each customer category was estimated for each 5-year period through 2045 based on the projected population growth rate for the period determined from the WFMP.

To estimate future water use for each customer category, the demand factor is multiplied by the number of estimated new connections and added to the 2020 use of existing customers in that category. This process is applied to each customer type, then all of the category results are added to estimate the total future water use. Projected future demands by customer class as well as estimated losses are presented in **Table 10-5**, **Table 10-6**, and **Figure 10-3**.

Table 10-5: DWR 4-2R Projected Demands for Water

	PROJECTED WATER USE				
CUSTOMER CLASS	2025	2030	2035	2040	2045
Single-Family	13,859	14,791	15,722	16,653	17,584
Multi-Family	553	591	628	665	702
Commercial	1,943	2,073	2,204	2,334	2,465
Industrial	717	765	813	861	909
Institutional	989	1,056	1,122	1,189	1,255
Landscape Irrigation	2,485	2,652	2,819	2,986	3,153
Hydrant	313	334	355	376	397
Golf Course	-	-	-	-	-
Fire Service	5	6	6	7	7
Agricultural Irrigation	81	86	92	97	103
Water Losses	2,513	2,682	2,851	3,020	3,189
TOTAL	**23,459**	**25,035**	**26,611**	**28,188**	**29,764**

Table 10-6: DWR 4-3R Total Gross Water Use

-	2020	2025	2030	2035	2040	2045
Potable and Raw Water From Table 4-1R and 4-2R	20,098	23,459	25,035	26,611	28,188	29,764
Recycled Water Demand From Table 6-4R	-	-	-	-	-	-
TOTAL WATER USE	**20,098**	**23,459**	**25,035**	**26,611**	**28,188**	**29,764**

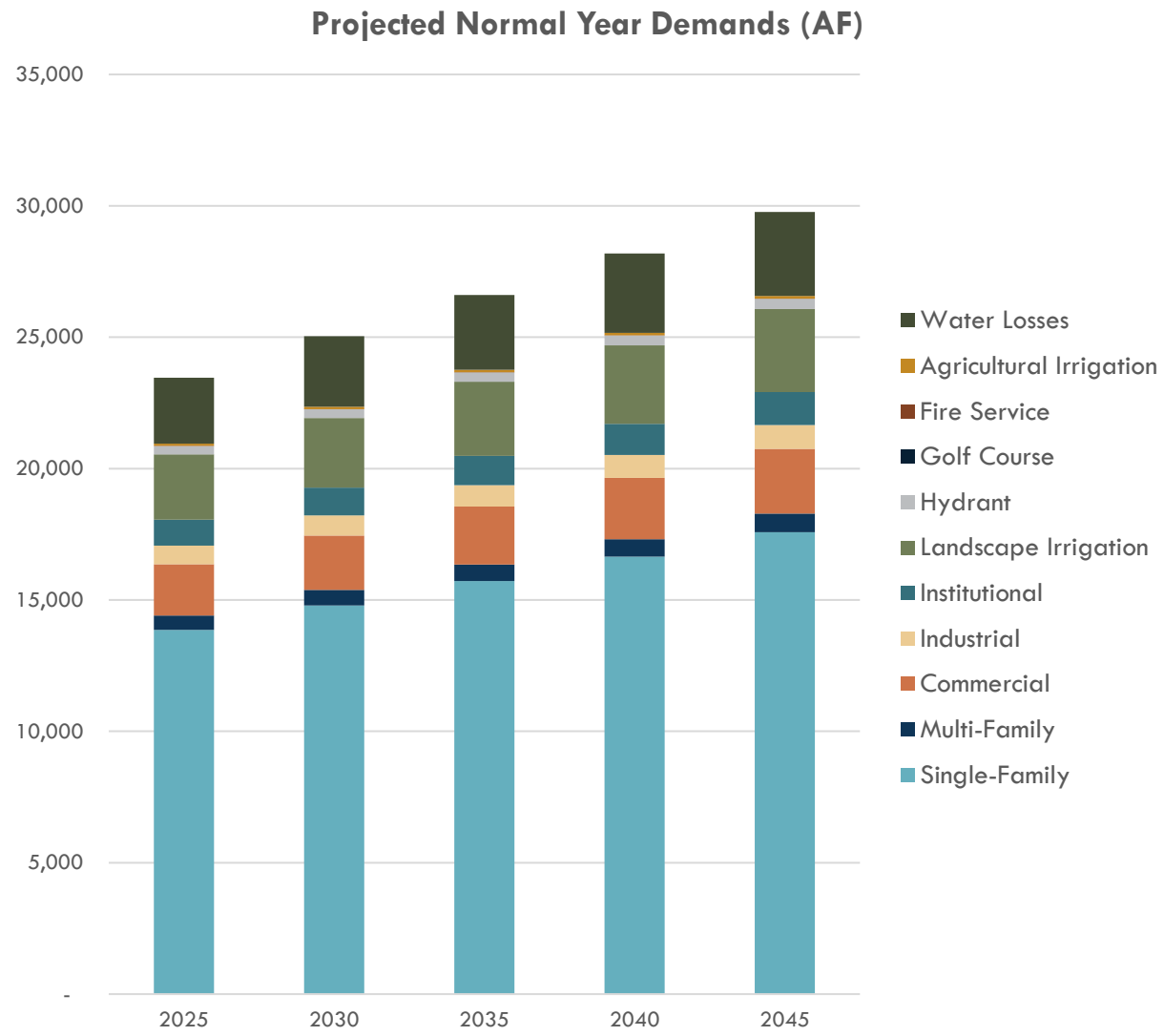


Figure 10-3: WVWD Projected Future Water Consumption by Customer Class (AF)

10.2.2.1 Estimating Future Water Savings

The demand tool used to project future water use has the capability to modify demand factors for both new and existing connections to quantify reductions in current and future customer demand that may occur as a result of active conservation programs implemented by WVWD or passive savings from more water efficient fixtures and landscapes that are required by current and future building codes and standards. WVWD may use this tool in the future to consider the impacts of changing customer water use on overall demand; however, WVWD has elected not to incorporate demand reductions from future conservation programs and passive savings from codes and standards into the demand projections at this time. In 2018, the legislature enacted SB 606 and AB 1668, which provide for implementation of a water budget-based approach to

establishing new urban water use objectives for water suppliers. The series of water use efficiency standards that will inform calculation of WVWD's new water use objective are still under development and will take effect in 2023. Once the new standards have been established, WVWD will reevaluate customer demands and identify approaches to comply with the new standard, which will be incorporated into the next UWMP prepared in 2025. WVWD is committed to promoting water use efficiency and will continue to implement a comprehensive set of programs intended to reduce customer demands and support sustainable use of regional water supplies.

10.2.3 Water Use for Lower Income Households

Senate Bill 1087 requires that water use projections in an UWMP include the projected water use for single-family and multi-family residential housing for lower income households as identified in the housing element of any city, county, or city and county in the service area of the supplier. WVWD serves portions of five jurisdictions: the City of Rialto, the City of Fontana, the City of Colton, the City of Jurupa Valley, and unincorporated San Bernardino county.

Based on SCAG's 6th cycle final regional housing needs allocation (RHNA), it is estimated that the weighted percentage estimate of very-low and low-income households in the WVWD service area is 44 percent. Therefore, it is assumed that 44 percent of future residential demands will come from very-low and low-income households. These demands have been included in the projections presented throughout this report.

10.2.4 Climate Change Considerations

A topic of growing concern for water planners and managers is climate change and the potential impacts it could have on California's future water supplies.

Recent climate change modeling for the SAR watershed suggests that a changing climate will have multiple effects on the Region. Adaptation and mitigation measures will be necessary to account for these effects. **Part 1 Chapter 2** includes an assessment of the potential impacts of climate change.

10.3 SBX7-7 Baseline and Targets

With the adoption of SBX7-7, also known as the Water Conservation Act of 2009, the State of California was required to reduce urban per capita water use by 20% by 2020. This section summarizes the past targets the WVWD developed and demonstrates that compliance by 2020 was achieved.

Water use targets were developed in terms of gallons per capita per day, or GPCD, which is calculated by dividing the total water from all customer categories by the population.

DWR has prepared standardized tables to record and document the calculations required for this section. The standardized tables for WVWD's calculations are included in **Part 4 Appendix J-7**.

10.3.1 Baseline and Target

WVWD's baseline and 2020 target was calculated in the 2015 RUWMP and has not changed for this plan. More details on the development of the baselines and target can be found in the 2015 RUWMP and **Part 4 Appendix J-7**. WVWD's calculated water use target for 2020 is 232 GPCD.

10.3.2 2020 Compliance Daily Per-Capita Water Use (GPCD)

Through the implementation of its active water conservation program, WVWD has met its Confirmed Water use Target for 2020 of 232 GPCD, as shown in **Table 10-7**. To maintain this level of water use, WVWD intends to continue its current level of outreach and programs for the foreseeable future.

Table 10-7: SBX 7-7 2020 Compliance

2020 WATER USE TARGET GPCD	ACTUAL 2020 GPCD	SUPPLIER ACHIEVED TARGETED REDUCTION IN 2020?
232	201	Yes

10.4 Water Supply

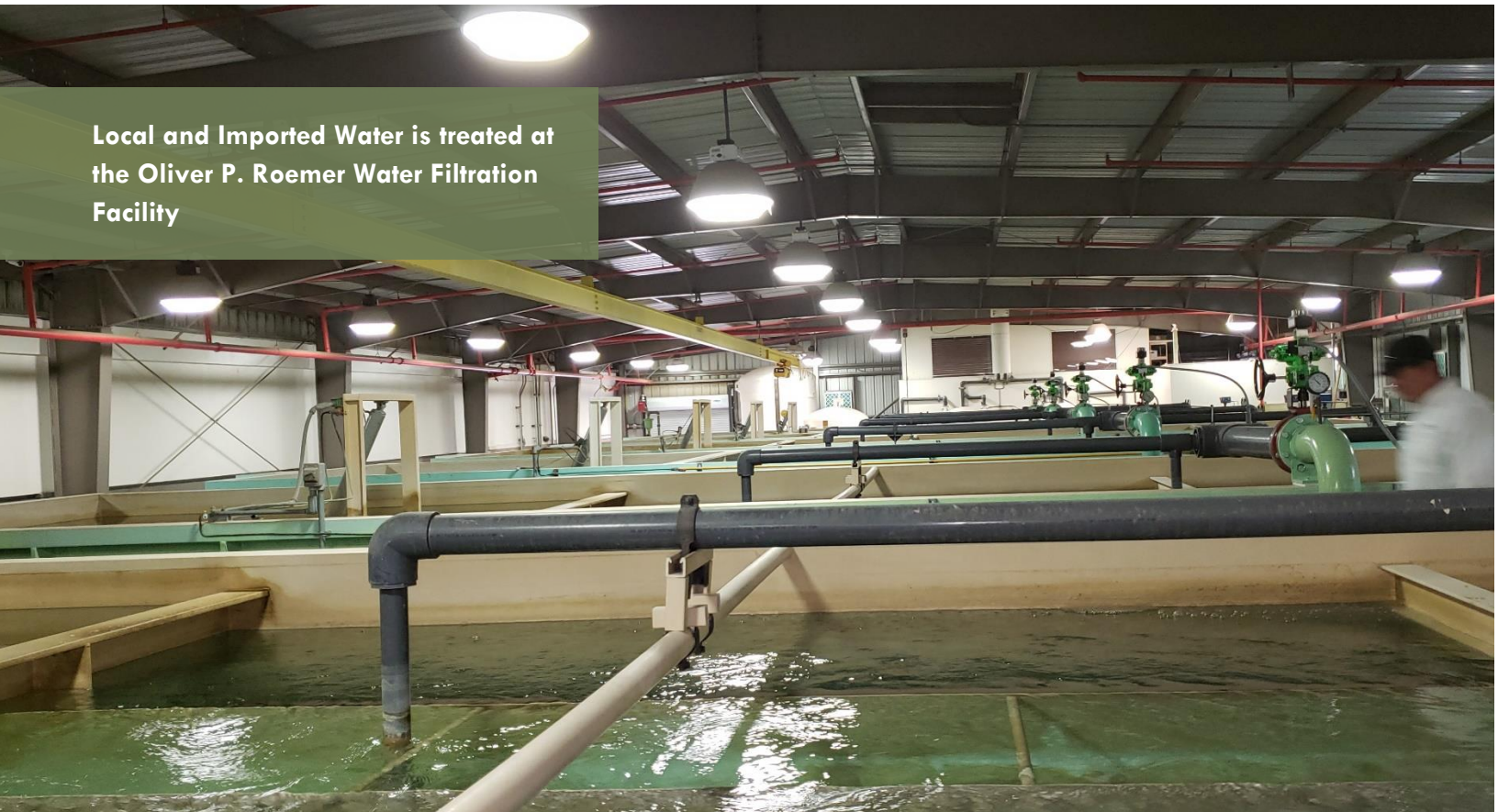
WVWD utilizes three primary sources for drinking water supply: local surface water from flows on the east side of the San Gabriel Mountains, including North Fork Lytle Creek, Middle Fork Lytle Creek, and South Fork Lytle Creek; groundwater; and imported water from the State Water Project (SWP).

More information about local surface water and groundwater basins is included in **Part 1 Chapter 3** of the 2020 IRUWMP.

10.4.1 Purchased or Imported Water

WVWD receives SWP water from Valley District through the Lytle Turnout off the San Gabriel Feeder Pipeline. Metering and transmission facilities are sized to enable WVWD to purchase and treat up to 20 million gallons per day (MGD), approximately 23,000 AFY, at final treatment plant expansion. SWP water is treated at the District's Oliver P. Roemer Water Filtration Facility (WFF) and used for potable supply, and WVWD is investigating the use of SWP water for groundwater recharge in the Lytle Creek Basin. In 2006 the WFF was expanded to increase production capacity to 14.4 MGD. In 2020, WVWD began the design of a 7.2 MGD expansion of the WFF to increase capacity to 21.6 MGD. WVWD has been utilizing SWP water through the Lytle Turnout since 1999.

WVWD does not have a specific allocation of SWP water from Valley District but expects to receive the projected volumes of SWP under most conditions. A description of this supply and its reliability is provided in **Part 1 Chapter 3 and Chapter 5**. This supply is not guaranteed so WVWD maintains 100% reliability from other sources.



Local and Imported Water is treated at the Oliver P. Roemer Water Filtration Facility

10.4.2 Groundwater

WVWD draws the majority of its water supply from its wells. WVWD can extract groundwater from five regional groundwater basins: Bunker Hill and Lytle Creek (which are both part of the San Bernardino Basin or SBB), Rialto-Colton, Riverside North, and Chino Basins. All five basins have been adjudicated and are managed for long term sustainability, as discussed further in **Part 1 Chapter 3**. WVWD's historical production for the past five years is shown in Table 10-8.

10.4.2.1 Bunker Hill and Lytle Creek (Part of SBB)

WVWD produces groundwater from the SBB, described in detail in **Part 1 Chapter 3**. Per the Western-San Bernardino Judgement, WVWD is not limited in the amount of groundwater they can produce from the SBB. Restrictions on WVWD's rights from the SBB are that the water must be used within the boundaries of Valley District.

10.4.2.1.1 Baseline Feeder

In addition to its own wells in SBB, WVWD also receives Bunker Hill Sub-basin water from the Baseline Feeder.

In 1991 WVWD entered into a joint venture agreement with Valley District, the City of Rialto and the Riverside Highland Water Company to construct the Baseline Feeder. The Baseline feeder is a 48- inch transmission main with a capacity of 60 MGD designed to transport water from the Bunker Hill basin west to the WVWD area. WVWD has a contract with Valley District for delivery of 5,000 AFY to be provided by Valley District. West Valley owns 33 percent of the pipeline from Meridian Avenue and Baseline Road to Cactus Avenue and Baseline Road. In 1991 WVWD and the City of Rialto entered into an agreement with SBVMWD to participate in the financing of reaches one and two of the pipeline. The WVWD and the City of Rialto were then obligated to purchase 5,000 AFY and 2,500 AFY respectively, at an approximate cost of $130 to 140 per acre foot for 20 years.

In 2012, the parties to the agreement entered into a Restated and Amended Agreement to jointly construct, operate, and maintain a 1.0-million-gallon reservoir and booster station to boost water from two new wells in the 9th Street and Lytle Creek Wash area into the Baseline Feeder. The reservoir is used to remove entrapped air from the well discharges.

All water delivered through the Baseline Feeder is Bunker Hill groundwater and is included in West Valley's total Bunker Hill production for the purposes of this plan.

10.4.2.2 Rialto-Colton

WVWD has groundwater extraction rights in the Rialto-Colton Basin, specifically within the boundary of the 1961 Rialto Decree, discussed in more detail in **Part 1 Chapter 3**. In any year in which the average of the elevation of the spring-high water level, measured in March, April, and May, in the three index wells is above 1002.3 feet msl, WVWD has no restrictions on yearly extractions. When the average standing water levels in the three index wells falls below 1002.3 feet msl and is above 969.7 feet msl, WVWD is restricted to total groundwater extractions of

6,104 AFY. When the average of the three index wells drops below 969.7 feet msl, ground water extractions are reduced for all parties stipulated in the decree by 1 percent per foot below the 969.7-foot level, but not to exceed 50-percent reduction.

WVWD has a total water right allocation in the Rialto Basin of 6,104 AFY, including 510 AFY that are fixed rights and 5,594 AFY that are adjustable and subject to a percent reduction each year based on groundwater levels in the index wells. Over the previous 10 years, the percent reduction has ranged from 7 percent in 2010 to 29 percent in 2020. For the purposes of this plan, WVWD and the other agencies who pump from the Rialto Basin are assuming a 30-percent reduction in adjustable rights in 2025 and a 2% gain in adjustable rights for every 5-year period thereafter based on planned recharge to increase water levels and adjustable rights.

> For 2025, WVWD's available water supply from the Rialto Basin is expected to be 4,426 AFY (510 AFY fixed plus 5,594 AFY reduced by 30 percent). By 2045, the average water supply is assumed to increase to 4,873 AFY.

As discussed further in **Part 1 Chapter 3**, WVWD participates in the Rialto Basin Groundwater Council (Rialto Basin GC), which was formed in 2021. The Rialto Basin GC will develop, adopt, and implement a sustainable groundwater management plan, which will include implementing groundwater recharge projects to restore groundwater levels.

10.4.2.3 Riverside North

WVWD also produced water from the Riverside North groundwater basin. This basin was discussed further in **Part 1 Chapter 3**.

10.4.2.4 Chino Basin

WVWD owns rights to approximately 900 AF of production in the Chino Basin. Due to water quality constraints this supply is not currently being used. In the near term, WVWD is looking at options to utilize their water rights in this basin including nitrate treatment and the delivery of this supply through interties with other agencies. By 2030, WVWD may use the supply directly.

Table 10-8: DWR 6-1R Groundwater Pumped Last Five Years (AF)

GROUNDWATER TYPE	LOCATION OR BASIN NAME	2016	2017	2018	2019	2020
Alluvial Basin	Bunker Hill (part of SBB)	5,452	5,640	5,777	4,508	5,549
Alluvial Basin	Lytle (part of SBB)	1,850	2,365	2,416	2,572	3,078
Alluvial Basin	Chino	-	-	-	-	-
Alluvial Basin	Rialto-Colton	2,123	3,923	3,353	2,779	1,420
Alluvial Basin	Riverside-Arlington	2,745	1,089	1,542	1,301	1,354
	TOTAL	**12,170**	**13,017**	**13,088**	**11,159**	**11,401**

10.4.3 Surface Water

WVWD has the right to divert and export out of the Lytle Creek Region 2,290 gpm when it is available. WVWD can also purchase an additional 1,350 gpm of Lytle Creek flows through an agreement with the City of San Bernardino (San Bernardino is not able to utilize their surface water flows), which is treated at the Oliver P. Roemer WFF. WVWD also utilizes small amounts of Lytle Creek surface water flows for groundwater recharge in the Lytle Creek Basin.

When the flows at the mouth of Lytle Creek Canyon drop below 7,182 gpm (798 miners inches), all diversion rights holders must reduce their diversions to a prorated schedule set in the 1897 decree. If WVWD is not receiving its full Lytle Creek surface water allotment, they are permitted to make up the difference by additional pumping in the Lytle Creek Region.

10.4.4 Stormwater

WVWD is participating in regional project planning efforts to capture additional stormwater for purposes of groundwater recharge to increase sustainability of the basins WVWD produces water from. These regional projects are discussed in **Part 1 Chapter 3**.

10.4.5 Wastewater and Recycled Water

The wastewater collected within different portions of the WVWD water service area is treated by the City of Rialto (City), the City of Colton, San Bernardino County, or the Inland Empire Utilities Agency. The majority of the wastewater collected in the WVWD service area goes to the City of Rialto Wastewater Treatment Plant (WWTP), which has a 12.0 MGD tertiary treatment plant capacity with a current flow of approximately 7 MGD. All of the City of Rialto's treatment plant effluent meets Title 22 for recycled water usage in restricted irrigation. A small amount of water is used for landscape irrigation and the rest is discharged into the Santa Ana River.

> It is estimated that approximately 57 percent or 4 MGD of the wastewater collected at City of Rialto WWTP was generated within WVWD's water service area in 2020.

Information about wastewater collected is presented in **Table 10-9**.

10.4.5.1 Potential, Current, and Projected Recycled Water Uses

WVWD has evaluated the feasibility of adding recycled water as a non-potable supply, but would rely on the City of Rialto or San Bernardino County to provide the recycled water from their wastewater treatment facilities.

In 2012, WVWD prepared a master plan to evaluate potential uses of recycled water within its service area. WVWD does not currently have a recycled water distribution system and is not pursuing recycled water use at this time because it is not cost effective to extend facilities from the wastewater treatment plants to the locations of potential use. However, recycled water is utilized regionally for meeting habitat needs in the Santa Ana River (see **Part 1 Chapter 3.4**).

Table 10-9: DWR 6-2R Wastewater Collected within Service Area in 2020 (AF)

WASTEWATER COLLECTION			RECIPIENT OF COLLECTED WASTEWATER			
NAME OF WASTEWATER COLLECTION AGENCY	WASTEWATER VOLUME METERED OR ESTIMATED	WASTEWATER VOLUME COLLECTED FROM UWMP SERVICE AREA IN 2020	NAME OF WASTEWATER AGENCY RECEIVING COLLECTED WASTEWATER	WASTEWATER TREATMENT PLANT NAME	WASTEWATER TREATMENT PLANT LOCATED WITHIN UWMP AREA	WWTP OPERATION CONTRACTED TO A THIRD PARTY
City of Rialto	Estimated	4,336	City of Rialto	Rialto Wastewater Treatment Plant	Yes	Yes
City of Colton	Estimated	532	City of Colton	Colton WWTP	No	No
San Bernardino County	Estimated	329	San Bernardino County	Lytle Creek North Water Reclamation Plant	No	No
Inland Empire Utilities Agency	Estimated	971	Inland Empire Utilities Agency	Recycled Plant No. 4	No	No
	TOTAL	**6,608**				

10.4.6 Water Exchanges and Transfers

WVWD is looking at options for the potential transfer of their Chino Basin water rights from agencies currently pumping Chino Basin water. WVWD does not anticipate any other regular or long-term transfers or exchanges, during the period covered by this Plan. Any transfer or exchanges would be as-needed related to an emergency.

10.4.6.1 Emergency Interties

WVWD currently has interconnections with the Cities of Rialto, Colton and San Bernardino, the Fontana Water Company, Marygold Mutual Water Company, and Valley District which can be utilized as needed for short-term supply needs. These connections are not typically used for extended periods.

10.4.6.2 Future Water Projects

To meet the future demands within the system, WVWD plans to rehabilitate existing wells, to drill new wells, and equip wells with wellhead treatment if required. These wells are planned for various groundwater basins and pressure zones within the distribution system.

Groundwater is not the only planned supply source to be utilized by WVWD to meet the anticipated future demands. WVWD is expanding the Oliver P. Roemer Water Filtration Facility by 7.2 MGD for a total capacity of 21.6 MGD to allow additional treatment of SWP water when available.

When planning future water supply sources, WVWD selects projects that will provide sufficient supply to meet peak day demands. When possible, these sources are planned by pressure zone, thereby reducing the need to lift water to a higher zone.

As development progresses and increased demands are placed on the system, WVWD will determine which projects to implement. Although WVWD may not need to utilize each source to its full potential, construction of these water supply projects gives WVWD this option should one or more sources be off line due to maintenance.

As part of the Rialto Basin GC, WVWD plans to collaborate with the other parties to implement groundwater recharge in the Rialto Basin to increase water levels. Increased water levels will result in an increase in WVWD's allowable pumping from the Rialto Basin, thereby increasing supply. The Rialto Basin GC will be developing a groundwater management plan that will identify recharge goals and projects and the potential supply increase is not yet quantified.

10.4.7 Summary of Existing and Planned Sources of Water

WVWD's water supply is comprised of local groundwater, surface water and SWP water. A similar mix of supplies is anticipated to be used in the future. The volume of water utilized from each source in 2020 is summarized in **Table 10-10** and projected supply by source is summarized in **Table 10-11**.

Table 10-10: DWR 6-8R Actual Water Supplies in 2020 (AF)

		2020		
WATER SUPPLY	ADDITIONAL DETAIL ON WATER SUPPLY	ACTUAL VOLUME	WATER QUALITY	TOTAL RIGHT OR SAFE YIELD
Groundwater (not desalinated)	Bunker Hill (part of SBB)	5,549	Drinking Water	See Note
Groundwater (not desalinated)	Lytle (part of SBB)	3,078	Drinking Water	See Note
Groundwater (not desalinated)	Rialto-Colton	1,420	Drinking Water	See Note
Groundwater (not desalinated)	Riverside-Arlington	1,354	Drinking Water	See Note
Surface water (not desalinated)	Lytle Creek	5,356	Drinking Water	
Purchased or Imported Water	State Water Project - Direct Delivery	3,342	Drinking Water	
-	**TOTAL:**	**20,098**		-

See Part 1 Chapter 3 for discussion of safe yield of regional groundwater basins.

Table 10-11: DWR 6-9R Projected Water Supplies (AF)

		PROJECTED WATER SUPPLY				
		2025	2030	2035	2040	2045
WATER SUPPLY	ADDITIONAL DETAIL ON WATER SUPPLY	REASONABLY AVAILABLE VOLUME	REASONABLY AVAILABLE VOLUME	REASONABLY AVAILABLE VOLUME	REASONABLY AVAILABLE VOLUME	REASONABLY AVAILABLE VOLUME
Groundwater (not desalinated)	Bunker Hill (part of SBB)	2,052	2,353	3,554	4,754	6,455
Groundwater (not desalinated)	Bunker Hill (part of SBB, via Baseline Feeder)	5,000	5,000	5,000	5,000	5,000
Groundwater (not desalinated)	Lytle (part of SBB)	2,900	2,900	2,900	2,900	2,900
Groundwater (not desalinated)	Rialto-Colton	4,426	4,538	4,650	4,761	4,873
Purchased or Imported Water	State Water Project - Rialto Colton Groundwater Supplemental Supply	-	-	-	-	-
Groundwater (not desalinated)	Riverside-Arlington	2,500	3,000	3,500	4,000	4,000
Groundwater (not desalinated)	Chino	-	900	900	900	900
Surface water (not desalinated)	Lytle Creek	3,100	3,100	3,100	3,100	3,100
Purchased or Imported Water	State Water Project - Direct Delivery	7,000	7,000	7,000	7,000	7,000
	TOTAL:	26,978	28,791	30,603	32,415	34,229

Supplies shown in this table are planned pumping or diversions, except supplies from San Bernardino Basin are increased to meet the Total Supply Target with 15% Reliability Factor.

Table 10-12: DWR 7-2R Normal Year Supply and Demand Comparison (AF)

-	2025	2030	2035	2040	2045
Supply Totals From Table 6-9R	26,978	28,791	30,603	32,415	34,229
Demand Totals From Table 4-3R	23,459	25,035	26,611	28,188	29,764
DIFFERENCE:	**3,519**	**3,756**	**3,993**	**4,227**	**4,464**

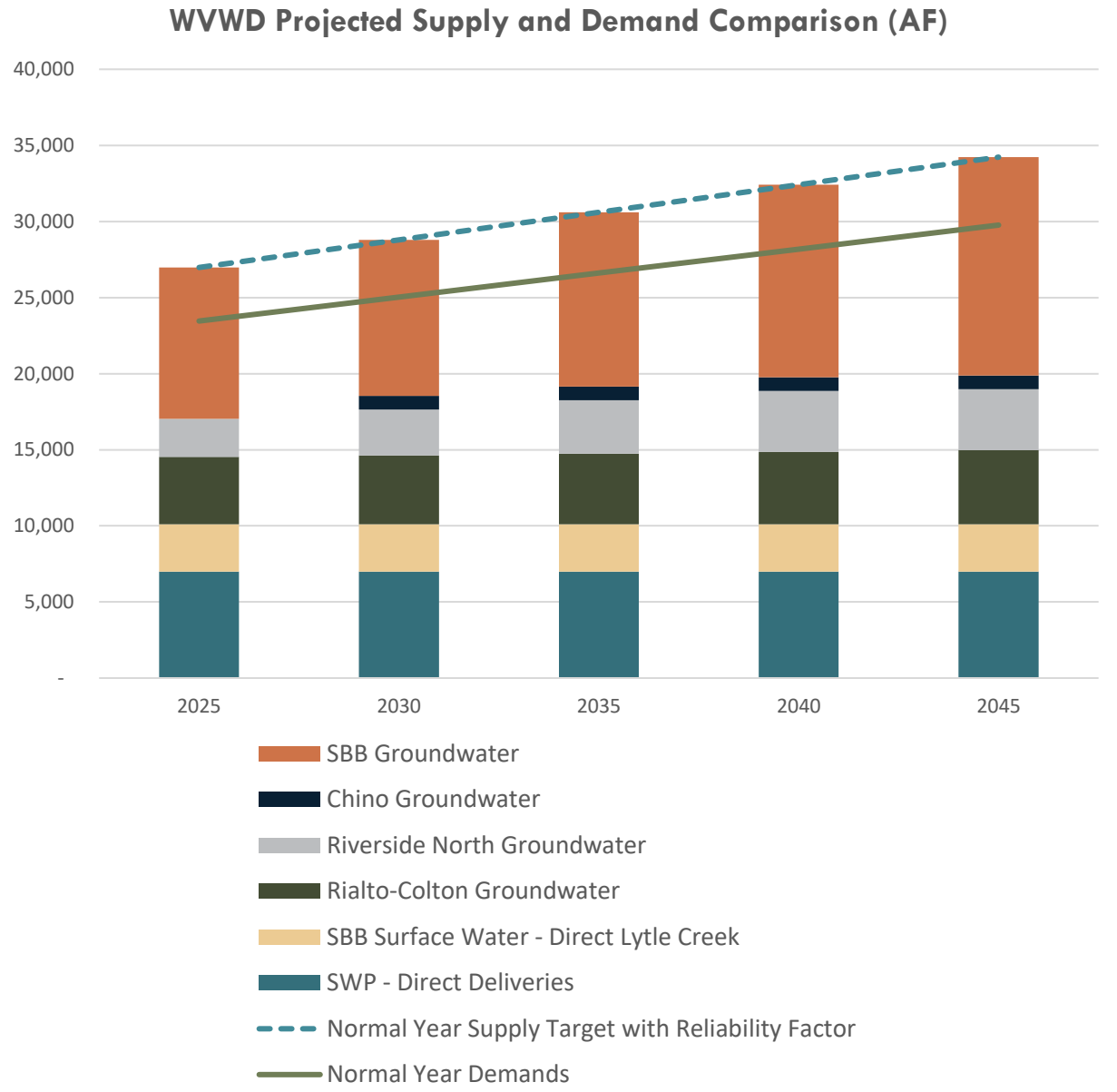


Figure 10-4. Projected Normal Year Supply and Demand Comparison (AF)

10.4.8 Energy Intensity

Reporting water energy intensity has many benefits for water utilities and their customers including:

- Identifying energy saving opportunities as energy consumption is often a large portion of the cost of delivering water.
- Calculating energy savings and greenhouse gas (GHGs) emissions reductions associated with water conservation programs.

- Potential opportunities for receiving energy efficiency funding for water conservation programs.
- Informing climate change mitigation strategies.
- Benchmarking of energy use at each water acquisition and delivery step and the ability to compare energy use among similar agencies.
- WVWD has a Hydroelectric plant that generates power from SWP water delivered and treated at the WFF. Power generated from the hydro plant is used to offset electricity used at the WFF.

In 2020, WVWD consumed 885.8 kWh of energy for water facilities per AF of water delivered.

10.5 Water Service Reliability Assessment

This section considers WVWD's water supply reliability during normal years, single dry years, and up to 5 consecutive dry water years. The supply reliability assessment discusses factors that could potentially limit the expected quantity of water available from WVWD's current source of supply through 2045.

Influent and Effluent Pump Stations at the Oliver P. Roemer Water Filtration Facility

10.5.1 Constraints on Water Sources

During times of State-wide drought conditions, the availability of SWP water may be reduced. These conditions are normally anticipated in advance to an extent, providing WVWD with the opportunity to plan for the reduced supply. During a drought period when SWP supplies are reduced, Valley District prioritizes direct deliveries to the water treatment plants, including WVWD's, but if deliveries are reduced, WVWD will shift to other local supplies.

The local groundwater and surface water supplies are influenced by annual precipitation. In extended drought conditions, the surface water supplies in the Lytle Creek region can be severely impacted. In addition, groundwater levels in the Lytle Creek Basin have been known to drop over 300 feet during extended drought periods. As a result, WVWD transitions to groundwater produced from the Bunker Hill Sub-basin when surface water and groundwater supplies from the Lytle Creek region are limited.

WVWD's pumping rights in the Rialto Basin are determined by groundwater levels. While WVWD and the Rialto Basin GC plan to recharge the basin to increase water levels, WVWD's pumping rights could be reduced if groundwater levels decline.

If WVWD's other supplies are reduced, they can shift production to the Bunker Hill or Riverside North basins if additional supply is needed.

Some of the WVWD's wells have been impacted by arsenic, perchlorate, MTBE, 1,2,3-TCP, and volatile organic carbons (VOCs). WVWD has implemented wellhead treatment as needed and continues to monitor groundwater contamination and the movement of groundwater contaminant plumes. These past and ongoing groundwater treatment projects have demonstrated that treatment is an economically viable alternative for handling arsenic, perchlorate and VOCs. Based on current conditions, water quality is not anticipated to affect WVWD supply reliability. However, water quality issues are constantly evolving. WVWD will take action to protect and treat supply when needed, but it is well recognized that water quality treatment can have significant costs. These water quality issues are further discussed at a regional level in **Part 1 Chapter 3**.

10.5.2 Year Type Characterization

In general, groundwater is less vulnerable to seasonal and climatic changes than surface water (i.e. local and imported) supplies. The Western-San Bernardino Watermaster, in collaboration with the BTAC, monitor groundwater levels and implement supplemental recharge to maintain long term sustainability of local groundwater sources. Further discussion of regional water resource management is included in **Part 1 Chapter 3**.

Per UWMP requirements, WVWD has evaluated reliability for an average year, single dry year, and a 5 consecutive dry year period. The UWMP Act defines these years as:

- **Normal Year:** this condition represents the water supplies a supplier considers available during normal conditions. This could be a single year or averaged range of years that most closely represents the average water supply available.
- **Single Dry Year:** the single dry year is recommended to be the year that represents the lowest water supply available.
- **Five-Consecutive Year Drought:** the driest five-year historical sequence for the Supplier, which may be the lowest average water supply available for five years in a row.

10.5.3 Water Service Reliability

The results of the reliability assessment are summarized in the tables below.

Under single dry and consecutive dry year conditions, the assessment assumes that demands will increase by as much as 10% due to increased outdoor water use. Although water use may decrease in the later years of a multiple year drought due to implementation of conservation measures and drought messaging, the assessment is based on a 10% increase throughout the 5-year drought to be conservative.

As described in **Part 1, Chapter 3**, the effects of a local drought are not immediately recognized since the region uses the local groundwater basins to simulate a large reservoir for long term storage. While pumping rights from the Rialto Basin and available surface water may be reduced in dry years, WVWD is able to pump additional groundwater from Bunker Hill, Lytle and Riverside North to meet total demands in dry years and participates in efforts to replenish the basins with imported and local water through regional recharge programs. WVWD's total groundwater supplies are not reduced in dry years so 2020 is considered the base year for all year types. Based on the analysis, WVWD does not anticipate any shortage due to single or consecutive dry years. Even though localized drought conditions should not affect supply, WVWD participates in several ongoing water conservation measures and regional recharge projects to optimize and enhance the use and reliability of regional water resources. WVWD also has a water shortage contingency plan to put into action as appropriate to reduce the demand during critical drought years or other supply emergencies.

A summary of the basis of water year data is presented in **Table 10-13.** The percent of average supply increases in drought years because WVWD's groundwater production will increase to meet an assumed increase in demands.

Table 10-13. DWR 7-1R Basis of Water Year Data

YEAR TYPE	BASE YEAR	AVAILABLE SUPPLY IF YEAR TYPE REPEATS AS PERCENT OFAVERAGE SUPPLY
Average Year	2020	100%
Single-Dry Year	2020	110%
Consecutive Dry Years 1st Year	2020	110%
Consecutive Dry Years 2nd Year	2020	110%
Consecutive Dry Years 3rd Year	2020	110%
Consecutive Dry Years 4th Year	2020	110%
Consecutive Dry Years 5th Year	2020	110%

The projected supply and demand during a normal year are shown in **Table 10-12**.

The projected supply and demand during a single dry year are shown in **Table 10-14**. WVWD's demands in single dry years are assumed to increase by 10% above normal year demands. The local groundwater basins WVWD produces water from have storage for use in dry years so WVWD can produce the volume of water needed to meet 100% of demands in single dry years. WVWD's supplies are 100% reliable during single dry years.

Table 10-14. DWR 7-3R Single Dry Year Supply and Demand Comparison (AF)

-	2025	2030	2035	2040	2045
Supply Totals	29,676	31,670	33,663	35,657	37,651
Demand Totals	25,805	27,539	29,273	31,006	32,740
DIFFERENCE:	**3,871**	**4,131**	**4,391**	**4,651**	**4,911**

The projected supply and demand during five consecutive dry years are shown in **Table 10-15**. WVWD's demands in multiple dry years are assumed to increase by 10% above normal year demands. The local groundwater basins WVWD produces water from have storage for use in dry years so WVWD can produce the volume of water needed to meet 100% of demands in multiple dry years. WVWD's supplies are 100% reliable during multiple dry years.

Table 10-15. DWR 7-4R Multiple Dry Years Supply and Demand Comparison

		2025	2030	2035	2040	2045
First	Supply Totals	29,676	31,670	33,663	35,657	37,651
Year	Demand Totals	25,805	27,539	29,273	31,006	32,740
	DIFFERENCE:	**3,871**	**4,131**	**4,391**	**4,651**	**4,911**
Second	Supply Totals	29,676	31,670	33,663	35,657	37,651
Year	Demand Totals	25,805	27,539	29,273	31,006	32,740
	DIFFERENCE:	**3,871**	**4,131**	**4,391**	**4,651**	**4,911**
Third	Supply Totals	29,676	31,670	33,663	35,657	37,651
Year	Demand Totals	25,805	27,539	29,273	31,006	32,740
	DIFFERENCE:	**3,871**	**4,131**	**4,391**	**4,651**	**4,911**
Fourth	Supply Totals	29,676	31,670	33,663	35,657	37,651
Year	Demand Totals	25,805	27,539	29,273	31,006	32,740
	DIFFERENCE:	**3,871**	**4,131**	**4,391**	**4,651**	**4,911**
Fifth	Supply Totals	29,676	31,670	33,663	35,657	37,651
Year	Demand Totals	25,805	27,539	29,273	31,006	32,740
	DIFFERENCE:	**3,871**	**4,131**	**4,391**	**4,651**	**4,911**

10.6 Drought Risk Assessment

The Drought Risk Assessment (DRA) is a new analysis required for the 2020 UWMP, with a focus on the five-year consecutive drought scenario beginning in 2021. Because WVWD relies on groundwater basins with significant storage, available supplies do not vary on a monthly or seasonal basis, so this analysis is conducted on an annual basis. Projected demands and supplies from 2021-2025 are shown in **Table 10-16.**

Demands for 2021 – 2025 were assumed to increase at a uniform rate between the 2020 actual use and 2025 projected use and were then increased by 10% to reflect higher anticipated demands during dry years. This DRA uses the same water supply reliability assumptions used in the Water Service Reliability Assessment described in **Section 10.5** and the 15% Reliability Factor is also applied to supplies in this DRA, therefore, this analysis shows a 15% supply surplus for WVWD. WVWD can produce additional groundwater to meet any increases in demand in dry years. As shown in **Part 1 Chapter 5**, the region as a whole has sufficient supplies to meet demands plus the 15% Reliability Factor, even in a 5-year drought. As shown in **Part 1 Chapter 5 Figure 5-1**, the SBB had over 4.8 million acre-feet in storage as of 2020 due to regional efforts to store water in wet years for use during dry years.

> Although projections in this Plan show that the regional water supplies are sufficient to meet the demands of WVWD and the Region as a whole, even during a 5-year drought (see Part 1 Chapter 5), WVWD remains committed to water conservation and to being a good steward of regional water resources to preserve supplies for the future due to the possibility of experiencing more severe droughts than anticipated in this Plan.

Table 10-16: DWR 7-5 Five-Year Drought Risk Assessment (AF)

2021	Gross Water Use	22,848
	Total Supplies	26,275
	SURPLUS	**3,427**
2022	Gross Water Use	23,587
	Total Supplies	27,125
	SURPLUS	**3,538**
2023	Gross Water Use	24,326
	Total Supplies	27,975
	SURPLUS	**3,649**
2024	Gross Water Use	25,066
	Total Supplies	28,825
	SURPLUS	**3,760**
2025	Gross Water Use	25,066
	Total Supplies	28,825
	SURPLUS	**3,760**

10.7 Water Shortage Contingency Plan

The Water Shortage Contingency Plan (WSCP), which is a strategic plan that WVWD uses to prepare for and respond to foreseeable and unforeseeable water shortages. A water shortage occurs when water supply available is insufficient to meet the normally expected customer water use at a given point in time. A shortage may occur due to a number of reasons, such as water supply quality changes, climate change, drought, regional power outage, and catastrophic events (e.g., earthquake). Additionally, the State may declare a statewide drought emergency and mandate that water suppliers reduce demands, as occurred in 2014. The WSCP serves as the operating manual that WVWD will use to prevent catastrophic service disruptions through proactive, rather than reactive, mitigation of water shortages. The WSCP provides a process for an annual water supply and demand assessment and structured steps designed to respond to actual conditions. The level of detailed planning and preparation provide accountability and predictability and will help WVWD maintain reliable supplies and reduce the impacts of any supply shortages and/or interruptions.

The WSCP was prepared in conjunction with the 2020 IRUWMP and is a standalone document that can be modified as needed. WVWD's WSCP is attached as **Part 4 Appendix J-9**.

10.8 Demand Management Measures

The Demand Management Measures (DMMs) section provides a comprehensive description of the water conservation programs that WVWD has implemented for the past five years, is currently implementing, and plans to implement in order to reduce demand. WVWD's current per-capita consumption is less than its 2020 compliance target. WVWD expects to continue to implement current conservation programs to encourage conservation and maintain per-capita consumption below the compliance target.

10.8.1 Existing Demand Management Measures

The following Section identifies the water demand management measures currently implemented or scheduled for implementation by WVWD. Water conservation programs and incentives offered by the City of Rialto will also benefit SBVMWD and WVWD. In order to effectively implement water conservation programs, WVWD collects data for customers within the WVWD Water Service area only. WVWD recognizes that demand management measures are important for the reliability of its water sources and has made a continued effort to comply with the DMMs required by the act.

10.8.1.1 Water Waste Prevention Ordinances

WVWD, through Article 24, lists use of water considered non-essential to the public health, safety and welfare and, defines what constitutes water wasting pursuant to Water Code Section 350 et seq., Water Code Section 71640 et. seq., and the common law. Article 24 was adopted on August 6, 2015 and is provided in **Part 4 Appendix J-9**.

10.8.1.2 Metering

WVWD has changed its entire meter stock to Automatic Meter Reading (AMR). This system eliminates the need for each meter to be visually read by a technician and ensures that water usage is billed correctly. The AMR system is also highly useful in identifying and addressing customer-side leaks, as well as for understanding and assessing the impacts of various conservation programs.

10.8.1.3 Conservation Pricing

WVWD is in compliance with this DMM. The volumetric portion of District's water revenue accounts for about 71 percent of total revenue. WVWD has a tiered water rate system that is always in place. WVWD charges customers increasing rates based on their water usage during a billing cycle to encourage water conservation.

WVWD completed a rate study in 2012 and implemented an Inclining Block Rate tiered rate structure starting January 1, 2013 (Tier One - 1-10 units, Tier Two - 11-50 units, Tier Three - 51+ units).

10.8.1.4 Public Education and Outreach

WVWD provides informational materials to customers through paid advertising, classes, water bills, a website, quarterly newsletters and social media. WVWD has expanded their social media outreach to include Facebook, Twitter, Instagram, Nextdoor and Linkedin. The main objectives are simply to promote water conservation, to educate and increase awareness of the importance of water use efficiency and to encourage our customers to become active members in all these activities within our communities.

WVWD will be revamping its website to include multiple pages on information for water conservation including rebates and programs that WVWD is participating in and water conservation tips for indoor and outdoor use. WVWD's conservation piece of the website is updated on a regular basis to include new ideas.

Current GIS technologies allow us to provide direct communication channels for our customers in real time to interact with the District through cloud-based solutions. These solutions are simply online forms, called GeoForms, which have the functionality of embedded e-mail communications and alert mechanisms so that when a customer submits one of these forms online through a smart device, GIS and other related departments receive real-time email containing all the details related to the online forms. Based on three different targeted water conservation efforts, three different online applications, GeoFroms, are developed in GIS for our customers. Instead of generating one big online form to include all incentives in one application, specific online forms are generated for each individual incentive. The same format is used for each online form, but each online form's content is specifically tailored for individual rebate programs.

The first application is designed mainly to report any water-related issues that cause water loss in the communities. The application provides fields to be filled in by the customers along with

the incident types and severity level along with the incident locations and customer information. These incidents could be a water leak, hit or broken hydrant, water pressure issues as well as water quality issues. This online application allows customers to submit an online form to request the District to address such issues via WVWD's website. This will then electronically trigger an alert email notification to rapidly address the issues that are reported.

WVWD continues to hold water conservation classes for students at local elementary, middle and high schools located within WVWD. The District also gives tours to local schools of the Treatment Plants and hands out conservation materials.

For the last 15 years WVWD has sponsored a Water Conservation Poster Contest with the elementary schools located in the District. On average 25 teachers participate in the contest as well as over 150 entries. The District also has conservation messages appearing directly on the customer's bill along with a graph that shows customer's current usage compared to the previous year.

For the last several years, the District has created a welcome package for all new customers including a Leak Detection Guide, the Demonstration Garden brochure and plant list, the Quarterly Newsletter, and the District's Water Conservation Calendar. Landscape Classes, Conservation Workshops, and Information booths at public events are done multiple times during the year. The District's outreach information, fliers, brochures and mailers are assembled in English and other languages.

WVWD regularly attends the regional Water Conservation Sub-Committee of the BTAC. WVWD has partnered with other Inland Empire Water Agencies to develop a regional approach to conservation and messaging. The outreach campaign has helped implement the following:

- Collaborative communication effort with the other Inland Empire agencies participating, focused on ending water waste through outreach & education;
- Sharing information unique to the region through On-Hold messages, Mailers, Bill inserts, Lawn signs, Promotional items, Event participation, and Special outreach events;
- Using Press Conferences, Press Releases, Holding Statements, Fact Sheets, Targeted advertising, Presence on website and outreach materials, Participation in social media, and Regular live events.

10.8.1.5 Programs to Assess and Manage Distribution System Real

WVWD has policies for meter testing and replacement that were implemented in January 2011. WVWD now requires an annual testing of meters 4 inch and larger. The Meter Supervisor develops a schedule for testing that includes all meters that are 5 years or older. WVWD has a new valve maintenance crew to repair distribution system leaks. All new fire hydrants installed are equipped with internal check valves so water loss is minimized if a fire hydrant gets hit. WVWD has a full time maintenance and meter department that repairs leaks that are reported by customers or personnel, on a priority basis. The total budget for these departments for FY 2020-2021 is 3.3 million dollars. WVWD repairs approximately 30 leaks a month. The Billing Department Staff also notifies customers, using their monthly meter readings; if it looks like the consumption has increased significantly. Customer Service Staff also provides a letter of thanks to customers for reporting leaks.

10.8.1.6 Water Conservation Program Coordination and Staffing Support

WVWD's Water Conservation Program is a district wide effort. Staff from Customer Service, External Affairs, GIS, Meters, Operations, Engineering and other departments collaborate on various aspects of the program, on encouraging conservation and on ways to efficiently and wisely use our water resources.

The Board of Directors of WVWD adopted Ordinance No. 80, Amending Article No. 24 Water Conservation, of the Service Rules and Regulations. The adoption of this ordinance allowed the District to create a Stage III, A, B & C to be able to restrict the number of irrigation days allowed by Board action instead of ordinance adoption. This Ordinance also addressed the changes required by the State Water Resources Control Board on May 5, 2015.

10.8.1.7 Other Demand Management Measures

WVWD has a number of rebate programs in place to incentivize customers to upgrade to more water efficient technology. Some of WVWD's rebate programs offered are listed below:

- Residential Plumbing Retrofit Kits - package to customers that includes 2 low flow showerheads, 1 kitchen faucet aerator, and 2 bathroom faucet aerators. WVWD plans to expand these kits to include new innovative water conserving features.
- Residential ULFT/HET Rebates - Up to $100 rebate per household.
- Residential HEW Rebates - Up to $100 rebate per household.
- Residential WBIC Rebates - Up to $100 rebate per household.
- Residential HE Nozzles Rebates - Up to $4 per nozzle rebate.
- Residential Turf Replacement Rebates.
- Institutional Rebate Programs - rebate program targeted at schools within WVWD's boundaries to offer rebates on an individual basis for toilets and ET controllers for landscaping.
- CII Rebate Programs - WVWD identifies high water users and will work with each company on an individual basis to create a conservation program tailored to their particular needs.

- Disadvantaged Community (DAC) Water/Energy Grant Program - Starting 2016, remove 65,000 square feet of residential turf and replace it with drought tolerant landscaping. Annually, Water Savings of 44 gallons per square foot.

WVWD is developing two additional online applications. One which will allow customers to submit an online form to request rebates via WVWD's website and another for the turf replacement rebate program. The District offers incentives for customers who replace their high water-consuming landscaping with drought tolerant landscaping.

10.8.2 Implementation over the Past Five Years

WVWD's current per-capita consumption is less than its 2020 compliance target, largely due to the conservation programs and messaging employed by WVWD. WVWD expects to continue to implement its current conservation programs to encourage conservation and maintain per-capita consumption below the compliance target.

10.9 Adoption, Submittal and Implementation

This section describes WVWD's process for adopting, submitting, and implementing the 2020 IRUWMP and WVWD's WSCP.

10.9.1 Notice of Public Hearing

A joint notice was provided on behalf of all agencies whose 2020 UWMPs are part of the 2020 IRWUMP to all cities and counties and other stakeholders within the region that that 2020 IRUWMP is being prepared. This notice was sent at least 60 days prior to WVWD's public hearing. The recipients are identified in **Part 1 Chapter 1** and include all cities and counties within WVWD's service area. A second notice was provided to these cities and counties with the date and time of the public hearing and the location where the draft report was available for review.

WVWD provided notice to the public through its website and published announcements of the public hearing in a newspaper on two occasions before the hearing. Copies of the proof of publication are included in Part 4 Appendix J-2.

10.9.2 Public Hearing and Adoption

WVWD held a public hearing on June 17, 2021 to hear public comment and consider adopting this 2020 IRUWMP and WVWD's WSCP.

As part of the public hearing, the WVWD provided information on their baseline values, water use targets, and implementation plan required in the Water Conservation Act of 2009. The public hearing on the 2020 IRUWMP took place before the adoption of the Plan, which allowed WVWD the opportunity to modify the 2020 IRUWMP in response to any public input before adoption. After the hearing, the Plan was adopted as prepared or as modified after the hearing.

> WVWD's adoption resolution for the 2020 IRUWMP and WVWD's WSCP is included in Part 4 Appendix J-3.

10.9.3 Plan Submittal

WVWD will submit the 2020 IRUWMP and WVWD's WSCP to DWR, the State Library, and cities and counties within 30 days after adoption.

> 2020 IRUWMP submittal to DWR will be done electronically through WUEdata, an online submittal tool.

10.9.4 Public Availability

No later than 30 days after filing a copy of its Plan with DWR, WVWD will make the plan available for public review during normal business hours by placing a copy of the 2020 IRUWMP and WVWD's WSCP by posting the plans on the District's website for public viewing.

10.9.5 Amending an Adopted UWMP or Water Shortage Contingency Plan

If the adopted 2020 IRUWMP or WVWD's WSCP is amended, each of the steps for notification, public hearing, adoption, and submittal will also be followed for the amended plan.