2020

Hollister Urban Area Urban Water Management Plan

July 2021

TODD GROUNDWATER

Todd Groundwater

PUBLIC DRAFT July 2021

HOLLISTER URBAN AREA

2020 URBAN WATER MANAGEMENT PLAN

Date Plan Submitted to the Department of Water Resources: _____

San Benito County Water District
Sunnyslope County Water District
City of Hollister

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CONTACT SHEET

SAN BENITO COUNTY WATER DISTRICT

Name of Primary Contact Person: **Jeff Cattaneo, District Manager**

Phone: **(831) 637-8218**

Email address: **jcattaneo@sbcwd.com**

The water supplier is a: **Water district and water wholesaler**

Utility services provided by the water supplier include: **Water service**

Is this agency a Bureau of Reclamation Contractor? **Yes**

Is this agency a State Water Project Contractor? **No**

SUNNYSLOPE COUNTY WATER DISTRICT

Name of Primary Contact Person: **Drew Lander, General Manager**

Phone: **(831) 637-4670**

Email address: **drew@sunnyslopewater.org**

The water supplier is a: **Water district and water retailer**

Utility services provided by the water supplier include: **Water and sewer service**

Is this agency a Bureau of Reclamation Contractor? **No**

Is this agency a State Water Project Contractor? **No**

CITY OF HOLLISTER

Name of Primary Contact Person: **Henry Gonzales**

Phone: **(831) 636-4377**

Email address: **Henry.Gonzales@hollister.ca.gov**

The water supplier is a: **City water department and water retailer**

Utility services provided by the water supplier include: **Water and sewer service**

Is this agency a Bureau of Reclamation Contractor? **No**

Is this agency a State Water Project Contractor? **No**

TABLE OF CONTENTS

LIST OF TABLES (LOCATED AT THE END OF EACH SECTION)

LIST OF FIGURES (LOCATED AT THE END OF EACH SECTION)

LIST OF APPENDICES

EXECUTIVE SUMMARY

Purpose and Scope

The 2020 Hollister Urban Area (HUA) Urban Water Management Plan (UWMP) has been prepared as a collaborative effort among the San Benito County Water District (District), Sunnyslope County Water District (Sunnyslope or SSCWD), and the City of Hollister (Hollister). The plan has been prepared in accordance with the Urban Water Management Planning Act and guidelines prepared by the Department of Water Resources (DWR). The 2020 HUA UWMP is intended to help guide the area's future water management efforts.

This Plan builds on and updates the 2015 UWMP, accounting for changes in the California Water Code and local planning and water management efforts. Updates include the Drought Reliability Assessment, quantification demand reduction of the Water Shortage Contingency Plan, and detailed consideration of supply reliability by source.

The HUA agencies have provided agency coordination and community participation in their urban water management planning efforts. Much of the coordination and community participation regarding water conservation within the HUA is undertaken by the agency members of the Water Resources Association (WRA) of San Benito County. The WRA serves water customers of Hollister, Sunnyslope, the District, and the City of San Juan Bautista. The WRA has played an integral role in the preparation of this UWMP.

This UWMP presents the following elements relating to water supply and demand in the HUA:

- A description of the HUA service area, which is a regional alliance of the District, Sunnyslope, and Hollister.
- Past and current water demand as reported by the agencies in the HUA.
- Water Loss Audit consistent with AWWA methodology.
- Baseline daily per capita water demand, as required by Senate Bill 7.
- Projected water demand based on estimated population and per capita daily demand reductions as required by Senate Bill 7.
- A summary of sources of water supply and plans for future water supply facilities.
- Discussion of water supply reliability and comparison of supply and demand, including the effects of drought and emergencies on water supply availability and the contingency plans in place to manage shortages.
- Details of the demand management measures employed within the HUA.

Findings

The HUA is an approximately 20 square mile area comprising all of the incorporated, and some unincorporated county lands, surrounding the City of Hollister. This is the same area that was used in the 2010 and 2015 UWMP and in the Hollister Urban Area Water and Wastewater Master Plan (Master Plan). There are two municipal water purveyors within the HUA: the City of Hollister and Sunnyslope County Water District. These water purveyors provide water supply to their individual service areas from sources described in Section 6 of this report. The District has the responsibility and authority to manage groundwater in San Benito County, which includes managing groundwater and surface water supplies. In addition, the District holds the contract for water through the Central Valley Project (CVP) and is the imported water wholesaler from the CVP to Zone 6, which includes the HUA.

Table ES-1
Population — Current and Projected

	2020	2025	2030	2035	2040
Total HUA Population	49,667	58,617	68,733	81,579	94,037
Potable Water Demand (acre-feet per year, AFY)	6,084	6,968	8,149	9,484	10,859
Potable Water Supply - Normal Water Year (AFY)	6,084	6,968	8,149	9,484	10,859
Potable Water Supply - Single Dry Water Year (AFY)	6,084	6,271	7,334	8,536	9,771

Population

The annual estimates for the population of the HUA (for which water is supplied by Sunnyslope and Hollister) were updated through 2020. These historical population estimates are based on data from the online DWR population tool.

Population for the HUA was also estimated through 2040 in five-year intervals. Future population was estimated as part of the Master Plan through examination of general development plans for the City of Hollister and San Benito County. These population growth estimates were based on the Master Plan with some adjustments, as indicated in Section 4.2.6.

Baseline and Future Demand

Historical population was combined with measured water use to calculate baseline per capita daily demand for the HUA, in accordance with DWR guidelines and Senate Bill 7. The baseline period selected for Hollister and Sunnyslope as the agencies have separate baseline demand and targets.

Both retailers exceeded the 2020 demand reduction targets. Detailed discussions of the baseline and target water demands are presented in Section 5.

Future water demands have been calculated based on the target water use values and the population projections summarized above and described in detail in the relevant sections. The resulting annual water demands are summarized in **Table ES-1**.

Water Supply

The HUA relies on local groundwater, imported water from the CVP, and recycled water for municipal water supply. The District manages all CVP imports for both agricultural and municipal and industrial (M&I) water deliveries. The District also manages the groundwater resources of the County, particularly the highly developed basins in the northern County, where District activities include managed aquifer recharge, monitoring groundwater levels and water quality, and annual reporting. The North San Benito Groundwater Basin is subject to the 2014 Sustainable Groundwater Management Act, which requires development of Groundwater Sustainability Plans (GSP) by 2022. The North San Benito GSP is underway, as presented on the District website.

Since the initiation of CVP importation and the construction and expansion of water treatment plants (WTPs, including Lessalt and West Hills), the use of groundwater for M&I supply has declined. However, the basin provides significant storage and groundwater remains a major source of supply, particularly in drought. In the last drought (2014 through 2016) groundwater has accounted for approximately 64 percent of the total water supplied by Hollister and Sunnyslope. The District's management has resulted in a reliable and sustainable groundwater resource, although groundwater quality is recognized as lower quality than CVP in terms of salinity, hardness, and other constituents as documented in the GSP. In 2020, a normal year, groundwater was 32 percent of supply.

Blending groundwater with CVP imported water helps the HUA address various water quality issues. The quality of groundwater has been described as highly mineralized and of marginal quality for drinking and agricultural purposes. Because of this less-than-desirable water quality, groundwater has been blended with CVP supply since construction of the WTPs; the Master Plan recommends that groundwater be less than a third of supply. This goal is to achieve better water quality for supply and wastewater but may be temporarily relaxed during drought conditions. The District's contract for municipal and industrial CVP deliveries with the United Stated Bureau of Reclamation (USBR) is 8,250 AFY, including users outside of the HUA. While municipal WTP capacity has been expanded to allow increased M&I use of CVP supplies,

future CVP supply will continue to be constrained by USBR allocations. Simulated future M&I allocations (available from DWR for long-term planning) could be reduced as much as 50 percent of the contract amount in dry years.

Water Supply Reliability

Multiple factors could result in inconsistency of supply and shortages, including legal, environmental, water quality, climatic, or a combination of these. Hollister, Sunnyslope, and the District are preparing for these threats to water supply through expanding their portfolio of supplies, improving facilities (e.g., treatment plant expansion and groundwater banking), and supporting demand management. Section 7 presents a detailed discussion of the factors affecting water supply, the steps taken by the HUA agencies to address these factors, and a comparison of supply and demand during water shortages caused by drought. The Drought Reliability Assessment (DRA) tool provided by DWR additionally quantifies the expected demand and supply for the near future.

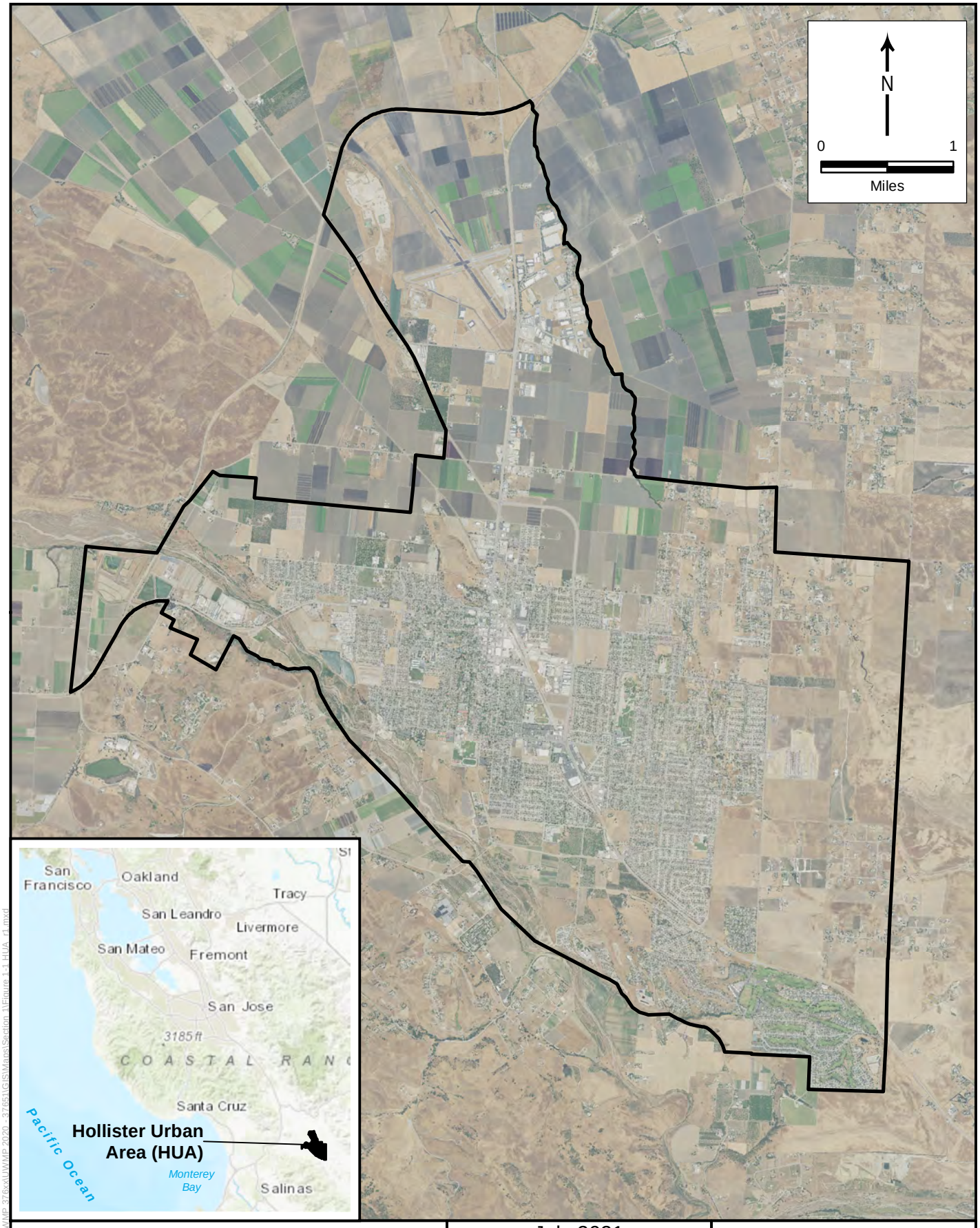
Water Conservation

The HUA agencies developed a Water Shortage Contingency Plan (WSCP) as part of the 2015 UWMP. In response to new requirements, the ability of the HUA to reduce demand when faced with water shortages was further detailed and quantified, as described in Section 8. In addition to shortage-related prohibitions, the agencies have many ongoing programs to encourage water conservation. These programs, discussed in depth in Section 9, were successful in reducing water demand by more than 25 percent to meet the state mandated water use reduction in the 2014-2016 drought. To meet the future water use per capita demand targets, the HUA and WRA, through their water conservation coordinator, plan to focus their efforts on several demand management measures (DMMs) including public outreach, rebates, and turf removal programs. These specific DMMs are targeted as opportunities for maximum water savings.

1. INTRODUCTION

This Urban Water Management Plan (UWMP or Plan) has been prepared for the Hollister Urban Area (HUA) to help guide the area's water management efforts to the year 2025 and beyond. The HUA covers all of the City of Hollister and some of unincorporated areas beyond the city limits. The Hollister Urban Area UWMP is a collaborative effort between the City of Hollister (Hollister), Sunnyslope County Water District (Sunnyslope), and San Benito County Water District (District). The Plan has been prepared in accordance with the Urban Water Management Planning Act (Division 6 Part 2.6 of the Water Code §§10610 – 10656). The location of the HUA is shown in **Figure 1-1**.

This Plan builds on and updates the 2015 UWMP, accounting for changes in the California Water Code and local planning and water management efforts. Major changes include a more robust water contingency plan, expanded discussion of water loss, and individual agency tables uploaded to the DWR WUE portal. A complete review of the changes for the 2020 UWMP is included in the DWR UWMP Guidelines in **Appendix B**.



Hollister Urban Area

July 2021

TODD GROUNDWATER

Figure 1-1
Hollister Urban Area (HUA)

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2. PLAN PREPARATION

2.1 Plan Preparation and Adoption

This Plan documents Hollister's and Sunnyslope's sources of water supply, defines water demands, presents a water shortage contingency plan, describes implementation of water demand management measures, and projects water supply and demand to the year 2040. The plan also describes ongoing work by the District to ensure and expand water supply in the area. The two water systems and their connections and 2020 water supply are documented in **Table 2-1**.

As indicated in **Table 2-2**, the HUA represents a regional alliance, as defined by Water Code sections 10608.20(a)(1) and 10608.28. Hollister and Sunnyslope choose to plan, comply, and report on a regional basis. Where possible, information for each entity is displayed individually in addition to the regional totals for the entire HUA.

The HUA regional alliance is made up of both retailers (Hollister and Sunnyslope) and a wholesaler (the District), which is indicated in **Table 2-3** as required. Where applicable, the requirements for both retailers and wholesalers are addressed. Because the three agencies work together in preparation of future water demands and supply, **Tables 2-4 R** and **2-4 W** have been updated to reflect that they are aware of each other's planning process. (Note that R indicates Retailer and W indicates Wholesaler.)

Throughout the 2020 UWMP, units are in acre-feet and data are presented in calendar years, unless otherwise stated (**Table 2-3)**. Water volumes and other data are shown to the nearest acre-foot (AF). These values are accurate to one to three significant digits, depending on the measurement. Values in the text may show more significant digits than are warranted to maintain as much precision as possible during subsequent calculations: results of calculations have been rounded to the appropriate number of significant digits.

In accordance with section 10642 of the Water Code and section 6066 of the Government Code, each agency held a public hearing prior to adoption of the Plan. A public notice was posted before the public hearing and included in **Appendix A**. The Final Plan was adopted by Hollister on June 7, 2021, Sunnyslope on June 16, 2021, and the District on May 26,2021.

The resolutions to adopt the Plan are included in **Appendix A**. The adopted Plan has been filed with the Office of Conservation in the Department of Water Resources and California State Library, as required by law. California regulations require Urban Water Management Plans to be updated at least once every five years in years ending in five and zero. However, DWR extended the deadline for the 2020 UWMP to July 1, 2021.

2.2 Agency Coordination and Public Participation

The HUA agencies have provided for agency coordination and community participation in their urban water management planning efforts. A Draft Plan was made available to the public in June 2021 for comment with public presentations to the Hollister City Council on June 7, 2021, Sunnyslope Board of Directors on June 16, 2021, and the District Board of Directors on May 26,2021.

The Water Resources Association of San Benito County (WRA) is an ongoing means for agency coordination and public participation, focused on water conservation. The WRA serves water customers of the following agencies: City of Hollister, City of San Juan Bautista, Sunnyslope County Water District and San Benito County Water District. The WRA coordinates and conducts water conservation programs for its participating member agencies and maintains an active website, www.wrasbc.org.

The Draft Plan was sent to local organizations with a request to provide comments, including San Benito County and the City of San Juan Bautista. Final Plan copies are available at Hollister City Hall and the City Library. An electronic version is available on the websites of all three agencies (Hollister, Sunnyslope, and the District).

2.3 Acknowledgements

This Plan was prepared by Iris Priestaf, Maureen Reilly, Nicole Grimm, and Arden Wells of Todd Groundwater. We appreciate the considerable assistance provided by District, Hollister, and Sunnyslope staff, most notably Jeff Cattaneo and Shawn Novack. This Plan was prepared using the checklists and worksheets provided by the California Department of Water Resources (DWR) from their website,

https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans

and their *Guidebook to Assist Urban Water Suppliers to Prepare a 2020 Urban Water Management Plan* (DWR 2016d).

Table 2-1 Retail Only: Public Water Systems

Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020
3510001	City of Hollister	6,598	3,319
3510003	Sunnyslope	6,454	2,593
	TOTAL	13,052	5,912
NOTES:			

Table 2-2: Plan Identification

Submittal Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable*
☐	**Individual UWMP**		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☑	**Regional Urban Water Management Plan (RUWMP)**		
NOTES:			

Table 2-3: Supplier Identification

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
☐	Supplier is a wholesaler
☑	Supplier is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
☐	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP (select from drop down)	
Unit	
NOTES:	

Table 2-4 Retail: Water Supplier Information Exchange

Submittal Table 2-4 Retail: Water Supplier Information Exchange
The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631.
Wholesale Water Supplier Name *(Add additional rows as needed)*
San Benito County Water District
NOTES:

Table 2-4 Wholesale. Water Supplier Information Exchange (select one)

Submittal Table 2-4 Wholesale: Water Supplier Information Exchange (select one)	
☐	Supplier has informed more than 10 other water suppliers of water supplies available in accordance with Water Code Section 10631. Completion of the table below is optional. If not completed, include a list of the water suppliers that were informed.
	Provide page number for location of the list.
☑	Supplier has informed 10 or fewer other water suppliers of water supplies available in accordance with Water Code Section 10631. **Complete the table below.**
Water Supplier Name *(Add additional rows as needed)*	
City of Hollister	
Sunnyslope County Water District	
NOTES:	

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3. SYSTEM DESCRIPTION

3.1 General Description

The HUA is located about 90 miles south of San Francisco in the northern portion of San Benito County, California. The HUA is in a broad valley between the Gabilan Range on the west and the Diablo Range on the east. As shown in **Figure 1-1**, the San Benito River runs through the southwestern portion of the HUA and Santa Ana Creek flows through the eastern portion of the HUA. The Arroyo de Las Viboras and Arroyo Dos Picachos flow to the northeast of the HUA. The City of Hollister was incorporated in 1872 and is the largest community in San Benito County. Other communities near the HUA include San Juan Bautista and Tres Pinos, which are also in San Benito County, and Gilroy in Santa Clara County. The HUA overlies a portion of the Gilroy-Hollister groundwater basin, designated as DWR Basin No. 3-3.

3.2 Service Area

The HUA is an approximately 20 square mile area comprising all of the incorporated, and some unincorporated county lands, surrounding the City of Hollister (**Figure 1-1**). This area has been used in the previous 2015 UWMP (Todd 2016), 2010 UWMP (Todd 2011), and the Water and Wastewater Master Plan (HDR 2008a and HDR 2017).

There are two municipal water purveyors within the HUA: the City of Hollister and Sunnyslope County Water District. These water purveyors provide water supply to their individual service areas from sources described in Section 4 of this report. The year 2020 service areas for Hollister and Sunnyslope are shown on **Figure 3-1**.

The District was formed by a special act of the State with responsibility and authority to manage groundwater in San Benito County. As part of its management activities, the District manages recharge to the basin, explores expanded groundwater banking, monitors water levels and water quality, and reports annually on the basin. In addition, the District is the imported water wholesaler from the Central Valley Project (CVP) to Zone 6, the northern portion of the County. HUA is located completely within Zone 6.

3.3 Climate

San Benito County has a moderate California coastal climate, with a hot and dry summer season typically lasting from May through October. Average annual rainfall ranges from 7 inches in the drier eastern portion of the County to 27 inches per year in high elevations to the south (PRISM, 2010). The City of Hollister, some 30 miles inland from the coast and separated from it by the Gabilan Range, receives an annual average rainfall of about 13 inches. Snowfalls in the mountains are infrequent and relatively light. A comparatively long growing season of 265 days or more per year prevails, and year-round cropping is practiced to some extent. The area has a high percentage of sunny days, particularly in summer. Most of the rainfall occurs in the late fall, winter, and early spring, generally between November and April. Therefore, significant irrigation is required during summer months (HDR 2017).

Figure 3-2 is a graph of annual rainfall in Hollister from 1975 to 2020. While rainfall data have been collected monthly since 1875, precipitation and other weather data have been collected since June 1994 from a California Irrigation Management Information System (CIMIS) station located by the San Benito County Water District office in Hollister (Station #126). As shown, annual precipitation is subject to wide annual variations.

Evapotranspiration (ET) is the loss of water to the atmosphere by evaporation from soil and plant surfaces and transpiration from plants. It is an indicator of how much water is needed by plants (e.g., crops and landscaping) for healthy growth and productivity. ET from a standardized well-watered grass surface is the common reference, denoted as ETo. The least ET occurs in the cool wet winter months and greatest ET occurs during the hot dry summer months. This results in peak monthly water demands in summer that are three times the comparable winter demand. Average annual ETo in the HUA is 49 inches, peaking at 6.2 to 6.9 inches per month in June, July, and August.

Average monthly temperatures in the HUA range from approximately 48 degrees Fahrenheit in January and December to near 65 degrees in July and August. In these two months, daily maximum temperatures typically reach as high as 86 degrees.

3.4 Population

The HUA is the urban center of a highly productive agricultural area that has been in continuous production for over one hundred years. The primary industry of the HUA is agriculture and agriculture related businesses, although in recent years there has been an increase in the number of residents who commute to other areas for work. The area is characterized primarily by single family residences, with less than sixteen percent of the population in multifamily dwellings.

Tables 3-1 Hollister Retail and 3-1 Sunnyslope Retail show the population for 2020 through 2040 in five-year increments for Hollister and Sunnyslope, respectively. The current population is based on the information provided by the DWR online population tool. Additional information on the calculation of the current population is included in **Appendix B**. Population is anticipated to increase in the coming years, as planned developments are constructed. The 2025 through 2040 populations for the City and Sunnyslope are based on the projected connections reported by the retailer and the average household size. These data are in line with the Water and Wastewater Master Plan population projections (HDR 2017). The future population and water demand estimates are discussed in more detail in Section 4.3.

Based on the DWR online tool, the household size for Hollister is 3.30 for single family and 18.37 for multiple family residences. In Sunnyslope, the household size is 3.45 and 10.03 for single family and multiple family residences, respectively. Information about the projected connections is discussed in Section 4.2. While the District is a wholesaler of CVP water to HUA, it does not provide urban water supply directly in the HUA. **Table 3-1 W** shows the total population of the two retailers (Hollister and Sunnyslope) served by the District.

Additional increases in population are expected to occur in the unincorporated part of the county, outside the Hollister Urban Area. The City of Hollister and Sunnyslope have no plans to serve this increase and

thus, these increases are not included in the future population or future demand calculations. However, it is recommended that development in neighboring areas continue to be tracked as increases in groundwater pumping for these developments may impact groundwater resources of the HUA.

Demographic, social, and economic trends and shifts may affect water management and planning decisions, such as creating appropriate water programs based on the needs of specific socioeconomic factors. Based on 2019 data from the American Community Survey, 7.3 percent of adults 18 to 64 years in San Benito County are below the poverty level. Meanwhile, the median income of all households is $86,958. The population identifies as about 60 percent Hispanic, 34 percent White, 3 percent Asian, 1 percent Black, and 2 percent identifies as other. Of the population 18 years and older, about 91 percent speak English “very well”, while about 9 percent speak English less than “very well”. The highest educational attainment of the population 25 and older is less than ninth grade for 13 percent, twelfth grade with no diploma for 6 percent, high school graduate for 25 percent, 26 percent receiving some college education, 10 percent with an Associate degree, 14 percent with a bachelor’s degree, and 6 percent with a Graduate degree. This is important information when considering language and content for public outreach of water programs.

3.4 Land Uses Within Service Area

GIS-based land use maps are available online with the DWR Land Use Viewer (DWR 2021). 2014 land use data was downloaded, clipped to the service area, and analyzed by type as shown in **Figure 3-3**. The current land use in the HUA is dominated by natural and idle lands, which make up 36 percent of the service area by acreage. This refers to lands that are idle, covered by water or non-vegetated grass and brush. Agricultural and pastural lands cover 29 percent of the service area and include lands used for vineyards, small vegetables, deciduous orchards, irrigated field crops, non-irrigated pastures, and non-irrigated grains. Urban residential lands cover 23 percent of the HUA, while rural residential areas are only 2 percent by acreage. Other urban land uses include commercial, industrial, turf and vacant urban land, which cover 11 percent of the service area by acreage. Based on the Groundwater Sustainability Plan (currently in development) and the County General Plan outlined in the Water and Wastewater Master Plan, anticipated changes in future land use include converting natural vegetation or agricultural use to urban growth (HDR 2008). Future development is expected to be somewhat denser than the existing urban area. Because of this, urbanization will likely occur at a slower rate than population growth. Other anticipated land use changes include some expansion of vineyard acreage, although at a slower rate than present, as recent industry trends suggest a slowing of grape production in California.

Table 3-1a. Population - Current and Projected - Hollister

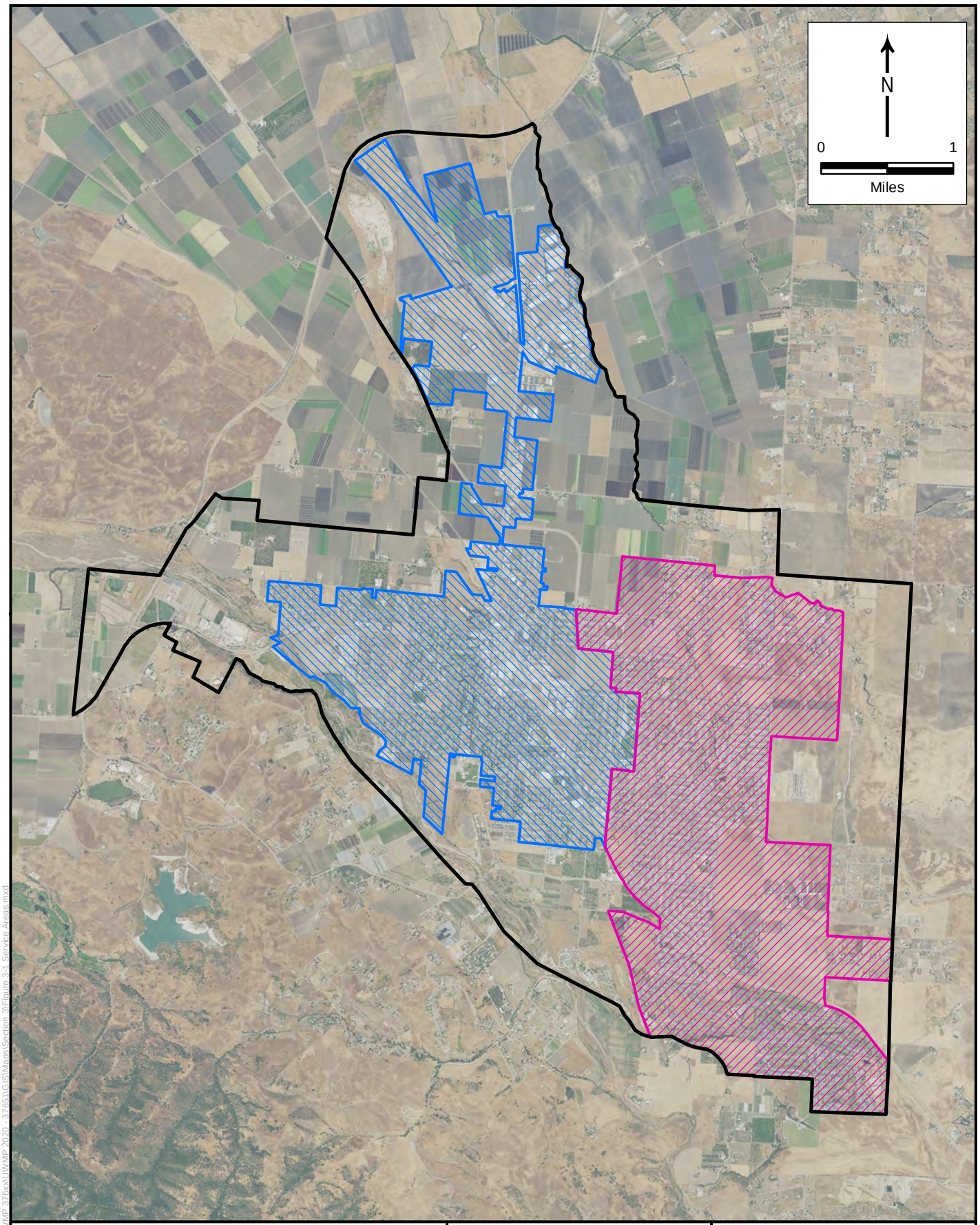
Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	25,963	31,286	37,365	43,489	49,978	
NOTES: Hollister. 2020 population based on DWR tool using 2019 connections, as 2020 connection information is not available. Future population based on projected number of connections.						

Table 3-1b. Population - Current and Projected - Sunnyslope

Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	23,704	23,704	23,704	23,704	23,704	
NOTES: Sunnyslope. 2020 population based on DWR tool using 2019 connections, as 2020 connection information is not available. Future population based on projected number of connections.						

Table 3-1c. Population - Current and Projected - HUA

Submittal Table 3-1 Wholesale: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	49,667	54,990	61,069	67,193	73,682	
NOTES: Combined Hollister and Sunnyslope						



Hollister Urban Area
Approximate 2020 City of Hollister Service Area
Approximate 2020 SSCWD Service Area

July 2021

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Figure 3-1
Service Areas, City of Hollister and SSCWD

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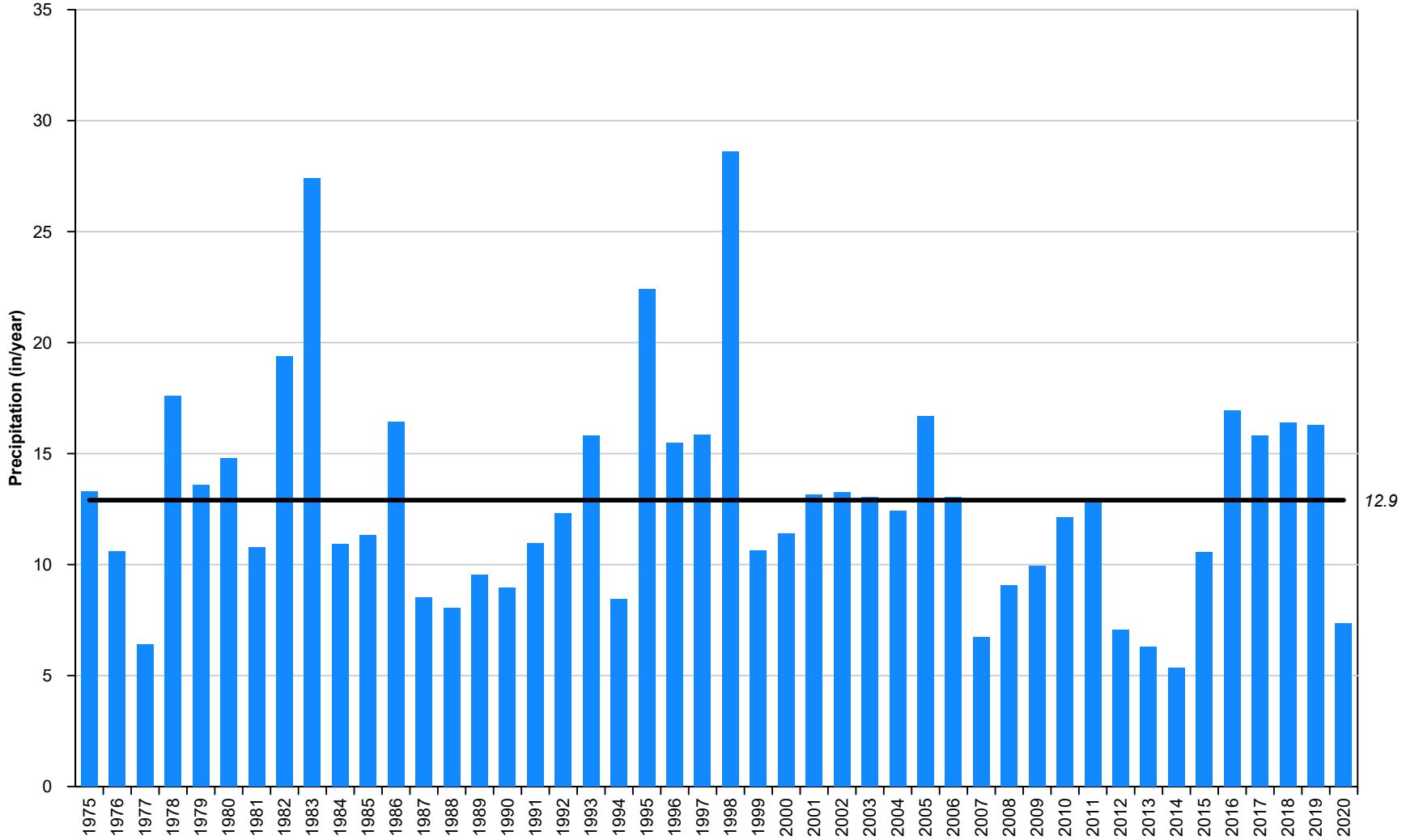

Precipitation (in/year)

Average (1875 - 2020)

July 2021

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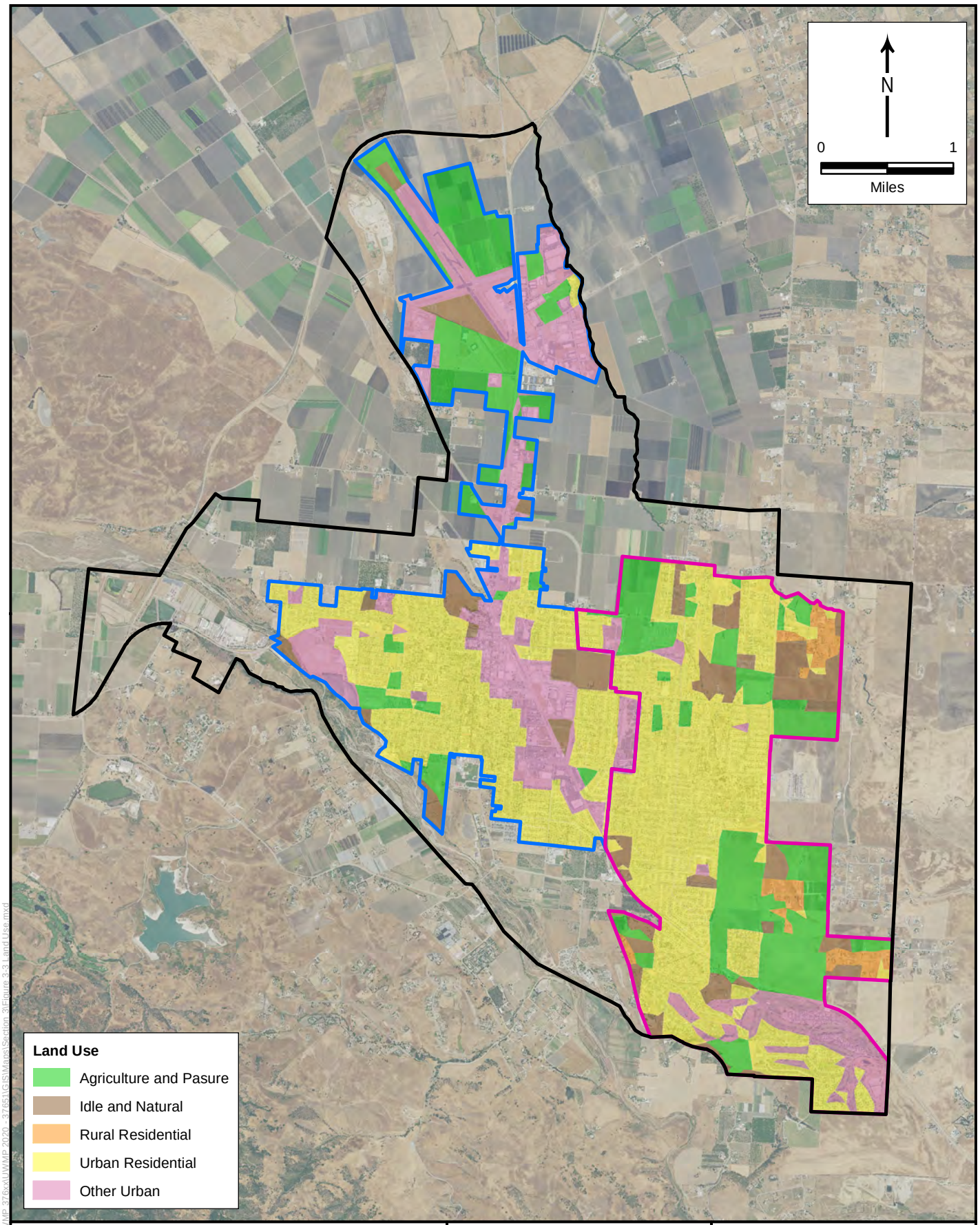
Figure 3-2
Annual Precipitation
Hollister Urban Area



July 2021

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Figure 3-3
Land Use Map
Hollister Urban Area

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4. SYSTEM WATER USE

Hollister's and Sunnyslope's past, current, and projected water demands are presented in this section. Current water demand is provided by water use sector and projected to 2040 in five-year increments. Current system losses are also provided and projected to 2040.

4.1 Non-Potable Versus Potable Use

Non-potable water accounts for only a small portion of water use within the HUA as shown in **Table 4-1 Demands for Potable and Non-Potable Water**. In 2020, 3 percent of supplied water to Hollister and 1.7 percent for the entire HUA was non-potable water, most of which is used for municipal irrigation. The source of non-potable water is disinfected tertiary recycled water provided from the domestic wastewater treatment plant/water reclamation facility (DWWTP/WRF) for the City of Hollister. This recycled water is currently being used for irrigation at one site within the HUA (97 AF in 2020). While there are no plans to increase recycled water use for municipal use in the HUA, additional recycled water is supplied to areas outside of the HUA for agricultural irrigation (Todd 2020). The municipal non-potable use is reflected in **Table 4-3** showing projected total gross water use of potable and non-potable waters.

4.2 Past, Current, and Projected Water Use by Sector

4.2.1 Water Uses by Sector

Tables 4-1 Hollister Retail and 4-1 Sunnyslope Retail show the number of water service accounts and delivery volumes by customer type in 2020 for the City of Hollister and Sunnyslope, respectively. In recent years, the number of accounts (specifically residential connections) increased in both the Hollister and Sunnyslope service areas. Hollister and Sunnyslope water connections are classified into seven water use categories, which are described below along with selected California Water Code (CWC) citations:

- Single-family residential - A single-family dwelling unit. A lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling.
- Multi-family - Multiple dwelling units contained within one building or several buildings within one complex. It should be noted that the number of multi-family accounts is not the same as the number of multi-family units because one connection could supply multiple units.
- Commercial - A water user that provides or distributes a product or service. CWC 10608.12 (d). This category also includes institutional uses. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions. CWC 10608.12 (i).
- Industrial - A water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System (NAICS) code sectors 31 to 33, inclusive, or an

entity that is a water user primarily engaged in research and development. CWC 10608.12 (h). The following link is to the NAICS website: http://www.census.gov/cgi-bin/sssd/naics/naicsrch.

- Landscape-Water connections supplying water solely for landscape irrigation. Such landscapes may be associated with multi-family, commercial, industrial, or institutional/governmental sites, but are considered a separate water use sector if the connection is solely for landscape irrigation.
- Landscape (recycled water) – Includes meters that only use recycled water solely for landscape irrigation.
- Distribution System Losses -Reporting of system losses are required in the 2020 UWMPs.

Table 4-3 W shows the volume of raw water that the District delivers to the Lessalt and West Hills Water Treatment Plants (WTP). Raw water losses from conveyance and storage are typically 10 percent in a normal year (Cattaneo 2016). Water losses associated with treatment are included in the retailers' estimates.

4.2.2 Water Use Sectors in Addition to Those Listed in Water Code

Other water use sectors (such as sales to other agencies, groundwater recharge, and conjunctive use) are not performed by retailers in the HUA at this time, are not planned in the future, and are not included in these demand tables.

4.2.3 Past Water Use

The delivery volumes by customer type for both Hollister and Sunnyslope from 1996 through 2020 are illustrated in **Figure 4-1.** The number of water service connections and volume of water served provide insight into water use volumes and trends associated with different types of users, which can be useful in defining effective water conservation measures. On average, single family residential represents most of the total demand at 69 percent. Multiple family homes and commercial uses each total about 10 percent of total demand. Other uses, including industrial and dedicated landscape irrigation, represent a combined 10 percent of total demand. Water demand in the HUA peaked in the early 2000s and has decreased since then. The decline in total water demand reflects a water conservation response to the multiple year drought achieved through increased public outreach.

4.2.4 Distribution System Water Losses

Water losses for Hollister and Sunnyslope were calculated using the required methodology and audit tool developed by AWWA (www.awwa.org/resources-tools/water-knowledge/water-loss-control.aspx). The DWR requires reporting of losses for each of the five years proceeding this plan update, for retailers. This is the calendar year. Reported losses for the most recent 12 months are shown in **Table 4-1 Hollister Retail and 4-1 Sunnyslope Retail** for Hollister and Sunnyslope, respectively. The water loss volume and reporting period are repeated in **Tables 4-4 Hollister Retail and 4-4 Sunnyslope Retail** for Hollister and Sunnyslope,

respectively. The AWWA audit results for each retailer are included in **Appendix D**. The AWWA tool uses the total water supply and deliveries by agency to estimate the total water loss. The tool also breaks out apparent water losses (unmetered water or inaccurate meter readings) and real water losses (water leaving the system through leaks, or other physical issues).

Since 2016, reported water losses in Sunnyslope have decreased from 7.0 percent (51 MG/Yr) to 2.8 percent (23 MG/Yr) in fiscal year 2019. The agency attributes this improvement to its current program to replace aging meters. The decrease in water losses indicate that the program is successful. The State Water Board is in the process of creating regulations that would set water loss performance standards. Currently, low levels of real loss are defined as 16 gallons per connection per day. In 2019, Sunnyslope exceeded this standard with real losses of only 4.6 gallons per connection per day. During the same period, Hollister reported a decrease in percent water loss from 15.3 percent (145 MG/Yr) to 11.6 percent (118 Mg/Yr). Hollister has a large number of unmetered water uses including line flushing for sampling, fire flows, construction uses, and other unmeasured and unclassified uses and losses. In the AWWA tool for Hollister, the default ratio of apparent and real losses is used due to lack of data. However, Hollister estimates most of its water losses are due to the apparent water loss of unmetered activities. In 2019, Hollister had real losses of 37.4 gallons per connection per day, which is considered above low levels of real loss. To address this amount of loss, Hollister has a rigorous meter replacement program and is making continuous efforts to identify water losses. The decrease in water losses indicate that the program is already working to decrease excess losses.

Losses associated within the CVP storage and distribution system are included in **Table 4-4 W** as raw water losses for the District. Losses are associated with evaporation and seepage as a result of storage in an open reservoir. It is estimated that water losses are about 10 percent in normal years for the CVP storage and distribution system operated by the District.

4.2.5 Current Water Use

Currently in the HUA, water use is dominated by single family residential land connections (3,452 AF). Peak water use months in 2019 for Hollister were September, July, and June with 315 AF, 290 AF, and 280 SF used per month, respectively. For Sunnyslope, the peak water use months in 2019 were September, July, and August with 289 AF, 260 SF, and 246 AF used per month, respectively. These are the dry months with the least amount of precipitation, explaining the increase in water use. In contrast, the wettest months (March, February, and January) had the least amount of water use in Sunnyslope with 95 AF, 97 AF, and 110 AF, respectively. In Hollister, the months with least water use in 2019 were March, January, and April with 149 AF, 151 AF, and 168 AF, respectively. Beginning in April, the proportion of water use for landscape irrigation increased, while the proportions of both single and multi-family residential water use decreased; this trend reversed in November with a greater proportion of water used by residential.

4.2.6 Projected Water Use

The 2008 HUA Water and Wastewater Master Plan calculated buildout water demand based on the land use planning data from the adopted General Plans for the City and San Benito County (HDR 2008). These

buildout conditions also have been used in the GSP to simulate future growth out to 2068 (Todd 2021). Total buildout demand for the HUA as calculated by the 2008 Water and Wastewater Master Plan is projected to be 18,501 AFY for the HUA (10,994 AFY for Hollister, 6,007 AFY for Sunnyslope, and 1,500 AFY for other users). For the purposes of the UWMP, the increase in water demand must be projected to 2040 in 5-year increments. While the 2008 Master Plan buildout estimate provides a maximum development scenario, additional information is needed to project short term growth.

The 2017 Update of the HUA Water and Master Plan projected water demand from 2016 to 2035. The increased demand was calculated based on a four percent annual population growth in the HUA. The 2017 Update acknowledged that near term development may be delayed due to infrastructure limitation. The 2017 Update projected population and converted population to water demand using the assumptions of 3.3 people per housing unit and 0.33 AFY per single family housing unit and 1.27 AFY per multiple family connection or 0.21 AFY per unit. Water demand from 2015 to 2020 was expected to increase by 987 AFY for the HUA by 2020, a 17 percent increase over 2014 (HDR 2017). This estimated increase in water demand did not occur; the actual demand increased by 82 AFY, a 2 percent increase from 2014.

While the short term increases in demand projected by the 2017 Master Plan Update were not realized, the longer-term projected increase in population and water demand over 2021- 2035 still represents the best available information for planning purposes. The Plan provided the expected increases as shown in **Table 4-A**.

Table 4-A. Increases in Water Demand as projected in 2017 Master Plan Update, AFY

	2015- 2020	2021- 2025	2026- 2030	2031 - 2035	Total
SFR(a)	756	710	863	1,050	**3,380**
MFR(b)	96	90	110	134	**430**
Commercial/Industrial(c)	75	63	63	63	**264**
Losses(d)	60	56	68	83	**267**
TOTAL	**987**	**919**	**1,104**	**1,330**	**4,340**

(a) SFR demand is based on a unit demand of 0.33 AFY.
(b) MFR demand is based on a unit demand of 1.27 AFY.
(c) Commercial / Industrial demands were estimated based on 12.5 AFY of new demand per year.
(d) Losses were estimated based as 7 percent of residential demand.

Both the City of Hollister and Sunnyslope track potential projects that are currently in the process of development. Hollister's project forecast is to about 2030 and Sunnyslope's project forecast extends to

2045. These lists of projects on the planning horizon are included as **Appendix C**. The total expected increases to water demand from these projects are similar to those projected by the 2017 Master Plan. The Hollister planning does not extend for the entire time period, and it is assumed that additional growth would occur to meet Master Plan projected increases. The increase until 2035 is expected to continue for the period 2036-2041, as the expected project-specific demand in Sunnyslope suggests a relative steady increase in development. **Table 4-B** shows the expected project-specific water demand increase and additional growth. The total water use in 2040 is consistent with the previous UWMP that had estimated total water demand at 10,170 AFY in 2030.

Table 4-B. Projected Water Demand

		Units	2020	2025	2030	2035	2040
Sunnyslope	Number of New Residential Units	Homes		1,543	1,762	1,775	1,881
	New Acre Feet Commercial & Institutional	AFY		40	82	5	45
	Project Required Water Demand	AFY		549	663	591	666
	Total Water Demand	AFY	**2,487**	**3,036**	**3,699**	**4,289**	**4,955**
Hollister	SF New Residential Units	Homes		979	869		
	MF New Residential Units	Homes		275	209		
	Project Required Water Demand	AFY		381	331		
	Additional Growth - Master Plan Projections	AFY			106	739	664
	Total Water Demand	AFY	**3,041**	**3,421**	**3,752**	**4,491**	**5,155**
TOTAL AREA	**Total Water Demand**	AFY	**5,527**	**6,457**	**7,451**	**8,780**	**10,110**
	Project Based Growth Increase			930	1,100	1,330	1,330
	Additional Growth - Master Plan Projections			920	1,100	1,330	1,330

These buildout estimates use per unit demands based on historical consumption. Water conservation measures were considered; however, because the demands were based on historical consumption, additional conservation was not included in the demand forecasts. The water demand for new developments will likely be lower than historical demand due to improved plumbing codes, active water conservation programs, and drought tolerant landscape. Additional future reductions are not presumed (as recorded in **Table 4-5**) but these water demand assumptions should be revisited for the next UWMP in 2025.

Tables 4-2a and 4-2b provide projections for water service connections and deliveries in five-year intervals between 2020 and 2040, for Hollister and Sunnyslope, respectively.

Table 4-3 sums the total water demand for the HUA including the non-potable demand that will be satisfied by recycled water (discussed in Section 6). Total water demand is expected to increase to 10,110 AFY by 2040, including recycled water. **Table 4-2c** shows the expected volume of raw water the District

will deliver to HUA WTP. **Table 4-3c** summarizes the total volume of water the District anticipates delivering through 2040; this includes the CVP deliveries to Hollister and Sunnyslope plus expected raw water losses. **Tables 4-2c and 4-3c** are identical as the District has no plans to serve recycled water to the urban retailers. Losses occur within the District's CVP conveyance and storage system (e.g., from evaporation and seepage); these losses are counted in **Tables 4-2c and 4-3c**.

4.2.7 Characteristic Five-Year Water Use

Water conservation is encouraged in the HUA through a variety of programs, which are discussed in detail in Section 9. To meet the future water use per capita demand targets, Hollister, Sunnyslope, the District, and the WRA, through their water conservation coordinator, plan to focus their efforts on several demand management measures (DMMs). These specific DMMs represent opportunities for maximum water savings, based on local experience during the recent drought. The DMMs that will continue to save water include state level programs:

1. Model Water Efficient Landscape Ordinance (effective December 1, 2015) – The revised ordinance is projected to reduce typical residential landscape demands by about 20 percent from demands estimated using the prior ordinance provisions. Commercial landscapes may reduce water demands by about 35 percent over the prior ordinance.

2. California Energy Commission Title 20 appliance standards for toilets, urinals, faucets, and showerheads – The appliance standards determine what can be sold in California and therefore will affect both new construction and replacement fixtures in existing homes.

3. CALGreen Building Code – The CALGreen Building Code requires residential and non-residential water efficiency and conservation measures for new buildings and structures that will reduce the overall potable water use inside each building and structure by 20 percent. The 20 percent water savings can be achieved in one of the following ways: (1) installation of plumbing fixtures and fittings that meet the 20 percent reduced flow rate specified in the CAL Green Code, or (2) by demonstrating a 20 percent reduction in water use from the building "water use baseline." The practical representation of the savings in unit water demands from this code would be to reduce indoor baseline unit demands for recently constructed residential units downward by 2 to 5 percent, although this may be redundant with any reduction already represented by the Title 20 appliance standards.

In addition, several local programs already in place may reduce future water demand:

- Retail conservation pricing – "Conservation pricing" provides incentives to customers to reduce average or peak use, or both. All water rates and charges for Hollister, Sunnyslope, and the District are established through ordinance by the appropriate governing body. Currently, both Hollister's and Sunnyslope's rate structures for water service are increasing block structures for residential customers. Adjusting the rates or adding additional blocks for water rates may continue to improve water conservation.

- Public information programs – One of the cornerstones of an effective water conservation program is effective public outreach and education. Public information and outreach—which convey the need for efficient water use and show how customers can reduce water use—supports all other elements of the program. Public outreach promotes water conservation in general, by informing customers of the needs, benefits, and methods of conserving water. Outreach can also foster understanding regarding how water conservation fits into the overall water management for the HUA. Current public outreach is focused on schools and students with classroom presentations promoting efficient water use and supplementation of presentations with grade level-appropriate education materials. Presentations are also given to local community groups and service organizations. While the effect of public outreach is unquantifiable, its qualitative effect on water conservation is considered very important.

- Rebates – WRA continues to provide a variety of rebate and retrofit programs that have successfully reduced water demand. These programs currently include incentives for replacement or removal of water softeners, efficient landscape hardware, and low flow toilets. The District is also considering policies on new developments to encourage water conservation.

- Landscape– This DMM applies to non-residential accounts with dedicated irrigation meters and to commercial, industrial, and institutional (CII) accounts with mixed-use meters. Both the City and Sunnyslope continue to implement landscape audit and incentive programs and these programs can be expanded to account for more water savings. In addition, the WRA has offered landscape efficiency programs over the past two years to encourage water conservation for large landscape and residential customers. Several DMMs are targeted to reducing water waste and increasing water efficiency. The turf removal program encourages irrigators to replace their high water demand turf with water efficient landscaping. The program, advertised in both English and Spanish, has been very successful in reducing water demand during the recent drought.

A complete list of the DMMs that will be employed by the HUA and the estimated water reductions resulting from their implementation is presented in Section 9.

4.3 Worksheets and Reporting Tables

The Optional Planning Tool Use and Supply Worksheets were used for the water service reliability assessment and the Drought Risk Assessment and are attached in **Appendix E.** The Drought Risk Assessment is discussed in detail in Section 7.

4.4 Water Use for Lower Income Households

State legislation (SB 1087 and Government Code section 65589.7), effective January 1, 2006, specifies that local water agencies and sewer districts must grant priority for service hook-ups to projects that help meet the community's fair housing need.

In other words, policies and procedures should be written to provide priority service to new developments with affordable housing and these policies should be updated every five years. The San Benito County

General Plan (2016) indicates that approximately 12 percent of the housing for both the City of Hollister and the County unincorporated areas serves the population in the extremely low income range, that is families with income less than 30 percent of the median income.

4.5 Climate Change Considerations

Climate change can affect projected water demand. The climate change vulnerability assessment, available from the UWMP 2020 guidebook, was performed for the HUA. Water demand may increase as water use varies by more than 50 percent seasonally. Climate change is likely to increase temperatures and ET and may also increase the duration of high temperature/ET periods (“heat waves"). This would increase water demand for landscape irrigation and other residential uses, with particular ramifications for summer months. Public outreach will be critical to reduce demand in the high-water use summer months. The WRA already has programs to encourage drought tolerant landscaping, improve efficient irrigation practices, and reduce water waste and these programs have and will continue to reduce potential impacts from climate change.

Table 4-1a. Demands for Potable and Non-Potable Water - Actual - Hollister

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable Water - Actual			
Use Type *(Add additional rows as needed)*	2020 Actual		
	Additional Description *(as needed)*	Level of Treatment When Delivered	Volume
Single Family			1,805
Multi-Family			322
Commercial			480
Industrial			126
Institutional/Governmental			
Landscape			278
Groundwater recharge			
Saline water intrusion barrier			
Agricultural irrigation			
Wetlands or wildlife habitat			
Sales/Transfers/Exchanges to other agencies			
Losses	based on 8.44% from 2019 Audit		265
Other			28
Other - Non potable irrigation			100
Other			
Other			
		TOTAL	3,406
NOTES:			

Table 4-1b. Demands for Potable and Non-Potable Water - Actual Sunnyslope

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable Water - Actual			
Use Type *(Add additional rows as needed)*	2020 Actual		
	Additional Description *(as needed)*	Level of Treatment When Delivered	Volume
Single Family			2,101
Multi-Family			210
Commercial			9
Industrial			32
Institutional/Governmental			
Landscape			128
Groundwater recharge			
Saline water intrusion barrier			
Agricultural irrigation			5
Wetlands or wildlife habitat			
Sales/Transfers/Exchanges to other agencies			
Losses	based on 3.7% loss reported on FY 19-20 audit		92
Other			2
Other			
Other			
Other			
		TOTAL	2,579
NOTES:			

Table 4-1c. Submittal Table 4-1 Wholesale: Demands for Potable and Non-Potable Water - Actual - District

Submittal Table 4-1 Wholesale: Demands for Potable and Non-Potable Water - Actual			
Use Type *(Add additional rows as needed)*	2020 Actual		
	Additional Description *(as needed)*	Level of Treatment When Delivered	Volume
Sales to other agencies			3,993
Transfers to other agencies			
Exchanges to other agencies			
Groundwater recharge			
Saline water intrusion barrier			
Agricultural irrigation			
Wetlands or wildlife habitat			
Retail demand for use by suppliers that are primarily wholesalers with a small volume of retail sales			
Losses			439
Other Potable			400
Other Non-Potable			
Other			
		TOTAL	4,832
NOTES: Sale to other agencies is the CVP deliveries to HUA. Other is CVP delvieries to other users.			

Table 4-2a. Use for Potable and Non-Potable Water - Projected -Hollister

Submittal Table 4-2 Retail: Use for Potable and Non-Potable Water - Projected						
Use Type *(Add additional rows as needed)*	Additional Description *(as needed)*	Projected Water Use *Report To the Extent that Records are Available*				
		2025	2030	2035	2040	2045 (opt)
Single Family		2,128	2,520	3,259	3,923	
Multi-Family		380	424	424	424	
Commercial		480	480	480	480	
Industrial		126	126	126	126	
Institutional/Governmental						
Landscape		278	278	278	278	
Groundwater recharge						
Saline water intrusion barrier						
Agricultural irrigation						
Wetlands or wildlife habitat						
Sales/Transfers/Exchanges to other agencies						
Sales/Transfers/Exchanges to other agencies						
Losses		265	265	265	265	
Other Potable		28	28	28	28	
Other Non-Potable						
Other						
TOTAL		3,686	4,123	4,862	5,526	0
NOTES:						

Table 4-2b: Use for Potable and Non-Potable Water - Projected -Sunnyslope

Submittal Table 4-2 Retail: Use for Potable and Non-Potable Water - Projected						
Use Type *(Add additional rows as needed)*	Additional Description *(as needed)*	Projected Water Use *Report To the Extent that Records are Available*				
		2025	2030	2035	2040	2045 (opt)
Single Family		2,650	3,313	3,904	4,569	
Multi-Family		210	210	210	210	
Commercial		49	130	135	180	
Industrial		32	32	32	32	
Institutional/Governmental						
Landscape		128	128	128	128	
Groundwater recharge						
Saline water intrusion barrier						
Agricultural irrigation		5	5	5	3	
Wetlands or wildlife habitat						
Sales/Transfers/Exchanges to other agencies						
Sales/Transfers/Exchanges to other agencies						
Losses		106	106	106	106	
Other Potable		2	2	2	2	
Other Non-Potable						
Other						
TOTAL		3,182	3,926	4,522	5,231	0
NOTES:						

Table 4-2c. Use for Potable and Non-Potable Water - Projected -District

Submittal Table 4-2 Wholesale: Use for Potable and Raw Water - Projected						
Use Type *(Add additional rows as needed)*	Additional Description *(as needed)*	Projected Water Use *Report To the Extent that Records are Available*				
		2025	2030	2035	2040	2045 (opt)
Sales to other agencies		5,388	5,388	5,388	5,388	
Transfers to other agencies						
Exchanges to other agencies						
Groundwater recharge						
Saline water intrusion barrier						
Agricultural irrigation						
Wetlands or wildlife habitat						
Retail demand for use by suppliers that are primarily wholesalers with a small volume of retail sales						
Losses		677	677	677	677	
Other Potable		700	700	700	700	
Other Non-Potable						
Other						
TOTAL		6,765	6,765	6,765	6,765	0
NOTES: Sale to other agencies is the CVP deliveries to HUA. Other is CVP delvieries to other users.						

Table 4-3a. Total Gross Water Use (Potable and Non-Potable) - Hollister

Submittal Table 4-3 Retail: Total Gross Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*	3,406	3,686	4,123	4,862	5,526	0
Recycled Water Demand* *From Table 6-4*	100	100	100	100	100	0
TOTAL WATER USE	3,506	3,786	4,223	4,962	5,626	0
**Recycled water demand fields will be blank until Table 6-4 is complete.*						
NOTES:						

Table 4-3b. Total Gross Water Use (Potable and Non-Potable) - Sunnyslope

Submittal Table 4-3 Retail: Total Gross Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*	2,579	3,182	3,926	4,522	5,231	0
Recycled Water Demand* *From Table 6-4*	0	0	0	0	0	0
TOTAL WATER USE	2,579	3,182	3,926	4,522	5,231	0
**Recycled water demand fields will be blank until Table 6-4 is complete.*						
NOTES:						

Table 4-3c. Total Gross Water Use (Potable and Non-Potable) - District

Submittal Table 4-3 Wholesale: Total Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045 (opt)
Potable and Raw Water *From Tables 4-1W and 4-2W*	4,832	6,765	6,765	6,765	6,765	0
Recycled Water Demand* *From Table 6-4W*	0	0	0	0	0	0
TOTAL WATER DEMAND	4,832	6,765	6,765	6,765	6,765	0
**Recycled water demand fields will be blank until Table 6-4 is complete.*						
NOTES:						

Table 4-4a. 12 Month Water Loss Audit Reporting - Hollister

Submittal Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
01/2019	371.0
** Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*	
NOTES:	

Table 4-4b. 12 Month Water Loss Audit Reporting - Sunnyslope

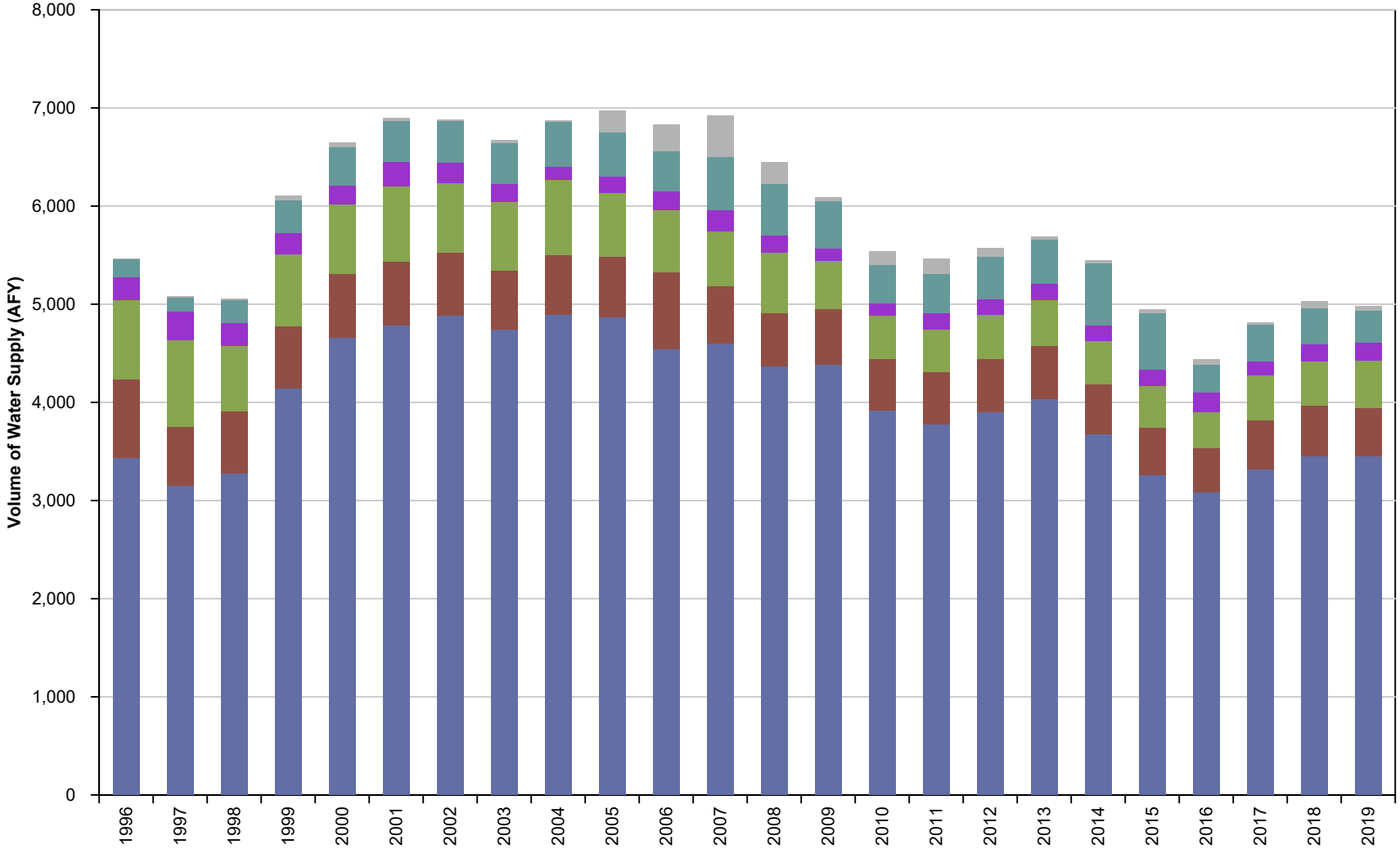
Submittal Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
07/2019	84.4
** Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*	
NOTES:	

Table 4-5a. Inclusion in Water Use Projections - Hollister

Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook)	No
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc… utilized in demand projections are found.	
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

Table 4-5b. Inclusion in Water Use Projections - Sunnyslope

Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook)	No
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc… utilized in demand projections are found.	
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	



July 2021

TODD GROUNDWATER

Figure 4-1
Historical and Current Demand by Customer Type

5. BASELINES AND TARGETS

Water agencies must demonstrate compliance with their established water use target for the year 2020. Water use targets are calculated separately for Hollister and Sunnyslope and the associated information is provided by agency in the WUE portal to allow for each agency to have local control. Compliance is verified by DWR's review of the SB X7-7 Verification Form submitted with an agency's 2020 UWMP.

The SB X7-7 Verification Form, which includes all Tables labeled SBX7-7, is described in this section, included in **Appendix F,** and summarized in **Tables 5-1 and 5-2**. The process for defining baseline water use and calculating target water use was established by DWR. This process includes identification of a suitable baseline period, estimation of the population served for all years in the baseline period, compilation of gross water use for each year of the baseline period, estimation of daily per capita water use for each year in the baseline period, and calculation of water use targets for 2015 and 2020.

5.1 Updated Calculations from 2015 UWMP

During review of the 2015 UWMP, DWR requested revision of the gross water use estimate for the region. Although flow from the Lessalt WTP to the retail agencies was not monitored discretely for each service area during the baseline period, gross water use must be calculated separately for each retail agency (Huff, 2016). Individual baseline and targets were calculated for each retailer in order to properly submit relevant information through the WUE UWMP Tool. These revised gross water use estimates and targets by agency were reflected in the updated calculated baseline per capita daily use and the per capita demand targets. The revised tables from the 2015 UWMP process are included in **Appendix F**, and the methodologies are described below for calculating baseline per capita daily water use and target water use.

Throughout this section, Hollister and Sunnyslope are addressed as individual retailers.

5.2 Baseline Period

In accordance with Senate Bill 7, water suppliers must define a 10- or 15-year water use Base Period. This Base Period is used to calculate a Base Daily per Capita Water Use, which is the baseline for computation of required future reductions. Senate Bill 7 requires retailers to reduce per capita daily water use 10 percent by 2015 and 20 percent by 2020, as compared to Base Daily per Capita Water Use. Because no recycled water was supplied within the HUA in 2008, a 10-year base period is required. Each agency has a separate set of verification tables, located in **Appendix F**.

The baseline periods selected are 1996 through 2005 for Hollister and 1999 through 2008 for Sunnyslope. These periods are representative of water use for each retailer; water use in more recent years was artificially low because of drought and economic factors. **Table 5-1** shows the base period information including the full 10-year period and the 5-year base period used to calculate the minimum Water Use Reduction Requirement for each agency.

5.3 Service Area Population

Calculation of per capita daily water use for the baseline period requires annual estimates of population. DWR developed an online tool designed specifically for estimating annual population within UWMP areas for baseline and target years. This tool is based on 2010 United States Census (Census) data. The population estimates used in this UWMP are derived from DWR's tool, as noted on **SBX7-7 Verification Table 2.** The first step is to estimate population of the service areas using US Census data. As noted on **SBX7-7 Verification Table 2,** the online population tool provided for UWMP was used and the total population for HUA is shown in **SBX7-7 Verification Table 3.**

5.4 Gross Water Use

HUA annual gross water use for the baseline period was calculated for the individual agencies separately. Because Lessalt WTP water deliveries to each separate agency were not consistently measured during this time, volume of use was estimated based on reported demand and groundwater use. Individual gross water uses for the agencies are shown in **SB X7-7 Verification Table 4**.

Gross water use includes all water into the system, which comes from the following sources:

- CVP imported water – total flows into the Lessalt and West Hills WTPs are metered; flow out to Hollister and Sunnyslope respectively.
- Hollister produced groundwater –monitored at the point of production (e.g., wells)
- Sunnyslope produced groundwater –monitored at the point of production (e.g., wells)
- Unaccounted for water – losses, etc.

The respective contributions of these water sources are shown in **SB X7-7 Verification Table 4 A.**

5.5 Baseline Daily Per Capita Water Use

The annual population estimates and gross water use data for the agencies were used to calculate per capita daily water use for each year of the baseline period, as shown in **SB X7-7 Verification Table 5**. This is a simple calculation wherein the annual gross water use is converted to average daily water use and then divided by population for each year. As shown in **SB X7-7 Verification Table 5,** baseline per capita daily water was 149 gallons per capita day (gpcd) and 178 gpcd for Hollister and Sunnyslope, respectively.

SB X7-7 Verification Table 5 includes calculations of the five-year baseline per capita water use for the HUA. The five-year baseline period was 2003 through 2007 as noted above, and the same period was used for both agencies. Average per capita daily water use during this five year period was 136.4 gpcd and 170.3 gpcd for Hollister and Sunnyslope, respectively.

SB X7-7 Verification Table 5 also shows estimated per capita daily water use for 2020, which was 114 gpcd and 119 gpcd for Hollister and Sunnyslope, respectively. Baseline and 2020 daily per capita water use estimates are summarized in **SB X7-7 Verification Table 6.**

5.6 2020 Targets

Four methods are allowed by Senate Bill 7 for calculating the 2015 and 2020 water use targets. The first method is to simply calculate 90 and 80 percent of the baseline daily per capita water use as the 10 percent reduction for 2015 and 20 percent reduction for 2020, respectively. This first method was used for both Hollister and Sunnyslope because it is the most applicable to the available data as well as the water use and demographic characteristics of the HUA. Target water use in 2020 should be 80 percent of baseline daily per capita water use. For Hollister, the calculated 2020 water use target is 119 gpcd (149 gpcd x 0.80 = 119 gpcd). For Sunnyslope, the calculated 2020 water use target is 135 gpcd (169 gpcd x 0.80 = 135 gpcd). The individual calculations are shown in **SB X7-7 Table 7A** for each agency.

The Water Code requires that the HUA agencies also calculate the maximum target (minimum water use reduction) because the five-year baseline per capita water use is greater than 100 gpcd (Water Code Section 10608.22). The minimum reduction requirements, **SB X7-7 Table 7F,** ensures that the retailers, regardless of method used to generate future targets, will reduce water demand by an adequate amount. The target 2020 per capita water use target cannot exceed 95 percent of the 5-year baseline water use.

For Hollister, **Table 5-1** shows the 2020 maximum water use target is 129.2 gpcd (0.95 x 136.4 gpcd = 129.5 gpcd, rounded up to 130 gpcd in SB X7-7 Table 7F). The calculated water use target from Method 1 above is a smaller volume than the minimum reduction requirement (119 gpcd versus 130 gpcd). Therefore, Hollister meets the minimum reduction requirement and is eligible to use the target calculated by Method 1.

For Sunnyslope, the 2020 maximum water use target is 162 gpcd (0.95 x 170 gpcd = 162 gpcd). The calculated water use target from Method 1 above is a smaller volume than the minimum reduction requirement (135 gpcd versus 162 gpcd). Therefore, Sunnyslope also meets the minimum reduction requirement and is eligible to use the target calculated by Method 1.

5.7 2020 Compliance Daily Per Capita Water Use

For each agency, **Table 5-1a and b** summarizes the 10-year baseline water use, the 2015 interim target, and the 2020 confirmed target, for Hollister and Sunnyslope, respectively. **Table 5-2a and b** compares actual 2020 per capita use to each agency's targets. While DWR allows optional adjustments to these targets, these allowances are not applicable to Hollister or Sunnyslope. Based on estimated population (using the DWR population tool) and gross water use, the actual 2020 per capita daily water use was 114 gpcd and 119 gpcd, for Hollister and Sunnyslope, respectively. Both agencies not only met but exceeded their 2020 goals (119 gpcd and 135 gpcd, for Hollister and Sunnyslope respectively). Documentation of the 2020 compliance tables are found in **Appendix F**.

5.8 Wholesaler Participation

As the wholesaler, the District is not required to establish and meet baseline and targets for daily per capita water use. However, wholesale agencies are required to provide an assessment of their present and proposed future measures, programs and policies that will help the retail water suppliers meet water use targets. These demand management programs are administered by the WRA, which is funded in large part by the District. The demand management programs and DMMs developed and administered by the WRA are detailed in **Section 9**.

Table 5-1a. Baselines and Targets Summary - Hollister

Submittal Table 5-1 Baselines and Targets Summary *Retail Supplier or Regional Alliance Only*				
Baseline Period	Start Year	End Year	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	*1996*	*2005*	*149.2*	*119*
5 Year	*2003*	*2007*	*136.4*	*130*
*All values are in Gallons per Capita per Day (GPCD)				
NOTES:				

Table 5-1b. Baselines and Targets Summary - Sunnyslope

Submittal Table 5-1 Baselines and Targets Summary *Retail Supplier or Regional Alliance Only*				
Baseline Period	Start Year	End Year	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	*1999*	*2008*	*169.0*	*135*
5 Year	*2003*	*2007*	*170.3*	*162*
*All values are in Gallons per Capita per Day (GPCD)				

Table 5-2a: 2020 Compliance-Hollister

Submittal Table 5-2: 2020 Compliance *Retail Supplier or Regional Alliance Only*							
Actual 2020 GPCD*	**Optional Adjustments to 2020 GPCD** Enter "0" if no adjustment is made *From Methodology 8*					2020 GPCD* *(Adjusted if applicable)*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
	Extraordinary Events*	Economic Adjustment*	Weather Normalization*	TOTAL Adjustments*	Adjusted 2020 GPCD*		
114.1				0	114.1	114.1	Yes
**All values are in Gallons per Capita per Day (GPCD)*							
NOTES:							

Table 5-2b: 2020 Compliance-Sunnyslope

Submittal Table 5-2: 2020 Compliance *Retail Supplier or Regional Alliance Only*							
Actual 2020 GPCD*	**Optional Adjustments to 2020 GPCD** Enter "0" if no adjustment is made *From Methodology 8*					2020 GPCD* *(Adjusted if applicable)*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
	Extraordinary Events*	Economic Adjustment*	Weather Normalization*	TOTAL Adjustments*	Adjusted 2020 GPCD*		
119.0				0	119.0	119.0	Yes
**All values are in Gallons per Capita per Day (GPCD)*							
NOTES:							

6. WATER SUPPLY CHARACTERIZATIONS

The HUA relied historically on the North San Benito Groundwater Basin (**Figure 6-1**) for its municipal water supply. Since 2003 and development of water treatment facilities, CVP water imported by the District has been available for direct urban use. In addition, recycled water also has been developed for non-potable use. **Figure 6-2** illustrates the historical and current supply by source for the HUA, described in this section**.**

6.1 Imported Water

The CVP is a Federal water system operated by the U.S. Bureau of Reclamation (USBR) and created to: protect the Central Valley from water shortages and floods, improve navigation on the Sacramento River, provide supplies of municipal and industrial water, enhance water quality, generate electric power, conserve fish and wildlife, and create opportunities for recreation. The CVP consists of 20 dams and reservoirs, 11 power plants, and 500 miles of major canals, conduits, and tunnels. About nine million AFY of water are managed by the CVP and about seven million AFY of water for agricultural, urban, and wildlife uses are delivered annually. An average of five million AFY of CVP water is provided to farms to irrigate about three million acres of land and about 600,000 AFY of water is provided for municipal and industrial uses. About 800,000 AFY are provided for fish and wildlife habitats and 410,000 AFY to State and Federal wildlife refuges and wetlands, pursuant to the Central Valley Project Improvement Act (CVPIA). Finally, the CVP generates 5.6 billion kilowatt hours of electricity annually (Mintier Harnish 2009).

The San Benito County Water District has a new "Amended and Restated Contract" with no expiration for a maximum of 8,250 AFY of municipal and industrial (M&I) water and 35,550 AFY of agricultural water. The District negotiated the renewal of this contract in May 2007. Imported water is delivered to agricultural, municipal, and industrial customers in Zone 6 through 12 subsystems containing approximately 120 miles of pressurized pipeline laterals (SBCWD 2011). Zone 6 is the District's zone of benefit for CVP water, and it overlies the Hollister and San Juan Management Areas (see **Figure 6-3**).

The District distributes CVP water to both agricultural and M&I customers in Zone 6. Hollister and Sunnyslope purchase CVP water directly from the District as they are the primary M&I CVP customers. Other M&I uses of CVP water include urban irrigation, golf courses, and potable supply for the Stonegate community. Actual CVP deliveries are modified on an annual basis by USBR, reflecting hydrologic conditions (e.g., drought), reservoir storage, and the environmental status of the Sacramento-San Joaquin Delta. In USBR water year 2020, the allocation for M&I users was 70 percent of historical use while agricultural users received 20 percent of contract amounts. Reductions in recent years are primarily the result of the less than average precipitation (Todd 2020).

6.1.1 Water Supply Facilities

Water treatment for potable M&I supplies within the HUA is provided by the Lessalt WTP and West Hills WTP. The Lessalt WTP, placed into operation in January 2003, is designed to treat imported CVP water using microfiltration and chlorine disinfection (HDR 2008a). In 2015, the plant was upgraded with granulated activated carbon filtration to remove organic materials and thereby reduce trihalomethanes

(THMs) in water. In addition, further treatment to remove iron and manganese was added. Treated water is distributed to Hollister and Sunnyslope customers. The Lessalt WTP was constructed to provide the HUA with a direct source of M&I CVP water and to improve water quality by supplementing existing groundwater with higher quality surface water. The Lessalt WTP was completed in 2002 with a nominal design capacity of 3 million gallons per day (MGD). Because of hydraulic constraints, process limitations, and reductions in CVP water availability, the WTP has, until recently, operated at an average rate less than 1.6 MGD. A WTP expansion completed in April 2015 increased the operational capacity of Lessalt to 2.0 MGD, which extends the capacity of the WTP to an annual total of 2,240 AFY.

West Hills WTP is the second surface water treatment plant to treat CVP imports and allows delivery to urban areas currently not served by the Lessalt WTP. West Hills came online in August 2017, with a design capacity of 4.5 MGD, or 5,040 AFY. The total treatment capacity of M&I CVP water available to the Hollister Urban Area is currently 7,280 AFY.

The District manages San Justo Reservoir as storage for imported CVP water. In times of allocations greater than annual demand, the District can take delivery of additional CVP water to put into storage for dry year supplementation. The District's planned reserve is 5,000 AF, plus additional CVP transfers and exchanges, which would be sufficient to provide supply (in addition to groundwater) for up to five years with preferred blending of imported water and groundwater. Based on future demand and supply calculations, this reserve may only be needed when CVP allocations for M&I uses are at the lowest allocations, namely 50 percent, which is identified by USBR for health and safety purposes (USBR 2017).

6.1.2 2020 Actual Use of Supply

Total CVP imported water supply for 2020 was 4,391 AFY to the HUA. This includes both West Hills and Lessalt Treatment Plant deliveries to both Sunnyslope and Hollister and system losses. The two agencies work closely together to ensure adequate supply. In the past, the individual deliveries from Lessalt Treatment Plant were not metered but assumed to serve Hollister and Sunnyslope equally. With the addition of West Hills, the flow from the treatment plants to the agencies is monitored, although water can flow between the agencies via interties. While the intertie flow is also monitored, the flow from both plants is combined and only total volumes of treated water are totaled. CVP deliveries represented 70 percent of total supply in 2020, an increase over the five-year average of 61 percent of total supply. The increased utilization on CVP imports is due in part to the expanding treatment capacity and the return to average allocations after the minimal allocations during the 2014-2016 drought.

6.1.3 Water Year Types

Hydrologic conditions play a large role in the availability of CVP imports. The percent of the CVP contract allocated to the District is based on available supplies. While the total contract is for a maximum of 8,250 AFY of municipal and industrial (M&I), the district has only received 100 percent allocation in three out of the last ten years. The allocation varies from year to year based on the

hydrologic conditions of the larger CVP systems. Since 2006, the M&I allocation has ranged from 25 percent in dry years to 100 percent in wet years, with a 10-year average of 66 percent (Todd 2020).

6.1.4 Projections

Future CVP supply and contract allocations are estimated by Cal Sim II, a DWR tool used to simulate California State Water Project (SWP)/Central Valley Project (CVP) operations. The 2017 Cal Sim results use current operations to determine the allocations for the Santa Clara/San Benito Water Districts based on various hydrology (as observed 1922-2003). These estimates have been used in the GSP analysis of future availability of CVP supply to the HUA. This analysis applied the numerical model to future simulations, including a simulation that accounts for climate change in 2030. For this simulation, the average allocation was 74 percent of the contract amount resulting in an average of 4,907 AFY of available CVP supply for the HUA, with the remaining allocation (1,500 AFY) for other M&I users in the District. However, as with current conditions, the allocation varied widely from 25 percent in dry years to full allocation in wet years. It should be noted these future predictions show higher allocation than observed over the past five years.

6.2 Groundwater

Groundwater is a major source of supply for Hollister and Sunnyslope. The two retailers pump directly from wells located in the HUA. The District, formed by a special act of the State, has regional responsibility and authority to manage groundwater. As part of its management activities, the District provides recharge to the basin, explores expanded groundwater banking, monitors water levels and water quality, and reports annually on groundwater conditions in the basin.

6.2.1 Basin Description

Location

The HUA overlies the North San Benito Groundwater Basin, designated as DWR Basin No. 3-3.05, shown on **Figure 6-1** (DWR 2021a). The basin covers 200 square miles of the Pajaro River watershed and is drained by its tributaries, most notably the San Benito River. The San Benito River, intermittent in some parts of the basin, runs through the southern portion of the basin before reaching the Pajaro River. The San Benito River, when flowing, is a recharging stream along much of its channel, but groundwater contributes some base flow upstream of its confluence with the Pajaro River. The Hernandez Reservoir, located upstream of the basin on the San Benito River, is operated to enhance flow in the river and recharge the groundwater basin.

Geology

The North San Benito Groundwater Basin lies within the Coast Ranges of California, which are a series of elongated ranges and valleys with a predominantly northwesterly trend. The Hollister Valley's origin and shape has been controlled by folding and faulting of basement rocks in the area, resulting in low-lying

areas that have been infilled with unconsolidated to poorly consolidated alluvium of Tertiary and Quaternary age. The Quaternary alluvial deposits compose the valley floor and generally define the groundwater basin (California Geologic Survey 2002, Todd 2004). Numerous investigators have recognized the difficulty in describing the subsurface stratigraphy of the basin, due, in part, to sparse geophysical log data and a lack of distinctive textures and composition among the sedimentary units (Kilburn 1972, Faye 1974 and 1976, Luhdorff and Scalmanini 1991).

Major geologic faults, including the San Andreas and Calaveras, trend northwestward through the area. Most notably, the Calaveras fault is active and cuts through the basin, trending north-northwest from Hollister to the Pajaro River at San Felipe Lake, and separating the northern valley into two distinct geologic units at depth. The fault is perceived to impact groundwater flow locally, perhaps due to the presence of low permeability rock fragments and blocks displaced upward and adjacent to more permeable alluvial material along the fault zone (Todd 2004).

The Quaternary-age alluvium contains the main aquifers in the groundwater basin. The aquifers are the coarse-grain layers of sands and gravels with interbedded layers of silts and clays. The geometry of the basin suggests that basin-fill units were deposited in alluvial fan and fluvial environments from a variety of source rocks and directions. These deposits interfinger in the subsurface, making the differentiation of discrete aquifer packages difficult on a regional basis. This also results in variable aquifer properties across the basin. Previous investigators indicate wide variability in aquifer transmissivities (Luhdorff and Scalmanini 1991, Faye 1974). Although poorly defined, regional variations in permeability likely create preferential pathways for groundwater, especially in paleo-channel deposits, which may exist beneath current major stream courses or elsewhere in the basin (Todd 2004).

Subareas

Figure 6-3 shows the four-management area delineated as part of the GSP: Bolsa, San Juan, Hollister, and Southern. This definition of subbasins is maintained in this report, supporting consistent reporting of groundwater conditions.

The Hollister Urban Area overlies part of the Hollister and San Juan management areas. In water year 2020, 100 percent of Hollister and Sunnyslope pumping was located in the Hollister management area.

Groundwater Levels and Flow

In general, groundwater in the basin flows from the southeast and eastern portions of the basin toward the western and northwestern portions of the basin to the Pajaro River. However, general flow directions have been reversed in the Bolsa subbasin due to groundwater pumping; groundwater in the Bolsa subbasin near the Pajaro River flows southeast toward lower water levels.

Groundwater levels have been recorded in the basin since at least 1913 by various agencies including USBR, DWR, Pacheco Pass Water District, San Benito County, University of California Cooperative Extension, and the United States Geological Survey (USGS) (Clark 1924, Kilburn 1972, Farrar 1981, Creegan

& D'Angelo 1990). The District monitors water levels in approximately 80 to 100 wells on a semiannual and, more recently, a quarterly basis and reports the data to CASGEM. Water levels and trends are presented in the District annual reports (e.g., Todd 2020). Groundwater generally occurs under unconfined and confined conditions. Surficial clay deposits, especially in the Bolsa and San Juan areas, create confining layers. These layers have resulted in local artesian conditions wherein groundwater levels in wells have risen to the surface.

Figure 6-4 illustrates long term changes in groundwater levels in the basin. Water elevations in key wells from the Hollister management area (Figure 4-5 from GSP) are shown on the map in **Figure 6-4**.

Groundwater Recharge

The District owns and operates two reservoirs along the San Benito River. Hernandez Reservoir (capacity 17,200 AF) is located on the upper San Benito River in southern San Benito County. Paicines Reservoir (capacity 2,870 AF) is an offstream reservoir between the San Benito River and Tres Pinos Creek. It is filled by water diverted from the San Benito River, with some of the diversions consisting of natural runoff and some consisting of water released from Hernandez Reservoir. Water stored in the two reservoirs is released for percolation in Tres Pinos Creek and the San Benito River to augment groundwater recharge during the dry season. Since 1996, releases from Hernandez have ranged between 0 AFY and 26,300 AFY, generally reflecting variations in inflow. The total releases from Paicines Reservoir range from 0 AFY to 6,139 AFY (Todd 2020).

In the past, the District has purchased and percolated additional CVP imported water for groundwater management. This program began in 1988, and CVP percolation peaked in 1997 at 11,087 AFY. Managed CVP percolation volumes were reduced following 1997 in response to successful recovery of the groundwater basin from overdraft. In recent years, the District has restarted the CVP recharge program at off stream ponds. In water year 2020, 3,161 AFY of imported water was recharged in the groundwater basin (Todd 2020).

Hollister and Sunnyslope percolate treated wastewater discharge to the groundwater basin. The City of Hollister Domestic Wastewater Treatment Plant (DWWTP) represents the major portion, amounting to 2,392 AF in water year 2020. Wastewater percolation has been decreasing in recent years and is expected to continue to decrease as recycled water use increases. The Sunnyslope treatment plant also percolated wastewater discharge, 155 AF in water year 2020 (Todd 2020).

Water Quality

The District conducts semiannual sampling (spring and fall) of more than 24 wells distributed spatially over the basin. In addition, water suppliers with more than six connections, including Hollister and Sunnyslope, are required to monitor and report water quality to the State Water Resources Control Board Division of Drinking Water (DDW). These data and others are used by the District to monitor and track the status of water quality basin-wide.

A comprehensive water quality database for the District was created in 2004. This database, funded in part by a DWR grant, involved compilation of all available water quality data with the intent of regular update with future data. The first major update occurred as part of the 2007 Annual Groundwater Report. The database is now regularly updated with readily available local data. A more complete update of the water quality database, including research at local, regional, and state agencies, occurs on a triennial basis. The database was updated in November 2019, as part of the Annual Groundwater Report for Water Year 2019 (Todd 2019).

The quality of groundwater in the North San Benito Groundwater Basin has been described as highly mineralized and of marginal quality for drinking and agricultural purposes. The mineralized water quality is typical of other relatively small Coast Range groundwater basins but has also been impacted by decades of human-related activities, both agricultural and urban.

A general measure of groundwater quality is total dissolved solids (TDS). For drinking water purposes, TDS concentration of 500 milligrams per liter (mg/L) or less are recommended; however, TDS concentrations up to 1,000 mg/L are acceptable. TDS concentrations are affected by both natural and anthropogenic sources. **Figure 6-5** (Figure 4-18 from the GSP) illustrates the regional distribution of TDS concentrations. While concentrations are high (e.g., exceeding 500 mg/L), recent years (2014 through 2017) are characterized by TDS concentrations that are stable or decreasing.

The HUA agencies blend treated imported CVP water with local groundwater to reduce TDS in Hollister and Sunnyslope's water supplies. If CVP is available, the objective for M&I delivered water is at least 65 percent CVP imports with the remaining 35 percent as groundwater. This blending results in better delivered water supply, and sufficient wastewater quality to produce high quality recycled water and meet wastewater discharge requirements with the California Regional Water Quality Control Board (RWQCB).

The blending of groundwater with imported CVP water results in a linkage between groundwater supply and CVP allocations. In dry years, when CVP allocations are low, the volume of groundwater supply used by the HUA agencies for urban supplies will be limited to maintain the planned blending ratio. These blending requirements could be relaxed on a short-term basis in response to drought conditions.

Water Balance and Sustainable Yield

The District is in the process of preparing a Groundwater Sustainability Plan (GSP) for the North San Benito Groundwater Basin. As part of the GSP, the existing numerical model was expanded and updated to simulate the water budget and groundwater flow.

Major inflows include deep percolation from rainfall, return flow from urban and agricultural uses, recharge of reclaimed water, stream percolation (both natural and managed through reservoir and CVP releases), and subsurface inflow from adjacent groundwater basins. Most of these inflows are controlled by hydrological conditions and are generally greater in wet years and reduced in dry years.

Major outflows include pumping by agricultural and urban users and subsurface outflow to adjacent basins. Agricultural groundwater pumping is measured in Zone 6, but currently not monitored in other

parts of the basin. The volume of agricultural pumping in Zone 6 in any given year is dependent on the volume of CVP imports and the amount and distribution of rainfall, as growers often rely on both groundwater and CVP for water supply. Municipal pumping has decreased significantly as the HUA expanded its ability to treat CVP water and use it directly.

The change in storage calculated by the numerical model for 1975-2017 shows fluctuations due to changes in management and hydrologic conditions. Groundwater storage was at its lowest near the beginning of the simulation because of overdraft during the preceding decades and an intense drought during 1976-1977. Hollister MA groundwater storage increased significantly when imported water deliveries began in 1988. With decreased groundwater pumping, managed aquifer recharge, and several wet years in the 1990s, groundwater storage increased rapidly and has remained relatively steady since 1998. The recovery of groundwater levels and storage in the Hollister MA provided a buffer for the recent drought of 2014-2016, allowing local groundwater users to pump groundwater without severe declines.

The water budget section of the GSP estimates a sustainable yield based on expected future pumping. Sustainable yield is defined as the volume of pumping that the basin can sustain without causing undesirable effects. It is not a fixed or inherent natural characteristic of a groundwater basin. Rather, it is influenced by land use activities, importation of water, wastewater and stormwater management methods, and the locations of wells with respect to interconnected streams. The estimate of sustainable yield presented in this section reflects the current status of those variables and evaluates whether there would be a long-term increase or decrease in basin storage if those conditions continued over a 50-year future period with local hydrology and CVP imports (per CalSim2) corresponding to 1925-1953 and 1982-2002. The GSP analysis separates out the potential yield of groundwater by user. Based on the numerical modelling and analysis detailed in the GSP, the estimated sustainable yield for groundwater for M&I uses in the Hollister MA, where all of the municipal wells are located, is about 5,600 AFY. As noted above, future use of local groundwater supply may be limited or require treatment due to water quality concerns (Todd 2021).

6.2.2 Groundwater Management

The District manages the water resources for all of San Benito County. The District is a California Special District formed in 1953 by the San Benito County Water Conservation and Flood Control Act. The District has jurisdiction throughout San Benito County and has formed three zones of benefit to fund surface water and groundwater management activities. Zone 1 covers the entire county and provides the funding base for certain District administrative expenses. Zone 3 generally covers the San Benito River Valley to the confluence with the Pajaro River, from the Highway 25 Bridge nine miles south of the town of Paicines to San Juan Bautista, plus the Tres Pinos Creek Valley from Paicines to the San Benito River. Zone 3 provides the funding base for operation of Hernandez and Paicines reservoirs and related percolation and groundwater management activities. Zone 6 includes the two management areas (San Juan and Hollister) and provides the funding base for importation and distribution of CVP water and related groundwater management activities (Todd 2010, HDR 2008a).

Sustainable Groundwater Management Act (SGMA)

The 2014 Sustainable Groundwater Management Act (SGMA) requires sustainable groundwater management for designated medium- and high-priority groundwater basins; the North San Benito Groundwater Basin is medium priority. The District has become the Groundwater Sustainability Agency for the basin in San Benito County and is leading preparation and implementation of the Groundwater Sustainability Plan (GSP).

Annual Groundwater Report

Each water year, the District oversees the preparation of an Annual Groundwater Report that describes current groundwater conditions in the District and two zones of benefit: Zone 3 and Zone 6. The report documents water supply sources and use, groundwater levels and storage, and District management activities over the water year (October to September). Recommendations are provided with regard to the future water year imports, groundwater replenishment, groundwater pumping, and groundwater charges. This Annual Report is prepared at the request of the District to meet its information needs and to fulfill statutory reporting requirements (Todd 2020). The reports will continue to be prepared and will be expanded to meet the requirements of Annual Reporting for SGMA.

Water Rights

The North San Benito Groundwater Basin is not an adjudicated basin and groundwater entitlements or rights have not otherwise been defined. The long-term reliability of groundwater supply for the HUA is not likely to be predicated on water rights but is likely to be defined by the overall state of the groundwater basin.

6.2.2 Overdraft Conditions

Groundwater levels over time have varied in response to precipitation, groundwater pumping, and artificial recharge conditions. Water levels are estimated to have been at historical highs prior to 1913 before development of groundwater pumping (Kilburn 1972). In the drought conditions of the late 1970s, water levels in some areas had declined more than 150 feet from the estimated highs (Creegan & D'Angelo 1990). With the exception of a few areas of persistent water level lows, by 1998 groundwater levels had recovered close to the historical highs as a result of decreased pumping (following CVP importation), increased precipitation, and artificial recharge (Jones & Stokes 1999). During the recent drought that began in 2012, groundwater levels declined over much of the basin, most notably in agricultural areas of the basin that rely on groundwater. These subbasins sustained four successive years of drought with limited CVP imports. During this time groundwater elevations declined slightly or remained steady in areas of municipal pumping including Hollister East and Tres Pinos subbasins.

Groundwater elevation declines during drought do not constitute overdraft, which is a chronic condition. The North San Benito Basin is not in overdraft and sufficient storage remains in the basin to accommodate additional dry conditions with limited imported water availability. However, if drought conditions persist,

avoidance of significant and unreasonable impacts will require delivery of alternative supplies to sensitive areas or more rigorous water demand management.

6.2.3 Historical Pumping

Table 6-1a and Table 6-1b show the historical pumping of Hollister and Sunnyslope, respectively. In general, municipal pumping in the area has decreased over time due to increased treatment and use of imported water and water conservation measures (**Figure 6-2**). Average municipal pumping has declined as CVP treatment capacity has increased. From 1996 to 2002 (before Lessalt WTP came online) pumping averaged 6,563 AFY. From 2003 to 2016 (with only Lessalt WTP online), pumping averaged 4,580 AFY. Average pumping from 2017 to 2020 is now 1,950 AFY, a third of the total pumping pre-CVP imports.

The groundwater basin is a shared resource and other users (mainly agricultural) rely on groundwater supplies from the same management areas. For the GSP water balance, total current pumping in the Hollister Management Area is estimated to be around 49,882 AFY (4,424 AFY for M&I uses and 45,458 AFY for Agricultural uses). Municipal pumping has represented up to 15 percent of total pumping in the Management Area during the recovery period 1989-2014, reflecting the available CVP deliveries for agricultural users but limited CVP treatment capacity for M&I users. Locations of municipal wells in the HUA are shown on **Figure 6-6**.

2020 Actual Use of Supply

Total pumping for Hollister and Sunnyslope totaled 1,919 AFY, with each agency pumping about half of the total. The interties that connect the two retailers allow groundwater pumped from either retailer to flow to each other. The retailers use this connection to ensure that groundwater and CVP water is delivered efficiently to all customers in the HUA.

Water Year Types

Groundwater availability in the long term depends on the groundwater basin receiving adequate recharge to maintain or increase water in storage. The groundwater aquifer serves as a reserve for use during drought conditions. The use of groundwater is expected to increase in critically dry and below normal years as CVP imports are expected to decrease.

Projections

Groundwater is expected to make up the difference between total HUA demand and CVP deliveries. While CVP deliveries are preferred due to better water quality, the allocations are limited especially during drought. Groundwater will be used to make up for any decreased allocations during drought and any increase in growth above the CVP contracted volumes.

6.3 Surface Water

While local surface water is not directly used for water supply, it is used as a source of managed recharge to the groundwater aquifer. In most years, local surface water released from Hernandez and Paicines Reservoirs is percolated along the San Benito River and Tres Pinos Creek. Releases of local surface water have been limited typically to percolation upstream of the confluence of San Benito River and Tres Pinos Creek. This has helped maintain groundwater levels without causing shallow groundwater problems and competing for available storage space with the City of Hollister wastewater percolation ponds.

In Water Year 2020, Paicines and Hernandez releases were 9,473 AFY and 2,037 AFY respectively, representing average hydrologic conditions.

2020 Actual Use of Supply

There was no direct use of surface water in 2020.

Water Year Types

While the volume of releases from the reservoir and therefore the recharge to the groundwater basin varies based on hydrologic conditions, there is no direct use of surface water.

Projections

Releases and the corresponding recharge are expected to remain similar to historical conditions. There is no projected use of surface water.

6.4 Storm Water

Currently, storm water is not diverted for direct beneficial use. However, some runoff that enters the City's storm water system is treated in the wastewater industrial plant and some stormwater runs off to the San Benito River. The collected storm water serves to increase the volume recharged in the disposal ponds and improves the discharge water quality. The City is currently developing a stormwater plan that could utilize the excess capacity in the industrial wastewater treatment plant.

6.5 Wastewater and Recycled Water Opportunities

This section presents a summary of HUA wastewater collection, treatment, and disposal; current and projected recycled water use; programs to encourage recycled water use; and the HUA plan for optimizing recycled water use.

6.5.1 Recycled Water Coordination

In 2004, the City of Hollister, the County, and the District executed a Memorandum of Understanding (MOU) forming a partnership to undertake the development of the Master Plan for the HUA. The MOU was amended in 2008 to include Sunnyslope. A new MOU with Hollister was completed in 2014 that allowed the District to receive recycled water from the Hollister wastewater treatment plant and make it available to agricultural customers in the area. These parties have undertaken a coordinated effort to plan water supply and wastewater strategies for the HUA. These strategies include the collection and treatment of wastewater as well as disposal and recycled use, as appropriate.

Planning for recycled water use has included the preparation of a Recycled Water Feasibility Study prepared by the District in 2005 (RMC 2005) and a subsequent Recycled Water Feasibility Study Update prepared jointly by the District and Hollister (HDR 2008b), the Long-Term Wastewater Master Plans (LTWWMPs) prepared respectively by Hollister and Sunnyslope, and the Master Plan prepared jointly by Hollister, Sunnyslope, and the District (HDR 2008a). The Master Plan was updated in 2017 (HDR 2017).

Recycled water is currently being used for irrigation at one site within the HUA. While there are no detailed plans to increase recycled water use in the HUA, additional recycled water is supplied to areas outside of the HUA for agricultural irrigation (Todd 2020). Increasing recycled water supplies could reduce groundwater pumping in the area, increasing available groundwater supplies for other parties, including the HUA retailers.

Recycled water is currently available and will become more widely available in the near term. However, neither increased municipal non-potable use nor potable reuse opportunities are targeted currently for implementation because agricultural use is a higher priority.

6.5.2 Wastewater Collection, Treatment and Discharge

As indicated on **Table 6-2a and b**, five wastewater treatment plants treat the domestic, commercial, and industrial wastewater flows generated within the HUA (**Figure 6-6**). The existing wastewater facilities are owned by three separate agencies: Hollister, Sunnyslope, and San Benito County (Cielo Vista Estates Wastewater Treatment Plant). The facility descriptions are included below, organized by agency.

Current wastewater collection and treatment volumes for each of the treatment plants are presented on **Table 6-3a and b**. The Hollister Water Reclamation Facility treated 2,658 AF of wastewater in water year 2020. While most of the treated wastewater was disposed in percolation ponds, 97 AFY of recycled water was used for irrigation.

City of Hollister Wastewater Facilities

Hollister owns and operates two wastewater treatment plants (WWTPs); the domestic wastewater treatment plant/water reclamation facility (DWWTP/WRF) and the industrial wastewater treatment plant (IWWTP). The DWWTP/WRF, located on the western edge of the HUA (**Figure 6-6**), was built in 1979 to treat Hollister's domestic wastewater. The IWWTP (located west of downtown Hollister) treats seasonal

industrial wastewater and storm water from the downtown area. The City of Hollister's collection system consists of gravity pipelines and force mains ranging from 4- to 36-inches in diameter.

The Hollister DWWTP/WRF began operating in March 1980, was renovated in 1987 to increase capacity, improved in 2002 and 2003 to improve treatment efficiency, and upgraded in 2009 to include the WRF and improve treatment to tertiary levels. Construction of distribution systems connecting to the City of Hollister Reclamation facility has begun. This system will increase the use of recycled water in the District. Recycled water will augment supply to agricultural users in the Hollister subbasin area. The DWWTP/WRF receives wastewater flow from all municipal and most industrial customers within Hollister City limits, including portions of the Sunnyslope service area. The system treats water to disinfected tertiary recycled water standards through the use of a Membrane Bioreactor (MBR).

The DWWTP/WRF is currently capable of treating up to 4 MGD and the current dry weather average flow is approximately 3 MGD. The DWWTP/WRF can be expanded to accommodate peak flows of 5 MGD through the installation of additional membranes, when required by additional development.

The Hollister IWWTP began operating in 1971 and is located on 78 acres less than a mile east of the DWWTP/WRF (**Figure 6-6**). The facility was constructed to treat effluent from local tomato canneries and also treats storm water. Only one of the canneries, San Benito Foods, is currently in operation, from mid-June through mid-October. The IWWTP is a conventional aerated pond treatment system that produces secondary-treated discharge. The capacity of the IWWTP has been estimated to be as high as 7.5 MGD; however, the current RWQCB permit limits flows to 3.5 MGD during the canning season and 1.72 MGD of storm water during the non-canning season (HDR 2008a). The secondary effluent from the IWWTP is discharged to evaporation and percolation ponds, which recharge Hollister and San Juan area groundwater (RMC 2005). The number of industrial dischargers has significantly declined over the last 30 years and currently only one cannery discharges industrial wastewater to the IWTP (Wallace 2020).

Sunnyslope County Water District Wastewater Facilities

The domestic wastewater treatment plant serving the Ridgemark Estates community is managed by Sunnyslope. A new wastewater treatment plant was constructed in 2013 at the Ridgemark I facility (**Figure 6-6**). The new treatment plant is a sequential batch reactor facility with sludge handling facilities and four percolation ponds that can treat 330,000 gallons per day. In water year 2020, the total treated wastewater was 176-acre feet or approximately 157,000 gallons per day (Todd 2020). The previous Ridgemark II facility was converted to a pump station to pump wastewater to the new Ridgemark I treatment plant. At the Ridgemark II site, the treatment ponds and disposal ponds will remain as backup facilities owned by Sunnyslope.

Sunnyslope has no plans to provide recycled water for irrigation in the next five years. In the past, Sunnyslope had considered providing recycled water for Ridgemark Golf Course but this would require significant additional upgrades to its WWTP.

Other Wastewater Facilities

Wastewater treatment within the HUA by parties other than the two municipal water purveyors is limited to the Cielo Vista Estates, operated by San Benito County, and private residential septic systems.

Cielo Vista Estates is a residential development within Sunnyslope's service area and includes approximately 75 single-family homes located at the intersection of Airline Highway and Fairview Road. Wastewater from the community is treated by a Sequencing Batch Reactor (SBR) system operated by San Benito County. Secondary effluent from the treatment system is infiltrated to the groundwater basin via a leach line system. The Cielo Vista development is complete and new connections to the wastewater system are not anticipated (Schaaf & Wheeler 1999).

Some private residences within the HUA are still serviced by individual septic systems. No estimate has been made of the quantity of wastewater generated from these onsite wastewater systems.

6.5.3 Recycled Water System

The wastewater treatment facilities within the HUA utilize a number of treatment methods, which result in varying effluent quality, as described above. Current requirements for recycled water use are administered by Title 22 of the California Code of Regulations, referred to hereafter as Title 22. The Hollister DWWTP/WRF has the capacity to meet the requirements for disinfected tertiary recycled water as defined by Title 22. The remaining wastewater treatment facilities produce effluent that meets the Title 22 requirements for undisinfected secondary recycled water. However, the effluent streams from all of the treatment facilities have high levels of TDS, which may preclude local reuse on orchards and vineyards or non-food bearing trees. The parties to the MOU have committed to reducing these high concentrations by reducing the TDS of supplied water as part of the Master Plan (HDR 2008a). The Hollister DWWTP/WRF currently treats all wastewater flows to tertiary standards, but only disinfects what is used offsite for landscape irrigation.

As previously noted, the remaining wastewater treatment facilities (Ridgemark WWTP and Cielo Vista Estates) produce undisinfected secondary effluent, which is disposed of through evaporation and/or percolation.

There are no plans to upgrade or expand the Cielo Vista Estates wastewater treatment system.

The current and anticipated future quantities of wastewater treated to recycled water standards are presented in **Table 6-4a and b.** Recycled water will be available from only Hollister's domestic wastewater treatment plant/water reclamation facility (DWWTP/WRF). There are no plans to provided recycled water from other facilities.

6.5.4 Recycled Water Beneficial Uses

Current Uses

Offsite reuse of recycled water from the DWWTP/WRF takes place at Riverside Park (formerly known as the Brigantino Site) and previously occurred at the airport. Irrigation began in a limited capacity in 2009 and increased in 2010. In 2020, 97 AF of recycled water was delivered to Riverside Park, while no recycled water was delivered to the airport site. The remaining treated wastewater from the DWWTP/WRF is currently disposed of by evaporation and percolation. The DWWTP/WRF will increase the quantity of disinfected tertiary recycled water that it produces as demand for recycled water increases, in accordance with the Master Plan. In water year 2020, an additional, 428 AFY of recycled water was delivered to agricultural customers outside of the HUA.

Planned Versus Actual Use of Recycled Water

In the 2015 UWMP, recycled water use in the HUA was projected to remain steady at 116 AFY by 2020. The actual recycled water use in 2020 was 97 AF. In **Table 6-5a and b**, the projected recycled water use from the 2015 UWMP is compared to the 2020 actual use. The volume of landscape irrigation is about the same as recycled water has been prioritized for agricultural use outside of the HUA. Sunnyslope has no plans to pursue recycled water as a supply source.

Future Uses

Water recycling began with municipal irrigation but has shifted focus to provide recycled water to agricultural users beyond the HUA. The system was expanded in 2014, including infrastructure and treatment capability to improve water quality for the purpose of agricultural irrigation. The system was further improved in 2015 when SBCWD (at a cost of about $1,000,000) installed 1.65 miles of additional distribution system piping and 30 metered delivery points to provide water for agricultural customers. In 2016, the Recycled Water Storage Pond was installed in "Pond 2" at the Domestic Waste Reclamation Facility (DWRF) to improve distribution system water quality and to help equalize recycled water production with irrigation demand.

In 2019, SBCWD installed a series of sand media filters upstream of the Recycled Water Distribution System to improve water quality and allow agricultural customers y to use drip irrigation and minimize backwash waste. These upgrades to the Recycled Water Storage Pond and distribution system cost approximately $1,500,000. Recycled water currently is provided to approximately 865 acres for agricultural production and landscape irrigation. Currently, these agricultural customers rely on additional CVP imports and groundwater pumping. If more irrigation demands are met by recycled water, groundwater pumping in the area could be reduced, increasing the available groundwater supply for the HUA retailers.

There are no plans to expand recycled water use for municipal users. This is indicated by the absence of entries on **Tables 6-6a and 6-6b**.

6.5.5 Actions to Encourage and Optimize Future Recycled Water Use

There are no current plans to increase recycled water use in the HUA. Accordingly, no implementation strategies are listed on **Table 6-6a and b** and **Table 6-7a and b**. The District plans to distribute the recycled water produced by the City's WWTP for agricultural users outside the HUA. Sunnyslope may pursue recycled water in the future but has no plans in place.

6.6 Desalination Water Opportunities

The 2008 Master Plan PEIR examined the demineralization of urban wells as a potential project to increase water supply reliability and improve water quality. This improved water quality would in turn improve wastewater and recycled water quality. Groundwater pumped from local wells would be treated using reverse osmosis (R/O). The Master Plan developed a phased approach for implementation. The phasing would result in 3 mgd (3,400 AFY) of demineralization capacity by 2015, and a total of 5 mgd (5,600 AFY) by 2019. This schedule represents the earliest implementation of phased demineralization of urban wells (AECOM 2011). Facilities may include a mix of existing and new wells, with either wellhead or centralized treatment. The timing and capacity of demineralization facilities are being considered but there are no plans to begin a demineralization project at this time.

The District, Hollister, and Sunnyslope are not considering desalination from ocean water or brackish surface water at this time because of a lack of such water sources in the region.

6.7 Exchanges or Transfers

Through its CVP contract, the District has the capability to engage in transfer or exchange with other CVP customers.

6.7.1 Exchanges and Transfers

The District is the CVP wholesaler to agricultural and M&I users in addition to Hollister and Sunnyslope. During the next water shortage, Hollister and Sunnyslope may be eligible to purchase additional water that the District has obtained from its water transfers with other CVP customers, purchases on the spot market, and water banked at the Semitropic water bank. The amount of available water would be variable, based on the District's overall water needs. Potential short term water agreements are expected to include 1,000 AFY from North Delta contract holders and an additional 250 AFY from exchange contractors in non-critical years.

Currently, the District has no municipal supply stored with Semitropic.

6.7.3 Emergency Interties

Hollister and Sunnyslope share a connected water system and in an emergency, water can flow from one retailer to the other as needed.

6.8 Future Water Projects

As listed on **Table 6-7**, several future projects and programs could increase the reliability of the HUA water supply. These projects all reflect the basin-wide partnership between Hollister, Sunnyslope, and the District. Additional information is provided in the Groundwater Sustainability Plan for the North San Benito Basin (Todd, 2021).

6.8.1 Increase Groundwater Well Production Capacity

The major project described here has been termed the North County Project. It involves development of production well capacity in the northeastern portion of the North San Benito Basin to actively manage groundwater storage, to increase municipal water supply and drought year reliability, and to improve municipal water quality for the City of Hollister. The effort is being led by SBCWD in cooperation with the City of Hollister. The long-term goal of the project is to develop up to 5,000 acre-feet per year (AFY) of local water supply that is reliable during droughts. Phase I consists of siting, design, and installation of a new production well to serve the northern City of Hollister, beginning with a test well installed in 2021. Potential phases II and III would involve installation of additional production wells.

The "North County" area has not been formally delineated but is generally located in the northern Hollister and northeastern Bolsa Management Areas east of the Calaveras Fault, north of the City of Hollister and extending up Pacheco Creek Valley. The area has been defined mostly on the basis of relatively low concentrations of total dissolved solids (TDS) in groundwater.

6.8.2 Develop Surface Water Storage

The Pacheco Reservoir Expansion Project is a collaborative effort of Valley Water, San Benito County Water District, and Pacheco Pass Water District (PPWD). The project would establish a new dam and expanded reservoir on the North Fork of Pacheco Creek. Constructed in 1939 and used for groundwater recharge, the reservoir is located in Santa Clara County northeast of North San Benito Basin. The project will increase Pacheco Reservoir's operational capacity from 5,500 acre-feet up to 140,000 acre-feet (SBCWD, 2021). Sources of water supply to the expanded project would be a combination of local watershed inflows and CVP supplies. A pipeline is planned to the Pacheco Pass Conduit, the CVP pipeline that delivers water from San Luis Reservoir located about 13 miles to the northeast. Deliveries from San Luis Reservoir also flow west through the Conduit to the San Felipe Division of the CVP, which includes Valley Water and SBCWD.

6.8.3 Expand Managed Aquifer Recharge

Funded in part by a DWR grant, the District is pursuing Managed Aquifer Recharge (MAR). This has involved a systematic evaluation of the North San Benito Basin, including identifying sources of water (e.g., local surface water, CVP); locating sites for possible injection wells, recharge basins, or agricultural

fields for off-season infiltration; evaluating feasibility and preparing preliminary design. One possible water source for MAR is stormwater. The City is developing a Storm Water Resource Plan to help develop projects (Wallace 2021).

These projects would take advantage of available supplies in wet years and provide a method to recharge the groundwater basin for use of groundwater as a reserve for dry years and to maintain long-term sustainability.

6.8.4 Enhance Conjunctive Use

The Hollister Urban Area Water and Wastewater Master Planning Project (Master Plan) has been implemented since 2008 and it continues as an active planning process for the foreseeable future. Relative to groundwater sustainability, the Master Plan provides for conjunctive use of CVP supply, groundwater, wastewater, and recycled water. While CVP supply is sourced from beyond GSA jurisdictions and is not always reliable (see Plan Area section 2.1.2), the groundwater, wastewater, and recycled water are local sources and the conjunctive use planning increases reliability.

6.8.5 Continue/Enhance Water Quality Improvement Programs

The District will continue to implement projects that will improve groundwater quality. These projects include implementing the Salt Nutrient Management Plan, collaborating with UC Davis toward reduced nitrate and salt loading by agriculture, enhancing cooperation with the County and local agencies on regulation of water softeners and onsite wastewater treatment systems, and enhancing outreach to North San Benito County stakeholders (including disadvantaged communities) on groundwater quality issues.

6.8.6 Improve Monitoring Program

Water resource monitoring is described in the GSP (Section 7 Monitoring Network) and addresses surface water, groundwater levels and storage, and groundwater quality among other topics. This monitoring supports informed basin management and documents GSP performance in maintaining sustainability. The GSP Section 8.9 identifies recommended monitoring improvements, including:

- Investigation for Measurement of Agricultural Groundwater Extraction
- Assessment of Monitored Well Sites to Refine Network
- Documentation of Well Construction in the Plan Area
- Development of a Unique Well ID Program
- Enhancement of Surface Water Gaging
- Collaboration with State/Federal agencies for stream gages (Upper Tres Pinos)

These improvements are described in more detail in the GSP. Combined with the District's existing groundwater management, these programs will allow the HUA to continue to rely on the groundwater basin especially during drought.

6.9 Summary of Existing and Planned Sources of Water

The Hollister Urban Area currently relies on imported water from the CVP, groundwater, and a small volume of recycled water for landscape irrigation. **Tables 6-8a and 6-8b** show the current water supply by source for 2020, for Hollister and Sunnyslope respectively. **Figure 6-2** shows the historical water supply by source for the HUA from 1995 through 2020.

Future CVP supply availability is based on projected allocation for an average year using available Cal Sim II simulations and the existing and proposed users of M&I outside of the HUA. There is approximately 400 AFY of existing M&I use supplied CVP water by the District (Todd 2020). In addition, the District is planning to provide the City of San Juan Bautista with CVP supplies amounting to an estimated 300 AFY.

Under normal conditions, the expected long-term average from the Cal Sim II simulations is greater than the current treatment capacity. Simulations estimate that allocations would average 82 percent of the M&I contract, for a total of 5,388 AFY (82 percent of the 8,250 AFY M&I contract less deliveries to other agencies and system losses).

Tables 6-9a, Table 6-9b, and Table 6-9c show the projected future supply for the three agencies. The future supply to the District is the projected average CVP projections. In turn, the CVP supply available to the two agencies is the District's supply less other users and system losses, 5,388 AFY (see Table 6-9W). The HUA now has a treatment capacity of 7,280 AFY, which will allow the HUA to fully use the expected allocation. It is assumed Hollister and Sunnyslope will equally share the CVP supply to the HUA. Hollister is expected to continue its municipal supply of recycled water at 100 AFY. Both agencies will rely on groundwater for the remainder of the demand.

As discussed in the groundwater section, the HUA mostly overlies the Hollister Management Area with a portion in San Juan MA. The sustainable yield for M&I uses in the Hollister MA as defined in the GSP through future simulations is approximately 5,600 AFY. This volume could be expanded during drought conditions as needed. In 2040, the HUA plans to use groundwater as a supplemental supply during normal, single dry, and multiple dry years. Under normal conditions, the total groundwater pumping from Hollister and Sunnyslope is expected to total 5,389 AFY, slightly less than the simulated Hollister MA sustainable yield.

It is expected that CVP imports will continue to be the most desirable water source for the HUA in the future and that additional demand will be met with local groundwater blended with imported supplies. The preferred distribution is two-thirds imported water and one-third groundwater. Given future demand estimates and expected CVP allocations, by 2040 the water supply blend will be closer to half imported

water and half groundwater. The blending ratio is a matter of preference and may be relaxed during short term droughts.

6.10 Climate Change Impacts to Supply

Climate change is likely to affect water supply as well as demand (see Section 4.6). The climate change vulnerability assessment performed for the HUA is included as **Appendix E**. The most significant impact to supply will be the availability of imported water. Snowpack is expected to decrease as the climate warms and CVP allocations will likely decrease and become more variable as a result. In addition, CVP relies in part on the Delta, which is a climate-sensitive habitat where environmental requirements may also reduce CVP allocation. As discussed in Section 6.1, the Cal Sim II forecast project slightly reduced allocations in the future due in part to climate change. However, because of the shortage policy of USBR, the minimum allocation is now 50 percent, recognizing the need for public health and safety.

6.11 Energy Intensity

As a new requirement in 2020, suppliers must calculate the energy intensity of their water service. While the agencies have tracked their energy use in the recent years, they have not systematically recorded energy uses from conveyance, storage, pumping, treatment, and distribution. **Table 6-A** below lists the possible uses of energy in the HUA system. Sunnyslope and Hollister both provided their available energy consumption. Sunnyslope's estimate includes both pumping and distribution for a period of six month, whereas Hollister tracks only energy for pumping. To account for distribution, it is assumed that total energy costs for groundwater are similar in Sunnyslope and Hollister and that energy use can be extrapolated from the six-month period to one year.

SBCWD tracks energy use at each part of the water system from the turnouts, storage operations, pump stations, and treatment plants.

Table 6-10 (UWMP Table O-1a) summarizes the energy data. As shown, Hollister and Sunnyslope use energy to extract and divert water and SBCWD uses energy for storage, conveyance, and treatment. To simplify the accounting, the process of Distribution in **Table 6-10** only includes distribution for CVP water whereas the processes of Extract and Divert include distribution for groundwater. The value for Volume of Water Entering is defined as the volume of water sources before losses. It should be noted that the CVP energy use for storage, conveyance, and distribution also includes water for agriculture uses that are not accounted for in the volume of water entering the process.

The energy intensity of the system is the total energy use divided by the volume of water in the system (kWh/AF). For the CVP system, the energy intensity is approximately 436.61 kWh/AF and the groundwater system energy intensity is approximately 726.33 kWh/AF. In 2020, the groundwater system supplied 30 percent of the water and used 41 percent of the total energy of the system.

While the energy data used in this analysis are approximate, the energy intensity of the systems can be applied to evaluation of potential water management projects. The three agencies will continue to monitor and collect data on the energy use of the system.

Table 6-A. Components of Energy Use for Water Supply in the Hollister Urban Area

Component	Process	Agency
Groundwater		
Groundwater Wells	Extract and Divert	SSCWD, COH
GW to customers	Distribution	SSCWD, COH
CVP Operations		
San Justo Operations	Place into Storage	SBCWD
CVP conveyance from San Felipe to San Justo	Conveyance	SBCWD
CVP conveyance to Treatment Plants	Conveyance	All
Treatment Plants		
West Hills Treatment Plant	Treatment	SSCWD, COH
Lessalt Treatment Plant	Treatment	SSCWD, COH
Treated water to customers	Distribution	SSCWD, COH
Recycled Water		
Treatment of recycled water	Treatment	COH
Recycled water to muni customers	Distribution	COH

Table 6-1a. Groundwater Volume Pumped -Hollister

Submittal Table 6-1 Retail: Groundwater Volume Pumped						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
☐	All or part of the groundwater described below is desalinated.					
Groundwater Type	Location or Basin Name	2016	2017	2018	2019	2020
Add additional rows as needed						
	Hollister - North San Benito Groundwater Basin	1,798	1,417	740	918	950
	Sunnyslope - North San Benito Groundwater Basin	652	622	42	0	254
TOTAL		2,450	2,039	782	918	1,205
NOTES: Includes water pumped by Sunnyslope but delivered to Hollister						

Table 6-1b. Groundwater Volume Pumped - Sunnyslope

Submittal Table 6-1 Retail: Groundwater Volume Pumped						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
☐	All or part of the groundwater described below is desalinated.					
Groundwater Type	Location or Basin Name	2016	2017	2018	2019	2020
Add additional rows as needed						
	Sunnyslope - North San Benito Groundwater Basin	841	738	563	715	705
	Hollister - North San Benito Groundwater Basin				68	
TOTAL		841	738	563	783	705
NOTES: Water pumped by and delivered to Sunnyslope - does not include water delviered to Hollister						

Table 6-1c. Groundwater Volume Pumped -District

Submittal Table 6-1 Wholesale: Groundwater Volume Pumped						
☑	Supplier does not pump groundwater. The supplier will not complete the table below.					
☐	All or part of the groundwater described below is desalinated.					
Groundwater Type	Location or Basin Name	2016	2017	2018	2019	2020
TOTAL		0	0	0	0	0
NOTES:						

Table 6-2a. Wastewater Collected Within Service Area in 2020 - Hollister

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2020 service area covered by wastewater collection system *(optional)*					
	Percentage of 2020 service area population covered by wastewater collection system *(optional)*					
Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2020	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party? *(optional)*
Add additional rows as needed						
City of Hollister		2,658	City of Hollister	DWWTP/WRF	y	
Total Wastewater Collected from Service Area in 2020:		2,658				
NOTES: Based on Water Year 2020						

Table 6-2b. Wastewater Collected Within Service Area in 2020 - Sunnyslope

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2020 service area covered by wastewater collection system *(optional)*					
	Percentage of 2020 service area population covered by wastewater collection system *(optional)*					
Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2020	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party? *(optional)*
Add additional rows as needed						
Sunnyslope	metered	180		Ridgemark WWTP	y	n
Total Wastewater Collected from Service Area in 2020:		180				
NOTES:						

Table 6-3a. Wastewater Treatment and Discharge Within Service Area in 2020 - Hollister

Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020											
☐	No wastewater is treated or disposed of within the UWMP service area. The Supplier will not complete the table below.										
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2020 volumes Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
DWWTP/WRP	Percolation Ponds				No		2,658	2,132	100	426	
						Total	2,658	2,132	100	426	0
NOTES: Effluent data and recycled water deliveries from WY 2020 (District Annunal Report)											

Table 6-3b. Wastewater Treatment and Discharge Within Service Area in 2020 - Sunnyslope

Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020											
☐	No wastewater is treated or disposed of within the UWMP service area. The Supplier will not complete the table below.										
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2020 volumes				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
Add additional rows as needed											
Ridgemark	Percolation Ponds			ponds	no	secondary	180	178	0	0	0
						Total	180	178	0	0	0
NOTES:											

Table 6-3c. Wastewater Treatment and Discharge Within Service Area in 2020 - District

Submittal Table 6-3 Wholesale: Wastewater Treatment and Discharge Within Service Area in 2020											
☑	Wholesale Supplier neither distributes nor provides supplemental treatment to recycled water. The Supplier will not complete the table below.										
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2020 volumes				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
Add additional rows as needed											
						Total	0	0	0	0	0
NOTES: The wholesaler does not distributes recycled water for municipal use.											

Table 6-4a. Current and Projected Retailers Provided Recycled Water Within Service Area - Hollister

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area											
☐	Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.										
Name of Supplier Producing (Treating) the Recycled Water:		City of Hollister									
Name of Supplier Operating the Recycled Water Distribution System:		City of Hollister/SBCWD									
Supplemental Water Added in 2020 (volume) *Include units*											
Source of 2020 Supplemental Water											
Beneficial Use Type	Potential Beneficial Uses of Recycled Water (Describe)	Amount of Potential Uses of Recycled Water (Quantity) /	General Description of 2020 Uses	Level of Treatment	2020	2025	2030	2035	2040	2045 (opt)
Agricultural irrigation										
Landscape irrigation (excludes golf courses)					100	100	100	100	100	
Golf course irrigation										
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)*										
Surface water augmentation (IPR)*										
Direct potable reuse										
Other *(Provide General Description)*										
				Total:	100	100	100	100	100	0
Internal Reuse (*not counted towards Statewide Recycled Water volume*).										
**IPR - Indirect Potable Reuse*										
NOTES:										

Table 6-4b. Current and Projected Retailers Provided Recycled Water Within Service Area - Sunnyslope

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area										
☑	Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.									
Name of Supplier Producing (Treating) the Recycled Water:										
Name of Supplier Operating the Recycled Water Distribution System:										
Supplemental Water Added in 2020 (volume) *Include units*										
Source of 2020 Supplemental Water										
Beneficial Use Type	Potential Beneficial Uses of Recycled Water (Describe)	Amount of Potential Uses of Recycled Water (Quantity)	General Description of 2020 Uses	Level of Treatment	2020	2025	2030	2035	2040	2045 (opt)
Agricultural irrigation										
Landscape irrigation (excludes golf courses)										
Golf course irrigation										
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)*										
Surface water augmentation (IPR)*										
Direct potable reuse										
Other *(Provide General Description)*										
				Total:	0	0	0	0	0	0
Internal Reuse (*not counted towards Statewide Recycled Water volume*).										
**IPR - Indirect Potable Reuse*										
NOTES:										

Table 6-4c. Current and Projected Retailers Provided Recycled Water Within Service Area - District

Submittal Table 6-4 Wholesale: Current and Projected Retailers Provided Recycled Water Within Service Area							
☑	Recycled water is not directly treated or distributed by the Supplier. The Supplier will not complete the table below.						
Name of Receiving Supplier or Direct Use by Wholesaler	Level of Treatment	2020	2025	2030	2035	2040	2045 *(opt)*
Add additional rows as needed							
Total		0	0	0	0	0	0
NOTES:							

Table 6-5a. 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual - Hollister

Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual			
☐	Recycled water was not used in 2015 nor projected for use in 2020. The Supplier will not complete the table below.		
Use Type		**2015 Projection for 2020**	**2020 Actual Use**
Agricultural irrigation			
Landscape irrigation (excludes golf courses)		116	100
Golf course irrigation			
Commercial use			
Industrial use			
Geothermal and other energy production			
Seawater intrusion barrier			
Recreational impoundment			
Wetlands or wildlife habitat			
Groundwater recharge (IPR)			
Surface water augmentation (IPR)			
Direct potable reuse			
Other	*Type of Use*		
Total		116	100
NOTES:			

Table 6-5b. 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual - Sunnyslope

Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual			
☑	Recycled water was not used in 2015 nor projected for use in 2020. The Supplier will not complete the table below.		
Use Type		**2015 Projection for 2020**	**2020 Actual Use**
Agricultural irrigation			
Landscape irrigation (excludes golf courses)			
Golf course irrigation			
Commercial use			
Industrial use			
Geothermal and other energy production			
Seawater intrusion barrier			
Recreational impoundment			
Wetlands or wildlife habitat			
Groundwater recharge (IPR)			
Surface water augmentation (IPR)			
Direct potable reuse			
Other	*Type of Use*		
Total		0	0
NOTES:			

Table 6-5c. 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual - District

Submittal Table 6-5 Wholesale: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual		
☑	Recycled water was not used or distributed by the supplier in 2015, nor projected for use or distribution in 2020. The wholesale supplier will not complete the table below.	
Name of Receiving Supplier or Direct Use by Wholesaler	2015 Projection for 2020	2020 Actual Use
Add additional rows as needed		
Total	0	0
NOTES:		

Table 6-6a. Expected Future Water Supply Projects or Programs - Hollister

Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use			
☑	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Add additional rows as needed			
		Total	0
NOTES:			

Table 6-6b. Expected Future Water Supply Projects or Programs - Sunnyslope

Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use			
☑	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Add additional rows as needed			
		Total	0
NOTES:			

Table 6-7a. Expected Future Water Supply Projects or Programs - Hollister

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List*	Expected Increase in Water Supply to Supplier *This may be a range*
	Drop Down List (y/n)	*If Yes, Agency Name*				
Add additional rows as needed						
Increase Groundwater Well Production Capacity			New production well and actively managed storage			4,000 AFY
Develop Surface Water Storage		Valley Water	Pacheco Reservoir Expansion Project			up to 140,000 AFY
Expand Managed Aquifer Recharge			Managed Aquifer Recharge of CVP			
Enhance Conjunctive Use			Water and Wastewater Planning			
Continue/Enhance Water Quality Improvement Programs			Improved water quality in the groundwater, wastewater, and recycled water			
Improve Monitoring Program			Improved understanding of the groundwater basin to inform municpal pumping			
NOTES:						

Table 6-7b. Expected Future Water Supply Projects or Programs - Sunnyslope

Submittal Table 6-7b Retail: Expected Future Water Supply Projects or Programs						
☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List*	Expected Increase in Water Supply to Supplier *This may be a range*
	Drop Down List (y/n)	*If Yes, Agency Name*				
Add additional rows as needed						
Develop Surface Water Storage		Valley Water	Pacheco Reservoir Expansion Project			up to 140,000 AFY
Expand Managed Aquifer Recharge			Managed Aquifer Recharge of CVP			
Enhance Conjunctive Use			Water and Wastewater Planning			
Continue/Enhance Water Quality Improvement Programs			Improved water quality in the groundwater, wastewater, and recycled water			
Improve Monitoring Program			Improved understanding of the groundwater basin to inform municpal pumping			
NOTES:						

Table 6-7c. Expected Future Water Supply Projects or Programs - District

Submittal Table 6-7 Wholesale: Expected Future Water Supply Projects or Programs						
☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description *(if needed)*	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Supplier
Add additional rows as needed						
Increase Groundwater Well Production Capacity			New production well and actively managed storage			4,000 AFY
Develop Surface Water Storage		Valley Water	Pacheco Reservoir Expansion Project			up to 140,000 AFY
Expand Managed Aquifer Recharge			Managed Aquifer Recharge of CVP			
Enhance Conjunctive Use			Water and Wastewater Planning			
Continue/Enhance Water Quality Improvement Programs			Improved water quality in the groundwater, wastewater, and recycled water			
Improve Monitoring Program			Improved understanding of the groundwater basin to inform municpal pumping			
NOTES:						

Table 6-8a. Water Supplies — Actual - Hollister

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
		Actual Volume	Water Quality	Total Right or Safe Yield *(optional)*
Add additional rows as needed				
Hollister - Pumping		950		
Sunnyslope - Pumping		254		
Hollister - CVP		2,114		
Recycled Water		100		
Total		3,419		0
NOTES:				

Table 6-8b. Water Supplies — Actual - Sunnyslope

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
		Actual Volume	Water Quality	Total Right or Safe Yield *(optional)*
Add additional rows as needed				
Sunnyslope - Pumping		715		
Sunnyslope CVP		1,878		
Total		2,593		0

NOTES: Only includes pumping by Sunnyslope delivered to Sunnyslope

Table 6-8c. Water Supplies - Actual - District

Submittal Table 6-8 Wholesale: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
		Actual Volume	Water Quality	Total Right or Safe Yield *(optional)*
Add additional rows as needed				
	CVP - HUA Municipal - Lessalt	1,561		
	CVP - HUA Municipal - West Hills	2,431		
	CVP - Other	400		
	CVP System Losses	398		
	Total	4,791		0
NOTES:				

Table 6-9a. Water Supplies — Projected - Hollister

Submittal Table 6-9 Retail: Water Supplies — Projected											
Water Supply	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*									
		2025		**2030**		**2035**		**2040**		**2045** *(opt)*	
		Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*
Add additional rows as needed											
CVP		2,694		2,694		2,694		2,694			
Groundwater		992		1,429		2,168		2,832			
Recycled Water		100		100		100		100			
Total		3,786	0	4,223	0	4,962	0	5,626	0	0	0

NOTES: Asssumes a long term average of 82% allocation split evenly between sunnyslope and hollister

Table 6-9b. Water Supplies — Projected - Sunnyslope

Submittal Table 6-9 Retail: Water Supplies — Projected											
Water Supply	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*									
		2025		**2030**		**2035**		**2040**		**2045** *(opt)*	
		Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*
Add additional rows as needed											
CVP		0		0		0		0			
Groundwater		3,182		3,926		4,522		5,231			
Total		3,182	0	3,926	0	4,522	0	5,231	0	0	0

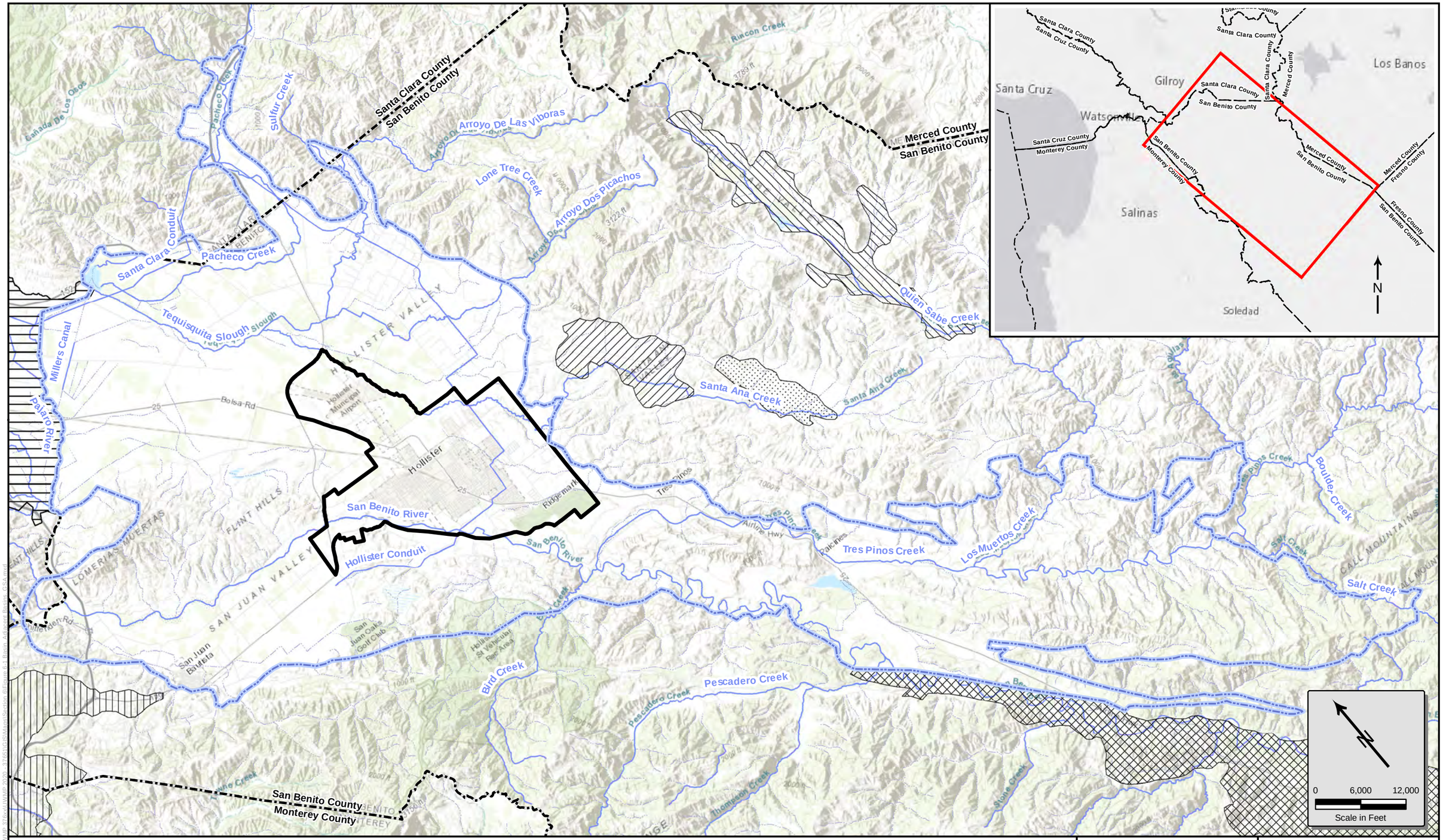
NOTES: Asssumes a long term average of 75 % allocation split evenly between sunnyslope and hollister

Table 6-9c. Water Supplies — Projected - District

Submittal Table 6-9 Wholesale: Water Supplies — Projected											
Water Supply	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*									
		2025		2030		2035		2040		2045 *(opt)*	
		Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*
Add additional rows as needed											
CVP - HUA agencies		5,388		5,388		5,388		5,388		5,388	
CVP - Other District M&I Users		700		700		700		700		700	
CVP - System Losses		677		677		677		677		677	
Total		6,765	0	6,765	0	6,765	0	6,765	0	6,765	0
NOTES: assumes a 82% CVP allocation for total supply, other users include the propsed service to San Juan Bautista (300 AFY)and existing M&I users (400 AFY).											

Table 6-10. Energy Intensity

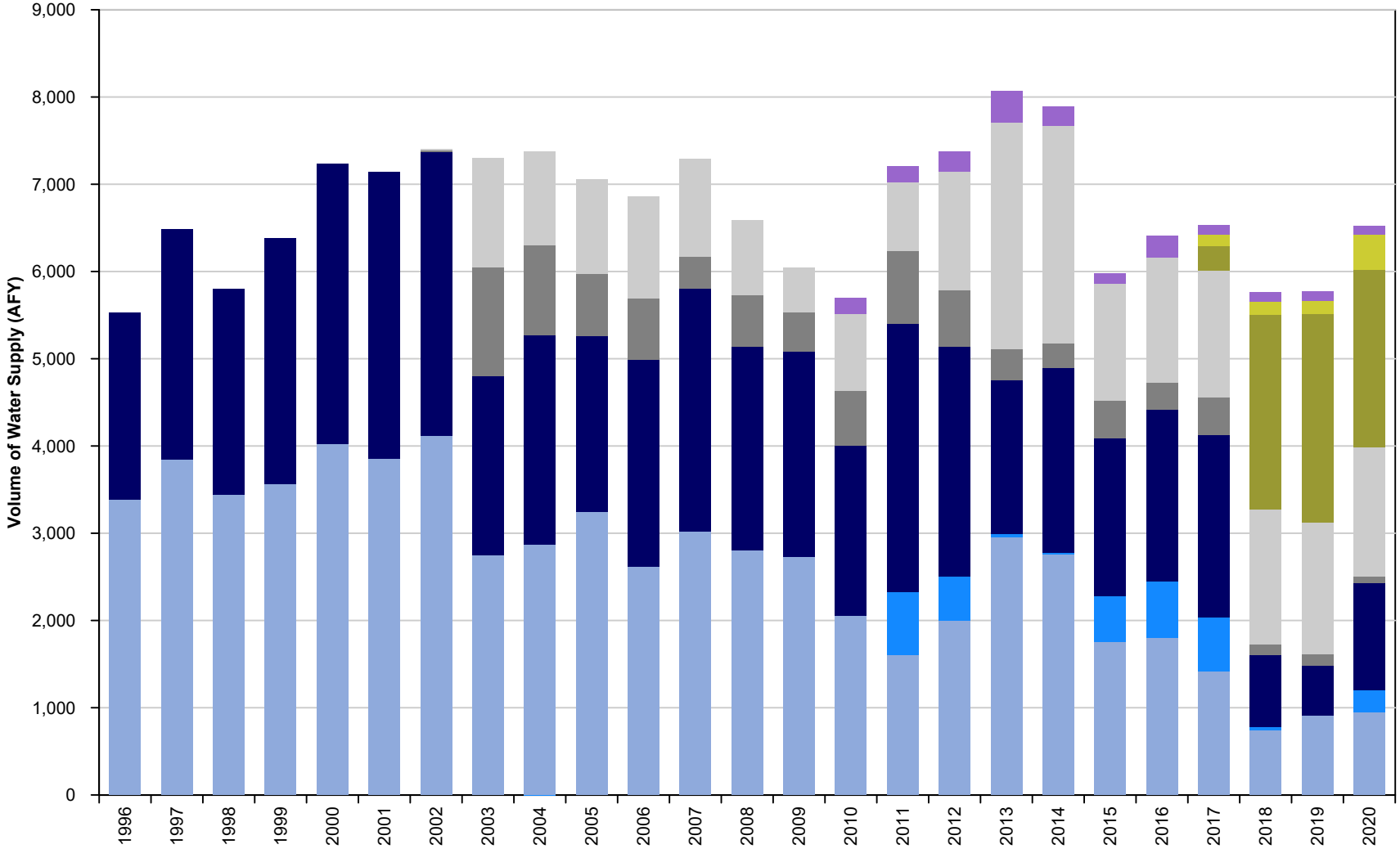
Table O-1A: Recommended Energy Intensity - Water Supply Process Approach									
Enter Start Date for Reporting Period	1/1/2020	Urban Water Supplier Operational Control							
End Date	12/30/2020	Water Management Process						Non-Consequential Hydropower (if applicable)	
		Extract and Divert	Place into Storage	Conveyance	Treatment	Distribution	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)		*1919.262905*	*4392.12*	*4392.12*	*4392.12*	*4392.12*	*4392.12*	*0*	*4392.12*
Energy Consumed (kWh)		*1394019.44*	*187306.5045*	*33277.76799*	*1371661.95*	*400274.65*	*3386540.312*	*0*	*3386540.312*
Energy Intensity (kWh/AF)		*726.3*	*42.6*	*7.6*	*312.3*	*91.1*	*771.0*	*0.0*	*771.0*



July 2021

TODD GROUNDWATER

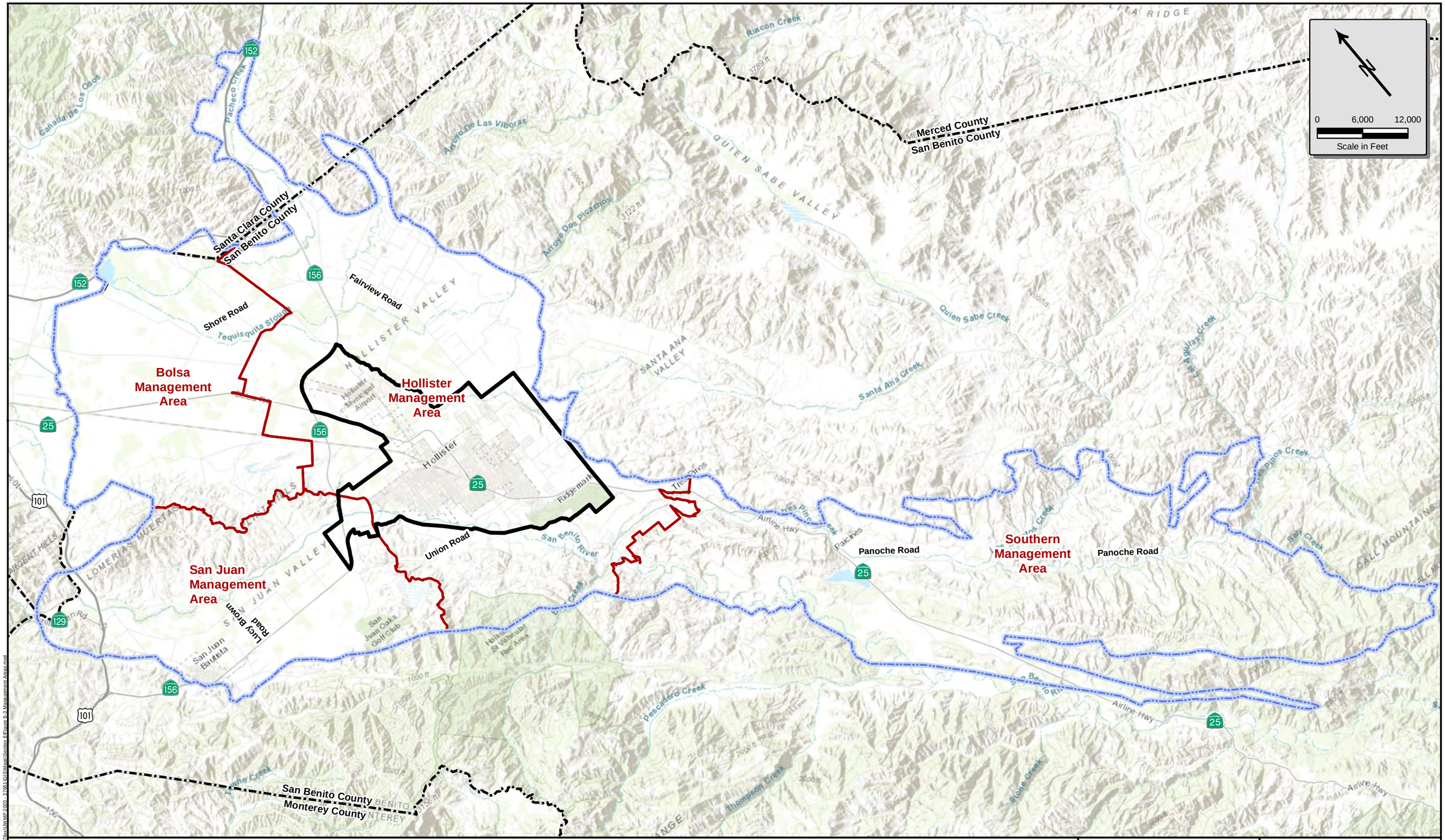
Figure 6-1
North San Benito Groundwater Basin



July 2021

TODD GROUNDWATER

Figure 6-2
Historical and Current Supply by Source



July 2021

TODD GROUNDWATER

Figure 6-3
Management Areas

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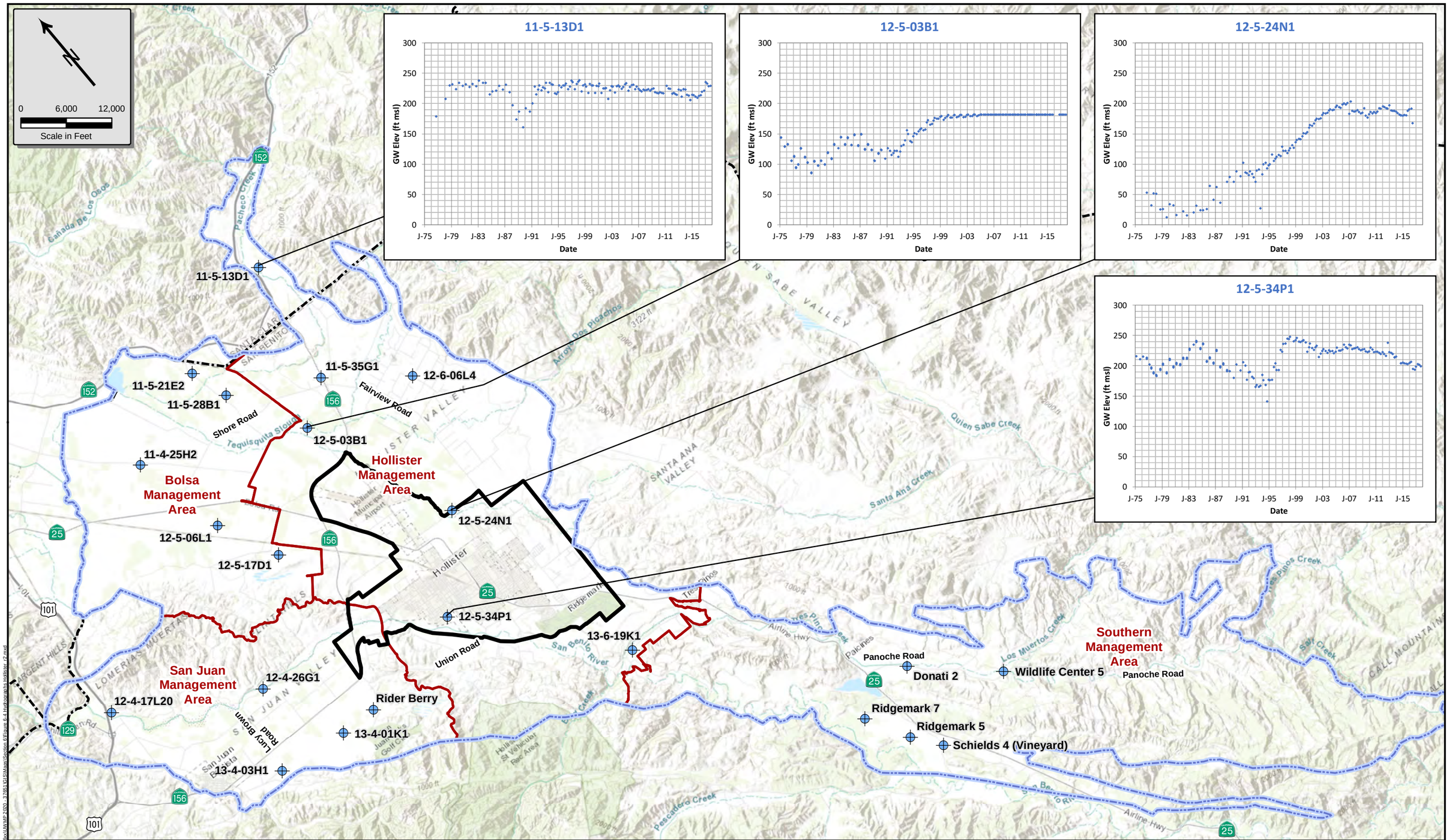


July 2021

TODD GROUNDWATER

Figure 6-4
Groundwater Elevations in Selected Key Wells

0 6,000 12,000
Scale in Feet

Merced County
San Benito County

Santa Clara County
San Benito County

San Benito County
Monterey County

Fairview Road
Shore Road
Union Road
Panoche Road
Panoche Road
Lucy Brown Road

Rincon Creek
Arroyo De Las Viboras
Arroyo Dos Picachos
Quien Sabe Creek
Santa Ana Creek
Tequisquita Slough
Pescadero Creek
Thompson Creek
Stone Creek
Los Muertos Creek
Las Aguilas Creek
Los Pinos Creek
Sixty Creek
San Benito River
Tres Pinos Creek
Airline Hwy

QUIEN SABE VALLEY
HOLLISTER VALLEY
SANTA ANA VALLEY
SAN JUAN VALLEY
FLINT HILLS
LOMERIAS MUERTAS
CALL MOUNTAINS

Hollister
Hollister Municipal Airport
San Juan Oaks Golf Club
Hollister St Vehicular Rec Area

Hollister Urban Area
North San Benito Basin

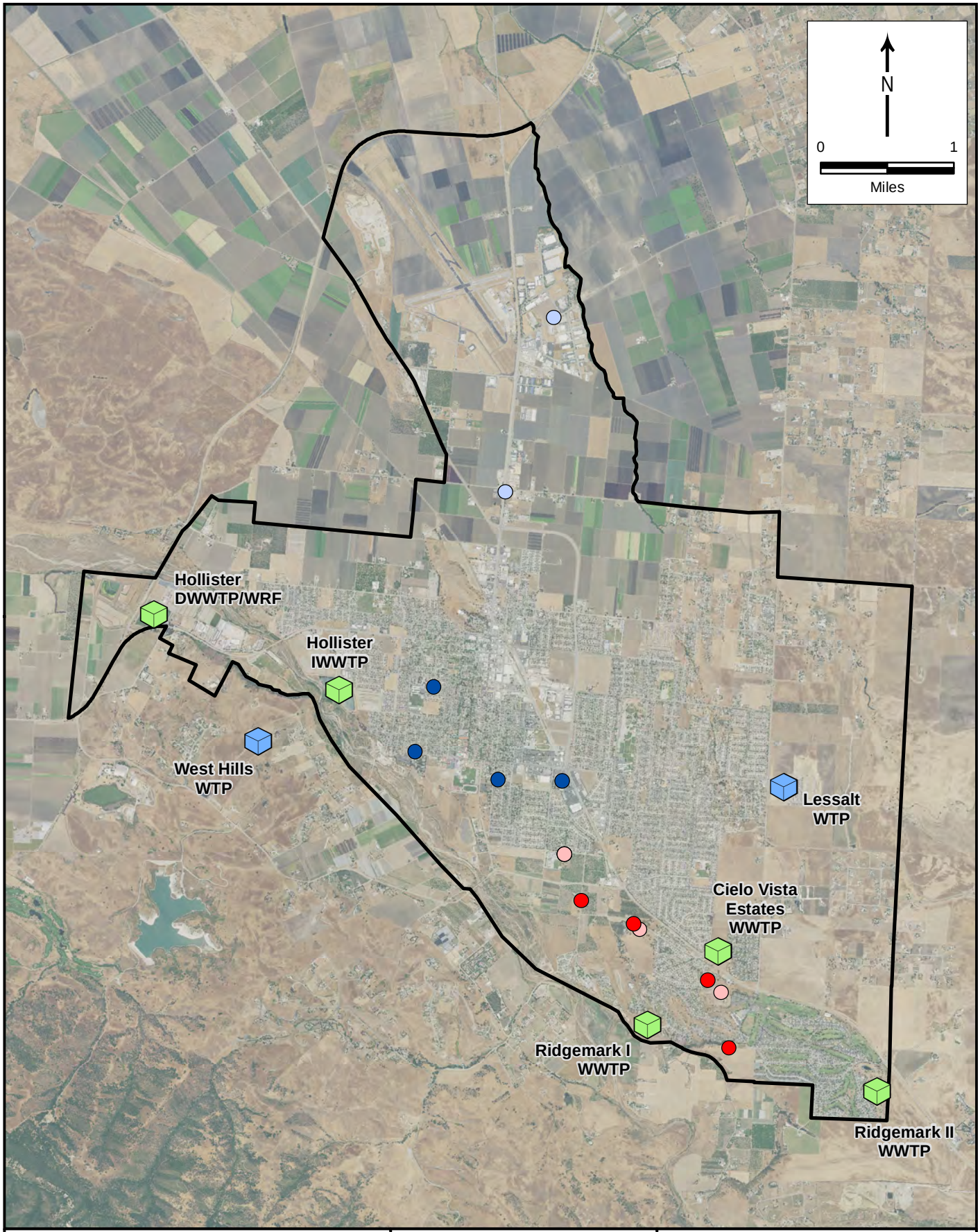
Average TDS Concentration
- Less than 500 mg/L
- 500 to 1,000 mg/L
- 1,000 to 1,500 mg/L
- Greater than 1,500 mg/L

July 2021

TODD GROUNDWATER

Figure 6-5
Water Quality in North San Benito Groundwater Basin (2014-2017)

Path: K:\Projects\HA UWMP 3760\UWMP 2020 - 3760\GIS\Maps\Section 6\Figure 6-5 TDS Distribution (2).mxd



July 2021

TODD GROUNDWATER

Figure 6-6
Location of Groundwater Wells, Water Treatment Plants, and Wastewater Treatment Plants

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7. WATER SERVICE RELIABILITY AND DROUGHT RISK ASSESSMENT

7.1 Constraints on Water Sources

The HUA has multiple water supply sources—CVP, groundwater, and recycled water—that increase overall water supply reliability. However, many factors could result in inconsistency of supply and shortages. These factors may include legal, environmental, water quality, and/or climatic considerations, as discussed below. Major factors affecting surface water supply from the CVP include environmental issues and climatic variation. The groundwater basin has a recent history of consistent supply but may be affected by climatic variations and poor water quality. Increased future uses of recycled water may be affected by the water quality of the source and legal/environmental constraints on use.

Hollister, Sunnyslope, and the District are addressing these potential constraints on water supply through development of a portfolio of supplies, improvement of facilities (e.g., treatment plant expansion and groundwater banking), and through demand management as summarized in the Water Shortage Contingency Plan (**Section 8**).

7.1.1 Legal

The Hollister basin has not been adjudicated, so specific groundwater rights have not been quantified. Although the possibility exists that adjudication proceedings could be initiated, the success of local groundwater management activities with stakeholder involvement (including GSP preparation) reduces the likelihood that such lengthy and costly legal action will occur.

Imported water is secured for the future through contracts that include provisions for reductions in water supply. Such interruption of imported water would induce additional groundwater pumping that, depending on the magnitude and persistence of the interruption, could reduce groundwater storage and affect the reliability of the groundwater supply.

The collection, treatment, and disposal of wastewater and recycled water uses are governed by the MOUs between the County, the District, Hollister, and Sunnyslope, and regulatory requirements. The local parties have undertaken a coordinated effort to plan water supply and wastewater strategies for the HUA.

7.1.2 Environmental

The most likely environmental factors affecting HUA water supplies would be reductions to CVP imports due to concerns over endangered species and water quality in the Delta. Expanded use of recycled water may also be limited by environmental concerns. Potential recycled water uses are and will continue to be in compliance with policies set by the RWQCB and other agencies. Other environmental concerns could include substantially increased pumping from other groundwater basin users, resulting in basin overdraft; SGMA defines overdraft as involving undesirable impacts including chronic lowering of groundwater levels, reduction of groundwater storage, seawater intrusion, degraded water quality, land subsidence, and surface water depletions with adverse impacts on beneficial uses. These undesirable results are addressed in the GSP preparation process (except seawater intrusion, which is not relevant to this inland basin.)

7.1.3 Delta Pumping Restrictions

The Sacramento-San Joaquin Delta is a key component to the state's water system (DWR 2009b), as much of the water that feeds the State Water Project and Central Valley Project flows through the Delta. The Delta is also home to a sensitive ecosystem with several federally listed threatened species. In 2007, pumping from the Delta for water supply was limited by a federal court to protect the Delta Smelt, a federally listed threatened species. Further restrictions have been imposed to protect other fish species, including the Longfin Smelt and Chinook salmon. Further appeals have upheld these restrictions (Los Angeles Times 2014). These pumping limits directly affect the amount of CVP imported water available to the HUA and other San Benito County users.

The SWRCB has developed the Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary (Bay-Delta Plan). While unlikely to reduce any limitations, the Bay-Delta Plan is establishing water quality control measures and flow requirements. In 2018 the State Water Board adopted Basin Plan amendments establishing the Lower San Joaquin River flow objectives and revised southern Delta salinity objectives. Future amendments are likely to focus on the Sacramento River, eastside Delta tributaries, and the Delta itself.

7.1.4 Water Quality

Water samples from the municipal wells are monitored for various water quality constituents. If these constituents are detected at concentrations higher than the drinking water standard or maximum concentration limit (MCL) set by the U.S. Environmental Protection Agency (USEPA) or the DDW, the well may be taken offline. In the past, municipal wells have been taken offline as a result of high nitrate concentrations. Although high nitrate concentrations can be treated, removal of wells from the system and fitting for treatment technology may temporarily impact the system and affect the cost of supply.

As discussed in the supply section, local groundwater is highly mineralized and the relatively poor water quality may limit some uses of groundwater. The HUA agencies are taking steps to improve water quality of the groundwater supply. In the meantime, groundwater is blended with CVP to ensure adequate quality for supply and indirectly improved quality for wastewater and recycled water. There is no regulatory requirement but the agencies may limit the volumes of groundwater used if insufficient imported water is available for blending.

As with groundwater, the water quality of recycled water (also characterized by high TDS concentrations) may also limit its potential uses. The 2008 Master Plan (HDR 2008a) and Update (HDR 2017) includes procedures by which the quality of recycled water can be improved over time. The changing quality of recycled water was taken into consideration in the projection of future use.

7.1.5 Climatic

The climatic events most likely to affect water supply are droughts, which are addressed in other sections of this report by examining historical droughts and considering their impact on current and future water supply and demand. However, future climate change—and specifically global warming—brings additional

uncertainty to water supply management. It is notable that five of the six extreme drought years have occurred within the past 26 years, suggesting greater climatic variability in recent decades.

Drought

Recorded droughts have been sufficiently intense and prolonged to temporarily affect groundwater levels in the basin but have not affected the long-term consistency of supply. However, paleoclimatic data indicate that extreme prolonged droughts have occurred in prehistoric California and current climate research indicates that extreme drought may occur more frequently with climate change. This is discussed in more detail below.

As reported in past UWMPs, basic review of groundwater hydrographs for wells in the basin suggested that one or even three consecutive extreme dry years did not have a discernable impact on groundwater levels. However, as experienced in recent drought, CVP allocations may be significantly reduced during these periods. As guided by the Master Plan process (HDR, 2008 and 2017), available imported water supplies are being managed conjunctively with local storage and supplies as available in drought.

Global Climate Change

According to the Intergovernmental Panel on Climate Change, global warming could significantly alter California's hydrologic cycles and water supply. These impacts could include decreased Sierra snowpack, increased temperatures, more severe droughts, sea level rise, and increased floods. Climate models indicate that precipitation as rainfall is expected to increase as snowfall decreases over the Sierra Nevada and Cascade mountain ranges. By the end of this century, the Sierra snowpack is projected to be 48 to 65 percent less than the historical average (DWR 2021b). This reduction would directly impact the volume of imported water available for all the District CVP customers, including Hollister and Sunnyslope. Sierra snowmelt feeds rivers that flow to the Delta, the source of CVP imported water. The Delta is also at risk from the predicted increases in climate variability associated with climate change. More severe flooding and rising sea levels threaten the waterways that serve as a vital link in the CVP system within the Delta.

Climate change may also increase regional temperatures and cause more variable weather patterns. The minimum daily temperature in California has increased over one degree Fahrenheit and continues to rise (DWR 2021b). In addition to decreasing snowpack, these increased temperatures may also increase water demand. Higher temperatures could increase water demand throughout the state through increased agricultural irrigation and in the HUA through increased outdoor residential and commercial irrigation. Changing weather patterns could cause more severe flooding and longer droughts.

Climate Change is already taken into account for future supply projections for all sources to the HUA for all. The CVP projections are based on the Cal Sim II simulations that reflect the most up to date CVP operational forecast given climate change. The groundwater availability is limited to the sustainable yield developed for the North San Benito GSP. The future modeling, on which the sustainable yield is based, represents a continuation of existing land and water use patterns, but with anticipated effects of future climate change on local hydrology (rainfall recharge and stream percolation) and on the availability of imported water supplies.

7.1.6 Catastrophic Water Shortage

The Urban Water Management Planning Act requires that water purveyors describe actions to be taken in the event of catastrophic water supply interruption, such as earthquake and regional power outage. Regional power outages represent a potential interruption in water supply.

Regional Power Outage

Heat waves and wildfire conditions have resulted in power outages in the HUA that disrupt water supply. To ensure that the water system is capable of providing an adequate level of service during power outages, Hollister Well Nos. 4 and 5 are equipped with standby power. Hollister also has portable generators to supply emergency power for the other active wells (HDR 2008a). Sunnyslope has portable generators at all potable well sites, wastewater pump stations, and their wastewater treatment plant. A backup generator has not been installed at the Lessalt or West Hills WTP because the size of the generator that would be required to run the plant and pump stations is cost prohibitive. However, the treatment plant has been wired with a quick-connect electrical connection so that a rental generator could easily be brought in and quickly connected to power the plant if needed.

Natural Disasters

Disasters such as earthquakes could disrupt water delivery infrastructure. The wholesalers—USBR and SBCWD—that provide imported water to the HUA are taking steps to ensure water supply reliability. USBR is responsible for about 370 storage dams and for dikes that form a significant part of the water resources infrastructure for the western United States. As the owner of these facilities, USBR is committed to providing the public and the environment with adequate protection from the risks inherent to collecting and storing large volumes of water for later distribution and/or release (USBR 2016). The District routinely monitors the conditions of Hernandez and Paicines dams used for both water supply and flood prevention.

Recognizing the proximity of the San Andreas and Calaveras faults, the City of Hollister, San Benito County, and the District have a joint water shortage emergency response plan included in **Appendix G.**

7.2 Water Service Reliability Assessment

The California Urban Water Management Planning Act requires that each water supplier provide an assessment of the reliability of its water supply during normal, dry, and multiple dry years. This section considers the impact on water supplies during a single extreme dry year and a multiple dry year period (defined as a drought lasting five consecutive years). In addition, a catastrophic water shortage could also occur, for example, as a result of earthquake damage, regional power outage, or water quality emergency. This section presents the response to potential water shortages for Hollister, Sunnyslope, and the District, including catastrophic water supply interruption and drought. **Tables 7-1** shows the base years selected to define average, single-dry year, and multiple-dry year period for each water source.

7.2.1 Types of Years

GSP Regulations require quantification of the water budget by water year type, which is a classification based on the amount of annual precipitation in a basin. It should be noted the water year type is based on hydrologic water year October to September. This UWMP reports on calendar year January to December.

Figure 7-1 shows annual rainfall in Hollister from water year 1922 through 2020; the average annual amount is 13.4 inches. Water year type is intended to aid in the evaluation of information such as water level hydrographs and groundwater storage changes. **Table 7-A** documents the classification developed for the North San Benito GSP, which describes five water year types (critically dry, dry, normal, above normal, wet). The methodology for defining the water year types is based on DWR's Water Budget Best Management Practice (BMPs) Document (DWR, 2016). For North San Benito, the annual rainfall amounts in Hollister over the period of record (1922-2018) were expressed as percentages of average annual rainfall. These were then sorted into quintiles, reflecting the five categories. The sorting into quintiles resulted in the classification shown in **Table 5-1**. The water years from 1922 to 2018 were then classified using the numeric values in **Table 5-1** as illustrated in **Figure 5-1.**

The water year classification is based on local Hollister rainfall as representative of the Basin and surrounding watershed. Local precipitation is important for the overall water balance of the area. While CVP allocations are critical to avoiding overdraft and are based on precipitation patterns in the Sierra Nevada and Central Valley, local precipitation has a larger effect by volume on the groundwater basin. Surface water recharge, deep percolation, and irrigation demand are all dependent on local rainfall.

Table 7-A. Water Year Type Classification

Water Year Type		Range of percent normal	Precipitation Range (in)
Wet	W	>130	> 17.5
Above Normal	AN	105-130	14.1 - 17.5
Normal	N	85-105	11.4 - 14.1
Dry	D	70-85	9.4 - 11.4
Critically Dry	C	<70	< 9.4
Average Rainfall 13.4 inches per year			

Average Conditions

Rainfall data have been collected monthly in the Hollister area since 1875. Precipitation and other weather data have been collected from a California Irrigation Management Information System (CIMIS) station located by the District office in Hollister since June 1994 (Station #126). Average conditions are considered the same as Normal as defined in **Table 7-A**.

Rainfall in water years 1992, 2003, 2009, and 2020 was about average. For the purposes of this UWMP, 2020 is selected as the typical average year for supply because the most recent year is representative of current basin operations.

Single-Dry Year

DWR guidelines suggest that a single dry year should be the lowest supply available to the retailers, in addition to lower precipitation. Supply has been reduced due to decreases in the CVP allocations for both agricultural and M&I uses. A decrease in agriculture allocations, while not affecting the retailers directly, indirectly affects supply as groundwater pumping from other uses in the basin generally increases. This increased groundwater use could affect groundwater availability in the long term. Critically dry years, as defined by the GSP water year type include 1990, 2007, 2013, and 2014.

In water year 2014, the year selected as a single dry year, local precipitation was 5.4 inches, 41 percent of normal and the lowest annual precipitation recorded at the San Benito CIMIS station. In addition, CVP allocations for agricultural and M&I users were 0 percent and 50 percent, respectively, the second lowest allocations since imported water began over twenty-five years ago. The low allocations and low precipitation resulted in significant groundwater level drawdown. Accordingly, 2014 is representative of a severe single-dry year.

Multiple–Dry Year Period

DWR guidelines suggest that a multiple dry year period should represent the lowest average water supply availability for a consecutive multiple year period (now defined as five or more consecutive dry years). As with the single dry year, CVP allocations significantly affect available supply.

In water years 2012 through 2016, CVP allocations for both agricultural and M&I users were the lowest on record. For example, the M&I allocation ranged from 25 to 75 percent of historical use for years. In addition, average annual precipitation for the five years was 10.58 inches, or 79 percent of normal. While other five-year periods had lower rainfall, the low rainfall during this period (combined with the low CVP allocation) significantly decreased the retailers' available water supply.

7.2.2 Sources for Water Data

Information regarding local climate conditions is available from the CIMIS station located in Hollister, while imported CVP allocations are available from the USBR. Groundwater availability and storage change is reported in the District's Annual Groundwater Reports (Todd 2015).

7.2.3 Water Service Reliability

The HUA relies primarily on groundwater and CVP imported water, with some use of recycled water. Both groundwater and CVP supplies are impacted during dry years. **Table 7-1** shows the available supply for the agencies for normal, single dry, and multiple dry years for each water source. The available supply is based on forecasts for each source.

CVP Allocation

The HUA relies primarily on groundwater and CVP imported water, with some use of recycled water. Both groundwater and CVP supplies are impacted during dry years.

Table 7-1 W shows the supply reliability of CVP imported water for the District. **Tables 7-1 CVP, 7-1 Groundwater, 7-1 CVP Supplemental and 7-1 Recycled Water Retail** show the retailer supply reliability of CVP imported water, groundwater, and recycled water based on the different year types.

Table 7-1 W estimates the reduction in CVP for single and multiple year droughts based on past allocations. As discussed in Section 6, the Cal Sim II simulations were used to forecast future CVP allocations. It is estimated the future average allocation will be 82 percent of the contract, amounting to 6,765 AFY for the District (0.82 x 8,250 AFY). The HUA retailers could receive 5,388 AFY, while the remaining 1,377 AFY is served by the District to other M&I users (700 AFY) or is accounted by 10 percent system losses. CVP supply allocations are reported by the San Luis & Delta-Mendota Water Authority (SLDMWA) for the USBR water year (March through February).

The allocation in 2014-2015 was 25 percent of the M&I contract, the most severe restriction of M&I supply that has ever occurred. A repeat of allocations this low are unlikely for two reasons. First, the severity of the allocation was due in part to agreements and contracts, which resulted in reduced available supply to CVP users. It is assumed these one-time agreements and contracts will not affect the CVP allocation to such a critical extent in the future. Second, the US Bureau of Reclamation published a Municipal and Industrial Water Shortage Policy and Environmental Impact Statement for the Central Valley Project in August 2015 (USBR 2015). The M&I shortage policy recognizes that CVP M&I water is needed to meet Public Health and Safety (PHS) needs; nonetheless, USBR cannot guarantee allocation. Accordingly, a minimum M&I water service allocation has been established at 50 percent of the full contract for the District. Additional CVP supplies could be requested if the District provides documentation on the unmet public health and safety need. (USBR 2017).

Future CVP projections are available from Cal Sim II, a DWR tool used to simulate California State Water Project (SWP)/Central Valley Project (CVP) operations. The 2017 Cal Sim results are based on current operations to determine the allocations for the Santa Clara/San Benito Water Districts based on various hydrology (as observed 1922-2003). These estimates were extrapolated through 2017 and used in the GSP numerical model future conditions analysis to predict available CVP supply to the HUA (Todd 2021). The DWR Cal Sim II simulation takes into account climate change in 2030 but not the USBR's commitment to Public Health and Safety. The extrapolated Cal Sim II forecasts, corrected for a minimum M&I allocation of 50 percent, are shown by base year in **Table 7-1 CVP** for the retailers and **Table 7-1 W**.

The District plans to supply approximately 700 AFY to M&I customers other than the City and Hollister. This additional M&I demand will be met during normal years, a single dry year, or the first year of a multiple year drought. In the event of a prolonged drought, the non-urban portion of this demand (400 AFY) may be unmet in order to provide the minimum human health and safely for urban residents.

Groundwater

The volume of groundwater used by the HUA is linked to the CVP allocation because local users prefer the higher quality CVP water. Accordingly, all of the CVP allocation is expected to be used by Hollister and Sunnyslope with groundwater as a supplemental source. The groundwater basin is managed for continued sustainability, as documented in the GSP, and for provision of supplemental supply during drought. Accordingly, **Table 7-1** shows no decrease of availability during drought conditions. In **Table 7-1 Groundwater**, the volume of available groundwater is not reduced from the sustainable yield of 5,600 AFY (discussed in **Section 6**).

Table 7-1 accounts for the preferred blending of groundwater with CVP supply (at no more than 35 percent) to improve delivered water quality. Additional groundwater may be used during drought conditions.

Recycled Water

The annual rate of recycled water is based on the 2020 values of 100 AF. Recycled water is not reduced in **Table 7-1 Recycled Water** because the source is reliable and not affected significantly by year-to-year hydrological variability. However, its desirability as a supply for some sensitive uses could be affected by changes in municipal water quality. For example, a significant long-term increase of groundwater use (for example due to low CVP allocation and assuming no wellhead demineralization) could affect wastewater quality and thus the quality of the recycled water.

Reservoir Storage and Supplemental Water

The District manages San Justo Reservoir as storage for imported CVP water. In times of allocations greater than annual demand, the District can take delivery of additional CVP water to put into storage for dry year supplementation. The District plans to reserve sufficient water to provide up to an additional 1,000 AFY for a limited time during the most severe droughts for up to five years. The District also has contracts and exchanges available to supplement their CVP allocation by up to an additional 1,250 AFY in dry years or 1,000 AFY in critically dry years (see Section 6.7.1); this banking provides additional reserve during severe droughts. This is documented in in **Table 7-1 CVP Supplemental**.

Water Shortage Contingency Plan

As experienced in the most recent drought, water conservation can reduce demand effectively. Chapter 8 of this UWMP outlines the Water Shortage Contingency Plan (WSCP), which contains voluntary and mandatory restrictions to curb demand by 10, 20, 30, 40, 50, and greater than 50 percent in times of water shortage. The WSCP also discusses outreach and education programs to decrease demand and temporary actions to augment water supply.

7.2.3 Water Service Reliability – Normal Year

Table 7-2 characterizes the HUA's normal year water service reliability. This table compares the normal year supply totals to the normal-year gross water use totals for the 20-year projection horizon (based on **Tables 4-3 and 6-9**). **Table 7-2 W** shows the supply reliability of CVP imported water for the District.

Table 7-2 R shows the projected supply totals and demands in normal years from 2020 through 2035 in five-year intervals.

7.2.4 Water Service Reliability – Single Dry Year

Submittal Table 7-3 is for a Supplier's water service reliability assessments for a single dry year projected 20 years (an additional five-year projection is optional but recommended).

Table 7-3 R shows the supply totals and demands for a single dry year (similar to 2014) for the 20-year planning horizon. This table compares the single dry year supply total to an adjusted gross water-use total for the HUA. As shown on **Table 7-1 CVP**, the CVP contract allocation is expected to be at its minimum (50 percent). As noted, above the District maintains additional reservoir storage, contracts, and exchanges that would supplement CVP supply by an additional 2,000 AFY.

For planning purposes, water used during a single dry year is assumed to be the same as during a normal year (see values from Submitted Table 4-3). Water demand may decrease during a dry year if users are responsive to conservation education and outreach campaigns or if temporary water use restrictions, specified in the WSCP in Chapter 8, are enacted. Conversely, water use may increase if irrigation water application is increased due to lower rainfall. The HUA agencies will monitor water use during a dry year and implement outreach or WSCP stages as appropriate.

The District supplies approximately 700 AFY to M&I customers other than the Hollister and Sunnyslope. The non-urban portion of this additional M&I demand (400 AFY) will be met during normal years, a single dry year, or the first year of a multiple year drought. In the event of a prolonged drought, this non-urban demand may be unmet in order to provide the minimum human health and safely for urban residents.

Table 7-3 R provides a comparison of supply and demand in a single dry year. In a typical single dry year, CVP allocations are expected to be 50 percent of the contracted amount less losses, which is a total of 3,300 AFY. Recycled water is expected to be fully available at 100 AFY. In addition, it is assumed that the District can use reserve water stored in San Justo reservoir up to 2,250 AFY to meet demand. The WSCP would be triggered to at least Stage 1 and would achieve the required conservation (up to 10 percent). Additional supply to District M&I customers outside of the HUA area is needed to meet demand in a single dry year.

7.2.5 Water Service Reliability – Multiple Dry Year

Table 7-4 R shows the supply totals and demands for each year of a multiple year drought (similar to 2012 through 2016) for the same time period. As with the single dry year, supply is limited by the CVP allocations but additional CVP supplemental water is available. **Table 7-1 W** shows the District's CVP allocation during the multiple dry year period. **Table 7-1 CVP** shows what would be available to the HUA

agencies (the District's allocation less other M&I users and system losses). The District supplies approximately 400 AFY to non-urban M&I customers other than Hollister and Sunnyslope and will deliver that supply in the first year of a multiple year drought. In the event of prolonged drought, this non-urban demand may be unmet in order to provide minimum human health and safety supply for urban residents.

The multiple dry year projections suggest that at least voluntary restrictions for Stage 1 (10 percent reduction) should be implemented in all dry years.

Table 7-B shows the projected supply by source for all water year types. The District relies on a diverse portfolio of imported water, groundwater, and recycled water, and has made plans for additional supplemental imported water in dry years. In general, the groundwater pumping is expected to be at least as much as current pumping (1,919 AFY in 2020) and to increase as needed to help meet demands. For planning purposes, CVP allocations are assumed to be limited in all years other than the normal year 2025. The available CVP supplemental supply (San Justo reserves, contractor and exchange water) is used as needed in dry years. As noted, in all dry years, it is expected the WSCP Stage 1 will be enacted to encourage a 10 percent reduction in water demand.

Table 7-B. Supply Portfolios by Water Year

Normal Year	2025	2030	2035	2040
CVP	4,949	5,388	5,388	5,388
Groundwater	1,919	2,661	3,996	5,369
CVP Supplemental	-	-	-	-
Recycled Water	100	100	100	100
TOTAL	**6,968**	**8,149**	**9,484**	**10,857**
Single Dry Year	**2025**	**2030**	**2035**	**2040**
CVP	3,013	3,013	3,013	3,013
Groundwater	1,919	2,222	3,423	4,659
CVP Supplemental	1,240	2,000	2,000	2,000
Recycled Water	100	100	100	100
TOTAL	**6,271**	**7,334**	**8,536**	**9,771**
Multiple Dry Year - 1	**2025**	**2030**	**2035**	**2040**
CVP	4,126	4,126	4,126	4,126
Groundwater	1,919	1,919	2,059	3,295
CVP Supplemental	126	1,189	2,250	2,250
Recycled Water	100	100	100	100
TOTAL	**6,271**	**7,334**	**8,536**	**9,771**
Multiple Dry Year - 2	**2025**	**2030**	**2035**	**2040**
CVP	3,904	3,904	3,904	3,904
Groundwater	1,919	1,919	2,282	3,518
CVP Supplemental	349	1,412	2,250	2,250
Recycled Water	100	100	100	100
TOTAL	**6,271**	**7,334**	**8,536**	**9,771**
Multiple Dry Year - 3	**2025**	**2030**	**2035**	**2040**
CVP	3,013	3,013	3,013	3,013
Groundwater	1,919	2,222	3,423	4,659
CVP Supplemental	1,240	2,000	2,000	2,000
Recycled Water	100	100	100	100
TOTAL	**6,271**	**7,334**	**8,536**	**9,771**
Multiple Dry Year - 4	**2025**	**2030**	**2035**	**2040**
CVP	3,013	3,013	3,013	3,013
Groundwater	1,919	1,972	3,173	4,409
CVP Supplemental	1,240	2,250	2,250	2,250
Recycled Water	100	100	100	100
TOTAL	**6,271**	**7,334**	**8,536**	**9,771**
Multiple Dry Year - 5	**2025**	**2030**	**2035**	**2040**
CVP	3,013	3,013	3,013	3,013
Groundwater	1,919	1,972	3,173	4,409
CVP Supplemental	1,240	2,250	2,250	2,250
Recycled Water	100	100	100	100
TOTAL	**6,271**	**7,334**	**8,536**	**9,771**

7.3 Description of Management Tools and Options

HUA agencies have several ongoing and planned demand management projects and programs. These are summarized in Chapter 9. Public outreach and education, coupled with demand reduction programming like rebates and home surveys, can decrease long-term demand, increase reliability, and minimize the need to import water from other regions.

In times of water shortage, water demand restrictions can be implemented by enacting the WSCP, outlined in Chapter 8. The restrictions largely focus on decreasing water use for outdoor irrigation. Additionally, in times of serious water shortage, a larger portion of water can be derived from groundwater to meet demands.

Section 6.8 describes future water projects Including potential surface water storage expansion, expanded managed aquifer recharge, and additional well production capacity in conjunction with increased groundwater monitoring.

7.4 Drought Risk Assessment

The HUA has prepared a drought risk assessment (DRA) in accordance with Water Code Section 10612. The DRA reliability assessment involves characterizing the expected quantity of each water supply source monthly for each year of the five-year drought under a variety of water shortage conditions. For purposes of the analysis, the drought is assumed to occur in the next five years. For HUA, the DRA evaluation is based on the five driest consecutive years, 2012-2016, including the recent drought.

The analysis also addresses the reliability of water sources expected to be used during water supply shortages, which are not part of the Supplier's normal water portfolio (e.g., special transfer or exchange agreements). The analysis reveals potential shortage or surplus; if a shortage is indicated, WSCP demand reduction measures and supply augmentation are identified to resolve the shortage. DWR recommends that the DRA address possible scenarios that could further impact water supply such as climate change. Because USBR is committed to supplying a minimum of 50 percent of their contractual amount, further reductions of CVP supply are not assumed for the HUA analysis.

The DRA has been developed using the Planning Tool provided by DWR. The Planning Tool DRA Worksheets are included in **Appendix E** and summarized on **Table 7-5**.

7.5.1 Data, Methods, And Basis for Water Shortage Conditions

The data used to complete the DRA are documented in this UWMP as are assumptions on future growth. A linear extrapolation was used to account for annual growth over the next five years. The annual use values were then subdivided into monthly use values based on the average monthly distribution trends. The reliability of water supply sources is documented in Section 7.2.3. For the DRA, it was assumed that the voluntary Stage 1 of the WSCP would be applied, reducing total demand by 10 percent.

The water supply is projected to remain relatively stable during the five-year drought, as increased groundwater use and CVP supplemental water compensate for reduced CVP deliveries. As discussed in

7.2.3, CVP allocations are reduced in drought periods. However, local groundwater is managed to account for increased pumping in times of water shortage, although its use may be managed to maintain high delivered water quality.

The maximum annual supplies for 2012-2016 drought conditions were calculated and compared to the demand to determine sufficiency. When demand exceeded supply, the difference was compared to the total demand. The annual demand never exceeded 110 percent of the maximum annual supply available. Stage 1 of the WSCP, with entirely voluntary actions, is expected to sufficiently reduce demands. However, some months with a higher water demand may require Stage 2 implementation, during which mandatory restrictions are enacted to reduce demand by 20 percent.

Some sources of error and uncertainty affect this DRA. Dry conditions may lead to an increase in irrigation. However, it is generally expected that outreach and education, especially with up-to-date use of news media (Quesnel and Ajami, 2017), will result in residential water use decreases. Timing of water use may vary during dry periods and water users may respond more quickly to drought conditions than during the 2012-2016 drought years. Notwithstanding some uncertainty, if voluntary restrictions in WSCP Stage 1 do not cause a timely 10 percent decrease in demand, Stage 2 or greater can be implemented.

7.4.3 Total Water Supply and Use Comparison

Table 7-5 shows the DRA total water supply and use comparison. As indicated, the HUA is prepared for a multiple year drought given the availability of a portfolio of sources and active management of potential risks. While necessary to long-term basin sustainability, CVP supply is considered as less reliable, given that M&I allocations can range from 50 to 100 percent and local agencies have little control. However, the HUA actively seeks out additional contracts and transfers and stores the additional supply in San Justo reservoir in preparation of multi-year droughts. Currently, the District is capable of continuing to provide adequate CVP supplies to the HUA even in a multi-year drought. In addition, the District manages the groundwater basin conjunctively with surface water supplies, providing a reliable supply in the event of CVP interruption.

The current DRA projections indicate that the HUA can withstand a five-year drought beginning in 2021 with implementation of only stage 1 of the WSCP, a voluntary 10 percent reduction to bridge the gap between supply and demand. However, if voluntary measures do not result in the expected 10 percent demand reduction, the HUA agencies will be prepared to implement Stage 2 mandatory restrictions.

Table 7-1 CVP. Basis of Water Year Data (Reliability Assessment)

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
Year Type	**Base Year** *If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020*	**Available Supplies if Year Type Repeats**	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		☑ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	**% of Average Supply**
Average Year	2020	5,388	100%
Single-Dry Year	2014	3,013	50%
Consectutive Dry Years 1st Year	2012	4,126	65%
Consectutive Dry Years 2nd Year	2013	3,904	62%
Consectutive Dry Years 3rd Year	2014	3,013	50%
Consectutive Dry Years 4th Year	2015	3,013	50%
Consectutive Dry Years 5th Year	2016	3,013	50%

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

NOTES: CVP (based on Cal Sim II)

Table 7-1 Groundwater. Basis of Water Year Data (Reliability Assessment)

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
Year Type	**Base Year** *If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020*	**Available Supplies if Year Type Repeats**	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		☑ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	**% of Average Supply**
Average Year	2020	5,600	100%
Single-Dry Year	2014	5,600	50%
Consectutive Dry Years 1st Year	2012	5,600	65%
Consectutive Dry Years 2nd Year	2013	5,600	62%
Consectutive Dry Years 3rd Year	2014	5,600	50%
Consectutive Dry Years 4th Year	2015	5,600	50%
Consectutive Dry Years 5th Year	2016	5,600	50%

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

NOTES: Groundwater

Table 7-1 CVP Supplemental. Basis of Water Year Data (Reliability Assessment)

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
Year Type	**Base Year** *If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020*	**Available Supplies if Year Type Repeats**	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		☑ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	**% of Average Supply**
Average Year	2020	-	100%
Single-Dry Year	2014	2,000	50%
Consectutive Dry Years 1st Year	2012	2,250	65%
Consectutive Dry Years 2nd Year	2013	2,250	62%
Consectutive Dry Years 3rd Year	2014	2,000	50%
Consectutive Dry Years 4th Year	2015	2,250	50%
Consectutive Dry Years 5th Year	2016	2,250	50%

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

NOTES: Additional CVP supplies from exchanges, transfers, and storage

Table 7-1 Recycled Water. Basis of Water Year Data (Reliability Assessment)

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
Year Type	**Base Year** *If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020*	**Available Supplies if Year Type Repeats**	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		☑ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	**% of Average Supply**
Average Year	2020	100	100%
Single-Dry Year	2014	100	50%
Consectutive Dry Years 1st Year	2012	100	65%
Consectutive Dry Years 2nd Year	2013	100	62%
Consectutive Dry Years 3rd Year	2014	100	50%
Consectutive Dry Years 4th Year	2015	100	50%
Consectutive Dry Years 5th Year	2016	100	50%

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

NOTES: Recycled Water

Table 7-1 W. Basis of Water Year Data (Reliability Assessment)

Submittal Table 7-1 Wholesale: Basis of Water Year Data (Reliability Assessment)			
Year Type	**Base Year** *If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 1999-2000, use 2000*	**Available Supplies if Year Type Repeats**	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		☐ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	**% of Average Supply**
Average Year	2020	6,765	100%
Single-Dry Year	2014	4,125	50%
Multiple-Dry Years 1st Year	2012	5,363	65%
Multiple-Dry Years 2nd Year	2013	5,115	62%
Multiple-Dry Years 3rd Year	2014	4,125	50%
Multiple-Dry Years 4th Year	2015	4,125	50%
Multiple-Dry Years 5th Year	2016	4,125	50%

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table. Suppliers may create an additional worksheet for the additional tables.

NOTES:

Table 7-2a. Normal Year Supply and Demand Comparison - Hollister

DRAFT Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	3,786	4,223	4,962	5,626	0
Demand totals *(autofill from Table 4-3)*	3,786	4,223	4,962	5,626	0
Difference	0	0	0	0	0
NOTES: Hollister Only					

Table 7-2b. Normal Year Supply and Demand Comparison - Sunnyslope

DRAFT Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	3,182	3,926	4,522	5,231	0
Demand totals *(autofill from Table 4-3)*	3,182	3,926	4,522	5,231	0
Difference	0	0	0	0	0
NOTES: Sunnyslope Only					

Table 7-3. Single Dry Year Supply and Demand Comparison

DRAFT Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals	6,271	7,334	8,536	9,771	
Demand totals	6,271	7,334	8,536	9,771	
Difference	0	0	0	0	0
NOTES: Includes entire HUA Assumes WSCP Stage 1 reductions					

Table 7-4. Multiple Dry Years Supply and Demand Comparison

DRAFT Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025	2030	2035	2040	2045 (Opt)
First year	Supply totals	6,271	7,334	8,536	9,771	
	Demand totals	6,271	7,334	8,536	9,771	
	Difference	0	0	0	0	0
Second year	Supply totals	6,271	7,334	8,536	9,771	
	Demand totals	6,271	7,334	8,536	9,771	
	Difference	0	0	0	0	0
Third year	Supply totals	6,271	7,334	8,536	9,771	
	Demand totals	6,271	7,334	8,536	9,771	
	Difference	0	0	0	0	0
Fourth year	Supply totals	6,271	7,334	8,536	9,771	
	Demand totals	6,271	7,334	8,536	9,771	
	Difference	0	0	0	0	0
Fifth year	Supply totals	6,271	7,334	8,536	9,771	
	Demand totals	6,271	7,334	8,536	9,771	
	Difference	0	0	0	0	0
Sixth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
NOTES: Includes entire HUA Assumes WSCP Stage 1 reductions						

Table 7-5. Five-Year Drought Risk Assessment Tables

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)	
2021	**Total**
Gross Water Use	6,694
Total Supplies	6,025
Surplus/Shortfall w/o WSCP Action	(669)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	669
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	10%

2022	Total
Gross Water Use [Use Worksheet]	6,806
Total Supplies [Supply Worksheet]	6,125
Surplus/Shortfall w/o WSCP Action	(681)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	681
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	10%

2023	Total
Gross Water Use [Use Worksheet]	6,917
Total Supplies [Supply Worksheet]	6,225
Surplus/Shortfall w/o WSCP Action	(692)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	692
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	10%

2024	Total
Gross Water Use [Use Worksheet]	7,028
Total Supplies [Supply Worksheet]	6,326
Surplus/Shortfall w/o WSCP Action	(703)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	703
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	10%

Table 7-5. Five-Year Drought Risk Assessment Tables

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)

2025	Total
Gross Water Use [Use Worksheet]	7,140
Total Supplies [Supply Worksheet]	6,426
Surplus/Shortfall w/o WSCP Action	(714)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	714
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	10%

8. WATER SHORTAGE CONTINGENCY PLANNING

The District, the City, and Sunnyslope have all passed ordinances/resolutions to address shortages in water supply. In addition, the HUA agencies have updated the Water Shortage Contingency Plan (WSCP). This Plan serves as a guide for adjusting supply and demand in response to a water shortage. The original plan was developed in 2016 as part of the 2015 Urban Water Management Plan (**Appendix G**) and provides details on how to reduce demand in the event of a water supply shortage.

In response to the 2012-2016 drought, a new WSCP mandate requires WSCPs to provide a more detailed analysis of supply and demand contingency actions and plan implementation. Additions to the 2020 WSCP include the documentation of plan procedures and implementation, standardization of water supply stages of action for the water supply plan, and quantification of contingency action effects on supply and demand.

Emergency responses to natural disasters are also discussed in a joint Water Shortage Emergency Response Plans to assist in planning and managing supply disruption, **Appendix H.**

8.1 Water System Reliability Analysis

Water supply reliability analyses conducted by the HUA (Section 7) identify constraints on water supply sources and evaluated each source's availability during a normal year, a single dry year, a 5-year drought period, and 20-year future projections. These analyses show that supply resources are sufficient to meet demand. The HUA depends on imported water, groundwater, and recycled water to meet its supply.

Central Valley Project (CVP) water has been imported by the District for direct municipal supply since 2003 and water treatment facilities have been expanded to a capacity of 7,280 AFY, almost 90 percent of the total contractual allocation for CVP M&I water (8,250 AFY). However, allocations vary based on hydrologic conditions. The CVP allocation for M&I demand since 2006 has ranged from 25 percent, during dry years, to the full allocation during wet years. In 2020, the total CVP water supply for the HUA was 4,391 AF including systems losses. Future projections suggest an average of 82 percent of CVP supplies in normal years, resulting in 5,388 AFY for supply in the HUA.

The groundwater basin provides critical storage and is also an important source of water for Hollister and Sunnyslope, which pump groundwater directly from wells within the HUA. As documented in the GSP, the groundwater basin is managed sustainably and stored groundwater is replenished in wet years for use in dry years. While groundwater has relatively poor water quality, it is blended with CVP supply in order to improve water supply, and indirectly the quality of wastewater and recycled water.

Recycled water is used at Riverside park in the HUA but has been prioritized for agricultural users outside the HUA. No surface or stormwater are utilized for directly for supply, but these sources of water can be used to supplement recharge.

Drought is the primary issue that would cause a shortage condition. Other causes of a water shortage include the sudden presence of an unforeseen toxin or infrastructure damage due to earthquakes or other natural disasters.

The Water Supply Reliability Analysis shows that the current available supply is sufficient to meet unconstrained demand during both a regular year and a single dry year (UWMP Section 7.2.3). Accounting for growth, the water supply during a normal year would meet demand every year 2020-2040. During a single dry year, supply would decrease due to decreased CVP allocations but can be supplemented with groundwater and other sources or addressed with conservation. The current supply is sufficient to meet unconstrained demand in 2025, 2030, and 2035, but demand in 2040 is expected to be 186 AF greater than supply, 1.3 percent of the total 10,859 AF projected demand. Initiation of voluntary Stage 1 of the WSCP is recommended during dry years.

The Drought Risk Assessment evaluates if current supplies are sufficient to meet demand during a multi-year drought. In brief, the maximum available supply was found sufficient to meet demand for three out of five dry years. The dry year conditions were based on the 2012-2016 drought years and water demands were adjusted for population growth over the next five years. Although the supply should be sufficient to meet demand during the first three years of a multi-year drought, it is recommended that the HUA Agencies implement the voluntary WSCP Stage 1 as a precautionary measure to conserve water during every drought year. During year four and five of a multi-year drought, the projected demand was greater than the maximum supplies if Stage 1 of the WSCP was not implemented. The gap each year was less than 10 percent of total demand, and it is expected that implementing Stage 1 of the WSPC would bridge the gap. However, agencies should be prepared to implement Stage 2 in the event of extended dry years.

8.2 Annual Water Supply and Demand Assessment Procedures

Beginning in 2022, HUA agencies must prepare and submit an annual water supply and demand assessment, pursuant to section 10632 (a)(2) of the Water Code. These annual assessments must be submitted to DWR by July 1 of each year.

The annual assessment will be completed in conjunction with the SGMA North San Benito County Groundwater Sustainability Agency annual GSP report. SGMA requires the submittal of this annual report on April 1, following the adoption of the GSP and annually thereafter. The GSP annual report include analyses of recent groundwater conditions, surface water supply, total water use, and change in groundwater storage. In addition, the report summarizes supply and demand in the previous water year and includes an estimate of next-year conditions, agricultural pumping, and water purchases. The water supply and demand assessment for the HUA will be prepared as an appendix to the annual report to streamline data requests and reporting for the three agencies.

The assessment will include documentation of the projected supply and demand for the upcoming year and determination that supply will be sufficient, even during a dry year. Supplies, including available groundwater, CVP, and recycled water, will be assessed by describing and quantifying the previous year's

water supply and estimating the upcoming year's supplies. Groundwater use and basin conditions in the previous water year will be assessed to determine any issues. The supply assessment will include data on climatic conditions, groundwater levels and extraction, land use, streamflow measurements, reservoir budgets, CVP deliveries, recharge rates, municipal recycling rates, and water quality data. The demand assessment will rely on agency-reported totals by use category.

Projected supplies will be largely dependent on climate and water conditions during the previous water year and the projected CVP allocations. In the annual water supply and demand assessment, the supplies will be assessed for both a current year and a subsequent dry year, taking plausible constraints into account.

Unconstrained customer demand will be assessed by looking at historical growth, climate, and water demand over the previous water year. The previous year's use will be adjusted to account for new customer connections. If the planned use is greater than the dry year supply, the HUA agencies should be prepared to enact the WSCP. Any infrastructure projects or conditions will also be factored into the supply and demand assessment.

8.3 Water Shortage Level Stages of Action

The 2015 WSCP outlined a water shortage response plan in the event of supply interruption. This plan included a four-stage rationing plan with voluntary and mandatory rationing depending on the severity and duration of the water supply shortage. The water shortage response was based on the Sunnyslope No Water Waste Ordinance No. 45 and was first documented for the HUA as part of the 2000 UWMP.

Pursuant to Water Code Section 10632(a)(3), all WSCPs must include a six-stage plan corresponding to shortage stages of up to 10 percent, 20 percent, 30 percent, 40 percent, 50 percent, and greater than 50 percent of water supply. During the 2012-2016 drought years, differences in state and local definitions led to uncertainty in public communication and state policy. The standardization is meant to aid communication and response action implementations across the state.

Water Code Section 10632(a)(3)(B) allows suppliers to retain existing water shortage response plan stages if the existing stages are directly related to the specified six stages. The four stages identified by the previous WSCP translate to the six new stages, as shown in **Figure 8-1**. **Table 8-1** outlines the new stages. For the new Stage 1, up to 10 percent reduction, the voluntary measures for the previous stage 1 (up to 15 percent) are applicable. For both 10 to 20 percent and 20 to 30 percent reductions, the previous Stage 2 restrictions are applicable, aiming for 25 percent reduction. For 30 to 40 percent and 40-50 percent reductions, the previous Stage 3 is applicable, which aims for 35 percent reductions. Finally, for greater than 50 percent reductions, the previous Stage 4, is applicable for over 50 percent reduction. Several response actions, such as landscape irrigation restrictions, exist on a sliding scale and can be adjusted to better correspond with the new 2020 WSCP levels.

Figure 8-1. Crosswalk between 2015 WSCP and 2020 UWMP Guidelines

Previous WSCP Stages	Supply/Condition
1	Up to 15%
2	Up to 25%
3	Up to 35%
4	Above 50%

2020 WSCP Level	Shortage Level
1	<10%
2	10-20%
3	20-30%
4	30-40%
5	40-50%
6	>50%

8.4 Shortage Response Actions

Water shortages can be met by augmenting the supply and/or decreasing the water demand. Each response action must be implementable. In sections 8.4.1 and 8.4.2, the response actions for each stage are outlined, along with the methodology for calculating action effectiveness. **Table 8-2** summarizes each demand reduction action, the stages in which they are implemented, and the estimated percent by which they can decrease demand.

In response to the new WSCP guidelines, the effectiveness of each action has been quantified for HUA using the best available data. It should be noted that the effectiveness of many shortage response actions have not been studied and effectiveness can vary by region. These estimates are best used as guidelines to inform decision makers which actions may contribute most to demand reductions. The methods for calculating the effectiveness of each action are outlined in **Appendix G.** In addition to the methods outlined as part of the WSCP, further demand reductions (particularly with indoor residential water use) are expected due to outreach, education, and social pressures.

The effectiveness of each action was estimated based on the observed water demand reduction during the 2014-2016 drought, studies and literature reviews examining the effectiveness of individual and combined response actions, and calculations of demand decreases scaled to the regional population. These estimates reflect best available data; however, it should be noted that the estimates are also uncertain. Historical data on demand reductions during drought, both within HUA and in case studies, are a result of *combined* demand restrictions, public education, and social pressures. There are very few studies of the effect of individual actions. In addition, a variety of assumptions are used in calculations of water demand as reduced by a given action. For example, estimating the money saved by restricting at-home carwashes involved assumptions about how many Hollister Urban Area residents would wash their

car at home in a non-drought month, how many of those carwashes would use a hose with a nozzle, and how much water each wash would use. Furthermore, several restrictions rely on postponing actions or implementing large water-use projects, such as filling up a new pool, removing a single-pass cooling systems, or receiving a large new water permit.

8.4.1 Locally Appropriate Demand Reduction by Stage

Implementation of restrictions and prohibitions on end users is based on a fundamental prioritization of domestic supply for human health and safety over non-essential uses, including landscape irrigation. In the event of a water shortage, water service may be restricted or prohibited for non-essential uses, recognizing that certain end users may be required to save more water than others because of their specific use. Prohibitions on end uses will affect user types differently:

- For urban residential users (who typically rely on HUA agencies for domestic supply), water service will continue during a shortage with restrictions on outdoor water use in Stages 1 through 5 and prohibitions in Stage 6.
- Rural residential users of CVP M&I water would also be subject to restrictions and prohibitions on outside water features and landscape irrigation.
- Landscape irrigators (e.g., golf courses, dedicated irrigation meters) are subject to the restrictions listed below for Stages 1 through 5 and the prohibition in Stage 6.
- Commercial businesses are subject to all restrictions in Stages 1 through 5 and prohibitions in Stage 6.

Stage 1

The first stage applies voluntary actions to reach the demand reduction goal of 10 percent, with a focus on outdoor irrigation demand reduction.

1. Recommended Watering Hours: Watering or irrigating of lawn, landscape or other vegetated area with potable water is discouraged between the hours of 9:00 a.m. and 5:00 p.m. Pacific Standard/Daylight Savings Time.
2. Recommended Limit on Watering Duration: Watering or irrigating of lawn, landscape or other vegetated area with potable water using a landscape irrigation system or a watering device that is not continuously attended is recommended to be limited to no more than three days a week with a duration of fifteen (15) minutes watering per water day per station. This subsection does not apply to landscape irrigation systems that exclusively use very low-flow drip type irrigation systems when no emitter produces more than two (2) gallons of water per hour and weather-based controllers or stream rotor sprinklers that meet a 70 percent efficiency standard. The use of recycled water is exempt from this prohibition.

3. Eliminate Excessive Water Flow or Runoff: Watering or irrigating of any lawn, landscape or other vegetated area in a manner that causes or allows excessive water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter, or ditch is strongly discouraged.

4. Discourage Washing Down Hard or Paved Surfaces: Washing down hard or paved surfaces, including but not limited to sidewalks, walkways, driveways, parking areas, tennis courts, patios or alleys, is discouraged except by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shutoff device, a low-volume, high-pressure cleaning machine equipped to recycle any water used, or a low-volume high-pressure water broom.

5. Fix Leaks, Breaks or Malfunctions: Excessive use, loss or escape of water through breaks, leaks or other malfunctions in the water user's plumbing or distribution system for any period of time after such escape of water should have reasonably been discovered and corrected are encouraged to be corrected as soon as practical.

6. Recirculating Water for Water Fountains and Decorative Water Features: Operating a water fountain or other decorative water features that uses recirculated water is encouraged.

7. Washing Vehicles: Using water to wash or clean a vehicle, including but not limited to any automobile, truck, van, bus, motorcycle, boat, or trailer, whether motorized or not is discouraged, except by use of a hand-held bucket or similar container or a hand-held hose equipped with a positive self-closing water shut-off nozzle or device. Washing vehicles at commercial conveyor car wash systems with re-circulating water systems is recommended.

8. Drinking Water Served Upon Request: Eating or drinking establishments, including but not limited to a restaurant, hotel, cafe, cafeteria, bar, or other public place where food or drinks are sold, served, or offered for sale, are encouraged to providing drinking water to any person only when expressly requested.

9. Commercial Lodging Establishments Encouraged to Provide Guests Option to Decline Daily Linen Services: Hotels, motels and other commercial lodging establishments are encouraged to provide customers the option of not having towels and linen laundered daily. Commercial lodging establishments are encouraged to prominently display notice of this option in each bathroom using clear and easily understood language.

10. Installation of Single Pass Cooling Systems: Installation of single pass cooling systems is discouraged in buildings requesting new water service.

11. Installation of Non-recirculating Water System in Commercial Car Wash and Laundry Systems: Installation of non-recirculating water systems is discouraged in new commercial conveyor car wash and new commercial laundry systems.

12. Restaurants Encouraged to Use Water Conserving Dishwash Spray Valves: Food preparation establishments, such as restaurants or cafes, are encouraged to use water conserving dish wash spray valves.

13. Commercial Car Wash Systems: All commercial conveyor car wash systems are encouraged to install operational re-circulating water systems.

14. Pool Covers: It is recommended that all existing pools use a pool cover or solar blanket to reduce water loss due to evaporation.

Stage 2

The second stage seeks a 10 to 20 percent reduction of future supplies, and uses restricted building permits, mandatory rationing, and reduction by customer types. The shortage response actions in Stage 2 are derived from the 25 percent reduction stage established in the 2016 WSCP. Stage 2 continues the voluntary reductions in Stage 1. In addition, the following reduction requirements become mandatory:

1. Limits on Watering Hours: Watering or irrigating of lawn, landscape or other vegetated area with potable water is prohibited between the hours of 9:00 a.m. and 5:00 p.m. Pacific Standard/Daylight Savings Time on any day, except by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system. The use of recycled water is exempt from this prohibition.

2. Limit on Watering Duration: Watering or irrigating of lawn, landscape or other vegetated area with potable water using a landscape irrigation system or a watering device that is not continuously attended is limited to no more than fifteen (15) minutes watering per designated water day per station. This subsection does not apply to landscape irrigation systems that exclusively use very low-flow drip type irrigation systems when no emitter produces more than two (2) gallons of water per hour and weather-based controllers or stream rotor sprinklers that meet a 70 percent efficiency standard. The use of recycled water is exempt from this prohibition.

3. Limits on Watering Days: Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to three days per week from April through October. The watering days are designated depending upon house address (odd house and no house address Monday, Wednesday, and Friday, even house address Tuesday, Thursday, and Saturday). During the months of November through March, watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to no more than one day per week (odd house and no house address - Monday, even house address - Tuesday). This provision does not apply to landscape irrigation zones that exclusively use very low flow drip type irrigation systems when no emitter produces more than two (2) gallons of water per hour. This provision also does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system.

4. No Excessive Water Flow or Runoff: The application of water is prohibited to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non- irrigated areas, private and public walkways, driveway, street, alley, gutter, ditch, parking lots, or structures.

5. No Washing Down Hard or Paved Surfaces: Washing down hard or paved surfaces is prohibited, including but not limited to buildings, structures, sidewalks, walkways, driveways, parking areas, tennis courts, patios, or alleys.

6. Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within seventy-two (72) hours of notification by the city unless other arrangements are made with the city.

7. Recirculating Water Required for Water Fountains and Decorative Water Features: Operating a water fountain or other decorative water feature that does not use recirculated water is prohibited.

8. Limits on Washing Vehicles: Using water to wash or clean a vehicle is prohibited, including but not limited to any automobile, truck, van, bus, motorcycle, boat, or trailer, whether motorized or not, except by use of a hand-held bucket or similar container or a hand-held hose equipped with a positive self-closing water shut-off nozzle or device. This subsection does not apply to any commercial car washing facility.

9. Drinking Water Served Upon Request Only: Eating or drinking establishments, including but not limited to a restaurant, hotel, cafe, cafeteria, bar, or other public place where food or drinks are sold, served, or offered for sale, are prohibited from providing drinking water to any person unless expressly requested.

10. Commercial Lodging Establishments Must Provide Guests Option to Decline Daily Linen Services: Hotels, motels and other commercial lodging establishments must provide customers the option of not having towels and linen laundered daily. Commercial lodging establishments must prominently display notice of this option in each bathroom using clear and easily understood language.

11. No Installation of Single Pass Cooling Systems: Installation of single pass cooling systems is prohibited in buildings requesting new water service.

12. No Installation of Non-re-circulating in Commercial Car Wash and Laundry Systems: Installation of non-re-circulating water systems is prohibited in new commercial conveyor car wash and new commercial laundry systems.

13. Commercial Car Wash Systems: Within one year of passage of this Ordinance, all commercial conveyor car wash systems must have installed operational re-circulating water systems or must have secured a waiver of this requirement from the city.

14. Pool Covers and Refilling of Existing Pools: All new pools shall be required to have a pool cover or solar blanket to reduce water loss through evaporation. Refilling of existing private pools is prohibited, except to maintain water levels, unless the pool is in imminent danger of failure.

Stage 3

The third stage seeks a 20 to 30 percent reduction of water demand. During this stage, the shortage response actions for Stages 1 and 2 will be in place. The shortage response actions for this stage are derived from the 25 percent reduction stage established in the 2016 WSCP. Stage 3 contains the same response actions as Stage 2. HUA may choose to increase response action monitoring and enforcement in Stage 3, as well as encouraging water users to adopt additional voluntary conservation measures.

Stage 4

Stage 4 aims for a 30 to 40 percent reduction. It allows the agencies to restrict water uses to priority needs and the prohibited or limited uses of water become more restrictive. These restrictions are derived from the 35 percent reduction stage in the 2016 WSCP.

1. Limits on Watering Days: Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to two days per week from April through October. The watering days are designated depending upon house address (odd house and no house address - Monday and Thursday, even house address - Tuesday, and Friday). During the months of November through March, watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to no more than one day per week (odd house and no house address - Monday, even house address - Tuesday). This provision does not apply to landscape irrigation zones that exclusively use very low flow drip type irrigation systems when no emitter produces more than two (2) gallons of water per hour. This provision also does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system. Use of recycled water for irrigation is exempt from these restrictions.

2. Irrigating Within 48 Hours of Rainfall: The applications of potable water to outdoor landscapes during and within 48 hours following measurable rainfall is prohibited.

3. Irrigation outside Newly Constructed Homes: The irrigation with potable water outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission is prohibited.

4. Installation of New Turf: Adding new turf landscaping is prohibited.

5. Prohibition against Watering Turf in Medians: The irrigation with potable water of ornamental turf on public street medians, including roundabouts is prohibited.

6. Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within forty- eight (48) hours of notification by the city unless other arrangements are made with the city.

7. Limits on Filling Ornamental Lakes or Ponds: Filling or re-filling ornamental lakes or ponds with potable water is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a supply shortage level under this section.

8. New Pools: Installation and filling of new private pools are prohibited.

9. Dust Control: The use of potable water for construction and dust control is prohibited.

10. Drought Water Rates: Each agency may consider adopting rate structures and other mechanisms to maximize water conservation. These rates should be consistent with Prop218 requirements.

11. Any of the HUA agencies reserve the right to restrict water use for priority uses.

Stage 5

Stage 5 aims for a 40 to 50 percent reduction. The water shortage response actions in this phase are the same as those in Stage 4. Enforcement and monitoring may be increased during this stage to assist in decreasing water demand.

Stage 6

1. Stage 6 seeks at least a 50 percent reduction. This stage adds flow restrictions and a per capita allotment by customer type. The prohibited or limited uses of water in the previous stages are continued or made more restrictive. No Watering or Irrigating. Watering or irrigating of lawn, landscape or other vegetated area with potable water is prohibited. This restriction does not apply to recycled water. Exceptions are limited to the following:

2. Maintenance of vegetation, including trees and shrubs, that are watered using a hand-held bucket or similar container, hand-held hose equipped with a positive self-closing water shut-off nozzle or device;

3. Maintenance of existing landscape necessary for fire protection;

4. Maintenance of existing landscape for soil erosion control;

5. Maintenance of plant materials identified to be rare or essential to the well-being of protected species;

6. Maintenance of landscape within active public parks and playing fields, day care centers, golf course greens, and school grounds, provided that such irrigation does not exceed two (2) days per week for no more than fifteen (15) minutes watering per designated water day per station and is prohibited between the hours of 9:00 a.m. and 5:00 p.m. Pacific Standard/Daylight Savings Time.

7. Actively irrigated environmental mitigation projects.

8. Obligation to Fix Leaks, Breaks or Malfunctions. All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within twenty-four (24) hours of notification by the city unless other arrangements are made with the water retailer.

9. Limits on New Potable Water Service: Upon declaration of a Level 6 Water Shortage Emergency condition, the agency may limit the issuance of new potable water services, temporary meters and/or statements of immediate ability to serve or provide potable water service (such as, can and will-serve letters, certificates, or letters of availability), except under the following circumstances:

10. A valid, unexpired building permit has been issued for the project; or

11. The project is necessary to protect the public health, safety, and welfare; or

12. The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the agency providing service.

13. This provision does not preclude the resetting or turn-on of meters to provide continuation of water service or the restoration of service that has been interrupted for a period of one year or less.

14. Limits on Building Permits. Upon declaration of a Stage 6 Water Supply Shortage Emergency condition, the City Administrator is authorized to implement a program in his or her discretion to limit or withhold the issuance of building permits which require new or expanded water service, except to protect the public health, safety and welfare, or in cases which meet the city's adopted conservation offset requirements.

15. No New Annexations. Upon the declaration of Stage 6, the agencies may suspend consideration of annexations to its service area. This subsection does not apply to boundary corrections and annexations that will not result in any immediate increased use of water.

16. Each of the HUA agencies reserves the right to restrict flow in water lines.

8.4.2 Locally Appropriate Supply Augmentation

During a water shortage emergency, the HUA Agencies may choose to augment the water supply by increasing the proportion of groundwater in delivered water. Groundwater can make up for any decrease in CVP allocation during a drought. HUA potable water is a mix of CVP water and groundwater to meet aesthetic standards. The average proportion of the supply that is CVP water was 61 percent over the past five years. The proportion of groundwater can be temporarily increased if the CVP supply is limited or insufficient to meet demand. The preferred ration of groundwater to imported water is 35:65, but this proportion may temporarily increase during periods of water shortage. Decreasing the proportion of

potable water that is CVP is at the discretion of the HUA agencies and may be enacted during stages 2 through 6. In **Table 8-3** augmenting the supply through increasing the proportion of groundwater in potable water is estimated to enhance the supply by up to 20 percent. Drought reserves in San Justo Reservoir can also augment supply during a water shortage emergency. It should be noted that water stored in San Justo is not considered exchange/transfer supplies. It may have originated from a transfer, but once it is in San Justo, it is considered stored water reserve. However, these supplies are managed as exchanges or transfers (Section 6.7) and not as part of the WSCP.

8.4.3 Catastrophic Supply Interruption

Hollister, Sunnyslope, and the District also have water shortage emergency response plans in place. Sunnyslope and the City have a general Emergency Disaster Response Plan as well as a Power Failure Emergency Response Plans. The plans include steps to be taken during and after a disaster and the use of the Standard Emergency Management System (SEMS). Copies of these plans are included as **Appendix H**. The District relies on their current Water User's Handbook and County emergency plans.

These plans develop the procedures for each agency before and during a disruption of water supply during a natural disaster. In 1999, the California Emergency Management Agency (Cal EMA) published *Emergency Planning Guidance for Public and Private Water Utilities* to improve coordination among water utilities and other emergency response agencies and to assist water utilities in developing or revising emergency plans and procedures. It is recommended that ongoing coordination between the City, Sunnyslope, and the District take place to ensure these water supply emergency plans remain consistent and meet the goals provided in the guidance documents. With these plans in place, the retailers in the HUA can adequately handle a water supply shortage due to a natural disaster or another interruption of the water supply (Cal EMA 1999).

The agencies emergency shortage plans meet the requirements for the WSCP to include a seismic risk assessment and mitigation plan to assess the vulnerability of each water facility.

8.5 Communication Protocols

Effectively implementing any stage of the water shortage contingency plan requires clear and timely communication with the public, stakeholders, key decisionmakers, and local, regional, and state governments. The WSCP Communication protocols allow agencies to efficiently communicate any current or predicted water shortages and the response actions that are triggered. Communication protocols are outlined for each stage. In order to ensure consistency, each agency is encouraged to develop scripted responses to commonly asked questions when each stage goes into effect and as information changes throughout a water shortage crisis.

8.5.1 Stage 1 And Prior Communication

Stage 1 contains voluntary measures meant to reduce water demand by up to 10 percent. The HUA agencies aim to communicate water conditions when a water shortage condition exists or is anticipated. During this stage, or when HUA is expected to enter Stage 1 soon, the following communication protocols are recommended:

- The District, Hollister, and Sunnyslope must communicate to establish consistent Stage 1 implementation and unified message in response to commonly asked questions (Section 8.5.7)
- Communication in both English and Spanish of voluntary actions with customers, residents, and businesses through social media, radio, websites, newspaper, television coverage, newsletters, and bill stuffers.
- Notification to stakeholders, elected officials, and other decision-makers regarding water shortage conditions, projections, actions to be taken, demand reduction goals, and implementation.
- Monthly reports will be sent to the City Council and the Sunnyslope Board of Directors. If reduction goals are not met, the respective managers will notify the governing board of each agency that additional action is required.
- Direct contact (via telephone or email) with local media about conditions and response actions.
- Daily production figures will be reported to the Water Supervisor of each agency.
- The Supervisor will compare the weekly production to the target weekly production to verify that the reduction goal is being met. Weekly reports will be forwarded respectively to the General Manager of Sunnyslope, the Public Works Director at the City of Hollister and to the Program Manager of the WRA.
- Communication with public about potential for mandatory stages.
- Increased information about voluntary programs, like home surveys and leak repairs.

8.5.2 Stage 2 Communication

Stage 2 contains voluntary measures meant to reduce water demand by 10-20 percent. During this stage, the following communication protocols are recommended:

- The District, Hollister, and Sunnyslope must communicate to establish consistent Stage 2 implementation and unified message in response to commonly asked questions (Section 8.5.7)

- Communication in both English and Spanish of mandatory actions and penalties with customers, residents, and businesses through social media, radio, websites, newspaper, television coverage, newsletters, and bill stuffers.
- Notification to stakeholders, elected officials, and other decision-makers regarding water shortage conditions, projections, actions to be taken, demand reduction goals, and implementation.
- Direct contact (via telephone or email) with local media about conditions and new mandatory response actions.
- Direct contact (via telephone or email) to chamber of commerce and businesses directly affected by restrictions (hotels and carwashes, for example)
- Monthly reports will be sent to the City Council and the Sunnyslope Board of Directors. If reduction goals are not met, the respective managers will notify the governing board of each agency that additional action is required.
- Daily production figures will be reported to the Water Supervisor of each agency.
- The Supervisor will compare the weekly production to the target weekly production to verify that the reduction goal is being met. Weekly reports will be forwarded respectively to the General Manager of Sunnyslope, the Public Works Director at the City of Hollister and to the Program Manager of the WRA.
- Education about continued voluntary conservation actions with public.
- Increased information about voluntary programs, like home surveys and leak repairs, particularly within context of adhering to Stage 2 mandatory restrictions.

8.5.3 Stage 3 Communication

Stage 3 seeks to reduce water demand by 20-30 percent but includes the same mandatory actions as Stage 2. During this stage, increased communication about water conditions can lead to a decrease in demand.

- The District, Hollister, and Sunnyslope must communicate to establish consistent Stage 3 implementation and unified message in response to commonly asked questions (Section 8.5.7)
- Increased communication of mandatory actions with customers, residents, and businesses through social media, radio, websites, newspaper, television coverage, newsletters, and bill stuffers.

- Notification to stakeholders, elected officials, and other decision-makers regarding water shortage conditions, projections, actions to be taken, demand reduction goals, and implementation.
- Daily production figures will be reported to the Water Supervisor of each agency.
- The Supervisor will compare the weekly production to the target weekly production to verify that the reduction goal is being met. Weekly reports will be forwarded respectively to the General Manager of Sunnyslope, the Public Works Director at the City of Hollister and to the Program Manager of the WRA.
- Monthly reports will be sent to the City Council and the Sunnyslope Board of Directors. If reduction goals are not met, the respective managers will notify the governing board of each agency that additional action is required.
- Direct contact (via telephone or email) with local media about conditions.
- Warnings of increased water use monitoring and stricter mandatory restrictions if HUA enters Stage 4.

8.5.4 Stage 4

Stage 4 implements stricter mandatory management actions to achieve a 30-40 percent reduction.

- The District, Hollister, and Sunnyslope must communicate to establish consistent Stage 4 implementation and unified message in response to commonly asked questions (Section 8.5.7)
- Communication in English and Spanish of mandatory actions and penalties with customers, residents, and businesses through social media, radio, websites, newspaper, television coverage, newsletters, and bill stuffers.
- Notification to stakeholders, elected officials, and other decision-makers regarding water shortage conditions, projections, actions to be taken, demand reduction goals, and implementation.
- Daily production reports will be provided to the General or City Manager of each agency.
- Direct contact (via telephone or email) with local media about conditions and new mandatory response actions.
- Direct contact (via telephone or email) to chamber of commerce and businesses directly affected by restrictions (construction or landscaping companies, for example).
- Monthly reports will be sent to the City Council and the Sunnyslope Board of Directors. If reduction goals are not met, the respective managers will notify the governing board of each agency that additional action is required.

- Increased information about voluntary programs, like home surveys and leak repairs, particularly within context of adhering to Stage 4 mandatory restrictions.

8.5.5 Stage 5

Stage 5 seeks to reduce water demand by 40-50 percent but includes the same mandatory actions as Stage 4. During this stage, increased communication about water conditions can lead to a decrease in demand.

- The District, Hollister, and Sunnyslope must communicate to establish consistent Stage 5 implementation and unified message in response to commonly asked questions (Section 8.5.7)
- Increased communication of mandatory actions and penalties with customers, residents, and businesses through social media, radio, websites, newspaper, television coverage, newsletters, and bill stuffers.
- Notification to stakeholders, elected officials, and other decision-makers regarding water shortage conditions, projections, actions to be taken, demand reduction goals, and implementation.
- Daily production reports will be provided to the General or City Manager of each agency.
- Direct contact (via telephone or email) with local media about conditions
- Monthly reports will be sent to the City Council and the Sunnyslope Board of Directors. If reduction goals are not met, the respective managers will notify the governing board of each agency that additional action is required.
- Warnings of increased water use monitoring and stricter mandatory restrictions if HUA enters Stage 5.

8.5.6 Stage 6

Stage 6 is the most severe stage, seeking to reduce demand by at least 50 percent. The District, Hollister, and Sunnyslope must communicate to establish consistent Stage 5 implementation and unified message in response to commonly asked questions (Section 8.5.7).

- Increased communication of mandatory actions and penalties with customers, residents, and businesses through social media, radio, websites, newspaper, television coverage, newsletters, and bill stuffers.
- Notification to stakeholders, elected officials, and other decision-makers regarding water shortage conditions, projections, actions to be taken, demand reduction goals, and implementation.

- Daily production reports will be provided to the General or City Manager of each agency.
- Direct contact (via telephone or email) with local media about conditions.
- Monthly reports will be sent to the City Council and the Sunnyslope Board of Directors. If reduction goals are not met, the respective managers will notify the governing board of each agency that additional action is required.

8.5.7 Commonly Asked Questions by Target Audience

It is recommended that the District, Hollister, and Sunnyslope collaborate to develop a unified response to the following commonly asked questions:

Customers and Community:

- When will water supply return to normal?
- What are the restrictions, and when will restrictions be lifted?
- What will you give me to compensate for any damages to my property?
- How will you prevent a water shortage in the future?

News Media:

- What are the current water conditions?
- What is the status of the Water Shortage Contingency Plan?
- What is the estimated loss?
- How will you prevent this from happening again?
- Who is responsible?

Government Regulators:

- When did water shortage happen?
- What are the environmental, health, and safety impacts of this water shortage?

Elected officials:

- How does this water shortage affect the environment, the economy, and public safety?
- How many employees are affected?
- When will the situation return to normal?

Employees:

- Will this water shortage affect my job?
- Will I get paid during times of reduced operation?

8.6 Compliance and Enforcement

8.6.1 Demand Reduction Through Public Outreach

During the most recent drought (2014-2016), public outreach was expanded by 200 percent, and a 25 percent reduction was achieved by both Hollister and Sunnyslope. These programs are discussed in more detail in Chapter 9 of the UWMP. The specific public outreach measures listed below are intended to reduce demand during a drought or water supply interruption:

- Expand Public Information Campaign – Newsletter and other flyers in both English and Spanish were used to publicize programs and explain the importance of drought conservation.
- Improve Customer Billing – Customers with higher-than-average bills were contacted, and possible water savings were recommended.
- Offer Water Use Surveys – Both residential and landscape surveys help high water users to identify areas of potential conservation.
- Provide Rebates or Giveaways of Plumbing Fixtures and Devices – Rebates and plumbing retrofits are available at all times but are publicized more during drought conditions. Plumbing retrofits including hose nozzles, faucet aerators, and shower heads are available at no cost to customers. Rebates are available for low flow toilets and high efficiency washing machines.
- Provide Rebates for Landscape Irrigation Efficiency – There is currently a landscape efficiency rebate program that provides rebates for low-volume sprinkler heads, rain sensors, hose timers, and includes customized sprinkler schedules.
- Increase Water Waste Patrols – Examples include: Implement a Water Waste Patrol program; Increase staffing for Water Waste Patrol; Increase authority of Water Waste Patrol.
- Moratorium or Net Zero Demand Increase on New Connections – The agencies have added a no new connection element to their WSCP that is triggered in Stage 4.
- Implement or Modify Drought Rate Structure or Surcharge –a drought rate structure may be implemented in future droughts.

In addition to these measures, HUA agencies offer ongoing educational programming, classes, and community outreach. Section 9 of the UWMP contains a more detailed descriptions of these programs.

8.6.2 Warning and Citation Protocols

Enforcement is applicable at any water shortage stage. Any customer violating the regulations and restrictions on water use set forth in the “No Waste" Ordinances will receive a written warning for the first violation. A second violation within 12 months of the first violation results in a $100 penalty. On the third violation, the customer will be charged a $250 fine and the retailer may install a flow-restrictor. If a flow-restrictor is placed, the violator will pay the cost of installation and removal. After a fourth violation, a $500 penalty is issued. If water service is disconnected, it will be restored only upon payment of a reconnection charge. These penalties apply at any time but are likely to be more closely adhered to during drought periods.

Any willful violation occurring subsequent to the issuance of the second written warning will constitute a misdemeanor and may be referred to the City/County District Attorney’s office for prosecution pursuant. Misdemeanor convictions could include imprisonment and/or fines. The length of time for imprisonment and the magnitude of the fine vary between Hollister and Sunnyslope. If water service is disconnected, it will be restored only upon payment of a reconnection charge. These penalties apply at any time but are likely to be more closely adhered to during drought periods. In addition to fines, the City, Sunnyslope or the District, after written notice, may install a flow restrictor device or discontinue service to consumers who willfully violate provisions of this WSCP.

A person or property can apply for a waiver to the requirements in the WSCP. This hardship waiver is applicable at any stage of the WSCP. The written request must be submitted to one of the HUA agencies with supporting documentation (photographs, maps, drawings, and any other information as appropriate). The waiver may be granted or conditionally granted only upon a written finding of the existence of facts demonstrating an undue hardship to a person using water or to property upon which water is used. The Agency that receives the waiver must act upon any completed application no later than ten days after submittal and may approve, conditionally approve, or deny the waiver. The applicant requesting the waiver must be promptly notified in writing of any action taken.

8.7 Legal Authorities

In the event of a water shortage, the HUA Agencies shall declare a water shortage emergency in accordance with Water Code Chapter 3 Division 1.

Water Code Chapter 3 Division 1, Section 350 *Declaration of water shortage emergency condition. The governing body of a distributor of a public water supply, whether publicly or privately owned and including a mutual water company, shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.*

The HUA agencies shall coordinate with the cities of Hollister and San Juan Bautista and San Benito County for the possible proclamation of a local emergency, as defined in the California Government Code, California Emergency Services Act (Article 2, Section 8558).

8.8 Financial Consequences Of WSCP

During periods of water shortage, revenue of the HUA agencies may be reduced as the WSCP is implemented. Decreased water demand will lead to decreased revenue at the normal billing rate. The WSCP calls for an increase in water demand reduction programs, such as expanded public information campaigns, water use surveys, rebates, and water waste patrols, which may result in increased spending and staff costs.

The HUA agencies proactively prepare for periodic revenue shortages and periods of increased spending. All surplus revenues that the District, Hollister, and Sunnyslope collect are currently reinvested into the water supply system in preparation for potential revenue reduction during water shortages.

Based on projected and observed declines in revenue during shortages, the entities determined that rate increases may be needed in Stage 2 through 6. In Stage 1, no additional water purchases and no rate increases are required. For Stages 2 & 3, 4 & 5, and 6, rate increases may be needed if the agencies decide to maintain the same revenue over this period.

8.9 Monitoring, Reporting, and WSCP Refinement Procedures

Under normal water supply conditions, potable water production values for Hollister and Sunnyslope are recorded daily and reported monthly to the Water Supervisor. Water use will be monitored and analyzed through billing data. During a Stage 1, Stage 2, or Stage 3 water shortage, daily production figures will be reported to the Water Supervisor of each agency. The Supervisor will compare the weekly production to the target weekly production to verify that the reduction goal is being met. Weekly reports will be forwarded respectively to the General Manager of Sunnyslope, the Public Works Director at the City of Hollister and to the Program Manager of the WRA. During a Stage 4, 5, or 6 water shortage, the daily production report will be provided to the General or City Manager of each agency. In Stages 1 through 6, monthly reports will be sent to the City Council and the Sunnyslope Board of Directors. If reduction goals are not met, the respective managers will notify the governing board of each agency that additional action is required.

The WSCP implementation can be refined and updated at any point. During a water shortage, the Agencies may make changes as needed to best fit the emergency and communicate these changes with the public and stakeholders. After a water shortage emergency has passed, the Agencies are encouraged to evaluate the plan's effectiveness and may choose to adjust the WSCP to enhance its success, clarity, and feasibility.

8.10 Special Water Feature Distinction

Per Water Code Section 10632 (b) the HUA Agencies shall define and analyze water features that are artificially supplied with water, such as ponds, places, waterfalls, and fountains, separately from swimming pools and spas. Water features that are not pools or spas may use recycled water, while potable water must be used in pools and spas for health and safety purposes.

8.11 Adoption, Submittal, and Availability

The initial WSCP adoption coincided with the 2015 UWMP adoption. In accordance with section 10642 of the Water Code and section 6066 of the Government Code, each agency held a public hearing prior to adoption of the Plan.

Table 8-1. Water Shortage Contingency Plan Levels

Submittal Table 8-1 Water Shortage Contingency Plan Levels		
Shortage Level	Complete Both	
	Percent Shortage Range[1] *Numerical value as a percent*	Water Shortage Condition (*Narrative description)*
Add additional rows as needed		
1	Up to 10%	Mild Water Shortage
2	Up to 20%	Moderate Water Shortage
3	Up to 30%	Severe Water Shortage
4	Up to 40%	Critical Water Shortage
5	Up to 50%	Critical Water Shortage
6	>50%	Catastrophic Water Shortage
[1] *One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.*		
NOTES:		

Table 8-2. Demand Reduction Actions

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? *Include volume units used.*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement?
Add additional rows as needed				
1,2,3,4,5,6	Landscape - Restrict or prohibit runoff from landscape irrigation	5% reduction mandatory, 2% reduction voluntary	Excess runoff is discouraged under Stage 1 and profited for Stage 2 and above.	Yes
1,2,3,4,5,6	Landscape - Limit landscape irrigation to specific times	5% reduction mandatory, 2% reduction voluntary	Irrigation is discouraged between the hours of 9:00 a.m. and 5:00 p.m in Stage 1 and prohibited for Stage 2 and above.	Yes
2,3,4,5,6	Landscape - Limit landscape irrigation to specific days	10% for three times a week restrictions, 20% for twice a week restrictions	Irrigation is limited to three days a week in Stage 2 and reduced to two days a week in Stage 4.	Yes
4,5,6	Landscape - Prohibit certain types of landscape irrigation	2%	Irrigation outside new homes or on medians is prohibited in Stage 4. No new turf is allowed in Stage 6.	Yes
6	Landscape - Prohibit all landscape irrigation	40%	All Watering or irrigation of lawn, landscape, or other vegetaed areas with potable water is prohibited in stage 6	Yes
4,5,6	Landscape - Other landscape restriction or prohibition	<1%	Irrigation within 48 hours after rainfall is prohibited in Stage 4, 5, and 6.	Yes
1,2,3,4,5,6,	Landscape - Other landscape restriction or prohibition	5% reduction mandatory, 2% reduction voluntary	Duration of irrigation is suggested to be no more than 15 minutes per watering in stage 1. This limit is required in Stage 2	Yes
1,2,3,4,5,6	CII - Other CII restriction or prohibition	<1%	Commercial car washes are required to have recirculating systems. Recirculation is encouraged in Stage 1 and required in Stage 2 and above	Yes
1,2,3,4,5,6	CII - Lodging establishment must offer opt out of linen service	<1%	Hotel programs are encouraged in stage 1 and required for Stage 2 and above	Yes
1,2,3,4,5,6	CII - Restaurants may only serve water upon request	<1%	Drinking water by request is encouraged in Stage 1 and required for Stage 2 and above.	Yes

Table 8-2. Demand Reduction Actions

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? *Include volume units used.*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement?
Add additional rows as needed				
1,2,3,4,5,6	CII - Other CII restriction or prohibition	1%	Installation of Single Pass Cooling Systems are discouraged in Stage 1 and prohibited for Stage 2 and above	Yes
1,2,3,4,5,6	CII - Other CII restriction or prohibition	<1%	Restaurants encouraged to use water conserving dishwash spray valves	
1,2,3,4,5,6	CII - Other CII restriction or prohibition	<1%	Stage 1 recommends washing a vehicle with a hose with a shut valve. In Stage 2 and above, a hose with a shut value is mandatory.	Yes
1,2,3,4,5,6	Water Features - Restrict water use for decorative water features, such as fountains	1%	Recirculating water features are encouraged at all stages. In Stage 2 and beyond, operating a decorative water feature that does not use recirculated water is prohibited.	Yes
4,5,6	Water Features - Restrict water use for decorative water features, such as fountains	1%	Filling or refilling ornamental lakes and ponds are prohibited in Stages 4, 5, 6	Yes
1,2,3,4,5,6	Pools and Spas - Require covers for pools and spas	<1%	All pools should have a pool cover, this is encouraged in Stage 1 and required in Stage 2 and above	Yes
4,5,6	Pools and Spas - Other water feature or swimming pool restriction	<1%	The installation and filling of new pools are prohibited	Yes
2,3,4,5,6	Pools and Spas - Other water feature or swimming pool restriction	1%	Existing pools should not be refilled in Stage 2 and above, except to maintain water levels.	Yes
1,2,3,4,5,6	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	2%	Fixing leaks is encouraged under stage 1. Leaks must be fixed with 72, 48 and 24 hours in Stages 2 & 3, 4 & 5 and 6, respectively	Yes
1,2,3,4,5,6	Other - Prohibit use of potable water for washing hard surfaces	<1%	Washing hard surfaces is discouraged in Stage 1 and prohibited in all other stages.	Yes

Table 8-2. Demand Reduction Actions

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? *Include volume units used.*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement?
Add additional rows as needed				
1,2,3,4,5,6	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	<1%	Voluntary in Stage 1, mandatory in Stage 2 and above.	Yes
4,5,6	Other - Prohibit use of potable water for construction and dust control	1%	Potable water use for dust control is prohibited during Stage 4 throuhg Stage 6.	Yes
6	Other	2%	Limits on new water service, building permits, and annexation	Yes
4,5,6	Other	Variable	Any HUA Agencies reserve the right to restrict water for priority uses in Phases 4,5,and 6	Yes
4,5,6	Other	3%	Agencies may consider drought rates, if applicable in Stages 4,5, and 6.	Yes
NOTES: The extent to which each action reduces the shortage gap was calculated using best available data and assumptions. The methods of calculation are described in Appendix G				

Table 8-3. Supply Augmentation and Other Actions

Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How much is this going to reduce the shortage gap? *Include volume units used.*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
2,3,4,5,6	Other Actions (describe)	0-20%	Increase proportion of groundwater in potable water
2,3,4,5,6	Stored Emergency Supply	0-10%	Imported water stored in San Justo Reservoir for drought reserves
NOTES:			

9. DEMAND MANAGEMENT MEASURES

9.1 Wholesale Agency Programs

The District is the wholesaler to Zone 6 (Northern San Benito County) for CVP imported water, while Hollister and Sunnyslope are retailers that purchase CVP water from the District. These three agencies have a strong partnership to plan the future water supply for the HUA through this document and others, including the Master Plan and GSP. With regard to demand management, the District provides the conservation coordinator for the WRA, financial contribution and technical support to the WRA.

The District continues to:

- Join with retail water agencies to plan, design, implement, manage, and evaluate regional conservation programs.
- Provide conservation-related technical support and information to retail agencies they serve.
- Operate part of the conservation programs.
- Provide reports on BMP implementation within their service area by retail water agencies as needed.
- Encourage all of their retail agencies to be part of the Water Resources Association (WRA).

9.2 Demand Management Measures for HUA

Hollister, Sunnyslope, and the District are committed to implementing water conservation and water recycling programs. The three agencies, along with the City of San Juan Bautista, participate in the WRA of San Benito County. The WRA retains a Water Conservation Coordinator, who is a District employee, to serve the water conservation needs for the WRA members.

As required by USBR, the WRA coordinator also enters water conservation data as a fillable pdf to submit the required reports. The WRA coordinator also enters data for District activities into the Agricultural Water Management Council (AWMC) database each year as required by the Bureau. In addition, the WRA coordinator updates the Agricultural Water Management Plan for the District every five years.

9.2.1 Utility Operations Resources – BMP 1

Water waste prevention ordinances. Both Hollister and Sunnyslope have approved water conservation ordinances to reduce water waste at all times. San Benito County has also created a Water Conservation Plan (also included in **Appendix G**). The plan prohibits certain water wasting uses, limits others, creates guidelines for plumbing fixtures in new developments, and encourages water conservation.

Metering. Hollister and Sunnyslope are fully metered and currently have meter replacement programs in place. Sunnyslope requires separate irrigation meters for commercial landscaping, parks, and other non-residential water services.

Tiered pricing. A tiered pricing structure is always in place and is not dependent upon a water shortage for implementation, although a future rate structures could include drought rate structures. Tiered pricing sends a signal to customers regarding their water use. Both the City and Sunnyslope use a tiered rate structure for single family residences, where efficient water use is billed at a low price and higher water use is billed at progressively higher prices. The rate structures are included in **Appendix K**.

Programs to assess and manage distribution system real loss. The City and Sunnyslope generally have small water losses for the overall system. Each retailer regularly inspects the distribution system, to check for leaks. In addition, customers are contacted if water bill increases suggest leaks.

9.2.2 Public Education and Outreach – BMP 2

WRA, through its Water Conservation Coordinator and other staff, supports a variety of public education and outreach efforts. This includes bill inserts, flyers, Water Awareness Month, school presentations, and more. Water Awareness Month (WAM) is in May at the start of the irrigation season. The timing is optimal to remind water customers about irrigation programs and water efficiency. In addition, Proclamations are read at the Member Agencies board and council meetings as well as the Board of Supervisors meeting in proclaiming May as Water Awareness Month. During WAM, a banner is strung at the corner of Fairview Road and Santa Ana Road to urge people to contact their water provider for water saving ideas, the WRA sets up a booth at the local Farmer's Market, and holds workshops or classes covering a variety of topics concerning water use reduction.

The WRA retains a Water Conservation Coordinator, who is a District employee, to serve the water conservation needs for the WRA members. This person's duties focus primarily on ongoing programs within the District to encourage wise water use among the agricultural community and within the Hollister Urban Area. The duties of this position (and any support staff, as necessary) are described in section 9.3.

9.2.3 Residential Programs – BMP 3

Residential Surveys. This survey is a free home water conservation checkup including identification of the need for plumbing retrofits, a water softener check, household leak checks and identification of other possible water conservation improvements.

Plumbing Retrofits. As a complement to the residential surveys, WRA offers plumbing retrofits that replace older shower heads, add aerators in faucets and free hose nozzles. While this program has been successful in the past and estimated to have reached over 75 percent of customers, it may not provide significant water demand reduction in the future because of its past success.

Toilet Rebates. Rebates and giveaways are available for residential customers who replace existing toilets with high efficiency models. This program was discontinued in 2018 as only high efficiency toilets are now available for purchase.

Water Softener Rebate Program. Since 2007, a program has been in place to issue rebates to those water customers who remove a self-regenerating water softener (SRWS) without replacement ($300) or with transition to an off-site exchange service ($250). In July 2014, the City of Hollister enacted an ordinance that prohibits the installation of SRWS that use sodium and/or potassium salts. In February 2015, Sunnyslope adopted a new District Code prohibiting the installation of SRWS that use sodium and/or potassium salts.

Residential Bill Comparison. In addition to public outreach information. The agencies revised their bills to reflect a comparison of 2013 water consumption and current consumption for customers to gauge their reduction efforts.

High-Bill Contact Programs. These programs alert residential users if the monthly bill is higher than a pre-determined threshold and is implemented by the retailers directly. This will help the residential user identify leaks or changes in water use.

Notification of Leaks. If a leak is detected on a customer's property, they are alerted so they can repair the leak and avoid further water waste.

9.2.4 CII Programs – BMP 4

Commercial High - Efficiency Single Load Clothes Washers. Rebates are available for commercial customers who replace existing washers with high efficiency single load machines.

Commercial High - Efficiency Toilets. Rebates are available for commercial customers who replace existing toilets with high efficiency model.

Green Business Certification. The WRASBC is working together with the San Benito County Chamber of Commerce to recognize and promote businesses and government agencies that volunteer to operate in a more environmentally responsible way. WRASBC staff sits on the board of the Chamber of Commerce's Green Business Committee and actively participates in the Green Business Certification Program. The WRASBC's partners includes: Integrated Waste, Recology and PG&E.

Hotel Program. The WRASBC provides table cards to hotels and motels that allow guests to have linens washed only upon request.

9.2.5 Landscape Programs – BMP 5

Landscape Water Surveys. This survey is a free water conservation checkup for large urban irrigators including the identification of needs for plumbing retrofits and/or updated irrigation hardware, leak checks and identification of other possible water conservation improvements.

Landscape Irrigation Hardware Rebate Program. The WRA has rebates on hose timers, rain sensors and MP Rotator irrigation nozzles and sprinkler bodies with pressure regulators. A rebate is offered of 50 percent of the cost of qualifying products, up to $100.

Turf Removal Program. During the last drought (2014-2015) over 88,000 square feet of turf were removed in the Hollister Urban Area. This turf removal program included extensive public outreach in Spanish and English. The program is not currently active but may be used in the future as needed.

Irrigation Education. The District, in collaboration with the WRA, has been offering a series of classes since 2009 on irrigation efficiency and other agriculture practices.These workshops provide concepts, tools, and examples for optimizing irrigation and nitrogen management efficiency in row, tree, and greenhouse crop production. The classes also focus on keeping records and acquiring data needed for water quality regulation and reporting. The WRA also offers classes to residential customers. These classes instruct customers on topics such as efficient irrigation practices, converting landscapes to be water wise, and composting.

Custom Sprinkler Schedule. A Water Conservation Specialist will design a watering schedule tailored to customer habits, sprinkler's output, and the seasonal water needs of the individual lawn and garden. The plan is free and includes a schedule for each season, and even programming of the automatic sprinkler timer upon request.

9.3 Implementation Over the Past Five Years

Each DMM listed above is discussed below including the following details:

- Nature – Description of the DMM program (e.g., the dollar value for individual toilet replacements, the process used to inform customers of a landscape water budget program, or the content of a school education program.)

- Extent – Quantification of the implementation of the DMM (e.g., the number of customers who have used the toilet rebate program, the number of large landscape accounts that have been assigned a water budget, or the number of school presentations given by the WRA). In addition, extent includes a description of the methods used to estimate the expected water savings from DMMs, or the agency's implementation plan for a particular DMM.

The HUA continues to show its dedication to water demand management by steady funding for the WRASBC. The annual budget has increased from $324K in fiscal year 2015-2016 to $372K in fiscal year 2020-2021 (not including additional funds for development of this UWMP). A more detailed budget by DMM was not available. A summary table on the following page shows the implementation from 2011 to 2015 and 2016 to 2020.

Table. 9-A Ongoing Conservation Programs

CUWCC BMP	Program	Unit	TOTAL 2011-2015	TOTAL 2016-2020
1	Water Waste Ordinances	In Effect		
1	Metering	No unmetered		
1	Conservation Pricing	Tier Rates - Single Family		
1	Water Conservation Coordinator			
2.1	Newsletter and Articles	# of articles published	38	50
2.1	Flyers/ Bill Inserts	# reached	161,900	108,000
2.1	Website	# reached	2,600	3,800
2.1	Booths at Festivals	# of attendees	6,200	4,650
2.1	Email	email sent	675	800
2.2	School classroom presentations	# students reached	700	920
2.2	Large School Assemblies	# students reached	3600	2,200
2.2	Field Trips to WTP and WWTP	# students reached	350	275
2.2	Focus on Water Career Education	# students reached	425	320
3	Surveys- Residential Single Family	# surveys	1,547	1,073
3	Surveys- Residential Multi Family	# surveys	184	42
3	Plumbing Retrofits Single Family (showerhead/faucet aerators)	# replaced	1,642	1,042
3	Plumbing Retrofits Multi Family (showerheads/faucet aerators)	# replaced	161	25
3	High Efficiency Clothes Washers HECW Rebates ($100)	# replaced	280	18
3	ULF Toilets Rebates/Giveaways	# replaced	995	425
3	Water Softener Replacement Program	# replaced	319	348
3	Residential Bill Comparison	total hh reached	3,050	
3	High Bill Contact Programs	total hh reached	3,950	
3	Notification of Leaks	total hh reached	1,150	
4	Commercial High-Efficiency Toilets	# replaced	50	82
4	Commercial High - Efficiency Single Load Clothes Washers	# replaced	2	0
4	Green Business Certification	# of businesses	11	0
4	The Hotel Program	# of hotels	2	5
5	Landscape Irrigation Hardware Rebate Program	# of rebates	89	13
5	Turf Removal Program	sq ft removed	88,000	
5	Landscape Water Surveys/Audits	# of surveys	6	1,231
5	Custom Sprinkler Schedule	# reached	6	150
5	Landscape Classes	# of attendees	400	300
5	Landscape Plans	# downloads	UNK	1,231

9.2.6 Water Waste Prevention Ordinances

The ordinances were originally created as a response to the multiple dry years of the early 1990's but have continued to support sustainable water supply by prohibiting water wasting activities, which include:

- Indiscriminate or excessive water use, which results in water waste.
- Washing of cars, buildings, or exterior surfaces without the use of a quick-acting, positive shut-off nozzle.
- Use of potable water to irrigate turf, lawns, gardens, or ornamental landscaping between 9:00 a.m. and 5:00 p.m. by means other than drip irrigation or hand watering with a quick-acting, positive shut-off nozzle.
- Use of potable water to wash sidewalks or roadways when the use of airblowers or sweeping would provide a reasonable alternative.
- Allowing water waste caused by easily correctable leaks, breaks, or malfunctions, after a reasonable time within which to correct the problem.
- Operation of decorative fountains, even if they use recirculating systems.
- Use of water for construction purposes, such as consolidation of backfill, except when no other method can be used.
- Restaurant water service unless upon customer request.
- Hydrant flushing, except where required for public health and safety.
- Refilling existing private pools, except to maintain water levels.

Hollister, Sunnyslope, the District, and San Benito County have all established "No-Waste" ordinances, policies, and resolutions for their respective jurisdictions. The District has a Water Users Handbook that explains how each water user must take steps to control tailwater. If these policies are not followed, the District has the authority to discontinue service.

In addition to these existing ordinances, Emergency Water Conservation Regulations were passed in 2015 that added outdoor water restrictions. The Emergency regulations also added penalties for violating these restrictions including fines for repeated violations. The Regulations are included in **Appendix I**.

The water waste ordinances are enforceable for retailer customers in the City of Hollister and Sunnyslope. Enforcement costs are a part of each agency's overhead.

The WRA handles complaints of water waste or pursues water waste violations if observed by staff. The WRA issues 'Water Waste' violation cards and follows up with letters to the violators and offers assistance to correct the problem.

9.2.7 Metering

Both Hollister and Sunnyslope meter all customers within their service areas and both retailers have a meter replacement program.

Hollister has been replacing approximately 700 to 800 meters annually, about 10 percent of total connections. As of early 2008, nearly half of the City's old meters have been replaced with new meters that allow reading through a radio. Hollister is making continuous efforts to identify the number of accounts by specific customer type, including installation of dedicated landscape meters for customers who had mixed-use meters. Meter installation costs are part of new service connection fees.

Sunnyslope uses all radio-read water meters, which are highly accurate. Sunnyslope has an ongoing meter replacement program through which about 300-400 existing old meters are replaced every year with new updated meters. Through this we are on track to replace all meters in the District about every 15 years which is generally seen as the useful life of the meter. After 15 years it can begin to lose accuracy. Additionally, Sunnyslope is working to install a radio antenna system which can provide hourly water meter reads to the District. These could also be accessed by Sunnyslope customers via their Customer Portal. This information will greatly assist in identifying and repairing customer leaks and reduce water waste. Conservation pricing

Both the City and Sunnyslope use a tiered rate structure for single family residences, where efficient water use is billed at a low price and higher water use billed at progressively higher prices. Both entities assess a monthly service charge based on water meter size, plus a monthly consumption rate based on the amount of water consumed.

The monthly consumption rates for single-family residential customers are an inclining block with three tiers, while non-single-family customers are charged one rate for all water consumption. The City and Sunnyslope tiers and rates are included in **Appendix K**.

The current Sunnyslope water rates were approved by the Board of Directors on August 6, 2013 by Ordinance No. 73 and took effect on December 21, 2015.

Comparison with previous average usage rates might provide some information regarding the effectiveness of changing from non-conserving to conservation pricing. It is assumed that the economic incentive to customers to conserve water under conservation pricing structures is sufficient to make this program efficient.

It is expected that most of the conservation savings will occur with the largest water users, who will see larger benefits for conserving water. The expected annual water savings is 100 AFY, compared to the scenario where non-conserving pricing is used.

Public Education and Outreach

Public outreach is central to the HUA water conservation efforts. These ongoing activities were ramped up in response to the State mandated water conservation. Specific activities include:

- Newsletter articles on conservation - These articles are included as **Appendix L.**
- Flyers and/or brochures, bill stuffers, messages printed on bill, information packets. The flyers are included as **Appendix L**.
- Development and update of a website with resources for water conservation: www.wrasbc.org.The website provides details about ongoing water conservation programs and has three different water wise landscape plans available for download. Last updated in December 2020.
- Booths at Children's Festivals and Farmer's Market.
- Engagement with the community through responsiveness to emailed questions and concerns.
- Water Awareness Festival in May.

The full-time water conservation coordinator records the number and type of outreach activities. Newsletters are sent with water bills and are estimated to reach 40,000 people per year. Booths at festivals reached over 4,650 people in the last five years. Other outreach includes the website and email communication which reached about 800 people since 2016.

While there is no direct way to quantify public outreach, it is the foundation for all other programs. With methods to advertise and connect customers to other programs and information, all other demand management measures would be less effective. In addition, the expanded public outreach in response to the drought shows a direct connect between increased public outreach and decreased water use.

9.2.8 School Education and Outreach

The WRA also provides specific school focus outreach including:

- Presentations to school groups (both classroom and large assemblies
    - Water Cycle presentation to 4 and 5th graders
    - Water and Your World presentation to elementary students
- Field trips to the Water Treatment Plant and Wastewater Treatment Plant
- Water Careers Education

The number of students who have participated in these school programs totaled 3,715 in the last five years. WRA will continue to reach out to students at all grade levels. Before the start of each school year,

the Water Conservation Coordinator visits every school in the Hollister Urban Area along with those in San Juan Bautista to alert them of the School Education Program offered through the WRA. The direct effect on water demand is not quantifiable, but there is long-term benefit to educating students on the science and impacts of water supply and conservation.

9.2.9 Programs to Assess and Manage Distribution System Real Loss

As all connections in Sunnyslope and Hollister are metered, water loss in the HUA is due to leaks, flushing fire hydrants, maintenance of water tanks, metering accuracy, and other small unmetered releases due to maintenance procedures. No additional programs are planned to further manage water distribution system losses.

9.2.10 Water Conservation Program Coordination and Staffing Support

The WRA conservation coordinator's duties focus primarily on ongoing programs within the District to encourage wise water use among the agricultural community and within the Hollister Urban Area. The duties of this position (and any support staff, as necessary) include the following:

- Coordination and oversight of conservation programs and BMP implementation
- Preparation and submittal of the USBR water conservation reports
- Communication and promotion of water conservation issues to agency senior management
- Coordination of agencies' conservation programs with operations and planning staff
- Preparation of annual conservation budget
- Reporting to the governing bodies of the participatory agencies on the progress of the Water Conservation Program.

The WRA coordinator also submits water conservation data to USBR, as needed.

The water conservation coordinator works on behalf of the WRA which included Hollister, Sunnyslope, San Juan Bautista and the District. Like public outreach, this demand management measure provides a foundation for all other programs. Having key personnel to coordinate ongoing programs and begin new initiatives is critical for continued water use efficiency. The Conservation Coordinator will continue to oversee water conservation activities for the HUA. To gauge the effectiveness of this DMM, the conservation coordinator and Hollister staff will continue to document the number of programs, materials and attendance at water conservation activities. The benefits of a coordinator are indirect and the water savings due to this DMM cannot be quantified.

9.2.11 Residential Surveys

This DMM involves assisting customers with leak detection and minimization. This may include, but is not limited to: a water conservation survey, water efficiency suggestions and/or inspection, and provision of showerheads and faucet aerators that meet current Water Sense specifications. The primary focus is older neighborhoods with pre-1980 plumbing and the second priority is other pre-1992 housing. Houses constructed after 1992 were required by state building codes to utilize water conserving plumbing fixtures. The program is marketed through advertising in bill inserts, bill messages, and newsletters. During the water survey, water conservation staff performs the following:

- Check for leaks, including toilets, faucets, and meter check
- Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, as necessary
- Check toilet flow rates and direct customer to ultra-low flush toilet (ULFT) replacement programs, as necessary, and replace leaking toilet flappers and floats if applicable
- Check irrigation system and timers
- Review or develop customer irrigation schedule
- Evaluate water softener operations and test water hardness to ensure proper settings
- Promote the retrofit program and provide other information on local water resource topics

Surveys require between 30 and 90 minutes. For each dwelling unit, a Water Conservation Assistant completes a customer data form (including number of people per household, number of bathrooms, age of clothes washer and water softener, and approximate landscaped area square footage). These data are used to analyze the customer's water use for both pre- and post-audit conditions, and to refine the program. The results of the residential water survey are provided to the customer with water saving recommendations and specific local information packets prepared as part of the public information program described for DMM 7. The individual contacts made during the survey are used to actively promote the other programs and services offered by the Water Conservation Program, including retrofit and rebate programs offered under other BMPs. Both English and Spanish speaking persons conduct the surveys, and both English and Spanish language materials are available. The form used in the survey is shown in **Appendix L**.

In the last five years, over 1,073 single family homes and 42 multiple family units have participated.

Based on available information, the potential water savings from this BMP are estimated to be 20 to 30 gpd and 18 to 28 gpd for single family and multi-family residences, respectively. This savings would be approximately 187 AF over the last five years. It is expected that the number of surveys per year will decline with the decrease in older residences that have not completed these surveys.

9.2.12 Rebates and Retrofits

The WRA provides several rebates and plumbing retrofits for residential customers, including:

- Plumbing retrofits (shower heads, aerators in faucets and free hose nozzles)
- High Efficiency Clothes Washers (HECW) Rebates
- Water Sense Specification (WSS) toilets
- Water Softeners (demolishing)

The rebate programs have been very active and successful. The three major programs (HECW, low flow toilets, and water softeners) have all seen great success in the past but the number of rebates issued has decreased as water efficient fixtures dominant the market. In the past, water savings from these programs has totaled up to 130 AFY.

The HECW rebate is $100 per washer. From 2016 until the program was discontinued, 18 rebates for HECW have been issued. California Water Efficiency Partnership reports a water savings estimate of 5,250 gallons per year (0.2 AFY) per high efficiency washing machine, for a total savings of 3.6 AFY. This program is no longer active.

For WSS toilets, the financial incentive currently is $75 per toilet, and an additional $10 is given when residents deliver their old toilet to the District, as administrator of the program. In addition, the WRA provides a free toilet by appointment, limited to two free toilets per residence, unless a WRA representative inspects the property to confirm more than two toilets are required. In the past, this program has been extremely successful, with over 7,000 ULFTs installed from 2001 to 2015. In the last five years, only 425 toilets rebates were issued. Projected total annual water savings from toilet retrofits at full implementation are 20 gpcd each or 30 AFY for rebates issued (2016-2020), both in water demand and wastewater generation. The decrease in rebates and budget are another indication that the area already has many water saving devices with limited additional water savings potential.

Since 2007, WRA has conducted a water softener rebate program that encourages people to upgrade from their timer-based models (pre-1999) to demand-initiated regenerating (DIR) models or to demolish these older softeners with no replacement. A shared goal of the District, City and Sunnyslope is to reduce salt loading to wastewater and thereby help maintain groundwater quality and support water recycling. The program includes water softener checks as part of the home water audit programs. It also provides the public with information about DIR and exchange-type water softeners, encouraging replacement of less efficient timer models. Currently, the rebate offer is $150 (per household) for a water softener replacement, $250 for a water softener replacement with offsite service, and $300 for a water softener demolition. The water softener rebates are funded by a grant. It is estimated these rebates save 600 gallons per month per household. In the last five years, 348 rebates were issued, for an estimated total savings of 7 AFY.

While water softener rebates do help reduce water demand, a major benefit is the decrease in salt discharge in the wastewater. The salt reduction is critical to improving water quality of the wastewater discharge, recycled water, and indirectly the groundwater basin.

9.2.13 Commercial, Industrial, And Institutional Programs

The WRA works with businesses to encourage water conservation. The two main programs include the Green Business Certification which recognizes and promotes businesses and government agencies that volunteer to operate in a more environmentally responsible way. The other program serves hotels and provides table cards to hotels and motels that allow guests to have linens washed only upon request.

These programs are conducted jointly with SBC Chamber of Commerce. The WRA works closely with their partners to establish policies that are both business friendly and promote environmental stewardship. As part of this partnership, they produce the TV show "Going Green" which is aired on the Community Media Access Partnership through the local cable provider (Charter). This show discusses "green" topics including water conservation both locally and worldwide.

There is no single budget amount for these programs administered by the water conservation coordinator.

9.2.14 Landscape Water Surveys

A landscape water survey includes a check of an irrigation system and timers for maintenance and repairs needs, development of a customer irrigation schedule, reviewing scheduling with the customer, and providing the customer with an evaluation.

During a survey, the WRA checks irrigation schedules to see if they are adjusted for the season, checks/adjust sprinkler heads to make sure landscape is being irrigated and not fences or walkways, etc., develops an irrigation schedule to follow for the year, and makes recommendations to upgrade or repair equipment.

Hollister has a landscape ordinance that pertains to new and existing single family homes and has adopted the model water efficiency landscape ordinance (MWELO) to promote landscape irrigation efficiency. The City is also considering a financial incentive program to help homeowners to convert landscaping toward more water efficiency (e.g., landscape materials, irrigation conversions, automatic controllers, etc.)

The WRA water conservation coordinator offers water use surveys and audits to single family residences, which are modified versions of audits offered to large landscape customers. The WRA also publishes a newsletter biannually entitled, "Water Conservation Update", included in **Appendix L.** The newsletter provides landscape water conservation information and suggests seasonal water conservation measures such as turning off irrigation systems in the fall. WRA also offers free irrigation inspections in the spring and irrigation controller assistance in the fall. The WRA website provides useful tips for outside water conservation, a Watering Index to guide irrigation, and a Residential Lawn Watering Guide. The website also promotes a free custom sprinkler schedule. In addition, the newly revised website has videos with water conservation tips for each season and links to other useful resources (www.wrasbc.org)

In the last five years, over 1,000 surveys were performed or survey information downloaded. The water savings of this measure would depend on the existing volume of irrigation and the implemented reduction of irrigation. The 2010 UWMP estimated 25-50 AFY savings for this program.

The City of Hollister and the County have adopted Large Landscape Conservation Requirements, including the MWELO. The HUA entities will continue to implement this DMM through annual review of customers' water use, and by offering on-site follow-up evaluations to customers whose total water use exceeds their total annual water budget. The overall target of providing large landscape audits is 3 percent of existing accounts each year.

9.2.15 Landscape Irrigation Hardware Rebate Program

The WRA has rebates on hose timers, rain sensors and MP Rotator irrigation nozzles. Information on how residents apply for this rebate and what models are available are included in **Appendix L**. Thirteen rebates were issued for this program.

9.2.16 Turf Removal Program

During the last drought (2014-2015) over 88,000 square feet of turf were removed in the Hollister Urban Area. This turf removal program included extensive public outreach in Spanish and English. The turf was removed and either replaced with hardscape, drought tolerant plants or a combination of both. While the program is not currently active, the water savings effects of the removed drought will continue unless new turf is planted. This program may be brought back for future droughts as needed.

9.2.17 Irrigation Education

The District, in collaboration with the WRA, has been offering a series of classes since 2009 on irrigation efficiency and other agriculture practices. These workshops provide concepts, tools, and examples for optimizing irrigation and nitrogen management efficiency in row, tree, and greenhouse crop production. The classes also focus on keeping records and acquiring data needed for water quality regulation and reporting. The WRA also offers classes to residential customers. These classes instruct customers on topics such as composting, implementing efficient irrigation practices, and converting landscapes to be water wise. From 2016 to 2019, these classes reached 300 participants. There were no classes in 2020 due to the COVID-19 pandemic, but these classes will return when possible.

9.2.18 Custom Sprinkler Schedule

A Water Conservation Specialist will design a watering schedule tailored to customer habits, sprinkler's output, and the seasonal water needs of the individual lawn and garden. The plan is free and includes a schedule for each season plus programming of the automatic sprinkler timer.

in the last five years, 150 schedules have been developed for large landscapes customers. It is estimated that a custom sprinkler schedule could reduce irrigation by 20 to 30 gallons per day, for a total of 5 AFY

for the schedules recently implemented. This program can be expanded by reaching out directly to large landscape as well as residential customers. Schedules are created for residential customers through the water survey program.

9.4 Planned Implementation to Achieve Water Use Targets *(Retail Agencies Only)*

Water conservation efforts over the past five years have resulted in numerous plumbing and hardware retrofits in older buildings. These existing efforts (combined with new plumbing codes that require new developments to have water saving fixtures) have resulted in a large percent of buildings (both residential and commercial) with water saving technology. While these improvements have resulted in decreased water demand, the future potential gains from the rebate and retrofit programs may be limited.

In response to the State mandated water reduction due to the drought, the WRA and agencies stepped up their public outreach. They increased bill inserts, contacted high water users, and increased the advertisement of existing programs in multiple languages. In addition, the WRA also used public outreach to alert users to the new Emergency Water Conservation Regulations. These regulations focused on implementing efficient irrigation and outdoor water use. The increased public outreach and the focus on reducing water waste outdoors had measurable results. The agencies were able to reduce water demand in 2015 by more than 25 percent.

The water demand has continued to remain low and has not rebounded to pre-drought water use. This is due in large part to the public outreach and permanent changes enacted during the drought. Turf that was removed has not been replaced, high efficiency appliances remain in homes, and landscape plans continue to keep irrigation efficient.

The WRA plans to continue its focus on public outreach and education about irrigation efficiency. While these programs are difficult to account per unit water savings, the overall effect of reducing demand during the drought demonstrates the overall water savings.

10. PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

This 2020 UWMP was adopted and submitted as required by the Water Code. The Water Code lays out several notification and other processes required to prepare and adopt the UWMP. The UWMP submitted on July 1, 2021 must include the WSCP. The HUA WSCP was adopted as part of the 2015 adoption process and was not updated for this UWMP. In accordance with section 10642 of the Water Code and section 6066 of the Government Code, each agency held a public hearing prior to adoption of the Plan. A public notice was posted before the public hearing and included in **Appendix A**. The Final Plan was adopted by Hollister on June 7, 2021, Sunnyslope on June 16, 2021, and the District on May 26, 2021.

The following steps were followed for adoption:

- Notification of public hearing
    - The HUA agencies notified cities and counties of the public hearing.
    - Documented in **Table 10-1**
    - At least 60 days prior to public hearing
- Notification to the public
    - At least two notifications
    - Published in a local newspaper at least once a week for two successive weeks.
- Public hearing and optional adoption
    - Each agency held separate public hearings
- Adoption
    - Each agency adopted the UWMP
    - The adoption resolutions included in **Appendix A**
- Plan submittal
    - Each Supplier submitted the Plan and their relevant table via the WUE Portal
- Plan availability
    - Suppliers submitted the UWMP and WSCP to the California State Library and all cities and counties within which the Supplier provides water.

10.1 Checklist

DWR has provided a UWMP checklist to ensure the 2020 UWMP includes all required elements. This complete check list is presented here as **Table 10-A**.

Table 10-1. Notification to Cities and Counties

Submittal Table 10-1 Wholesale: Notification to Cities and Counties (select one)		
☐	Supplier has notified more than 10 cities or counties in accordance with Water Code Sections 10621 (b) and 10642. **Completion of the table below is not required. Provide a separate list of the cities and counties that were notified.**	
	Provide the page or location of this list in the UWMP.	
☑	Supplier has notified 10 or fewer cities or counties. **Complete the table below.**	
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Hollister	☑	☑
San Juan Bautista	☑	☑
	☐	☐
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
San Benito	☑	☑
Santa Clara	☑	☑
NOTES:		

Table 10-A. 2020 UWMP Guidebook Checklist

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	Executive Summary
x	x	Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	Executive Summary
x	x	Section 2.2	10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1
x	x	Section 2.6	10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.2
x	x	Section 2.6.2	10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	Section 2.1
x		Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that	System Supplies	2.1 (Tables 2-3 and 2-4)
	x	Section 2.6	10631(h)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Section 6.1 and Section 7.2.3 (table 7-1)
x	x	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Section 3.2
x	x	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3
x	x	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 3.4 (Table 3-1)
x	x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Section 3.4
x	x	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Section 3.4 (Table 3-1)

Table 10-A. 2020 UWMP Guidebook Checklist

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	Section 3.4
x	x	Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2 (Table 4-1)
x	x	Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	Section 4.2.4 (Table 4-4)
x	x	Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System Water Use	Section 4.2.6
x	x	Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	Section 4.2.6
x	optional	Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	Section 4.2.4 (Table 4-4) Appendix D
x	optional	Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.4
x	x	Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	Section 7.2.3 and Section 6.2.1
x		Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Section 5.2-5 (Table 5-1)
x		Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	Section 5.7 (Table 5-2)
	x	Section 5.1	10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	Section 5.8
x		Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	Section 5.2 (Table 5-2)

Table 10-A. 2020 UWMP Guidebook Checklist

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x		Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5-year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.6 (Table 5-1)
x		Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	Section 5.6 (Table 5-2) Appendix C
x	x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	Sections 6.1 and 6.2 (Table 6.1 and 6-1) Section 7.1 and 7.2 (Table 7-1)
x	x	Sections 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, including changes in supply due to climate change.	System Supplies	Sections 6.1, 6.2, and 6.10 (Table 6.1 and 6-1) Section 7.1 and 7.2
x	x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	Sections 6.1 and 6.2 (Table 6.1 and 6-1) Section 7.1 and 7.2 (Table 7-1)
x	x	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Section 6.1.1 (Table 6.1-3) Section 6.7 and 6.8
x	x	Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	Section 6.9 (Table 6-9)
x	x	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2 (Table 6-1)
x	x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.2.2
x	x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Section 6.2.1
x	x	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2.2

Table 10-A. 2020 UWMP Guidebook Checklist

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	Section 6.2.2
x	x	Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.2 (Table 6-1)
x	x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Section 6.2.3 (Table 6-9, Figure 6-6) Section 7.1 and 7.2 (Table 7-1)
x	x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis.	System Supplies	Section 6.7
x	x	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.5.2 (Table 6-2, 6-3)
x	x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.3 (Table 6-4)
x	x	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.5.4 (Table 6-4, 6-5, 6-6)
x	x	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.5.4 (Table 6-4, 6-5, 6-6)
x	x	Section 6.2.5	10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.5.5 (Table 6-7)
x	x	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.5 (Table 6-7)
x	x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6

Table 10-A. 2020 UWMP Guidebook Checklist

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	Section 6.5.2 (Table 6-2, 6-3)
x	x	Section 6.2.8, Section 6.3.7	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and for a period of drought lasting 5 consecutive water years.	System Supplies	Section 6.8 (Table 6-7)
x	x	Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	Section 6.10 (Table 6-10)
x	x	Section 7.2	10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 6.2.1 and Section 7.1.4
x	x	Section 7.2.4	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 6.8 (Table 6-7)
x	x	Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.2 (Tables 7-A, 7-B, 7-1, 7-2, 7-3, 7-4)
x	x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	Section 7.4, (Table 7-5), Appendix E
x	x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	Section 7.5.1
x	x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	Section 6.1, 6.2, 6.3, Section 7.1, 7.2.3
x	x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	Section 7.2 (Tables 7-A, 7-B, 7-1, 7-2, 7-3, 7-4)

Table 10-A. 2020 UWMP Guidebook Checklist

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	Section 7.1 (Tables 7-1)
x	x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	Section 8, 8.4.1 (Table 8-1), Appendix G
x	x	Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	Section 7.4, (Table 7-5), Appendix E
x	x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	Section 8.9
x	x	Section 8.2	10632(a)(2)(A)	Provide the written decision- making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	Section 8.2
x	x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	Section 8.3 (Table 8-8)
x	x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	Section 8.3 (Figure 8-1), Appendix G
x	x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	Section 8.3
x	x	Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	Section 8.4.2
x	x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Section 8.4.1, Appendix G

Table 10-A. 2020 UWMP Guidebook Checklist

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Section 8.5
x	x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	Section 8.4.1, Appendix G
x	x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	Section 8.4.1, Appendix G
x	x	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	Section 8.4.3 Appendix H
x	x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	Section 8.5
x	x	Section 8.5 and 8.6	10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	Section 8.5
x		Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	Section 8.6
x	x	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency	Section 8.7
x	x	Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	Section 8.7
x	x	Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local	Water Shortage Contingency Planning	Section 8.7
x	x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Section 8.8
x	x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Section 8.8

Table 10-A. 2020 UWMP Guidebook Checklist

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x		Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	Section 8.8
x		Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	Section 8.9
x		Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	Section 8.10
x	x	Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 8.11
x	x	Section 8.14	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 after adopted the plan.	Water Shortage Contingency Planning	Section 8.11
	x	Sections 9.1 and 9.3	10631(e)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and	Demand Management Measures	Sections 9.1 and 9.2 (Table 9-A)
x		Sections 9.2 and 9.3	10631(e)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Section 9.3 (Table 9-A)
x		Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	Section 10
x	x	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	Section 10
x	x	Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	Section 10

Table 10-A. 2020 UWMP Guidebook Checklist

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Section 10
x	x	Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Section 10
x	x	Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10
x	x	Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10
x	x	Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10
x	x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Section 10
x	x	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10
x	x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 8.11
x	x	Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	NA
x	x	Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	Section 8.11

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